Comment #9 - 7/18/13 - 6:22 p.m.

Thanks to all those involved in the development of the Exposure Draft of a Modeling standard of practice. I consider quantitative modeling a fundamental component of all actuarial practice and appreciate that the ASB has taken the initiative to create a general modeling standard.

My comments are mostly editorial. Those I consider more important/substantive I have identified with an '*".

RESPONSES TO QUESTIONS POSED.

1. Does the proposed standard provide sufficient guidance to actuaries working with models?

Yes, although perhaps uses "consider/considering" too much.

2. Is the proposed standard sufficiently flexible to allow for new developments?

Yes

3. The draft ASOP starts with a wide scope, but allows the actuary to use professional judgment to identify those instances (such as those involving minimal reliance by the user, or resulting in a non-material financial effect) where some guidance described in this ASOP is not appropriate or practical. Is this clear and appropriate?

Generally appropriate and clear

4. In those instances where some guidance described in this ASOP is not appropriate or practical and the deviations from guidance are "not material," the actuary does not need to disclose these deviations. Is this clear and appropriate?

Generally appropriate and clear

5. Appropriate documentation simplifies later use and development of current models as well as allowing easier review by principals and other actuaries. Section 3 contains guidance with regard to documentation. Is this guidance clear and appropriate?

Generally clear, but in specific comment below, I suggest changes in where documentation is mentioned.

6. Does the use of bold font to identify defined terms improve the readability and clarity of the standard? If not, what suggestions do you have to improve the recognition of defined terms in the standard?

*Suggest as an alternative creating a hyperlink from each occurrence of the defined word to its definition in Section 2. This will automatically give the word a different look and make it easy for the reader to navigate to the definition by clicking on the defined word.

SPECIFIC COMMENTS.

- A. Section 1.2, 3rd para
 - a. In first line: add "Section 3 of" between "in" and "this"
 - b. Last line: replace "should refer to Section 4" with "follow the guidance provided in Section 4.2" in my opinion what is in section 4 is also "guidance"
- B. Section 1.2, last line: replace "consider" with "follow"; if the guidance is applicable and appropriate, it would seem that the guidance should be followed; another alternative is to reword the last line to "consider the extent to which the guidance in this ASOP is applicable and appropriate."
- C. *Definition 2.9: Movethe second sentence ("Models are used toand guide decisions.") to the Appendix; that sentence seems more appropriate as background than as part of a defintion summarizes what models do not what they are; that sentence could be the first sentence in the background section of the Appendix
- D. Section 3.1.2, first sentence: add "or possible" at the end?
- E. Section 3.1.3, first sentence: add "or not possible" after "appropriate"?
- F. *Section 3.2.4: the first sentence and items c. and d. seem to cover items (opinion, communicating results, preparing documentation) that are more appropriately covered in Section 3.6 or Section 4; suggest revising 3.2.4 t o something like:
 - 3.2.4 <u>Understanding the Model</u> The actuary should understand
 - a. important aspects of the model being used, including but not limited to, basic operations, important relationships, major sensitivities, strengths and potential weaknesses; and
 - b. whether, and the extent to which, the **model** can fulfill its **intended purpose**, given limited information, time constraints, and other practical considerations
- G. Section 3.2.5, item a: suggest replacing "a contract or plan" with "what is being modeled"; "contract or plan" seems limiting
- H. *Section 3.2.5, item d: If there is grouping of data, documentation would seem to be appropariate (not just consider whether or not appropriate); suggest moving to Section 3.6 (see below)
- I. *Section 3.2.6: repalce "deriving" with something like ", and the quality of,"
- J. Section 3.2.7, item a, first line: suggest replacing "consider" with "use"
- K. Section 3.2.7, item a, point 3: suggest replacing "in modifying" with "to modify"
- L. Section 3.2.7, item a, point 4: suggest replacing "is significant" with "could have a material impact"

- M. *Section 3.2.7, item d: suggest replacing "consider monitoring that" with something like "monitor the extent to which"; if practical, it seems monitoring should be done, not just be "considered"
- N. Section 3.3, first line: both "model" and "risk" should be bold (or hyperlinked)
- O. *Section 3.3.1, items a and b: Items a. 1, a. 3, b.1. and b. 2 seem to overlap and perhaps could be consolidated or more clearly differentiated
- P. Section 3.3.1, item a 4: delete "then" is it necessary?
- Q. Section 3.4: delete "As Indicated in section 3.7.1,"?
- R. *Sections 3.4.1, 3.4.2 and 3.4.3: I am a bit uncomfortable with "should consider including" instead of "should include" but I am not sure I would be comfortable prescribing that all of that should be included!
- S. Section 3.5, second to last line: Is "(including sections 4.2 and 4.3)" necessary seems redundant
- T. *Section 3.6: reword to something like
 - 3.6 <u>Documentation—</u>Where appropriate to the **intended purpose**, the actuary should retain documentation or other file material. Such documentation could include, for example:
 - a. how the model meets the intended purpose;
 - b. potential limitations of the model; and
 - c. the rationale for grouping data

The actuary should also prepare and retain documentation to demonstrate compliance with the disclosure requirements of section 4 of this ASOP.

- U. Section 4.1.2: delete ", as discussed in section 3.2.4"?
- V. Section 4.1.3, second line: replace "therefore" with "for such inconsistencies"?
- W. *Appendix, Background: move the following sentence from definition 2.9 to be the first sentence of the Background secton "Models are used to help explain a system, to study the effects of different components, and to derive estimates and guide decisions."