

Draft date: 10/25/23

*2023 Fall National Meeting  
Orlando, Florida*

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

Saturday, December 2, 2023

10:00 – 11:00 a.m.

Floridian Ballroom—G-I—Level 1 – Bonnet Creek

#### **ROLL CALL**

#### **PROPERTY AND CASUALTY RISK-BASED CAPITAL (E) WORKING GROUP**

Tom Botsko, Chair	Ohio	Anna Krylova	New Mexico
Wanchin Chou, Vice Chair	Connecticut	Ni Qin	New York
Charles Hale	Alabama	Will Davis	South Carolina
Rolf Kaumann	Colorado	Miriam Fisk	Texas
Virginia Christy	Florida	Adrian Jaramillo	Wisconsin
Sandra Darby	Maine		

NAIC Support Staff: Eva Yeung

#### **CATASTROPHE RISK (E) SUBGROUP**

Wanchin Chou, Chair	Connecticut	Alexander Vajda	New York
Jane Nelson, Vice Chair	Florida	Tom Botsko	Ohio
Rolf Kaumann	Colorado	Andrew Schallhorn	Oklahoma
Travis Grassel	Iowa	Will Davis	South Carolina
Sandra Darby	Maine	Miriam Fisk	Texas
Anna Krylova	New Mexico		

NAIC Support Staff: Eva Yeung

#### **AGENDA**

1. Consider Adoption of its Working Group and Subgroup Minutes  
—*Tom Botsko (OH)*
  - A. Joint Property and Casualty Risk-Based Capital (E) Working Group and the Catastrophe Risk (E) Subgroup’s Nov. 16 Minutes Attachment A
  - B. Property and Casualty Risk-Based Capital (E) Working Group’s July 27 Minutes Attachment B
  - C. Catastrophe Risk (E) Subgroup’s July 18 Minutes Attachment C

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2. Consider Adoption of Proposal 2023-16-CR (2023 Cat Event List)  
—*Wanchin Chou (CT)* Attachment D
  3. Consider Adoption of its Working Group and Subgroup’s Working  
Agenda—*Tom Botsko (OH)* Attachment E
  4. Consider Exposure of Proposal 2023-14-P (Pet Insurance)  
—*Tom Botsko (OH)* Attachment F
  5. Consider Exposure of Proposal 2023-15-CR (Convective Storm for  
Informational Purposes Only Structure)—*Wanchin Chou (CT)* Attachment G
  6. Discuss Wildfire Peril Impact Analysis—*Wanchin Chou (CT)*
  7. Consider Exposure of Proposal 2023-13-CR (Disclosures for Catastrophe  
Reinsurance Program)—*Wanchin Chou (CT) and John Rehagen (MO)* Attachment H
  8. Hear Updates from the Convective Storm Model Review Ad Hoc Group  
Regarding the Convective Storm Technical Review—*Wanchin Chou (CT)*
  9. Discuss the Report from the American Academy of Actuaries (Academy)  
on an “Update to Property and Casualty Risk-Based Capital Underwriting  
Factors and Investment Income Adjustment Factors”—*Tom Botsko (OH),  
Allan Kaufman (Academy) and Joseph B. Sieverling (Reinsurance  
Association of America—RAA)* Attachment I
  10. Discuss Florida Commission on Hurricane Loss Projection Methodology—  
*Donna Sirmons (Florida Commission on Hurricane Loss Projection  
Methodology)* Attachment J
  11. Discuss Any Other Matters Brought Before the Working Group and  
Subgroup—*Tom Botsko (OH)*
  12. Adjournment

Draft: 11/21/23

Property and Casualty Risk-Based Capital (E) Working Group  
and Catastrophe Risk (E) Subgroup  
Virtual Meeting  
November 16, 2023

The Property and Casualty Risk-Based Capital (E) Working Group of the Capital Adequacy (E) Task Force met Nov 16, 2023, 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); Charles Hale (AL); Mitchell Bronson (CO); Nicole Crockett (FL); Sandra Darby (ME); Alexander Vajda (NY); Miriam Fisk (TX); and Adrian Jaramillo (WI). The following Subgroup members participated: Wanchin Chou, Chair (CT); Nicole Crockett, Vice Chair (FL); Mitchell Bronson (CO); Sandra Darby (ME); Alexandra Vajda (NY); Tom Botsko (OH); and Miriam Fisk (TX).

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

Botsko said proposal 2023-16-CR (Attachment XXX) provided routine catastrophe events updates two times. This exposure includes Jan. 1 through Oct. 31, 2023, U.S. and non-U.S. catastrophe risk events to the catastrophe event list. He stated that the Working Group and Subgroup will re-expose this proposal for the events happening between Nov. 1 and Dec. 31, 2023, in Jan. 2024.

The Working Group and Subgroup agreed to expose proposal 2023-16-CR for a seven-day public comment period ending Nov. 23.

2. Heard a Presentation from the Academy on the Update to Property and Casualty Risk-Based Capital Underwriting Factors and Investment Income Adjustment Factors Report

Ron Wilkins (American Academy of Actuaries—Academy) first provided a background for this report. He said that in May 2019, a letter from the Academy to this Working Group suggested three analyses related to the calibration of premium and reserve risk elements of the risk-based capital (RBC) formula. He also stated that the Academy issued the first of those reports that described a calibration of the Line 4 factors for premium and reserve risk. In August 2023, the second report was issued, covering the RBC formula's investment income adjustment (IIA) element. This report deals with Line 7 or 8 of the underwriting reserve and premium risk in RBC formula PR017 and PR018, respectively. Wilkins further explained that the IIAs are the factors that measure the extent to which future investment income might be available to provide for adverse development and/or inadequate premiums. The IIAs' effect is to reduce the premium and reserve risk charges. The IIA factors were last revised based on a 2010 Academy report that reflected updated payment pattern data but did not examine the payment pattern methodology or the 5% interest rate. The 5% interest rate has been in effect since the inception of the RBC formula, and the report considers all elements of the IIAs. Wilkins also mentioned that in evaluating the IIA factors in this report, the Academy reviewed the Line 4 line of business underwriting risk factors last revised for use in the 2019 RBC formula.

Wilkins said this presentation (Attachment XXX) would also cover the following key topics: 1) summary of results; 2) interest rates; 3) adjustment for catastrophe risk captured in Rcat; 4) safety level calculations; 5) minimum risk charges and year-over-year transition rules; and 6) calculation of indicated line 4 and investment income adjustment (IIA) Factors from the present value indicated risk charges. Botsko said the Working Group plans to discuss comments regarding this report at the Fall National Meeting.

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

SharePoint/NAIC Support Staff Hub/Member Meetings/Summer 2023 National Meeting/Task Forces/CapAdequacy/PCRBC WG/11-16  
Joint PCRBC Cat Risk Minutes.docx

Draft: 8/3/23

Property and Casualty Risk-Based Capital (E) Working Group  
Virtual Meeting  
July 27, 2023

The Property and Casualty Risk-Based Capital (E) Working Group of the Capital Adequacy (E) Task Force met July 27, 2023. The following Working Group members participated: Tom Botsko, Chair (OH); Wanchin Chou, Vice Chair, Jack Broccoli, and Amy Waldhauer (CT); Rolf Kaumann and Mitchell Bronson (CO); Jane Nelson (FL); Judy Mottar (IL); Sandra Darby (ME); Anna Krylova (NM); HauMichael Ying (NY); Will Davis (SC); Miriam Fisk (TX); and Darcy Paskey and Jody Ullman (WI). Also participating were: Elizabeth Perri (AS); Giovanni Muzzarelli, Mitra Sanandajifar, and Rebecca Armon (CA); Travis Grassel (IA); Julie Lederer and Danielle Smith (MO); Lindsay Crawford (NE); Jesse Kolodin (NJ).

1. Adopted its June 16 and April 24 Minutes

Botsko said the Working Group met June 16 and April 24. During these meetings, the Working Group took the following action: 1) adopted its Spring National Meeting minutes; 2) adopted proposal 2023-02-P, which provided a routine annual update to the Line 1 premium and reserve industry underwriting factors in the property/casualty (P/C) risk-based capital (RBC) formula; and 3) adopted proposal 2023-02-P-MOD, which updated the H/F, WC, and CMP reserve factors due to an incorrect calculation.

Chou made a motion, seconded by Darby, to adopt the Working Group's June 16 (Attachment XX) and April 24 (Attachment XX) minutes. The motion passed unanimously.

2. Adopted the Report of the Catastrophe Risk (E) Subgroup

Chou said the Subgroup met July 18. During this meeting, the Subgroup took the following action: 1) adopted its Spring National Meeting minutes; 2) discussed its working agenda; 3) received an update from its Catastrophe Model Technical Review Ad Hoc Group; 4) discussed the wildfire peril impact analysis; 5) heard a presentation from Verisk on a severe convective storms model update and technical review; and 6) discussed the flood insurance market.

Chou made a motion, seconded by Davis, to adopt the report of the Catastrophe Risk (E) Subgroup. The motion passed unanimously.

3. Adopted the 2023 P/C RBC Newsletter

Botsko said the 2023 P/C RBC newsletter reflects the adopted proposals for year-end 2023. He said as mentioned last year, the purpose of the adoption is to consider the content of the newsletter, and the format will later be revised. He said when the formatting of the newsletter is complete, it will be posted to the Working Group's web page.

Chou made a motion, seconded by Darby, to adopt the 2023 P/C RBC newsletter (Attachment XX). The motion passed unanimously.

4. Discussed 2022 RBC Statistics

Botsko said the 2022 P/C RBC statistics were run on June 29. He said there were 2,522 P/C RBC filings loaded onto the NAIC database, up from 2,511 in 2021. He stated that there were 54 companies that triggered an action level in 2022: 1) 27 were in company action level; 2) seven were in regulatory action level; 3) three were in an authorized control level (ACL); and 4) 17 were in a mandatory control level. Also, there were 19 companies that triggered the trend test. However, the aggregate RBC percentage decreased from 617% in 2021 to 586% in 2022 due to the decrease of both ACL and total adjusted capital (TAC) amounts. Botsko also stated that the interested parties suggested that adding the operational risk component will provide a complete picture of the RBC formula. Without hearing any objections, the Working Group agreed to include the operational risk amount in the 2023 RBC statistics.

