

**Comment #31 – 9/30/13 – 7:45 p.m.**

ASB COMMENTS

RE: *Modeling* Exposure Draft – Broad Concerns

September 29, 2013

Dear ASB:

Thank you for the opportunity to comment on what I think will be an excellent reference to enhance the quality of actuarial Modeling. My previous comments have suggested additions to the guidance.

Purpose

However, I want to separately express broader concern that two aspects of the guidance could inappropriately weaken, rather than strengthen, the standard of quality of our Modeling work and the fulfillment of our responsibility to the public.

I also ask whether clarification is needed on how guidance relating to reliance on others fits together among and within the various ASOPs related to Modeling, as elaborated in (B) below.

(A) Serious Concerns

- (1) The Exposure Draft creates a double standard for the actuary's responsibility in understanding the Model he is using:

“3.1.2: If the actuary uses a Model designed or built by someone else, such as a vendor or colleague, there may be limited ability to understand the underlying workings of the Model and, therefore, full application of the guidance in this ASOP may not be necessary.”

This continues, “nonetheless, the actuary should make a reasonable and appropriate attempt, given the Project's Objective, to understand...basic workings...major sensitivities and dependencies...and key strengths and limitations.”

- (2) There are several instances where a phrase like “given limited time or information or budget constraints” comes up. This seems to suggest, and could possibly codify, our acceptance of actuaries failing to meet Projects' Objectives to the full extent. Examples, with italics added:

“3.2.7 Assumptions and Parameters - The actuary should use assumptions and parameters that are appropriate in light of the Intended Purpose. a. Experience Used – The actuary should consider experience that is based on appropriate available data, *given time or budget constraints*, in light of the Model's Intended Purpose.”

“3.2.4 Understanding the Model – The actuary’s responsibilities may include expressing an opinion, using or communicating results, or preparing documentation. In these instances, the actuary should do the following: ... b. understand whether, and the extent to which, the Model can fulfill its Intended Purpose, *given limited information, time constraints, and other practical considerations.*”

And, 3.4 Presentation of Results... 3.4.1, “Explanation of Model in Actuarial Report - “...the actuary should consider including explanations of ...b. the extent to which the Models fulfill their Intended Purpose, *given limited information, time constraints, and other practical considerations.*”

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I considered both of these concerns in light of the very strong ethics in our *Code of Professional Conduct*. The familiar Precept 1 reads:

“An Actuary shall act honestly, with integrity and competence, and in a manner to fulfill the profession’s responsibility to the public and to uphold the reputation of the actuarial profession.”

And Annotation 1-1 continues: “An Actuary shall perform Actuarial Services with skill and care.”

This precept does not say that we should act with competence, or skill and care, “to the extent possible given time or budget constraints,” or “to the extent feasible given business situations where we purchase Models from a vendor.” Nor does it say that we should uphold the reputation of the profession to the extent feasible.

#### Further Discussion – Understanding Models Developed by Others

My concern for the double standard in the understanding of these Models is informed and heightened by some SOA meeting sessions from the last couple years. In totality I have the impression that there might be too much acceptance of the use of vendors’ “black box” Models or mathematical algorithms which are not well understood. Actuaries have noted counterintuitive results.

We need only look back to 2008 to see the impact of financial professionals’ lack of understanding of Credit Default Swaps and other products they assembled: the deepest recession since the 1930’s with continuing high unemployment today.

**I think that the actuary should understand each aspect of a Model sufficiently well to act with competence, if that aspect is material to the Project’s Objective and within his expertise.**

This would not preclude use of vendor or consulting services and declaring reliance upon them (discussed a little in (B) below). (I would still prefer that algorithms be open for examination, even if the actuary does not possess the expertise to personally understand all details.)

#### Further Discussion – Time or Budget Constraints; Information Constraints

I assume that most current American and global business models are designed to impose time and budget constraints to the point at which customer dissatisfaction sufficiently hurts sales or other serious problems result. But I feel that actuaries, among others, have a professional responsibility to join together prior to this point and say we will not do our jobs if we cannot do them competently, just as I surely hope that my future surgeons will not allow hospital profit goals to compromise care.

There could be appropriate exceptions, such as when new regulations require Actuarial Services which are not yet incorporated into efficient routines. Exceptions deemed appropriate should be permitted in the ASOP (not as a deviation), but with the understanding that the exception is not expected to be ongoing.

Similarly, allowing for limitations due to “information” constraints might be acceptable where actuarial data has not caught up with new products or new regulations, and the limitations are temporary.

**Simple addition of a word like “temporary” or “temporarily” after “given” in the passages might help rectify this issue; I’m not sure if it is a complete solution.**

(B) Scope of ASOPs with respect to Reliance on Others

- This ASOP is entitled *Modeling*
- The ASB is currently revising ASOP No. 38, *Using Models Outside the Actuary’s Area of Expertise (P & C)*, to include all actuarial work.
- Section 3.5 in *Modeling* discusses “Reliance on Others” and refers us to ASOP Nos. 23 and 41: “When relying on Data or other information supplied by others, the actuary should refer to ASOP Nos. 23 and 41, for guidance. When relying on projections or supporting analysis supplied by others, the actuary should refer to ASOP No. 23, deeming such projections or supporting analysis as Data covered by that standard...”

I suggest that the ASB consider whether the interaction of these three guidance sets needs any clarification. The questions below are rhetorical, for your consideration.

- (1) Will the scope of this *Modeling* ASOP encompass the Models to be covered in revised ASOP No. 38, or are they mutually exclusive? What if a Model is a combination?
- (2) Is a “projection” described in 3.5 also a Model, and if so, when is it covered by the *Modeling* ASOP, when by the revised ASOP No. 38 and when by ASOP No. 23 (via 3.5 above)?

To illustrate, here are a few examples of Models and Intended Purposes or Intended Applications currently in use which involve some degree of reliance on others. Is it clear which ASOPs apply?

- a. An actuary goes to his company’s investment department for a “projection” or “Model” of the future cash flows of CMO’s to be used for cash flow testing (with a Project’s Objective related to PBR, RBC, ERM, Asset Adequacy Analysis or pricing, for example)
- b. A cash flow testing Model is purchased from a vendor and all formulas and methods are fully documented for the actuary and within his expertise
- c. As in b., but parts of the Model are outside the expertise of the actuary

- d. A cash flow testing Model is purchased from a vendor and some formulas are labeled proprietary and are unknown to the actuary
- e. An NAIC (or SOA) economic scenario generator is used
- f. The actuary uses random number generators built into software packages such as Excel

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The ASB might delay the effective date of sections of the ASOP for which the industry needs time to adapt.

Thank you very much for considering these thoughts. I am available at any time for questions or further discussion.

Sincerely,

Mary Jo Napoli, FSA, MAAA