

**Date:** February 28, 2015  
**To:** Actuarial Standards Board  
**From:** Anthony T. Salis, A.C.A.S.  
**Subject:** Comments on the Exposure Draft on Modeling

First, I thank the board for their work and efforts in putting this document together and presenting it for comments. I appreciate the work that has been put into this ASOP and I hope that my comments do not detract from the quality of the committee's efforts in putting together this draft.

### **Request for Comments**

1. I agree with the comments made by Greg Frankowiak that complexity of the model may also dictate how much of the standard needs to apply. I agree with his proposed change to the wording in the first sentence of the third paragraph: "the actuary should use professional judgment, including considering..."
2. I do not believe this section is clear, specifically about whom "others" represents. If the actuary is part of a team of actuaries, it may be appropriate for him to reasonably rely on them to confirm that the applicable guidance from this ASOP has been followed. It would not be appropriate for the actuary to rely on non-actuaries to confirm that the guidance of the ASOP has been followed, since they are not held to the standards of this ASOP. I would propose the following wording: "When the actuary is part of a modeling team, the actuary should confirm or may reasonably rely on other actuaries who have confirmed that the applicable guidance from this ASOP has been followed."
3. I do believe that the distinction between the "intended application" from the "project objective" is clear and appropriate to cover the different stages of model use, but referring them together by using the term "intended purpose" is still confusing. It would be better to include separate references to "intended application" and "project objective" where appropriate instead of combining them into one term.
4. I believe the guidance is sufficient in most parts, just unclear in certain parts as I have mentioned and will mention below. The only insufficient part I believe is in regards to when the actuary is part of a modeling team. I do not believe that a "modeling team" has been properly defined to address its scope of workers. How close does an actuary need to be to the work of building a model to be part of the modeling team? It seems that the applicability of the guidance may be less for a model that was built without an actuary on the modeling team than if an actuary were on the modeling team. Should an actuary ensure that any model he uses follows this guidance? If not, then does that discourage the involvement of actuaries on modeling teams?

## Other Comments

**1.2 – Scope:** Should there be some specific guidance as to how the scope of this standard differs from that of ASOP No. 38?

**2.15 – Specification:** The term “interactions” is confusing because this is not referring to the statistical use of that word. I would suggest revising this definition to: “A description of a model that identifies the inputs and the formulas, algorithms, or logic to be used to generate the outputs from the given inputs.” This keeps the definition broad enough to be flexible, yet specific enough to completely describe what is being named.

**3.1.2 – Models Developed by Others:** Having a basic understanding the model includes understanding the risks associated with using the model. I would suggest adding 3.1.2(e) to say, “key risks associated with using the model.”

**3.2.1 – Designing, Building, Developing, Reviewing, or Evaluating the Model for the Intended Application:** I believe it would be more accurate for the last phrase to say, “the model’s volatility around the expected values.” The current wording is a bit unclear.

**3.2.7(b) – Margins:** Margins could also be applied to data, so it would be better to mention all inputs instead of just assumptions and parameters. Also I would suggest changing the wording from “should determine” to “should consider” as margins may not always need to be considered.

**3.4 – Presentation of Results:** I would suggest adding a qualifier to this statement to mention that this guidance is applicable where appropriate depending on the intended application and the type of model.

**4.1.2 – Inconsistent Assumptions and Parameters:** In conjunction with section 3.2.7(d), this may result in the over-statement of inconsistencies in the model assumptions and parameters. Inconsistencies frequently occur in the industry because it is impractical to adhere to all the pure statistical assumptions that are behind models created, even in methods that are widely accepted practices. It may be difficult in these situations to quantify the materiality of these inconsistencies. For many of these inconsistencies, more harm than good may be done by communicating these to certain audiences when the effect could be assumed to be immaterial. This may create unnecessary distrust in the actuary’s model from the perspective of a non-technical audience. I would suggest adding wording to section 4.1 or 4.1.2 to clarify that the amount of disclosure should depend on the intended audience.