5. Discussed its Working Agenda

Botsko summarized the changes of the Working Group's 2023 working agenda, which included the following substantial changes: 1) update the Sept. 26 comment from conduct a review on different convective storm models to conduct a review on severe convective storm models, and add an additional comment of "the SG is finishing reviewing the following SCS vendor models: RMS, Verisk, KCC and Corelogic" in the comment section in item P1; 2) remove item #P5 as the proposal 2022-07-P has been adopted at the 2022 Fall National Meeting; and 3) add a new Item P8 for adding pet insurance line in the RBC formula due to the adoption of the Annual Statement Blanks proposal 2023-01BWG.

6. Discussed the Possibility of Reviewing and Analyzing the P/C RBC Charges That Have Not Been Reviewed Since Developed

Botsko said the Risk Evaluation Ad Hoc Group has met a few times since established. During the last meeting, the Ad Hoc Group decided to create three subgroups to potentially streamline the process of making progress on specific topics: 1) Asset Concentration Ad Hoc Subgroup; 2) RBC Purposes and Guidelines Ad Hoc Subgroup; and 3) Geographic Concentration Ad Hoc Subgroup. He encouraged all the interested parties to contact NAIC staff if anyone is interested in joining the ad hoc subgroups. Also, Botsko anticipated that the ad hoc subgroups will start meeting regularly after the Summer National Meeting.

7. Heard Updates on Current P/C RBC Projects from the Academy

Ron Wilkins (American Academy of Actuaries—Academy) said the purpose of the presentation (Attachment XX) is to provide: 1) the background of the report that will be released in the coming days; 2) a summary of the results; and 3) adjustment for catastrophe risk. He stated that the report is currently undergoing final public policy review by the Academy; it should be formally sent to the Working Group in a few days. Botsko said the Working Group is planning to expose the report for a 60-day comment period upon receiving it from the Academy.

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

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Draft: 8/10/23

Catastrophe Risk (E) Subgroup  
Virtual Meeting  
July 18, 2023

The Catastrophe Risk (E) Subgroup of the Property and Casualty Risk-Based Capital (E) Working Group of the Capital Adequacy (E) Task Force met July 18, 2023. The following Subgroup members participated: Wanchin Chou, Chair, Jack Broccoli, and Amy Waldhauer (CT); Jane Nelson, Vice Chair (FL); Rolf Kaumann and Mitchell Bronson (CO); Kevin Clark (IA); Judy Mottar (IL); Sandra Darby (ME); Anna Krylova (NM); HauMichael Ying (NY); Tom Botsko (OH); and Miriam Fisk, Rebecca Armon, and Monica Avila (TX). Also participating were: Elizabeth Perri (AS); Mitra Sanandajifar, Lynne Wehmueller, and Giovanni Muzzarelli (CA); Julie Lederer and Danielle Smith (MO); Jesse Kolodin (NJ); Liz Ammerman and Elizabeth Kelleher Dwyer (RI); and Darcy Paskey and Jody Ullman (WI).

1. Adopted its Spring National Meeting Minutes

Darby made a motion, seconded by Botsko, to adopt the Subgroup's March 21 minutes (*see NAIC Proceedings – Spring 2023, Capital Adequacy (E) Task Force, Attachment Four-B*). The motion passed unanimously.

2. Discussed its Working Agenda

Chou summarized the changes to the Subgroup's 2023 working agenda, which included the following changes in item P1: 1) update the Sept. 26 comment from conducting the review on different convective storm models to conduct a review on severe convective storm models; and 2) add an additional comment of "the SG is finishing reviewing the following SCS vendor models: RMS, Verisk, KCC and CoreLogic" in the comment section. He said the working agenda will be forwarded to the Property and Casualty Risk-Based Capital (E) Working Group for consideration.

3. Received an Update from its Catastrophe Model Technical Review Ad Hoc Group

Chou said the Catastrophe Model Technical Review Ad Hoc Group had three separate meetings with three different modelers—Karen Clarke & Company (KCC), Risk Management Solutions (RMS), and Verisk—to discuss the technical questions after the Spring National Meeting. He also said the Ad Hoc Group will schedule one for CoreLogic shortly after the Summer National Meeting. Jason Butke (Travelers) said the Ad Hoc Group submitted a list of technical questions to the three modeling companies, which covered hazard, vulnerability, and financial model components. He also stated that the modeling companies have been engaged in discussions and helpful in understanding the models. Chou said the goal of this reviewing process is to gain a better understanding of each vendor model to determine whether each model's results are in a reasonable range.

4. Discussed Wildfire Peril Impact Analysis

Chou said as discussed at the Spring National Meeting, the Subgroup members are required to sign nondisclosure agreements (NDAs) with the vendor modeling companies to ease the catastrophe modelers' concerns regarding their proprietary information while evaluating the impacts and determining the appropriate risk-based capital (RBC) catastrophe risk charge for wildfire peril. He stated that five state members have submitted responses so far. He encouraged the rest of the state members to submit their responses to NAIC staff by the end of July so the Subgroup can start the discussion soon.

5. Heard a Presentation from Verisk on a Severe Convective Storms Model Update and Technical Review

Julia Borman (Verisk) said this presentation (Attachment XXX) provides a more in-depth technical presentation to the Subgroup, which includes the following items: 1) an introduction to Verisk extreme event solutions and catastrophe modeling; and 2) approaching severe conductive storm risk with the Verisk severe thunderstorm model for the U.S. Chou said he appreciates that Verisk presented twice to the Subgroup to provide a better understanding on its model. He encouraged all the interested parties to review the materials and provide feedback to the Subgroup during its next meeting.

6. Discussed the Flood Insurance Market

Shana Oppenheim (NAIC) provided a brief update on the National Flood Insurance Program (NFIP) (Attachment XXX), which includes the following topics: 1) a brief overview of the NFIP review; 2) inaccurate flood maps causing disparity in NFIP payments; and 3) what is floating around the U.S. Congress (Congress).

Nancy Watkins (Milliman) provided a presentation on the U.S. private flood market (Attachment XXX), which includes the following items: 1) the market is underserved; 2) a shift in the market; and 3) private flood market dynamics.

Chou expressed appreciation to the presenters for speaking to the Subgroup. He said he believes the presentation will provide some ideas to the Subgroup to determine the possibility of adding Flood into the catastrophe risk component.

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

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## 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 |

<b>DATE:</b> <u>11/1/2022</u>	<b><u>FOR NAIC USE ONLY</u></b>
<b>CONTACT PERSON:</b> <u>Eva Yeung</u>	Agenda Item # <u>2023-16-CR</u>
<b>TELEPHONE:</b> <u>816-783-8407</u>	Year <u>2023</u>
<b>EMAIL ADDRESS:</b> <u>eyeung@naic.org</u>	<b><u>DISPOSITION</u></b>
<b>ON BEHALF OF:</b> <u>Catastrophe Risk (E) Subgroup</u>	<input type="checkbox"/> ADOPTED <span style="float: right;"><u>1<sup>st</sup> release:</u></span>
<b>NAME:</b> <u>Wanchin Chou</u>	<u>2<sup>nd</sup> release:</u>
<b>TITLE:</b> <u>Chair</u>	<input type="checkbox"/> REJECTED <span style="float: right;">_____</span>
<b>AFFILIATION:</b> <u>Connecticut Department of Insurance</u>	<input type="checkbox"/> DEFERRED TO <span style="float: right;">_____</span>
<b>ADDRESS:</b> <u>153 Market St,</u>	<input type="checkbox"/> REFERRED TO OTHER NAIC GROUP
<u>Hartford, CT 06103</u>	<input checked="" type="checkbox"/> EXPOSED <span style="float: right;"><u>1<sup>st</sup> release: 11/16/23</u></span>
	<u>2<sup>nd</sup> release:</u>
	<input type="checkbox"/> OTHER (SPECIFY) _____

#### 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 11/23/22.

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

Revised 11-2013

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

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	9/14/23-9/17/24	Northeast United States	> 25 million
Tropical Storm	Ophelia	9/22/23-9/26/23	East Coast of the United States	> 25 million

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+billion
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 Dujan (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

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 Nepartak	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, Judacan 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

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, Loas	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, Zhehiang, 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

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





Priority 1 – High Priority  
 Priority 2 – Medium Priority  
 Priority 3 – Low Priority

**CAPITAL ADEQUACY (E) TASK FORCE**  
**WORKING AGENDA ITEMS FOR CALENDAR YEAR ~~2023~~2024**

<b>2023 2024 #</b>	<b>Owner</b>	<b>2023 2024 Priority</b>	<b>Expected Completion Date</b>	<b>Working Agenda Item</b>	<b>Source</b>	<b>Comments</b>	<b>Date Added to Agenda</b>
<b>Ongoing Items – P&amp;C RBC</b>							
P1	Cat Risk SG	1		Continue development of RBC formula revisions to include a risk charge based on catastrophe model output:			
			Year-end <del>2023-2024</del> 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	4/26/21 - The SG exposed the referral for a 30-day period. 6/1/21 - The SG forwarded the response to the Climate and Resiliency Task Force. 2/22/22 - The SG adopted proposal 2021-17-CR (adding the wildfire peril for informational purposes only). The SG continues reviewing other perils for possible inclusion in the Rcat. 8/11/22 – The TF adopted Proposal 2022-04-CR (2013-2021 Wildfire Event Lists) 9/26/22 – The SG formed an ad hoc group to conduct review on severe convective storm models. 7/18/23-The SG is finishing reviewing the following SCS vendor models: RMS, Verisk, KCC, and Corelogic. <a href="#">12/2/23-Proposal 2023-15-CR (Convective Storm for Informational Purposes Only Structure) was exposed for a 30-day comment period at the Joint P/C RBC and Cat Risk SG meeting.</a>	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 <del>2020-2025</del> 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.	Refer from Operational Risk Subgroup	1) Sent a referral to the Academy on 6/14/18 conference call.	1/25/2018
P4	P&C RBC WG	1	<del>2023-2024</del> 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.		<a href="#">11/16/23 The Academy provided a presentation on their Underwriting Risk Report at the Joint PCRBC And Cat Risk SG meeting.</a>	6/10/2019
P5	P&C RBC WG	1	2023 Summer Meeting or later	Evaluate the Underwriting Risk Line 1 Factors in the P/C formula.			7/30/2020
P6	Cat Risk SG	1	<del>2024-2025</del> 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.		<a href="#">12/2/23 Proposal 2023-14-P (Pet Insurance) was exposed for a 30-day comment period at the Joint P/C RBC and Cat Risk SG meeting.</a>	7/27/2023
New Items – P&C RBC							

