***International Actuarial Association Actuarial Standards Committee***

**ISAP 5 – Insurer Enterprise Risk Models  
Report on Treatment of Comments on the Final Review**

**Submission**

The Actuarial Standards Committee (ASC) is pleased to submit this report. It was drafted by the ISAP 5 Task Force of the ASC and reviewed and edited by the ASC.  Throughout the document “we” means the ASC.

This report documents the comments we received on the proposed final ISAP 5 in the final review process and how we addressed those comments.

We would like to record our thanks to the commenters on the final review. They have helped us make slight adjustments which have improved the ISAP.

**Process**

In accordance with the IAA’s due process for the development of ISAPs, the proposed final ISAP 5 along with the amendments to the Glossary for the proposed final ISAP 5 were published for final review on 18 August 2016 with a comment deadline of 18 September 2016. The proposed final ISAP 5 and the associated Glossary were provided to all member associations and commenters on the Exposure Draft to enable them (a) to draw attention to any unintended consequences in the final draft’s wording, and (b) to determine whether their comments have been appropriately considered in the preparation of the proposed final ISAP.

**General overview of the responses to the final review**

We received 13 comment letters, two (an original and then a final) coming from the same source, representing 10 from Full Member Associations, and two from Standard Setters other than FMAs.

Nine of the 12 commenters were ultimately satisfied with the proposed final ISAP 5 as published for final review. The other three commenters made specific suggestions which were carefully considered by the ISAP 5 Task Force and in some cases we have made minor edits in response. Comments received can be viewed in their entirety on the IAA website at:

<http://www.actuaries.org/CTTEES_ASC/ISAP5/Final_Review_Comments/Final_Review_ISAP5_CommentsReceived_Sept2016.pdf>

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|  | **Organization** | **Comments** | **Date Received** |
| 1. | Institute of Actuaries of Korea | We have reviewed the proposed final ISAP 5 and we have no objection to it. This is an opinion from the Risk Management Committee of the IAK. | 9 September 2016 |
| 2. | Canadian Institute of Actuaries | The CIA would like to offer the following comment on the proposed final (PF) version of ISAP 5, dealing with insurer enterprise risk models. We are pleased with the changes made to the ISAP 5 exposure draft (ED) in arriving at this PF ISAP 5. The changes adequately alleviate the concerns we had raised in our feedback on the ED. We have no further comment. The CIA hopes that its comments provided herein will be of value to you. | 12 September 2016 |
| 3. | Casualty Actuarial Society | This comment is on behalf of the Casualty Actuarial Society (CAS), based on our review of the Final Consultation documents related to the draft of ISAP 5 on Insurer Enterprise Risk Models. CAS submitted quite a number of comments on an earlier draft of ISAP 5, and we are pleased to note that quite of few of the issues we raised in those comments have been addressed in the current draft. We appreciate the opportunity to comment, and we appreciate that the comments are reviewed and considered very thoughtfully.  We are concerned that issues we raised in several areas have not been addressed. We do not mean that they have been ignored; we realize that your team reviewed and considered them. But we believe these issues warrant another look by your team.-   * - 2.2 Proportionality. The new language addresses some of the earlier CAS comments, but still includes the phrase “nature, scale and complexity of the underlying risks.” Our earlier submission of comments noted the potential unintended consequence that this phrase may be misinterpreted to mean: “Do less, if the insurer is small and specialized.” And we suggested then (and suggest now), the solely cross-referencing ISAP 1 paragraph 1.5 would be a straightforward way to avoid this unintended consequence. | 16 September 2016 |

**ISAP 5 – Insurer Enterprise Risk Models  
Report on Treatment of Comments on the Final Review**

***Comments from Members and Other Interested Parties***

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|  | **Organization** | **Comments** | **Date Received** |
| 3. | Casualty Actuarial Society (cont’d) | - 2.4.1 seems to imply that the disclosure requirement applies to all stress/scenarios that were performed, but it seems to us that it really should only apply only for those tests where results are reported. Clearer language would clarify this point.  - 3.1 our comment noted that ISAP1 Section 3 does not always require a report, and suggested a refinement to the draft language here: “if the actuary completes a report the actuary should disclose in the report…”  In reviewing the current draft, we also noted two areas where we had questions rather than comments:  - 2.3.3 talks about probability distributions. Does there need to be a corresponding (though different) paragraph for situations where scenario testing is used?  - 2.3.2.c language seems to imply that stress testing or scenario testing might or might not be performed. Should there be a stronger direction to indicate that the use of the ERM model should include stress testing or scenario testing?  Finally, we noted a few wording issues in the new draft of ISAP5:  - 2.1.1 refers to “insurers.” It seems it should be “insurer”.  - 2.3.2 says the actuary should “obtain” information from appropriate sources. Should the wording perhaps be “obtain and examine.” The point is that the actuary should do something with the information, not just store it in a filing cabinet to prove that it was obtained. |  |
| 4 | Society of Actuaries in Ireland | The Society of Actuaries of Ireland is satisfied with the proposed draft. | 16 September 2016 |
| 5. | Canadian Actuarial Standards Board | On a general note we found the changes from the exposure draft very extensive and wondered if a re exposure would be in order. However, we also have very few comments and found these to be of high quality so this is more of an observation than a concern. In the Proposed Final ISAP 5:  - In Paragraph 2.3.3 at the start of the paragraph the terms ‘distributions and correlations’ is used whereas at the bottom ‘distributions and their related codependencies’ is used. We don’t understand why different terms are used to describe the same concept. | 18 September 2016 |

