

Title of Exposure Draft: Proposed Revision of Actuarial Standard of Practice (ASOP) No. 38

Comment Deadline: January 15, 2021

Instructions: Please review the exposure draft, and give the ASB the benefit of your recommendations by completing this comment template. Please fill out the tables within the section below, adding rows as necessary. Sample for completing the template provided at the following link: <http://www.actuarialstandardsboard.org/email/2020/ASB-Comment-Template-Sample.docx>

Each completed comment template received by the comment deadline will receive consideration by the drafting committee and the ASB. The ASB accepts comments by email. Please send to comments@actuary.org and include the phrase 'ASB COMMENTS' in the subject line. Please note: Any email not containing this exact phrase in the subject line will be deleted by our system's spam filter.

The ASB posts all signed comments received to its website to encourage transparency and dialogue. Comments received after the deadline may not be considered. Anonymous comments will not be considered by the ASB nor posted to the website. Comments will be posted in the order that they are received. The ASB disclaims any responsibility for the content of the comments, which are solely the responsibility of those who submit them.

I. Identification:

Name of Commentator / Company
Lauren Cavanaugh, MAAA, FCAS, Vice President of the American Academy of Actuaries, on behalf of the Casualty Practice Council

II. ASB Questions (If Any). Responses to any transmittal memorandum questions should be entered below.

Question No.	Commentator Response

III. Specific Recommendations:

Section # (e.g. 3.2.a)	Commentator Recommendation (Please provide recommended wording for any suggested changes)	Commentator Rationale (Support for the recommendation)
1.2	"The reviewing or evaluating actuary should apply the guidance in this standard to the extent practicable within the scope of the actuary's assignment."	We recommend that the scope of ASOP No. 38 be expanded to include this statement. The recommended wording is from section 1.2 of ASOP No. 56 and will help to clarify the scope of ASOP No. 38 and to limit potential inconsistencies between ASOP No. 38 and ASOP No. 56.
1.2	"The guidance in this ASOP applies to the actuary when, in the actuary's professional judgment, reliance by the intended user on the catastrophe model output has a material effect for the intended user. This judgment should be made within the context of the use of the catastrophe model output and the needs of the intended user, based on facts known by the actuary at the time the actuarial services are performed."	We recommend that the scope of ASOP No. 38 be expanded to include this statement. The recommended wording is similar to section 1.2 of ASOP No. 56 and will help to clarify the scope of ASOP No. 38 and to limit potential inconsistencies between ASOP No. 38 and ASOP No. 56.
1.2	"This standard only applies to the extent of the actuary's responsibilities. The actuary's responsibilities may extend to performing actuarial services related to an entire catastrophe model or to only a small portion of a catastrophe model."	We recommend that the scope of ASOP No. 38 be expanded to include this statement. The recommended wording is similar to section 1.2 of ASOP No. 56 and will help to clarify the scope of ASOP No. 38 and to limit potential inconsistencies between ASOP No. 38 and ASOP No. 56.

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2.2	<p><i>Draft ASOP wording: “Catastrophe Model—A representation of relationships among events based on statistical, financial, economic, mathematical, or scientific concepts and equations used to explain a system, to study the effects of different components, and to derive estimates based upon occurrences of large-scale, low-frequency, high-severity events.”</i></p> <p><i>Recommended wording: “Catastrophe Model—A model of low-frequency events with high-severity or widespread potential. Catastrophe models may be used to explain a system, to study effects of different components, or to derive estimates.”</i></p>	<p>The definition in the draft ASOP suggests that a model would only be considered a catastrophe model if it satisfies <u>all three</u> criteria:</p> <ul style="list-style-type: none"> ○ That it be used to explain a system, <i>and</i> ○ To study the effects of different components, <i>and</i> ○ To derive estimates based on occurrences of large-scale, low-frequency, high-severity events. <p>The definition in the draft ASOP suggests that the model must be based on occurrences (i.e., a loss history) of catastrophic events. Catastrophe models may be developed for risks with limited or no loss history.</p>
2	<p>“<u>Model</u> - A simplified representation of relationships among real world variables, entities, or events using statistical, financial, economic, mathematical, non-quantitative, or scientific concepts and equations. A model consists of three components: an information input component, which delivers data and assumptions to the model; a processing component, which transforms input into output; and a results component, which translates the output into useful business information.”</p>	<p>We recommend that a definition of “model” be added to ASOP No. 38 before the definition of “catastrophe model.” The recommended wording is from section 2.8 of ASOP No. 56.</p>
3.2	<p>“An actuary may rely on experts in the fields of knowledge used in the development of the catastrophe model. In determining the appropriate level of reliance, the actuary may should consider the following:”</p>	<p>The recommended change is to be consistent with the corresponding language in section 3.5 of ASOP No. 56.</p>
3.2.b	<p>“the extent to which the catastrophe model has been reviewed or validated opined on by experts in the applicable field, including any known material significant differences of opinion among experts concerning aspects of the catastrophe model that could be material to the actuary’s use of the catastrophe model; and”</p>	<p>The recommended changes are to be consistent with the corresponding language in section 3.5.b of ASOP No. 56.</p> <p>It is otherwise unclear whether the wording in the proposed ASOP is intentionally different (and is intended to have different meanings) or whether “validated” and “opined on” are believed to be interchangeable in meaning and whether “material” and “significant” are intended to have the same meaning.</p>