**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 |

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

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

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Health RBC Blanks       | <input checked="" type="checkbox"/> Property/Casualty RBC Blanks  | <input type="checkbox"/> Life and Fraternal RBC Blanks       |
| <input type="checkbox"/> Health RBC Instructions | <input type="checkbox"/> Property/Casualty RBC Instructions       | <input type="checkbox"/> Life and Fraternal RBC Instructions |
| <input type="checkbox"/> Health RBC Formula      | <input checked="" type="checkbox"/> Property/Casualty RBC Formula | <input type="checkbox"/> Life and Fraternal RBC Formula      |
| <input type="checkbox"/> OTHER _____             |   |  |

**DESCRIPTION/REASON OR JUSTIFICATION OF CHANGE(S)**

The proposed change would remove Pet Insurance from Inland Marine line of business and add a new line of business to PR035, PR038, PR123, PR223, PR307, PR700 and PR701 to be consistent with the change in the Annual Statement. However, the RBC charges for R4 and R5 will remain the same as Inland Marine line of business.

**Additional Staff Comments:**

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

Revised 2-2023

**UNDERWRITING RISK  
PR017 – PR018**

Underwriting risk is the largest portion of the risk-based capital charge for most property casualty insurance companies and makes up approximately 55 percent of the aggregate industry risk-based capital prior to the covariance adjustment. Underwriting risk is broken into two components in the RBC formula: the RBC charge calculated for reserves and the RBC charge applied against written premiums.

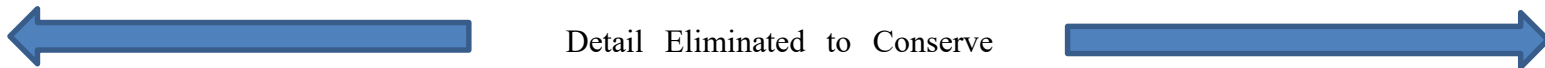
The reserve risk RBC is developed by multiplying a set of RBC factors, which are discounted for investment income and adjusted for each individual company’s own relative experience, times the gross of non-tabular discount net reserves for each of 19 major lines of business. A set of credits is available to these by-line RBC charges for loss-sensitive business. The aggregate reserve risk RBC is then adjusted to allow a credit for the amount of diversification among the 19 lines of business.

The 19 major lines of business largely correspond to the major breakdowns in Schedule P of the annual statement. Calculations for some lines are combined: the occurrence form and claims made form of Other Liability (H1 and H2) are combined; the Special Property and Pet Insurance Plans are combined; 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; 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	<b>0.999</b>	<b>1.047</b>	<b>1.106</b>	<b>0.873</b>	<b>1.026</b>	<b>0.906</b>	<b>0.984</b>	<b>0.994</b>	<b>0.969</b>	<b>0.852</b>
(2) COMPANY DEVELOPMENT	0.999	1.047	1.106	0.873	1.026	0.906	0.984	0.994	0.969	0.852
(3) (2)/(1)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
(4) INDUSTRY LOSS EXPENSE RBC %	0.213	0.179	0.276	0.344	0.494	0.383	0.276	0.304	0.531	0.371
(5) COMPANY RBC % (4)*(3)*.5+(4)*.5	0.213	0.179	0.276	0.344	0.494	0.383	0.276	0.304	0.531	0.371
(6) LOSS & LOSS ADJUSTMENT EXPENSE UNPAID SCH. P PART 1 (in 000s)	0	0	0	0	0	0	0	0	0	0
(7) OTHER DISCOUNT AMOUNT NOT INCLUDED IN LOSS & LOSS ADJUSTMENT EXPENSE UNPAID IN SCH. P PART 1 (in 000s)	0	0	0	0	0	0	0	0	0	0
(8) ADJUSTMENT FOR INVESTMENT INCOME	0.938	0.928	0.911	0.830	0.876	0.865	0.883	0.890	0.852	0.940
(9) BASE LOSS & LOSS ADJUSTMENT EXPENSE RESERVE RISK- BASED CAPITAL (000s) MAX {0,[(5)+1*(8)-1]*[(6)+(7)]} zero if Line [(6)+(7)] is negative	0	0	0	0	0	0	0	0	0	0
(10) % DIRECT LOSS SENS	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
(11) % ASSUMED LOSS SENS	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
(12) LOSS SENSITIVE DISCOUNT (in 000s)	0	0	0	0	0	0	0	0	0	0
(13) LOSS & LOSS ADJUSTMENT EXPENSE RBC AFTER DSCT (in 000s) L(09) - L(12)	0	0	0	0	0	0	0	0	0	0
(14) LOSS CONCEN FACTOR										
(15) TOTAL NET RESERVE RBC x1000 (converted to whole dollars)										

This worksheet is to show the results of the calculation of Underwriting Risk - Reserves

Enter data in PR035 through PR039, PR100 through PR701 and PROTH

(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
SPECIAL PROPERTY/PET INSURANCE PLANS	AUTO PHYSICAL DAMAGE	OTHER (INCLUD CREDIT,A&H)	FINANCIAL / MORTGAGE GUARANTY	INTL	REIN. PROPERTY & FINANCIAL LINES	REIN. LIABILITY	PL	WARRANTY	TOTAL
<b>0.983</b>	<b>1.016</b>	<b>0.946</b>	<b>0.674</b>	<b>2.414</b>	<b>0.924</b>	<b>1.024</b>	<b>0.874</b>	<b>0.995</b>	XXX
<b>0.983</b>	1.016	0.946	0.674	2.414	0.924	1.024	0.874	0.995	XXX
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	XXX
0.246	0.155	0.220	0.179	0.359	0.415	0.656	0.802	0.371	XXX
0.246	0.155	0.220	0.179	0.359	0.415	0.656	0.802	0.371	XXX
0	0	0	0	0	0	0	0	0	0
<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
0.966	0.976	0.967	0.926	0.874	0.901	0.838	0.841	0.940	XXX
0	0	0	0	0	0	0	0	0	0
<b>0.000%</b>	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	XXX
<b>0.000%</b>	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	XXX
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
									1.000
									0

## UNDERWRITING RISK - NET WRITTEN PREMIUMS PR018

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
SCH P LINE OF BUSINESS	H/F	PPA	CA	WC	CMP	MPL OCCURRENCE	MPL CLMS MADE	SL	OL	FIDELITY / SURETY
(1) INDUSTRY AVERAGE LOSS & LOSS ADJUSTMENT EXPENSE RATIO	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

(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
<b>0.550</b>	<b>0.727</b>	<b>0.702</b>	<b>0.209</b>	<b>1.136</b>	<b>0.578</b>	<b>0.743</b>	<b>0.597</b>	<b>0.652</b>	XXX
<b>0.550</b>	0.727	0.702	0.209	1.136	0.578	0.743	0.597	0.652	XXX
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	XXX
0.863	0.836	0.935	1.598	1.234	1.170	1.322	1.263	0.854	XXX
0.863	0.836	0.935	1.598	1.234	1.170	1.322	1.263	0.854	XXX
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	XXX
0.949	0.971	0.947	0.884	0.905	0.893	0.777	0.774	0.904	XXX
<b>0</b>	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
<b>0.000%</b>	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	XXX
<b>0.000%</b>	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	XXX
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
									1.000
									0



## UNDERWRITING AND INVESTMENT EXHIBIT - PREMIUMS WRITTEN PR035

(1) Did your company write Accident and Health Insurance in 2023? 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. Farnowners Multiple Peril	0	xxx	xxx
4. Homeowners Multiple Peril	0	xxx	xxx
5.1 Commercial Multiple Peril (Non-Liability Portion)	0	xxx	xxx
5.2 Commercial Multiple Peril (Liability Portion)	0	xxx	xxx
6. Mortgage Guaranty	0	xxx	xxx
8. Ocean marine	0	xxx	xxx
9.1 Inland marine	0	xxx	xxx
9.2 Pet Insurance Plans	0	xxx	xxx
10. Financial Guaranty	0	xxx	xxx
11.1 Medical Professional Liability - Occurrence	0	xxx	xxx
11.2 Medical Professional Liability - Claims-Made	0	xxx	xxx
12. Earthquake	0	xxx	xxx
13.1 Comprehensive (Hospital and Medical) Individual	0	0	0
13.2 Comprehensive (Hospital and Medical) Group	0	0	0
14. Credit Accident and Health (group and individual)	0	0	0
15.1 Vision Only	0	0	0
15.2 Dental Only	0	0	0
15.3 Disability Income	0	0	0
15.4 Medicare Supplement	0	0	0
15.5 Medicaid Title XIX	0	0	0
15.6 Medicare Title XVIII	0	0	0
15.7 Long-Term Care	0	0	0
15.8 Federal Employees Health Benefits Plan	0	0	0
15.9 Other Health	0	0	0
16. Workers' Compensation	0	xxx	xxx
17.1 Other Liability - Occurrence	0	xxx	xxx
17.2 Other Liability - Claims-Made	0	xxx	xxx
17.3 Excess Workers' Compensation	0	xxx	xxx
18.1 Products Liability - Occurrence	0	xxx	xxx
18.2 Products Liability - Claims-Made	0	xxx	xxx
19.1 Private Passenger Auto No-Fault (Personal Injury Protection)	0	xxx	xxx
19.2 Other Private Passenger Auto Liability	0	xxx	xxx
19.3 Commercial Auto No-Fault (Personal Injury Protection)	0	xxx	xxx
19.4 Other Commercial Auto Liability	0	xxx	xxx
21.1 Private Passenger Auto Physical Damage	0	xxx	xxx
21.2 Commercial Auto Physical Damage	0	xxx	xxx
22. Aircraft (all perils)	0	xxx	xxx
23. Fidelity	0	xxx	xxx
24. Surety	0	xxx	xxx
26. Burglary and theft	0	xxx	xxx
27. Boiler and machinery	0	xxx	xxx
28. Credit	0	xxx	xxx
29. International	0	xxx	xxx
30. Warranty	0	xxx	xxx
31. Reinsurance Property	0	xxx	xxx
32. Reinsurance Liability	0	xxx	xxx
33. Reinsurance Financial Lines	0	xxx	xxx
34. Aggregate Write-Ins for Other Lines of Business	0	xxx	xxx
35. TOTALS	0	0	0

