



# NATIONAL ASSOCIATION OF INSURANCE COMMISSIONERS

Date: 4/16/21

## CATASTROPHE RISK (E) SUBGROUP

Monday, April 26, 2021

12:00 – 1:00 p.m. ET / 11:00 a.m. – 12:00 p.m. CT / 10:00 – 11:00 a.m. MT / 9:00 – 10:00 a.m. PT

### ROLL CALL

Wanchin Chou, Chair	Connecticut	Halina Smosna	New York
Robert Ridenour, Vice Chair	Florida	Tom Botsko	Ohio
Laura Clements	California	Andrew Schallhorn	Oklahoma
Judy Mottar	Illinois	Will Davis	South Carolina
Gordon Hay	Nebraska	Miriam Fisk	Texas
Anna Krylova	New Mexico		

NAIC Support Staff: Eva Yeung

### AGENDA

1. Consider Exposure of Response to Request for Proposed Changes to the P/C RBC Catastrophe Component—*Wanchin Chou (CT)* Attachment A
2. Hear an Update from its Catastrophe Model Technical Review Ad Hoc Group —*Wanchin Chou (CT) and Halina Smosna (NY)* Attachment B
3. Discuss its Working Agenda item of Evaluating the Possibility of Allowing Third Party Models to Calculate the Catastrophe Model Losses—*Wanchin Chou (CT) and Robert Ridenour (FL)* Attachment C
4. Discuss Any Other Matters Brought Before the Subgroup—*Wanchin Chou (CT)*
5. Adjournment

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## NATIONAL ASSOCIATION OF INSURANCE COMMISSIONERS

### MEMORANDUM

TO: Raymond G. Farmer (SC), Co-chair of the Climate and Resiliency (EX) Task Force  
Ricardo Lara (CO), Co-chair of the Climate and Resiliency (EX) Task Force  
Kathleen A. Birrane (MD), Vice-chair of the Climate and Resiliency (EX) Task Force

FROM: Wanchin Chou (CT), Chair of the Catastrophe Risk (E) Subgroup  
Tom Botsko (OH), Chair of the Capital Adequacy (E) Task Force and the Property and Casualty Risk-Based Capital (E) Working Group

DATE: April 26, 2021

RE: Response to Request for Proposed Changes to the P/C RBC Catastrophe Component

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On March 15, 2021, a referral letter from the Climate and Resiliency (EX) Task Force was sent to the Catastrophe Risk (E) Subgroup to recommend the Subgroup consider:

1. Expanding the current catastrophe framework to include other perils such as wildfire, flood and/or convection storms that may experience a greater tail risk under projected climate-related trends

The Subgroup has been researching this issue and in the process of developing the catastrophe risk charge for wildfire peril. At this point, the Subgroup plans to review the additional perils one at a time. Flood and convection storms are some of the possible candidates for our future consideration.

2. Implementing two perils in the Risk-Based Capital (RBC) framework by year-end 2022 if possible

The Subgroup supports for 2022 reporting, but only for disclosure purposes until it can be studied and looked at more carefully. While we are working on implementing the wildfire peril in Risk-Based Capital framework by year-end 2022 for disclosure only, we cannot promise that we will have enough information to study the flood peril effectively.

Properly quantifying the risk charge for any catastrophe peril is important. George Box wrote the famous line in 1976, "All models are wrong, some are useful." Even the best models of the world are imperfect and taking appropriate time and steps to understand each commercial model is essential. We have gathered some information for wildfire models and invited subject experts from the industry to explore how to implement the wildfire peril in Risk Based Capital framework by year-end for disclosure only if possible. The flood model is more mature in Europe because they have established better water survey systems. The stochastic flood model in the US is gaining some support due to recent regulatory discussions in opening private flood insurance program instead of relying on the NFIP (National Flood Insurance Program) only. The stochastic flood model will be more mature with better underlying statistics in the near future.

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### 3. Revising the current criteria for all commercial modelers are allowed to be used

There are several commercial vendor catastrophe models available in the industry, but the model outputs provided could be very different. To include other perils that may experience a greater tail risk under projected climate-related trends, should we just accept the outputs from all catastrophe models? should we allow the current wildfire models as they are today to be used for RBC charge? The subgroup is evaluating the possibility of allowing additional third party models or adjustments to the vendor models to calculate the cat model losses by 2022 reporting.