IV. General Recommendations (If Any):

Commentator Recommendation (Identify relevant sections when possible)	Commentator Rationale (Support for the recommendation)
Section 1.2 Scope: We recommend clearer guidance on what constitutes a conflict between ASOP No. 38 and ASOP No. 56.	An actuary who is selecting, using, reviewing, or evaluating a catastrophe model would be guided by <u>both</u> ASOP No. 56 and ASOP No. 38, unless the actuary determines there is a conflict between the two, in which case the guidance in ASOP No. 38 would govern. It is unclear what would represent a “conflict” between ASOP No. 56 and ASOP No. 38 and how such potential conflicts are meant to be resolved. For example, if ASOP No. 56

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	states a specific requirement and ASOP No. 38 does not, would that element then not be required?
Section 1.2 Scope: We recommend that the scope of ASOP No. 38 be expanded to include elements similar to what is outlined in the scope of ASOP No. 56.	As the two ASOPs differ, they may otherwise be considered to be in conflict.
We recommend that the extent of reliance on experts be clarified in ASOP No. 38 and be made more consistent with ASOP No. 56.	As the two ASOPs differ, they may otherwise be considered to be in conflict. ASOP No. 38 uses stronger language with respect to “reliance on experts” as it states the elements that <u>should</u> be considered by the actuary. However, ASOP No. 38 does not state that the actuary “should” or “may” consider whether the science underlying the expertise is likely to produce useful models for the intended purpose.
We recommend that ASOP No. 38 be expanded to require disclosure of reliance on experts.	ASOP No. 56 states that the actuary should disclose the extent of reliance on experts, while ASOP No. 38 does not. Does this mean that the actuary should disclose the extent of reliance on experts when designing, developing, or modifying a catastrophe model (as only ASOP No. 56 would govern) and that the actuary may not need to disclose the extent of reliance on experts when using a model, as the two ASOPs conflict and therefore only ASOP No. 38 would govern?
We recommend that ASOP No. 38 be expanded to explicitly allow reliance on an expert to select, use, review, or evaluate the catastrophe model.	<p>The proposed ASOP explicitly allows the actuary to rely on another actuary to select, use, review, or evaluate the catastrophe model. The proposed ASOP does not appear to explicitly allow the actuary to rely on an expert to perform these same functions, and there may be instances where an expert is more qualified to perform that role.</p> <p>The extent of potential reliance on experts seems narrower in ASOP No. 38 than in ASOP No. 56, while the role of the actuary with respect to the model appears to be further removed in the scope of ASOP No. 38. In other words, presumably designing and building a model requires a certain level of expertise with respect to the modeled phenomena which may not be required when using a model. ASOP No. 38 mentions appropriate reliance on experts, but does not describe what experts may be relied on for.</p> <p>Examples of areas which appear to become the responsibility of the actuary per ASOP No. 38, and which are more likely to be outside the expertise of the actuary are as follows:</p> <ul style="list-style-type: none"> ○ 3.4.1. <u>Applicability of Historical Data</u>—To the extent historical data are used in the development of the catastrophe model or the establishment of catastrophe model parameters, the actuary should consider the adequacy of the historical data in representing the range of reasonably expected outcomes consistent with current knowledge about the phenomena being analyzed. ○ 3.4.2. <u>Developments in Relevant Fields</u>—The actuary should make a reasonable effort to be aware of significant developments in relevant fields of expertise. The actuary should evaluate whether such developments are likely to materially affect the

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<p>We recommend that the sections on model validation be expanded and clarified.</p>	<p>current actuarial analysis.</p> <p>Section 3.1.d. states that the actuary “should determine that appropriate model validation has occurred” and section 3.5 states that the actuary should evaluate the catastrophe model output, considering the input and the intended purpose.</p> <p>The language in section 3.1.d suggests that model validation could be made by another party (e.g., an expert or another actuary), as the actuary needs to determine that it “has occurred” and not necessarily perform the validation themselves. The language in section 3.5 then defines “appropriate validation” as the actuary evaluating the reasonableness of the model output.</p> <p>Also, it is unclear whether model validation has the same meaning in both sections. Perhaps section 3.1.d is more about the catastrophe model being fit for the purpose and perhaps section 3.5 is about evaluating the reasonableness of the model output.</p> <p>We recommend that section 3.5 be expanded to make clear that this model validation could be performed by another party. We further recommend clarifying each section if the intended meaning of “model validation” differs between the two sections.</p>
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V. Signature:

Commentator Signature	Date
Lauren Cavanaugh, MAAA, FCAS	January 15, 2021