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

**MEDICAL TABULAR RESERVE DISCOUNT PR038**

**Underwriting Risk - Reserves**

Annual Statement Source: Medical Tabular Reserve Discount

**PR017**

	<u>Line</u>	<u>Column</u>	<u>Value (000 Omitted)</u>
1 Homeowner/Farmowner	7	1	0
2 Private Pass Auto Liab	7	2	0
3 Comm Auto Liab	7	3	0
4 Workers' Comp	7	4	0
5 Comm Multi Peril	7	5	0
6 Medical Professional Liability - Occurrence	7	6	0
7 Medical Professional Liability - Claims-Made	7	7	0
8 Special Liab	7	8	0
9 Other Liab - Occurrence	7	9	0
10 Other Liab - Claims Made	7	9	0
11 Fidelity & Surety	7	10	0
12 Special Property	7	11	0
13 Auto Physical Damage	7	12	0
14 Other (Credit, A&H)	7	13	0
15 Fin Guaranty/Mrtg Guaranty	7	14	0
16 International	7	15	0
17 Medical Tabular Reserve Discount - Reinsurance :Property	7	16	0
18 Medical Tabular Reserve Discount - Reinsurance :Liability	7	17	0
19 Medical Tabular Reserve Discount - Reinsurance :Financial Lines	7	16	0
20 Product Liab - Occurrence	7	18	0
21 Product Liab - Claims Made	7	18	0
22 Warranty	7	19	0
<b>23 Pet Insurance Plans</b>	<b>7</b>	<b>11</b>	<b>0</b>
24 Total	7	20	0

**Underwriting Risk - Premiums**

Annual Statement Source : STMTINCOME (page 4, col.1 ln 4)

**PR018**

	<u>Line</u>	<u>Column</u>	<u>Value</u>
25 Other Underwriting Expenses Incurred	6	1	0

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	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 3U - PET INSURANCE PLANS PR307**

	(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 7A SECTION 1 PRIMARY LOSS SENSITIVE CONTRACTS PR700**

Schedule P Part 1	(3) % of Loss Sens to Total Net Loss & Expense Unpd	(6) % of Loss Sens to Total Net Premiums Written
1. Homeowners/Farmowners	0.000%	0.000%
2. Private Passenger Auto Liab./Medical	0.000%	0.000%
3. Commercial Auto/Truck Liab./Medical	0.000%	0.000%
4. Workers' Compensation	0.000%	0.000%
5. Commercial Multiple Peril	0.000%	0.000%
6. Medical Professional Liability - Occurrence	0.000%	0.000%
7. Medical Professional Liability - Claim-Made	0.000%	0.000%
8. Special Liability	0.000%	0.000%
9. Other Liability - Occurrence	0.000%	0.000%
10. Other Liability - Claims-Made	0.000%	0.000%
11. Special Property	0.000%	0.000%
12. Auto Physical Damage	0.000%	0.000%
13. Fidelity/Surety	0.000%	0.000%
14. Other (Credit, A&H)	0.000%	0.000%
15. International	0.000%	0.000%
19. Products Liability - Occurrence	0.000%	0.000%
20. Products Liability - Claims-Made	0.000%	0.000%
21. Financial Guaranty/Mortgage Guaranty	0.000%	0.000%
22. Warranty	0.000%	0.000%
<b>23. Pet Insurance Plans</b>	<b>0.000%</b>	<b>0.000%</b>

**SCHEDULE P PART 7B SECTION 1 REINSURANCE LOSS SENSITIVE CONTRACTS PR701**

Schedule P Part 1	(3) % of Loss Sens to Total Net Loss & Expense Unpd	(6) % of loss sens to Total Net Premiums Written
1. Homeowners/Farmowners	0.000%	0.000%
2. Private Passenger Auto Liab./Medical	0.000%	0.000%
3. Commercial Auto/Truck Liab./Medical	0.000%	0.000%
4. Workers' Compensation	0.000%	0.000%
5. Commercial Multiple Peril	0.000%	0.000%
6. Medical Professional Liability - Occurrence	0.000%	0.000%
7. Medical Professional Liability - Claim-Made	0.000%	0.000%
8. Special Liability	0.000%	0.000%
9. Other Liability - Occurrence	0.000%	0.000%
10. Other Liability - Claims-Made	0.000%	0.000%
11. Special Property	0.000%	0.000%
12. Auto Physical Damage	0.000%	0.000%
13. Fidelity/Surety	0.000%	0.000%
14. Other	0.000%	0.000%
15. International	0.000%	0.000%
16. Reinsurance - Property	0.000%	0.000%
17. Reinsurance Liability	0.000%	0.000%
18. Reinsurance -Financial Lines	0.000%	0.000%
19. Products Liability - Occurrence	0.000%	0.000%
20. Products Liability - Claims-Made	0.000%	0.000%
21. Financial Guaranty/Mortgage Guaranty	0.000%	0.000%
22. Warranty	0.000%	0.000%
<b>23. Pet Insurance Plans</b>	<b>0.000%</b>	<b>0.000%</b>

## Capital Adequacy (E) Task Force

### RBC Proposal Form

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Capital Adequacy (E) Task Force                      | <input type="checkbox"/> Health RBC (E) Working Group     | <input type="checkbox"/> Life RBC (E) Working Group                         |
| <input checked="" type="checkbox"/> Catastrophe Risk (E) Subgroup             | <input type="checkbox"/> Investment RBC (E) Working Group | <input type="checkbox"/> Longevity Risk (A/E) Subgroup                      |
| <input type="checkbox"/> Variable Annuities Capital. & Reserve (E/A) Subgroup | <input type="checkbox"/> P/C RBC (E) Working Group        | <input type="checkbox"/> RBC Investment Risk & Evaluation (E) Working Group |

<p style="text-align: right;"><b>DATE:</b> <u>12/02/23</u></p> <p><b>CONTACT PERSON:</b> <u>Eva Yeung</u></p> <p><b>TELEPHONE:</b> <u>816-783-8407</u></p> <p><b>EMAIL ADDRESS:</b> <u>eyeung@naic.org</u></p> <p><b>ON BEHALF OF:</b> <u>P/C RBC (E) Working Group</u></p> <p><b>NAME:</b> <u>Tom Botsko</u></p> <p><b>TITLE:</b> <u>Chair</u></p> <p><b>AFFILIATION:</b> <u>Ohio Department of Insurance</u></p> <p><b>ADDRESS:</b> <u>50 West Town Street, Suite 300</u> <u>Columbus, OH 43215</u></p>	<p style="text-align: center;"><b><u>FOR NAIC USE ONLY</u></b></p> <hr/> <p>Agenda Item # <u>2023-15-CR</u> Year <u>2024</u></p> <hr/> <p style="text-align: center;"><b><u>DISPOSITION</u></b></p> <p><b>ADOPTED:</b></p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input type="checkbox"/> WORKING GROUP (WF) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p><b>EXPOSED:</b></p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input type="checkbox"/> WORKING GROUP (WG) _____</p> <p><input checked="" type="checkbox"/> SUBGROUP (SG) <u>12/02/23</u></p> <p><b>REJECTED:</b></p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p><b>OTHER:</b></p> <p><input type="checkbox"/> DEFERRED TO _____</p> <p><input type="checkbox"/> REFERRED TO OTHER NAIC GROUP _____</p> <p><input type="checkbox"/> (SPECIFY) _____</p>
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#### IDENTIFICATION OF SOURCE AND FORM(S)/INSTRUCTIONS TO BE CHANGED

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Health RBC Blanks       | <input checked="" type="checkbox"/> Property/Casualty RBC Blanks  | <input type="checkbox"/> Life and Fraternal RBC Blanks       |
| <input type="checkbox"/> Health RBC Instructions | <input type="checkbox"/> Property/Casualty RBC Instructions       | <input type="checkbox"/> Life and Fraternal RBC Instructions |
| <input type="checkbox"/> Health RBC Formula      | <input checked="" type="checkbox"/> Property/Casualty RBC Formula | <input type="checkbox"/> Life and Fraternal RBC Formula      |
| <input type="checkbox"/> OTHER _____             |   |  |

#### DESCRIPTION/REASON OR JUSTIFICATION OF CHANGE(S)

The proposed change may add severe convective storm as one of the catastrophe perils for informational purposes only in the Rcat component. While the Catastrophe Risk (E) Subgroup reviewed the possibility of expanding the current catastrophe framework to include other perils that may experience a greater tail risk under projected climate-related trends, the severe convective storm has been identified as catastrophe perils 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 items from this third group of four 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 three items from this third group of four 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?					
		(6) 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>	(1) <u>RBC Amount</u>
(1) Total Earthquake Catastrophe Risk	PR027A L(10) C(7)	0
(2) Total Hurricane Catastrophe Risk	PR027B L(10) C(7)	0
(3) Total Wildfire Catastrophe Risk	PR027C L(10)C(7)	0
<b>(4) Total Convective Storms Risk</b>	<b>PR027D L(10)C(7)</b>	<b>0</b>
(5) Total Catastrophe Risk (R <sub>cat</sub> )	SQRT(L(1) <sup>2</sup> + L(2) <sup>2</sup> )	0
<b>(5a) Total Catastrophe Risk (R<sub>cat</sub> For Informational Purposes Only)</b>	SQRT(L(1) <sup>2</sup> + L(2) <sup>2</sup> +L(3) <sup>2</sup> +L(4) <sup>2</sup> )	<b>0</b>

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

**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.

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	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		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.

