

September 30, 2013

The following are comments for consideration by the Actuarial Standards Board (ASB) with respect to their Exposure Draft, issued June 2013, of the proposed Actuarial Standard of Practice (ASOP) for **Modeling**.

The availability of computing power, the proliferation of high quality data (information), and the clear value in 'mining' this information have all driven rapid advances in the use of models across all industries, including (re)insurance. As a PhD who has led predictive modeling teams in the (re)insurance space, and is now leading a capital modeling team, I believe that creating standards for model building is well worth the effort for any number of reasons; creating credibility for those in the profession engaged in the work, clarifying liability for those performing the work, providing guidance for those reviewing and/or validating models. The 'lies, damned lies, and statistics' phrase is oft-quoted and perhaps more apt for various types of models, where an increase in complexity of the work product is proportional to a decrease in transparency.

Standards should be appropriate to an area of expertise, and some observations after reviewing the proposed standard are as follows:

1. The ASOP creates a standard with extremely broad scope, ranging from the rapidly growing field of 'mining information' to 'traditional actuarial' techniques that have been used for many years.
  - a. As written, it will apply to nearly all work performed by credentialed actuaries.
  - b. Further, it is not limited to the field of (re)insurance and would apply to actuaries working outside of (re)insurance.
2. The ASOP creates a standard that applies to a relatively small subset of practitioners.
  - a. The standards apply to credentialed actuaries only. (Is there a standard for actuary to be 'not qualified' with respect to modeling?)
  - b. Model builders outside the (re)insurance area are rarely credentialed actuaries. While not aware of formal model-building standards specific to an industry, there are clearly both 'sound' and 'best' practices known to practitioners.
  - c. Standards potentially serve as a useful reference to non-actuaries building models, as well as to those validating models build by actuaries. As it is written, it is unclear whether these are standards or provide guidance with respect to a framework.

Primary concerns with this ASOP as it is currently written are as follows:

- Magnitude and clarity of scope: By attempting to provide a standard that applies to all types of models, and which in reality encompasses nearly any work an actuary will perform as part of their professional services, it becomes difficult to apply the standards to each separate area of modeling. The types of models that the ASB expects to fall under the scope of the ASOP, when built by a credentialed qualified actuary include (with an emphasis on those used in (re)insurance), but are not limited to the following:
  - Catastrophe
  - Statistical e.g. predictive
  - Financial e.g. capital
  - 'Standard actuarial' e.g. pricing, reserving
  - Claims

- Consistency of terminology with practice: As a corollary to the first concern, discussions with colleagues working in diverse fields such as cat modeling, capital modeling, and predictive modeling highlighted the need to address (in) consistency of language between various practice areas. Although it potentially limits the usefulness of the proposed ASOP, it is recommended that it be clarified that the terminology may be unique to the ASOP and actuaries building models in a specific field should use terminology appropriate to the field.

The views expressed herein do not necessarily reflect those of my employer. The opportunity to provide input into the process is sincerely appreciated.

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