

**Comment #23 – 2/28/15 – 4:10 a.m.**

Dear Sir or Madam,

We are providing our feedback on the second Exposure Draft on Modeling. We first note our primary concern regarding the exposure draft's documentation requirements, followed by other observations, before finally addressing those questions specifically asked by the committee.

**Documentation Requirement in Section 3.6**

We believe the requirements around documentation in Section 3.6 are not sufficiently robust. It does not include many other important model aspects required to satisfy the purpose of this ASOP as described in Section 1.1, and should say "Actuaries should document these items" instead of "actuaries should consider documenting". Most of these additional aspects are actually already discussed in other parts of Section 3, so it is recommended that Section 3.6 be enhanced to explicitly include these items. Some of these more important model characteristics include the following items:

- 1) Model's purpose and uses (Section 3.4.2)
- 2) Modeling methodology, structure and important underlying assumptions or parameters (Section 3.2.5)
- 3) Testing used to become comfortable with the model (Section 3.3.1)
- 4) Controls and governance (Section 3.3.2)
- 5) Any limitations or reliance's on data used in the model. This is especially true where data is still developing and there is an expectation that future changes may need to be made. (Sections 3.2.6 and 3.5)

**Other comments**

We had two other areas where we wished to provide feedback or offer support for others comments:

- 1) We support Dave Nelson's comments regarding peer review. The following sentence is too weak; "The actuary should consider obtaining a peer review, where practical and appropriate, depending on the intended purpose and the actuary's role." Both "should consider" and "where practical and appropriate" weaken the sentence, which we believe would be improved by removing either.
- 2) We believe a primary purpose of the actuary's review per Section 3.1.2 is to get comfortable with the models use, and this should be stated explicitly. An additional bullet should be added along the following lines; "the reasons to be comfortable with the models continued use".
- 3) In Section 3.1.2 we propose changing "However, the actuary should make a reasonable attempt, given the project objective, to have a basic understanding of the model including the following:" to "Given the project objective, it is necessary for the actuary to demonstrate a good understanding of such models by documenting the following:"

- 4) The ASOP provides guidance on applicability in sections 1.2, and 3.1. Later sections then continue to sound optional. These later sections are contingent on the decision of applicability so shouldn't sound like they are up to additional judgment later.
- 5) We propose broadening the definition of model risk to include not just specification issues ("model does not adequately represent that which is being modeled") but also the risk of adverse consequences arising from misusing the model or misinterpreting model output. Additionally, we suggest using the phrase "reliance on a model" rather than "decisions made as a result of a model" as it is a bit broader and covers situations where it is not exactly clear what the decision is but the model is generally used or relied upon. We'd suggest the following wording; "The risk of adverse consequences resulting from reliance on a **model** that does not adequately represent that which is being modeled or that is misused or misinterpreted."
- 6) You may want to consider citing some examples of what would be a model.

### **Feedback on ASB's questions on page vii**

Here we provide our feedback on the questions the ASB requested specific feedback on. Our answers are below the questions in blue.

1. Section 3.1.1 discusses situations when the actuary judges whether full guidance is or is not warranted. Is this section clear and appropriate? If not what changes would you suggest?  
*We support David A. Royce's suggestion to delete paragraphs four and five of Section 3.1.1. Additionally, "is material" should be deleted from paragraph six in section 3.1.1. Immateriality can be disclosed as the reason deviation is acceptable, but this should be disclosed and documented. If paragraph four is not deleted, then we recommend removing "if asked" from the end of the paragraph.*
2. Section 3.1.3 discusses the actuary's responsibility when the actuary is part of a modeling team. Is this section clear and appropriate? If not what changes would you suggest?  
*A "modeling team" can include a variety of distinct roles, including owner, developer, validator, and possibly even user. The ASOP does not explain the different key roles and responsibilities within the modeling team. It is unclear if the actuary's responsibility would be the same for all of these roles.*  
*If an actuary is in a position of limited responsibility in a team of non-actuaries (e.g. an investment team), it's unclear how responsible the actuary would be for applying the ASOP. Such an actuary would not be in a position to confirm that the applicable guidance from this ASOP has been followed.*
3. Section 3.3.1(a)(2) describes the degree of checking as being dependent on a list of possible factors, and this list includes both the "intended application" and the "project objective," which apply in different stages of modeling, rather than just referring to the "intended purpose," which encompasses either. Is this separate mention of the two possible stages of purpose helpful? Would the guidance be clearer if only the term "intended purpose" was used?

We prefer use of only the term “intended purpose”.

4. Does the proposed standard provide sufficient guidance to actuaries working with models?  
We believe that if an actuary followed the exposure draft’s documentation guidance he/she would not have sufficient documentation for the models.

We’d like to thank the Standards Board for their careful consideration of our feedback and their work in producing a very important standard.

Yours faithfully,

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