TO: Tom Botsko, Chair of the Property and Casualty Risk-Based Capital (E) Working Group

FROM: John Rehagen, Acting Chair of the Reinsurance (E) Task Force

RE: 2023 Due Diligence Review of Qualified Jurisdictions & Reciprocal Jurisdictions

DATE: November 16, 2023

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### **Executive Summary & Recommendation**

At the 2023 Summer National Meeting call of the Reinsurance (E) Task Force, it was noted that a project had been started by NAIC staff to create a new disclosure to collect more information of insurers catastrophe reinsurance programs. For background, with the recent catastrophe-related insolvencies in the market and increasing cost of CAT reinsurance coverage, state insurance regulators have identified a need to collect additional detail from insurers on the structure of their catastrophe reinsurance program and any changes from the prior year on an annual basis. As such information could be viewed as confidential and proprietary, and as it is closely related to the existing PR027 RCAT charge in Property/Casualty RBC, the collection of additional information on an insurer's catastrophe reinsurance program is being proposed through a series of questions added to the PR027 Catastrophe Risk Interrogatories included in the RBC Blanks.

The first draft of the proposed new disclosure was exposed for comments on Sept. 21, and two comment letters were received. As a result of the comment letters, NAIC staff made changes to their draft document, which is included in this referral. The Task Force reviewed these changes on its call on Nov. 16, and agreed with NAIC staff's changes and recommend that the Property and Casualty Risk-Based Capital (E) Working Group use that as their working document going forward. All these documents are included as attachments to this referral.

We recommend that the Property and Casualty Risk-Based Capital (E) Working Group expose the updated working copy of the proposal at its during the Fall National Meeting. Reinsurance (E) Task Force members and staff support will be available to assist with any questions during this process.

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

- |  |  |  |
|--|--|--|
| <input 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 PR027 RCAT charge in Property/Casualty RBC, the collection of additional information on an insurer's catastrophe reinsurance program is being proposed through a series of questions added to the PR027 Catastrophe Risk Interrogatories included in the RBC Blanks.

#### Additional Staff Comments:

The RBC Blanks proposal has been developed, exposed for public comment and discussed in detail through the meetings of the Reinsurance (E) Task Force to ensure that it meets regulatory needs and is fit for purpose.

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

**Revised 2-2023**

**INTERROGATORY ON CATASTROPHE RISK REINSURANCE PROGRAM PR027 (This interrogatory is for all natural catastrophe perils, and is not limited to earthquake, hurricane and wildfire.)**

- (1) Provide a narrative description of the natural catastrophe reinsurance program in place at the insurer, by peril where appropriate, including but not limited to:
  - (1a) Traditional reinsurance coverage in place (e.g., aggregate excess of loss, aggregate stop loss) and layers thereof, attachment points, participating reinsurers (affiliated/not affiliated), exhaustion limits, capacity for each category of risk transfer, information on existing quota share and related attachment points, reinstatement provisions, etc.

[Redacted]

- (1b) Non-traditional alternatives to reinsurance (e.g., catastrophe bonds and other insurance-linked securities, sidecars, parametric coverage, weather derivatives, etc.)

[Redacted]

- (2) Provide a graphical representation of the catastrophe reinsurance program (i.e., structure chart or reinsurance tower) in place at the insurer, by peril where appropriate. Please include any relevant data that is requested in Question (1a) above.

[Redacted]

(3)  
Y/N

- (3) Have there been any significant changes in the reinsurance program structure from the prior year (Y/N)

- (3a) Describe any significant changes from the prior year:

[Redacted]

[Redacted]

- (4) Provide the annual program renewal date(s):

	(4a) Reinsurance Treaty	(4b) Begin Date	(4c) End Date
0000001			
0000002			
0000003			
0000004			
0000005			
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0000007			
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(999999)	xxxx	xxxx	xxxx
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November 7, 2023

John Rehagen, Chair  
Reinsurance (E) Task Force  
National Association of Insurance Commissioners  
c/o Jake Stultz and Dan Schelp  
Via email: [jstultz@naic.org](mailto:jstultz@naic.org) and [dschelp@naic.org](mailto:dschelp@naic.org)

**Re: Joint Trades Comments Regarding RBC Reinsurance Program Interrogatory**

Dear Mr. Rehagen:

Thank you for the opportunity to comment on the proposed P&C Risk-Based Capital Interrogatory (the proposal), which is intended to collect additional detail from insurers on the structure of their natural catastrophe reinsurance program, including any changes from the prior year. This letter is submitted on behalf of the American Property Casualty Insurance Association (APCIA), the National Association of Mutual Insurance Companies (NAMIC) and the Reinsurance Association of America (RAA).

APCIA is the primary national trade association for home, auto, and business insurers. APCIA promotes and protects the viability of private competition for the benefit of consumers and insurers, with a legacy dating back 150 years. APCIA members represent all sizes, structures, and regions – protecting families, communities, and businesses in the U.S. and across the globe.

NAMIC consists of more than 1,500 member companies, including seven of the top 10 property/casualty insurers in the United States. The association supports local and regional mutual insurance companies on main streets across America as well as many of the country's largest national insurers. NAMIC member companies write \$357 billion in annual premiums and represent 69 percent of homeowners, 56 percent of automobile, and 31 percent of the business insurance markets. Through its advocacy programs NAMIC promotes public policy solutions that benefit member companies and the policyholders they serve and fosters greater understanding and recognition of the unique alignment of interests between management and policyholders of mutual companies.

The RAA is a national trade association representing reinsurance companies doing business in the United States. RAA membership is diverse, including reinsurance underwriters and intermediaries licensed in the U.S. and those that conduct business on a cross-border basis. The RAA also has life reinsurance affiliates and insurance-linked securities (ILS) fund managers and market participants that are engaged in the assumption of property/casualty risks. The RAA represents its members before state, federal and international bodies.

The RBC proposal form provided the following justification for the proposal:

*Given the recent catastrophe-related insolvencies and increasing cost of CAT reinsurance coverage, state insurance regulators have identified a need to collect additional detail from insurers on the structure of their catastrophe reinsurance program on an annual basis.*

We fully appreciate and support insurance regulators' need to understand insurers' natural catastrophe risk exposure and the reinsurance programs designed to mitigate these risks. We also appreciate that the proposal is designed as an RBC interrogatory to ensure its confidentiality. After reviewing the proposal and discussing it with our members, we had a number of questions about the purpose of the proposal, its scope, and whether its proposed format would provide useful information to state regulators. To address these questions and ensure our comments are fully informed and useful, we held conversations with a member of the Task Force and several NAIC staff. Following is a brief summary of a few of the questions and the answers provided by the NAIC:

Q1 Have there in fact been many recent catastrophe related insolvencies? 2022 P&C RBC Aggregate Report indicates continued improvement in the number of insurers at various RBC action levels.

*A1 Yes, there have been several recent insolvencies in certain catastrophe prone states, but there have also been recent insolvencies and impairments in other states, particularly those exposed to secondary perils such as convective storms. Some smaller insurers are reporting challenges in affording sufficient reinsurance coverage and are retaining more catastrophe risk.*

Q2 Current RBC RCat requires reporting catastrophe risk, net of reinsurance, for Hurricane, EQ and Windstorm (information only) at the 50, 100, 250 and 500 return periods. The change RCat values from prior periods would provide directional and quantitative information about net catastrophe exposure. Do the states really need the high level of detail in the proposal for all insurers subject to RCat reporting?

*A2 Yes. Several states have been requesting this information annually from many of their domestic insurers, and while the reinsurance program is considered in detail on financial examinations, that process is too infrequent. An annual requirement would provide all states with this information for each of their domestic insurers.*

Q3 Has the NAIC considered that most insurance groups purchase insurance at the group level? The disclosures in the proposal would have to be allocated to individual RBC reporting entities and is unlikely to provide consistent and useful information.

*A3 The Task Force might consider allowing group reporting.*

Q4 Would the NAIC consider limiting the scope of the proposal? RBC aggregate data shows nearly 1400 reporting entities with greater than a 1000% RBC ratio. Large groups are required to report similar information in their ORSA, Annual Registration Statement and in public reporting to the SEC.

*A4 The Task Force might consider limiting the scope of the proposal if industry suggested thresholds would not exclude insurers that lack sufficient reinsurance programs for natural catastrophe perils.*

Q5 The narrative description in the proposal is quite detailed, requiring a description of the natural catastrophe reinsurance program by peril, and separately providing granular program details (including type of coverage, layers, attachment points, limits, reinstatement provisions, etc.) for traditional and non-traditional reinsurance, and a graphical representation of the reinsurance program. This level of detailed reporting would be a significant compliance burden for many insurers and is often not available on a legal entity basis.

*A5 The proposal was designed based on public company disclosures. Regulators expect that insurers also report at this level of detail to their management and board of directors.*

We appreciate the dialogue with the NAIC about the purpose of the proposal and the rationale for its current design. We agree with the NAIC that state regulators should expect insurers to have robust processes and controls in place to manage natural catastrophe risk through an effective reinsurance program and through other means. We request that you consider the following suggestions for improvement to the proposal.

