## Comment #9 – 2/25/15 – 12:51 p.m.

The following are comments on the Second Exposure Draft on Modeling.

I would first like to thank the Modeling Task Force for their extensive work on this draft, and I appreciate the opportunity to provide comments on it.

• Section 1.2—While I understand the intent of the draft ASOP is to have a wide scope, I feel that it still is too broad to be an effective Standard and could also more effectively differentiate between requirements for model builders vs. model users. The very wide scope I feel makes it difficult to provide sufficiently flexible yet succinct guidance.

• At the end of the first paragraph in Section 1.2—I would suggest the draft ASOP includes a phrase such as "certain methods, approaches, and terms will not apply in all situations given the breadth of types of models being considered by this ASOP, so the actuary must use their actuarial judgment in determining what to apply".

• Section 2.7—I feel that the definitions for intended purpose vs. intended application vs. project objective are confusing. It is not completely clear to me why they are needed.

• Section 3.1.1—I would suggest that the consideration of complexity of the model should also dictate what and how much of the Standard needs to be applied in addition to 'materiality'. Some of the requirements are not practical to apply in some cases. I would also suggest the following wording change: In deciding the extent to which the guidance in this ASOP applies, the actuary should use professional judgment, including considering the extent of reliance by the intended user and the materiality of the financial effect.

• Section 3.1.2—gets at the concept of 'model user' I believe. A question I have is if making a "reasonable attempt" excludes the actuary from having to perform all of the other requirements? If so, can that be explicitly stated?

• Section 3.1.3—If those team members upon which the actuary is relying are not actuaries, what implications does that have on what the actuary needs to do? Can this be clarified?

• Section 3.2.1—I would suggest to acknowledge that in some cases, for example if the model is a not an in-house model (such as built by a vendor), some of these items that "should" be done may not be possible to do. I would suggest to change "should consider" to "could consider". In general, throughout Section 3.2 the words "could" and "should" are used in different places—given the broad scope of this draft ASOP, I would suggest utilizing "could" over "should" in general.

• Section 3.3.1—I appreciate that this section takes into account "complexity of the model" when suggesting how thorough the validation needs to be. Also, I agree that it says "could include" in Section 3.3.1.a.

• Section 3.3.1.a.2—I am not clear if "intended application" vs. "project objective" are the right terms if the intent is to describe different stages of modeling.

• Section 3.3.1.b—A question I have is why does this say "should consider" when 3.3.1.a says "could consider"? I would suggest this section to say "could" too. I would suggest that some of the sub-suggestions are not applicable to certain types of models.

• Section 3.4—I would suggest to add "as applicable depending on the type of the model" at the end of the paragraph.

• Section 3.4.1.b—I would suggest the following wording change: any other known material limitations of the models that.... While it would not be possible to list 'unknown' material limitations, I feel the clarity in the wording is important to note.

• Section 3.4.2.b—I feel that a requirement needing to describe "any uncertainty in model results" is far too broad and ambiguous. Can this scope be clarified?

• Section 3.4.3 and 3.4.4—I would suggest to add "as applicable depending on the type of the model".

• Section 3.7—considering the situation if an actuary is a model "user"—can this section refer back to 3.1.2 about making a "reasonable attempt" or similar caveat for clarity?

Thank you again for the opportunity to comment on the Draft ASOP. Again, I think the major challenge lies with the very broad scope of the Draft ASOP.

Greg Frankowiak, FCAS, MAAA, CPCU, MSM