



Deadline: 31 March 2016

Please use this template to comment on the [Exposure Draft of ISAP 1 A](#) Governance of Models, and the proposed revisions to the [Glossary for ISAP 1A](#).

The IAA invites comments on this Exposure Draft, particularly on the questions set out below. Comments are most helpful if they:

- (a) Comment on the questions as stated;
- (b) Indicate the specific paragraph or group of paragraphs to which they relate;
- (c) Contain a clear rationale; and
- (d) Include any alternative that the IAA should consider, if applicable within the scope of the Statement of Intent for ISAP 1A.

Identification and instructions		
Name of Individual:	Please indicate if your comments are personal, or represent your organization:	Robert Berendsen, Chairperson of the CIA's Committee on International Insurance Regulation. robert.berendsen@oliverwyman.com Comments represent those of the organization.
Name of organization		Canadian Institute of Actuaries (CIA)
Disclosure of comments:	Please indicate if your comments should be treated as confidential, and if so why:	
Instructions for filling in and sending the template	<p>Please follow the following instructions for filling in the template:</p> <ul style="list-style-type: none"> ⇒ Do not write in the yellow shaded cells ⇒ Write in the white cells ⇒ When commenting on a specific paragraph: <ul style="list-style-type: none"> ○ Please use a separate row for each paragraph, sub paragraph, or bullet. ○ Please include the full reference in the first column such as "Introduction 3rd paragraph 2nd bullet" or "2.6.1.b.ii" ○ Please insert/append extra rows as needed. <p>Please send the completed template, renamed with the organization's or individual's name, attached in Word Format, to</p>	



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	ISAP1A.comments@actuaries.org	
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	Specific Questions asked by the ASC	Response
Q1.	Is the guidance clear and unambiguous? If not, how should it be changed?	Generally clear. The word "validation" is not defined and appears to be used alternately to describe either the idea of a model being "fit for purpose" and/or the idea of "correct implementation" (also known as model verification) of a chosen model. For example in 2.2.4, 2.3.2 and 2.4.2.
Q2.	Is the guidance sufficient and appropriate? If not, how should it be changed?	Sufficient and appropriate, except for suggestions noted below.
Q3.	Is it clear how the guidance in the proposed ISAP relates to the guidance in ISAP 1? If not, how should it be changed?	Yes.
Q4.	Is the guidance at the right level of detail? If not, what text should be omitted because it is too detailed? In what areas do actuaries need more detailed guidance?	Generally at the right level of detail, except as noted below.
Q5.	Are there other matters that should be included in this standard on governance of models? Are there some included here that should not be?	

	General Comments on the ISAP 1A Exposure Draft	



Comments on specific paragraphs of the ISAP 1A Exposure Draft		
Full paragraph reference	Change proposed to the paragraph (markup preferred)	Reason the change is needed (can be kept very brief or left blank if obvious from the change)
2.1	<u>Model governance</u> is important for all models, from simple spreadsheets to complex simulations. The level of governance should be proportionate to the model's complexity, its intended use, and the risks associated with inappropriate processes used in modelling.	For example, one could justify simpler governance for models used exclusively for internal management reporting purposes.
2.2	If the <u>actuary</u> is selecting an existing <u>model</u> (whether developed in-house or by a third party) the <u>actuary</u> should, before using the model in a reporting capacity :	Should not preclude using a model in a test or exploratory environment even if some of the criteria are not met. We agree that models used for internal and external reporting purposes should satisfy the stated criteria, as modified below.
2.2.1	Examples of items that the <u>actuary</u> should consider, if applicable, include but are not limited to the data that might be available, the granularity and the quality of inputs availability, granularity, and quality of data and inputs required by the selected model , the appropriateness of the relationships recognized, . . .	The phrase "the data that might be available" was ambiguous. We believe the proposed text is what was meant.
2.2.1	. . ., the appropriateness of the relationships recognized, and the <u>model's</u> ability to capture an appropriate range of results possible volatility around the expected values.	
2.4.1	Document the <u>model</u> construction, including scope, purpose of the <u>model</u> , data requirements , methodology and algorithms, key assumptions , statistical quality, calibration, and fitness for intended purpose.	



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2.5.6 (new)	Be satisfied that there are clearly defined roles and responsibilities in connection with the use of the model.	
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Comments on specific definitions in the Exposure Draft of the updated Glossary

Note that only the proposed revisions are open for comment

Defined Term	Change proposed to the definition (markup preferred)	Reason the change is needed (can be kept very brief or left blank if obvious from the change)
Model	Model (ISAP 1A) – A practical representation of relationships among <u>entities</u> or events using statistical, financial, economic, or mathematical concepts. A model uses assumptions, data, and algorithms that simplify a more complex system and produces results that are intended to provide useful information on that system. Calculations Practical representations simple enough for their calculations to be effectively performed manually would not be considered a model.	This may be semantics. We'd argue that models typically involve a series of calculations, but that any calculation is not itself a model.
Model Validation		We believe it would be useful to add a definition of model validation and that the definition should include two concepts: (1) confirmation that a model is fit for purpose, and (2) that the model has been correctly implemented.