Group Reporting Option:

Public company financial reporting is reported on a consolidated basis, with details provided only for material amounts and risks. Based on the trades review of several large insurance groups' 10K filings, none report the level of detail requested in the proposal and none provide a reinsurance coverage tower graphic. Because catastrophe risk is managed, and reinsurance is purchased at the group level, the legal entity detail requested in the proposal will be challenging to complete and is unlikely to provide useful information to state regulators. Purchasing reinsurance protection at the group level, provides coverage for multiple catastrophe perils, provides administrative efficiency, and provides more effective coverage, since it covers several potential natural catastrophe losses in the group and is not sub-limited to specific legal entities. Multiple cedant reinsurance contracts require allocation agreements that allocate premiums and recoveries, but many elements of the proposal, such as coverage limits, attachments points, etc. cannot be allocated to individual entities. If these elements were allocated to individual entities, they would not provide useful information.

Example: An insurance group has a multiple cedant reinsurance contract that pays \$5 million XS of \$5 million and is spread among 5 entities in the group that write equal premiums. These entities might report \$1 million of limit each. If company A has a \$2 million loss from a covered event, but none of its affiliates have a loss from that event, a reader of this interrogatory might assume that company A has reinsurance protection, but because the reinsurance contract attaches at \$5 million, there would be no recovery.



We request that the Task Force consider modifying the proposal to allow group reporting rather than entity level reporting. Group level reporting is consistent with how insurance groups manage their catastrophe risks and artificial entity level allocations will not provide meaningful or comparable information to state regulators. We recommend that the interrogatory be prepared on a group level, include a list of the legal entities included in the group and perhaps also provide a summary of the allocation agreement. Identical filings could be included in each individual entity's RBC Interrogatory.

Material Perils:

Based on our review of several public filings, no reporting entities that we observed report the requested level of detail in the proposal for material natural catastrophe perils. Often this is broken out separately for hurricane and earthquake and frequently for only two major geographic areas (e.g., U.S. and Canada or U.S. and non-U.S.) Sometimes this information is only provided on an all perils basis world-wide. Providing this level of detail for immaterial risks will be time consuming, is inconsistent with financial reporting requirements for GAAP and Statutory Accounting and is unlikely to provide useful information to state insurance regulators.

Reinsurance Tower Graphic:

None of the public companies we observed provided a graphical presentation of the reinsurance program in their public filings. This is likely because they have overlapping reinsurance coverage for multiple perils, purchase reinsurance using a variety of different programs covering several geographic regions, use multiple, varying reinsurance structures for the same or similar risks and use facultative reinsurance cover for individual policies for program business. As a result, such graphical presentations would be very difficult to prepare and are unlikely to yield useful information. Preparing the requested graphics by peril will be costly and will unlikely provide useful information to state regulators.

We suggest the Task Force consider requiring separate reinsurance tower graphics for the top two or three perils that are material to the reporting entity's catastrophe reinsurance program. Based on our discussions with reinsurance intermediaries, most smaller insurers typically have only one major reinsured catastrophe peril, and do prepare a reinsurance tower graphic or receive it from their broker.

Redefining the Scope:

According to NAIC staff, approximately 870 RBC reporting entities are subject to RCat currently. This group is likely to grow if and when wildfire risk, convective storm risk and other catastrophe perils are eventually included in the RCat requirement. Basing the proposal only on insurers subject to RCat may in fact miss many insurers that are exposed to catastrophe risks other than hurricane and earthquake. For those insurers, a separate request of the insurer, as part of the annual financial analysis process, may be the best way for state insurance regulators to obtain information about catastrophe exposed insurers' reinsurance programs.

In order to better direct this requirement toward insurers facing increased solvency risk, the Task Force should consider narrowing the scope to focus on insurers with a higher risk of financial impairment or a higher risk of triggering an RBC action level as a consequence of their natural catastrophe risk and reinsurance program. A more focused scope should include insurers with significant catastrophe risk net of reinsurance, a high reliance on reinsurance to manage their catastrophe risk and perhaps include RBC ratios as an additional filter. Based on our analysis of annual statement data and review of several public company 10K filings, we suggest the following potential scope thresholds for consideration by the Task Force.

Proposed Scope Thresholds:

The following scope thresholds would be more effective identifying insurers that have significant net catastrophe exposure and that should be subject to the proposed RBC interrogatory and increased supervisory attention.

1. RBC Ratio below 1000% AND Reinsurance Utilization Rate greater than 30% (instead of reinsurance utilization, the Task Force could use a ratio derived from Schedule F, Part 6 “Restatement of Balance Sheet to Identify Net Credit for Reinsurance” at perhaps >50% of surplus)

OR

2. Probable Maximum Loss (PML) net of reinsurance as a percentage of Surplus of 25% or more

An RBC ratio greater than 1000% should in most cases indicate that the risk of insolvency in the near future is remote. However, RBC alone might not identify insurers that are heavily reliant on reinsurance if their net retention is low or if the catastrophe exposure is not a peril included in RCat. As a result, we propose pairing RBC with a reinsurance utilization rate threshold. Reinsurance utilization is typically measured as ceded reinsurance premium divided by gross written premiums and is a measure of the reliance on reinsurance. Industry aggregate data show that the industry aggregate reinsurance utilization ratio fluctuates in a very narrow band around 18%, so 30% may be a reasonable threshold. Based on our analysis of NAIC Annual Statement data these two criteria would result in 524 legal entities in scope for the proposed interrogatory.

Alternatively, the Task force might consider using a ratio of the effect of reinsurance on the balance sheet as a percentage of surplus, which can be derived easily from data in Schedule F, Part 6. We have not performed an analysis of this alternative using Annual Statement data, but a reasonable threshold might be a net benefit of reinsurance of 50% or more of an insurer’s surplus.

We are proposing net PML as a percentage of surplus as an additional threshold. This information is available in the RCat filings and the Annual Statement, so should be easily verifiable for any insurer currently subject to RCat. We believe that this threshold is more likely to focus regulators’ attention on the types of insurers that prompted this proposal. Since this data is confidential, we do not have the information to make an informed recommendation on the threshold but based on public company reporting and other public information, perhaps net PML of 25% of surplus at the 1-in-250 return period would be a good starting point. The Task force might want to consider

adding a change in PML to surplus ratios as an additional criterion. Finally, while the current scope of the proposal only includes insurers subject to RCat, using the net PML criteria could form the basis for separate state requests for similar information from other insurers that may have significant natural catastrophe risk other than hurricane and earthquake risk.

Thank you again for the opportunity to provide comments. We look forward to further engagement on these issues.

Sincerely,

Joseph B. Sieverling, SVP and Director of Financial Services  
Reinsurance Association of America

Matthew Vece, Director, Financial & Tax Counsel  
American Property and Casualty Insurance Association

Colleen W. Scheele, Public Policy Counsel and Director of Financial and Tax Policy  
National Association of Mutual Insurance Companies

cc: Tom Botsko, Chair Property Casualty RBC (E) Working Group  
Wanchin Chou, Chair, Catastrophe Risk (E) Subgroup

**Association of Bermuda Insurers and Reinsurers**

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Tel: 441 294-7221

600 Pennsylvania AVE SE  
Front 2, #15872  
Washington, DC 20003-9998  
Tel: 202-783-2434

October 30, 2023

Director Chlora Lindley-Myers (MO), Chair  
c/o John Rehagen  
Reinsurance (E) Task Force  
National Association of Insurance Commissioners

NAIC staff: [jstultz@naic.org](mailto:jstultz@naic.org); [dschelp@naic.org](mailto:dschelp@naic.org)

**RE: Proposed New Disclosures for Catastrophe Reinsurance Programs for P&C RBC**

On behalf of the 31 members of The Association of Bermuda Insurers and Reinsurers ("ABIR"), we kindly thank the National Association of Insurance Commissioners ("NAIC") for the opportunity to comment on its consultation of the proposed new disclosures for catastrophe reinsurance programs for P&C RBS ("Disclosures"), which is currently exposed until November 7, 2023.

ABIR represents the public policy interests of Bermuda's leading insurers and reinsurers. ABIR members operate from more than 150 countries around the world. ABIR members employ over 37,000 Americans in the U.S. and for over three decades have protected consumers around the world by providing affordable and accessible insurance protection and peace of mind.

The Bermuda market makes up about 35% of the global reinsurance market based on property & casualty net premiums earned. ABIR members at year end 2022 wrote global group gross written premiums of \$145 billion and net premium written of US\$111.8 billion. Since 1997, Bermuda insurers & reinsurers have paid nearly half a trillion USD in claim payments to American consumers and business, predominantly for natcat, specialty and financial risk recovery.

As a jurisdiction, Bermuda earned the designation as one of the inaugural, NAIC reciprocal jurisdictions effective January 1, 2020. The Bermuda market is proud of its leadership role in providing risk-diversifying capital through international reinsurance.

**The Disclosures**

We understand the catalyst for this development of this proposed annual disclosure is recent catastrophe-related insurer insolvencies and the increasing cost of catastrophe reinsurance coverage. We recognize and appreciate the NAIC's desire to ensure that regulated insurers are adequately reinsured for catastrophes, and we encourage the development of catastrophe reinsurance market. We acknowledge that the Disclosures may results in the identification of gaps in a cedants reinsurance program and therefore could possibly have a positive impact to reinsurers.

**Recommendations**

We believe that proposed approach which requires each insurer, by individual program, to provide detailed disclosures that could lead to violations of confidentiality provisions and discourage certain reinsurers from providing capacity in some situations. Further, we believe that such detailed disclosures could jeopardize the development of reinsurance structures for future catastrophe protection. While we recognize that the state regulators must have oversight into regulated insurers' catastrophe risk protection, we would suggest that the required disclosures be limited to providing the aggregate protection from traditional and non-traditional catastrophe reinsurance programs along with a narrative describing such programs.

ABIR and its member companies stand ready to provide additional information to the NAIC and state insurance regulators as may be required during this consultative process.

