

Capital Adequacy (E) Task Force

RBC Proposal Form

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|---|--|---|
| <input type="checkbox"/> Capital Adequacy (E) Task Force | <input type="checkbox"/> Health RBC (E) Working Group | <input type="checkbox"/> Life RBC (E) Working Group |
| <input checked="" type="checkbox"/> Catastrophe Risk (E) Subgroup | <input 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; margin: 0;">DATE: <u>11/12/25</u></p> <p>CONTACT PERSON: <u>Eva Yeung</u></p> <p>TELEPHONE: <u>816-783-8407</u></p> <p>EMAIL ADDRESS: <u>eyeung@naic.org</u></p> <p>ON BEHALF OF: <u>Catastrophe Risk (E) Subgroup</u></p> <p>NAME: <u>Wanchin Chou</u></p> <p>TITLE: <u>Chair</u></p> <p>AFFILIATION: <u>Connecticut Department of Insurance</u></p> <p>ADDRESS: <u>153 Market St., Hartford CT 06103</u></p>	<p style="text-align: center; margin: 0;"><u>FOR NAIC USE ONLY</u></p> <hr/> <p>Agenda Item # <u>2025-20-CR</u></p> <p>Year <u>2026</u></p> <hr/> <p style="text-align: center;"><u>DISPOSITION</u></p> <p>ADOPTED:</p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input type="checkbox"/> WORKING GROUP (WG) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p>EXPOSED:</p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input checked="" type="checkbox"/> WORKING GROUP (WG) <u>11/12/2025</u></p> <p><input checked="" type="checkbox"/> SUBGROUP (SG) <u>11/12/2025</u></p> <p>REJECTED:</p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p>OTHER:</p> <p><input type="checkbox"/> DEFERRED TO _____</p> <p><input type="checkbox"/> REFERRED TO OTHER NAIC GROUP _____</p> <p><input type="checkbox"/> (SPECIFY) _____</p>
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IDENTIFICATION OF SOURCE AND FORM(S)/INSTRUCTIONS TO BE CHANGED

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

Building on the precedent set by the 2021 wildfire review, an ad hoc group was re-established and began a new evaluation cycle on March 18, guided by the Actuarial Standard of Practice (ASOP) No. 38—Catastrophe Modeling for All Practice Areas. This comprehensive process included high-level analysis, confidential assessments, and detailed impact studies. In addition to the original three vendors—Moody Risk Management Solutions (RMS), Verisk Extreme Event Solutions, and KCC—CoreLogic joined as a new participant for this review cycle. Starting in early June and July, the group collaborated with all four vendors to conduct a second round of impact analysis using consistent exposure inputs. On September 25, the group reconvened to address feedback from the impact analysis presentations. A comparative review of the initial 2022 assessment and the current evaluation revealed that model outputs have become increasingly consistent. As a result, the Subgroup now has greater confidence in the models and their suitability for risk management applications.

This proposal formally recommends adding wildfire peril to the Rcat component, reflecting the enhanced reliability and applicability of the catastrophe models.

Additional Staff Comments:

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

Revised 2-2023

CALCULATION OF CATASTROPHE RISK CHARGE RCAT

PR027A, PR027B, PR027BI, PR027BII, PR027BIII, PR027BIV PR027C, PR027CI, PR027CII, PR027CIII, PR027CIV, PR027D, PR027, PR027INT, AND PR027INTA

The catastrophe risk charge for earthquake (PR027A), hurricane (PR027B), wildfire (~~PR027C~~) 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, RMS, KCC for earthquake, ~~and~~ hurricane, ~~and wildfire~~ only, ~~RMS, KCC~~, the ARA HurLoss Model (hurricane ~~only~~), or the Florida Public Model for hurricane only, 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, RMS, and KCC for earthquake, ~~and~~ hurricane ~~and wildfire~~ only, ~~RMS, KCC~~, ARA HurLoss (hurricane ~~only~~), or the Florida Public Model for hurricane only. 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, RMS, and KCC for earthquake, ~~and~~ hurricane, and wildfire only, ~~RMS, KCC, ARA HurLoss~~ (hurricane ~~only~~)), or the Florida Public Model for hurricane only, 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, and wildfire risks only.

As per the footnote on this page, modeled losses to be entered PR027A, PR027B PR027C and PR027D in Lines (1) through (4) are to be calculated using one of the **third-party commercial vendor** models – AIR, CoreLogic, RMS, and KCC for earthquake, ~~and~~ hurricane, and wildfire only, ~~RMS, KCC, ARA HurLoss~~ (hurricane ~~only~~); or the Florida Public Model (~~for~~ 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.

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

		Modeled Losses			
Wildfire	Reference	(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				
(2) Worst Year in 100	Company Records				
(3) Worst Year in 250	Company Records				
(4) Worst Year in 500	Company Records				
(5) Worst Year in 1000 (For Informational Purposes Only)	Company Records				
				(5) Y/N	
(6) Has the company reported above, its modeled wildfire losses using an occurrence exceedance probability (OEP) basis?					
		Reference		(6) Amount	(7) RBC Requirement (C(6) * Factor)
(7) Net Wildfire Risk		L(2) C(2)		0 1.000	0
(8) Contingent Credit Risk for Wildfire Risk		L(2)(C(3) - C(4))		0 0.018	0
(9) Total Wildfire Catastrophe Risk (AEP Basis)		If L(6) C(5) = "N", L(9) C(6) = L(7) C(7)+ L(8) C(7), otherwise "0"		0 1.000	0
(10) Total Wildfire Catastrophe Risk (OEP Basis)		If L(6) C(5) = "Y", L(10) C(6) = L(7) C(7)+ L(8) C(7), otherwise "0"		0 1.000	0
(11) Total Wildfire Catastrophe Risk		L(9) C(7) + L(10) C(7)			0
Disclosure in lieu of model-based reporting:				(8) Direct and Assumed	(9) Net
(12) For a company qualifying for the exemption under PR027INT C (10), complete 12a through 12c below:					
a. Provide the company's gross and net 1-in-100-year wildfire losses on a best estimate basis in lieu of model-based reporting.					
b. Provide details on how the company estimated the amounts shown in 12a.					
c. Provide a narrative disclosure about how the company manages its wildfire risk.					

Lines (1)-(5): Modeled losses to be entered on these lines are to be calculated using one of the following NAIC approved third party commercial vendor catastrophe models - AIR, RMS, ~~or~~ KCC, 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).

CALCULATION OF CATASTROPHE RISK CHARGE PR027

	<u>Reference</u>	(1) <u>RBC Amount</u>
(1) Total Earthquake Catastrophe Risk	PR027A L(10) C(7)	<u>0</u>
(2) Total Hurricane Catastrophe Risk	PR027B L(11) C(7)	<u>0</u>
(3) Total Wildfire Catastrophe Risk	PR027C L(11)C(7)	<u>0</u>
(4) Total Convective Storms Catastrophe Risk	PR027D L(10)C(7)	<u>0</u>
(5) Total Catastrophe Risk (Rcat)	SQRT(L(1)^2 + L(2)^2 + L(3)^2)	<u>0</u>
(5a) Total Catastrophe Risk (Rcat For Informational Purposes Only)	SQRT(L(1)^2 + L(2)^2 +L(3)^2+L(4)^2)	<u>0</u>

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