Based on the NAIC's Risk-Based Capital Model Act, the purpose of the RBC formula is to identify the weakly capitalized companies. It is our intent to take appropriate time and steps to understand each commercial wildfire model and assign appropriate risk charge with good understanding of the assumptions, limitations, data governance and model developments, etc. However, please be aware of that the Subgroup is only the assessor of the risk to the company, not the reviewer of the commercial models. The approval of the commercial catastrophe models and its validation process is a different subject that will require more discussions.

### 4. Ensuring all modeling information are documented and made available to NAIC staff and lead-state regulators

The Subgroup agrees with your recommendation regarding this documentation subject.

The Subgroup appreciates the Task Force's recommendation provided previously. Please contact, Eva Yeung, NAIC staff support for the Catastrophe Risk (E) Subgroup, at [eyeung@naic.org](mailto:eyeung@naic.org) with any questions.

Cc: Dan Daveline; Eva Yeung




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**MEMORANDUM**

**TO:** Catastrophe Risk (E) Subgroup of the Property and Casualty Risk-Based Capital (E) Working Group

**FROM:** Raymond G. Farmer (SC), Co-Chair of the Climate and Resiliency (EX) Task Force  
Ricardo Lara (CO), Co-Chair of the Climate and Resiliency (EX) Task Force  
Kathleen A. Birrane (MD), Vice-Chair of the Climate and Resiliency (EX) Task Force

**DATE:** March 15, 2021

**RE:** Proposed Changes to the P/C RBC Formula

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In 2020, the NAIC formed the Climate and Resiliency (EX) Task Force and formed five workstreams to assist in carrying out the charges of the Task Force. The Solvency Workstream was charged with considering the potential solvency impact of insurers' exposures to climate-related risks. During the course of its discussions, the members took an inventory of existing climate-related tools available to state insurance regulators and acknowledged the property casualty (P/C) risk-based capital (RBC) formula already had a good framework for considering hurricane risk. The commissioners noted that not only does the formula provide a means to ascertain that insurers are holding capital for hurricane risk, but also the formula provides disclosure of more extreme situations that presumably could become more commonplace if climate-related trends regarding severity of storms continue.

While the P/C RBC formula already includes a good framework for hurricane risk, we believe it should be expanded to include other perils that may experience a greater tail risk under projected climate-related trends. Specifically, we recommend you consider expanding to consider at a minimum "wildfire" and "flood," but also "convection storms" and other perils where commercial modelers have developed products that are being used by insurers. We ask that you take action to make changes for these two perils by year-end 2022 if possible, or otherwise as soon as possible as these risks continue to increase. Related to this point, we recommend you revise your current criteria for commercial models to enable this to occur. Specifically, we suggest an approach where all commercial modelers are allowed to be used, provided the model is documented in writing and the documentation is updated when the model is updated and made available to state insurance regulators through the NAIC. We understand that commercial modelers also document their validation of the models. Therefore, we suggest that as long as this information could be made available to NAIC staff and to a lead-state regulator in cases where they want to use their right to examine a particular insurer's use of models, this would collectively achieve the current objectives of RBC, as well as the objectives we seek at this time.

Please provide a response back as to whether you believe this recommendation is appropriate and if you can meet such an objective. If you have any questions, please contact NAIC staff Dan Daveline ([ddaveline@naic.org](mailto:ddaveline@naic.org)).

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## **Wildfire Model Review Phases**

Phase 1: Introduction to Wildfire Models – Completed

Phase 2: Technical Reviews

Phase 3: Impact Studies (Model Comparison)

Phase 4: Develop RBC Risk Charge

Phase 5: RBC Risk Charge (logistics/Instructions/Exposure)

Phase 6: RBC Risk Charge Implementation and Feedbacks

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2021 #	Owner	2021 Priority	Expected Completion Date	Working Agenda Item	Source	Comments	Date Added to Agenda
<b>Carry-Over Items Currently being Addressed – P&amp;C RBC</b>							
1	Cat Risk SG	1		Continue development of RBC formula revisions to include a risk charge based on catastrophe model output:			
			Year-end 2022 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.		<del>The SG agreed on adding Wildfire Peril to Reat.</del>	<del>10/19/2020</del>
2	Cat Risk SG	1	Year-end 2021 or later	Evaluate the possibility of allowing additional third party models <b>or adjustments to the vendor models</b> to calculate the cat model losses			12/6/2019
<b>Carry-Over Items not Currently being addressed - P&amp;C RBC</b>							
<b>New Items – P&amp;C RBC</b>							
3	Cat Risk SG	1	2022 Spring Meeting	<b>Implement Wildfire Peril in the Rcat component (For Informational Purpose Only)</b>			3/8/2021