If you have any questions in the meantime, please do not hesitate to contact Suzanne Williams-Charles on 441-705-4422 or at [suzanne.williams-charles@abir.bm](mailto:suzanne.williams-charles@abir.bm).

Sincerely,



John Huff  
President and CEO



Suzanne Williams-Charles  
Director of Policy and Regulation, Corporate Secretary  
And Data Privacy Officer

**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)

[Redacted]

- (2a) If yes, describe any significant changes from the prior year:

[Redacted]

(3)  
MM/DD/YYYY

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

[Redacted]

# Property and Casualty Risk-Based Capital Committee—Release of Recent Report

Ronald Wilkins, MAAA, FCAS  
Chairperson  
Property and Casualty Risk-Based Capital Committee

Highlights of Recently Issued Report to the NAIC on P&C Underwriting Factors and Investment Income Adjustment (IIA) Factors

December 2, 2023

# About the Academy



- The American Academy of Actuaries is a 19,500-member professional association whose mission is to serve the public and the U.S. actuarial profession. For more than 50 years, the Academy has assisted public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues.
- The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

For more information, please visit:

[www.actuary.org](http://www.actuary.org)



Topics Covered Today - Key topics in the August 2023 Report except for payment patterns and the Present Value (PV) method, which were discussed in previous presentations.

- Summary of Results
- Interest Rates
- Adjustment for Catastrophe Risk Captured in  $R_{\text{Cat}}$
- Safety Level Calculations
- Minimum Risk Charges and Year-Over-Year Transition Rules
- Calculation of indicated Line 4 and IIA factors from PV indicated risk charges.

## Status of Final Report

- On August 30, 2023, the American Academy of Actuaries published on its website a report to the NAIC P&C RBC Working Group: [Update to P&C RBC Underwriting Factors and Investment Income Adjustment Factors](#)

Please refer to the final report for explanations of the methodology and implications of the analysis which produced the results presented here.

# Indicated Changes in Risk Charges by Line

(1)	Premium Risk			Reserve Risk		
	(2)	(3)	(4)= (3)/(2)-1	(5)	(6)	(7)= (6)/(5)-1
LOB	Risk Charge		Change in Risk Chg	Risk Charge		in Risk Chg
	Current	Indicated		Current	Indicated	
A-HO	0.182	0.188	3.0%	0.138	0.166	20.4%
B-PPA	0.125	0.137	10.1%	0.094	0.129	37.2%
C-CA	0.185	0.201	9.1%	0.162	0.259	59.7%
D-WC	0.138	0.126	-8.8%	0.116	0.082	-28.9%
E-CMP	0.148	0.160	8.7%	0.309	0.325	5.1%
F1-MPL-O	0.534	0.363	-32.0%	0.196	0.094	-51.9%
F2-MPL-C	0.189	0.244	28.8%	0.127	0.050	-60.5%
G-SL	0.166	0.164	-1.1%	0.161	0.238	48.5%
H-OL	0.130	0.135	3.5%	0.304	0.293	-3.9%
I-SP	0.120	0.062	-48.5%	0.204	0.213	4.8%
J-APD	0.044	0.050	13.0%	0.127	0.112	-12.0%
K-Fid/Sur	0.272	0.105	-61.2%	0.289	0.440	52.4%
L-Other	0.142	0.143	1.2%	0.180	0.147	-18.4%
M-Intl	0.556	0.804	44.7%	0.188	0.852	353.6%
N-Re-Prop	0.312	0.162	-48.3%	0.275	0.204	-25.7%
O-Re-Liab	0.295	0.227	-23.2%	0.388	0.266	-31.5%
R-PL	0.307	0.286	-6.9%	0.515	1.013	96.6%
S-FG/MG	0.754	1.534	103.5%	0.092	0.050	-45.8%
T-Wrnty	0.030	0.215	617.5%	0.289	0.302	4.6%
Total/Avg	0.135	0.133	-1.7%	0.195	0.202	3.5%

# Indicated Changes in ACL by Type of Company

(1)	(2)	(3)	(4)	(5)	(6)
Row	Type of Company	ACL Value with 2019 Risk Charges (\$Billions)	% Change in:		
			Reserve Risk Charge	Premium Risk Charge	ACL
1	Commercial	64.9	4.8%	-4.5%	2.1%
2	Med Prof Liab	2.4	-52.2%	4.8%	-14.3%
3	NOC	0.9	21.3%	-17.6%	1.4%
4	Personal	84.3	12.4%	4.2%	1.6%
5	Reinsurance	8.2	-18.6%	-23.5%	-2.2%
6	Workers Comp	10.1	-9.7%	-2.9%	-4.8%
7	<b>Total</b>	170.6	3.4%	-0.8%	1.0%

# Distribution of Number of Companies by Indicated Change in ACL Values

(1)	(2)	(3)
% Changes in ACL RBC	# companies	% companies
Less Than -50%	9	0%
-50% to -25%	96	5%
-25% to -15%	117	6%
-15% to -5%	194	11%
-5% to 5%	951	52%
5% to 15%	298	16%
15% to 25%	95	5%
25% to 50%	71	4%
Over 50%	6	0%
<b>Total</b>	<b>1,837</b>	<b>100%</b>

# Contact

For more information, please contact  
**Rob Fischer, Casualty Policy Analyst**  
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November 3, 2023

Tom Botsko, Chair  
Property Casualty Risk-Based Capital (E) Working Group  
National Association of Insurance Commissioners  
c/o Ms. Eva Yeung, NAIC  
[Eyeung@NAIC.org](mailto:Eyeung@NAIC.org)

**Re: AAA Paper on R4 & R5 Underwriting and IIA Factor Update**

Dear Ms. Yeung:

Thank you for the opportunity to comment on the American Academy of Actuaries paper regarding the methodology for deriving the R4 & R5 Line 4 and Investment Income Adjustment factors. RAA appreciates the comprehensive work of the Academy to continue improving the methodology and the thoughtful approach undertaken to incorporate the Present Value Method.

The RAA is a national trade association representing reinsurance companies doing business in the United States. RAA membership is diverse, including reinsurance underwriters and intermediaries licensed in the U.S. and those that conduct business on a cross-border basis. The RAA also has life reinsurance affiliates and insurance-linked securities (ILS) fund managers and market participants that are engaged in the assumption of property/casualty risks. The RAA represents its members before state, federal and international bodies.

We support the overall approach the Academy proposes. However, there are certain policy options that have been presented for further consideration by regulators that can have significantly negative or even onerous impacts on the capital requirements for (re)insurers, depending on which options are chosen. We encourage a careful and measured evaluation of these policy and implementation options and look forward to providing future comments throughout the process.

**Ongoing Adjustments for Future Interest Rate Changes:**

It will be important to periodically update the Line 4 and Investment Income Adjustment factors using the Present Value Method to reflect future changes in interest rates and additional years of data from Schedule P that are used in calculating loss and reserve runoff ratios and changes in payment patterns By Line of Business (BLOB). This will ensure that the underwriting risk charge reflects changes in market conditions over time.

**BLOB Reasonableness Review:**

Changes in indicated capital requirements by BLOB should be reviewed for reasonableness in terms of the dollar amount of capital required to write the same dollar amount of premium. It is important to take a step back and evaluate, for reasonableness, the BLOB marketplace impact of proposed changes. This review can prevent unintended consequences to the availability and affordability of insurance in market segments.

**Transition Limits:**

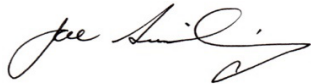
We agree with the Academy that transition limits, to phase in substantial changes to indicated risk charges, should be implemented as they have been in previous updates to the factors.

**Safety Level**

We do not believe that a change in safety level from the current 87.5th percentile is warranted and note the severe and unreasonable impact on many lines of business that would result at the 95th percentile. As has been noted by the Academy, the time horizon for Reserve Risk is over 9 years.

Thank you for the chance to provide these comments, and we look forward to offering our perspective.

Sincerely,



Joseph B. Sieverling  
Senior Vice President  
Director of Financial Services



Scott Williamson  
Senior Vice President  
Director of Analytics



# FLORIDA COMMISSION ON HURRICANE LOSS PROJECTION METHODOLOGY

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NAIC Fall National Meeting  
December 2, 2023

## FORMATION OF THE COMMISSION

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Hurricane Andrew (1992) caused significant disruptions and failures in the Florida property insurance market

Traditional methods used to project hurricane loss cost considered inappropriate after Hurricane Andrew

Legislature recognized the need for expert evaluation of catastrophe models

### Key questions

- How to address the “Black Box” problem
- How to protect proprietary processes and structure of the models under state Sunshine Laws
- What collective expertise is needed to evaluate catastrophe models

## FORMATION OF THE COMMISSION *(Continued)*

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Created by the Florida Legislature as an independent commission in 1995

Housed within the State Board of Administration of Florida

Funded out of the Florida Hurricane Catastrophe Fund

- Annual budget \$1.65 million

Operates under statute (Section 627.0628, Florida Statutes)

Structure and process designed to address Black Box problem

- On-site audit (Professional Team)
- Trade secret sessions (added by the Legislature in 2005)
- Commission member on-site visits provide greater access to the model

## COMPOSITION OF THE COMMISSION

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Twelve-member panel of experts to provide the most actuarially sophisticated guidelines and standards for the projection of hurricane and flood losses

- Actuary: Industry
- Actuary: Office of Insurance Regulation
- Actuary: Florida Hurricane Catastrophe Fund (FHCF) Advisory Council
- Insurance Consumer Advocate
- Director of the Division of Emergency Management
- FHCF Chief Operating Officer
- Executive Director of Citizens Property Insurance Corporation
- Insurance Finance Expert\*
- Statistics Expert\*
- Computer System Design Expert\*
- Meteorology Expert\*
- Licensed Professional Structural Engineer\*

\*Full-time faculty member of the State University System

## PROFESSIONAL TEAM

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Composition – Actuary, Statistician, Meteorologist, Hydraulic Engineer, Computer/Information Scientist, Structural Engineer, Coastal Engineer

Participates in all phases of the Commission's activities

- Report of Activities development
- Submission review
- On-site audit – full access to the model data, documentation and source codes
- Commission meeting participation and support
- Identification of important trends and research

Two experts for each discipline, a primary member and a backup member

## ROLE OF THE COMMISSION

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Defined in Section 627.0628(3)(a), Florida Statutes

- *The Commission shall consider any actuarial methods, principles, standards, models, or output ranges that have the potential for improving the accuracy of or reliability of hurricane loss projections used in residential property insurance rate filings and flood loss projections used in rate filings for personal lines residential flood insurance coverage*
- *The Commission shall revise previously adopted actuarial methods, principles, standards, models, or output ranges every odd-numbered year for hurricane loss projections and no less than every 4 years for flood loss projections*

## COMMISSION FINDINGS AND IMPLICATIONS

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With respect to a rate filing:

- *An insurer shall employ and may not modify or adjust actuarial methods, principles, standards, models, or output ranges found by the commission to be accurate or reliable in determining hurricane loss factors and probable maximum loss levels for use in a rate filing under s. 627.062*
- *An insurer may employ a model in a rate filing until 120 days after the expiration of the commission's acceptance of that model and may not modify or adjust models found by the commission to be accurate or reliable in determining probable maximum loss levels*
- *An insurer is not prohibited from using a straight average of model results or output ranges for the purposes of a rate filing for personal lines residential flood insurance coverage under s. 627.062*

## COMMISSION KEY PRINCIPLES

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All models or methods shall be theoretically sound

Models or methods shall not be biased to overstate or understate results

The output of models or methods shall be reasonable, and the modeler shall demonstrate its reasonableness

All sensitive components of models or methods shall be identified



# COMMISSION STANDARDS

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## Six Hurricane Categories

- General
- Meteorological
- Statistical
- Vulnerability
- Actuarial
- Computer/Information

## Seven Flood Categories

- General
- Meteorological
- Hydrological and Hydraulic
- Statistical
- Vulnerability
- Actuarial
- Computer/Information

Standards have evolved across time

## HURRICANE REQUIREMENTS (2023)

<b>Standards</b>	<u>General</u>	<u>Meteorological</u>	<u>Statistical</u>	<u>Vulnerability</u>	<u>Actuarial</u>	<u>Computer/ Information</u>
<b>35</b> 118 subparts	<b>5</b> 14 subparts	<b>6</b> 16 subparts	<b>6</b> 7 subparts	<b>4</b> 17 subparts	<b>6</b> 32 subparts	<b>8</b> 32 subparts
<b>Disclosures</b> <b>203</b>	<b>40</b>	<b>42</b>	<b>23</b>	<b>43</b>	<b>42</b>	<b>13</b>
<b>Forms</b> <b>28</b>	<b>7</b>	<b>3</b>	<b>6</b>	<b>5</b>	<b>7</b>	<b>0</b>
<b>On-Site Audit Requirements</b> <b>218</b>	<b>23</b>	<b>34</b>	<b>24</b>	<b>54</b>	<b>30</b>	<b>53</b>

## FLOOD REQUIREMENTS (2021)

<b>Standards</b>	<u>General</u>	<u>Meteorological</u>	<u>Hydrological &amp; Hydraulic</u>	<u>Statistical</u>	<u>Vulnerability</u>	<u>Actuarial</u>	<u>Computer/ Information</u>
37 130 subparts	5 14 subparts	5 19 subparts	4 15 subparts	5 6 subparts	4 14 subparts	6 29 subparts	8 33 subparts
<b>Disclosures</b> 262	45	48	36	16	65	43	9
<b>Forms</b> 27	8	0	5	2	4	8	0
<b>On-Site Audit Requirements</b> 268	34	39	33	22	49	40	51

## MODEL APPROVAL

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Model must pass all standards

Only one version of the model permitted

Hurricane and flood models reviewed independently

Only long-term models have been reviewed and found acceptable

No formal voting on other model types

- Short or near-term models
- Elicitation (expert opinion) models
- Open platform models

## CURRENT ACCEPTED HURRICANE MODELS

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Verisk (formerly AIR Worldwide) – since 1996

CoreLogic (formerly EQECAT) – since 1997

Risk Management Solutions (RMS) – since 1997

Applied Research Associates (ARA) – since 1999

Florida Public Hurricane Loss Model (Florida International University) – since 2006

Karen Clark & Company – since 2017

Impact Forecasting – since 2019

## MODELING ORGANIZATIONS

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Modelers support and recognize the importance of the work of the Commission

*“AIR is a strong proponent of the Commission and sees great value in the submission process as it allows, among other benefits, transparency in the model building process while protecting modelers’ intellectual property. It also promotes and establishes the validity of catastrophe models in general.”*  
July 22, 2011

*“KCC is pleased to be leading the industry as the first catastrophe modeling company to subject our flood model to the most comprehensive, thorough, and objective external review process.”*  
December 15, 2022

*“We very much value this process. And as you know, many states look to Florida and this review as not every state has been able to dedicate the resources or have the same professional review. We feel the process is very valuable for us as a company, but certainly for the entire U.S. insurance industry.”*  
KCC, July 19, 2023

## SUMMARY OF COMMISSION ACTIVITIES

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Average 9 meeting days a year

Average 7 on-site hurricane model audits during review years

Hurricane Standards Report of Activities published every odd year

Flood Standards Report of Activities published every other odd year

Rigorous public disclosure, on-site audits, and evaluation process

Reviewed 10 different modeling organizations over 27 years

Total Cost to Date: over \$10.7 million

All Commission documentation is available on the Commission's website, <https://fchlpm.sbafla.com/>

# COMMISSION PROCESS

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## Development and Adoption of Standards and Acceptability Process

- Professional Team meets and drafts preliminary revisions to the Report of Activities
- Commission committee meetings
- Commission meeting to adopt the standards and Report of Activities
- Report of Activities published and provided to the Modelers

## Review of Model Submissions



## COMMISSION PROCESS *(Continued)*

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### Model Submissions

- Hurricane model submissions are due November 1 of the following even year (1 year)
- Flood model submissions are due November 1 of the following odd year (2 years)

### Review of Model Submissions

- Professional Team reviews to identify any deficiencies and issues and meets to develop recommendations to the Commission
- Commission meets to review and amend, as necessary, the list of deficiencies and issues recommended by the Professional Team
- Commission sends letter of deficiencies and issues to Modelers with deadline for responding to deficiencies before the on-site audits begin
- Professional Team pre-visit letters are provided to Modelers
- Pre-visit conference call with Professional Team if requested by Modeler

## COMMISSION PROCESS *(Continued)*

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### Professional Team On-Site Review

- Audits every aspect of the model for verification and compliance with every standard
- Performs a due diligence review regarding the data and information provided in the disclosures and forms
- Provides a report to the Commission of the audit results
- Two possible outcomes regarding auditing for compliance with the standards
  - The model complies with all the standards, or
  - The model does not comply with all the standards

## COMMISSION PROCESS *(Continued)*

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### Professional Team Cannot Verify All Standards

- If the problems can be corrected while the Professional Team is on-site, they will review any corrective actions taken before determining verification of a standard
- If the problems cannot be corrected while the Professional Team is on-site, the Modeler has 7 days from the final day of the audit to request an additional verification review, and then has an additional 30 days to submit corrections and revisions
- Modeler has the option to forego an additional verification review and present its arguments for compliance directly to the Commission at the model review meeting or it may withdraw its request for review

## COMMISSION PROCESS *(Continued)*

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### Professional Team Additional Verification Review

- Audits corrections and revisions made to the model and submission documentation
- Audits for compliance with standards not verified during the initial on-site review
- Performs additional on-site tests of the model
- Reviews any new or revised trade secret material
- Appends its report to the Commission with the additional verification review results

## COMMISSION PROCESS *(Continued)*

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### Commission Meeting to Review Models for Acceptability

- Reviews each model separately
- Closed session for review of trade secret information
- Public sessions
  - Modeler presentations
  - Commission votes on all standards
- Model is found acceptable only if it meets all standards
- If the model fails to be found acceptable, the Modeler has up to 30 days to file a written appeal of the Commission's finding

## COMMISSION PROCESS *(Continued)*

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Appeal Process for a Model Not Found Acceptable

Process for Problems Discovered After a Model has been Found Acceptable

Process for Interim Model and Interim Platform Updates After a Model has been Found Acceptable

Process for Model Update for Consistency of Hurricane and Flood Models

Review and Acceptance Criteria for Functionally Equivalent Model Platforms

## CURRENT WORK OF THE COMMISSION

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### 2021 Hurricane Standards

- Model submissions were due November 1, 2022
- Received 7 hurricane model submissions – ARA, CoreLogic, Florida Public Model, Impact Forecasting, KCC, RMS, and Verisk
- Commission meetings to review models for acceptability – June 1 & 2, 2023 and July 19 & 20, 2023
- Additional verification review of Verisk model – November 2 & 3, 2023
- Commission meeting to review Verisk model for acceptability – January 4, 2024

### 2023 Hurricane Standards

- Committee meetings to draft proposed 2023 hurricane standards – September 27 & 28, 2023
- Commission meetings to adopt 2023 hurricane standards and Report of Activities – October 25 & 26, 2023
- Model submissions due November 1, 2024

## CURRENT WORK OF THE COMMISSION *(Continued)*

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### 2021 Flood Standards

- Model submissions were originally due November 1, 2023; an extension to January 31, 2024, if needed, was granted in August
- No flood model submissions were received on November 1, 2023
- Commission added an additional submission date of June 1, 2025

For submissions received on January 31, 2024:

- Commission meeting to review submissions for deficiencies: March 2024
- Professional Team on-site reviews: April – June 2024
- Professional Team additional verification reviews: July – August 2024
- Commission meetings to review models for acceptability: September – October 2024



## CONTACT INFORMATION

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