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|  | **Organization** | **Comments** | **Date Received** |
| 5. | Canadian Actuarial Standards Board (cont’d) | In the accompanying glossary:  We find the definition of model somewhat ambiguous. It may not be sufficiently clear that a single model may have many model runs. Controls for the inputs and outputs of each run are needed, but validation is not. It is easier to clarify this when using the UK/Cdn/(and until recently US) terminology of distinguishing of model specification, model implementation and model realization/run. Then one can state clearly that a model will have one or more model runs determined by distinct sets of input. It is also not clear "that simplify a more complex system" is intended to modify "methodologies" only, and not "assumptions, data, and methodologies". We suggest this definition could be changed to something like - "A model has a specification, uses methodologies that simplify a more complex system, and requires a set of assumptions and data for each run which produces results that are intended to provide useful information on that system." |  |
| 6 | Svenska Aktuarieforeningen | Svenska Aktuarieföreningen has no further comments on "Proposed Final ISAP 5 on Insurer Enterprise Risk Models". | 18 September 2016 |
| 7 | Institut des Actuaires (France) | Thank you very much for this new submission, the final draft was distributed to our working group and we did not receive any new comments.We also reviewed how our comments were taken into account and outcome is deemed reasonable | 18 September 2016 |
| 8 | Polish Society of Actuaries | The Polish Society of Actuaries welcomes the proposed ISAP and has no comments to its contents. | 18 September  2016 |
| 9. | Italian FMA Istituto degli Attuari and Ordine degli Attuari | I wish to thank much both the TF colleagues and the colleagues who sent comments on the ED for their worthwhile work.  We have read carefully all the documents. In the Consultation Report several principles points and intents are better explained (focus on Insurer Enterprise Risk models, Solvency Modelling and Enterprise Risk Modelling) .  We then haven't problems with the final draft's wording and we think the TF has appropriately considered the comments.  One comment: the TF thinks that some matters (description of different modelling techniques, motivation of ERM models, references to common | 18 September 2016 |

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|  | **Organization** | **Comments** | **Date Received** |
| 10 | Royal Dutch Actuarial Association | Below you will find 2 responses on ISAP 5 submitted by the Dutch Actuarial Association.  **Original Response:**  The Royal Dutch Actuarial Association has reviewed the final draft of ISAP5, especially on the follow up on our comments made. We appreciate in this respect that a Report on Treatment of Comments has been provided with an extensive feedback on the comments provided. Our overall conclusion is that the standard has made some limited improvements, but the guidance provided is still not sufficient and appropriate. We therefore do not support the standard in its current form. We believe that the amount and quality of the guidance is too limited for a standard of the IAA. More specific: We believe that the standard should be improved on readability and guidance provided. We miss a clear description on what ERM models are and more specific guidance on each of the models which can be distinguished. We believe that ISAP1 and ISAP1A should provide the general guidance with respect to modelling, whereas ISAP5 had value added if it contains further guidance for a specific set of ERM models. The content recorded is in our opinion not sufficient for this purpose. We again refer to ASOP46 where for example a distinction is made between economic capital models in general and more specific scenario- and stress testing and more specific guidance is recorded which we generally support. Furthermore, in our opinion this line of thinking is supported by the definition that has been added to the standard on an Enterprise Risk Model which also clearly mentions that this standard is applicable to a specific set of models: “Those models that are developed to comprehensively and consistently evaluate the risks of an entity. Examples include internal models as specified by the International Association of Insurance Supervisors (IAIS), and capital models.”  **Subsequent response (submitted 30 September 2016):**  We hereby send you - as discussed in the call of Monday on the final draft of ISAP5 - our updated response. We again would first like to express our thanks for your written response to our comments as recorded in the Comment Template on ISAP5 which you shared for the call, the good discussion in the call on Monday in which we both shared our views on the draft standard and finally the response to the mail with two questions on this matter we sent earlier this week. All helped us in better understanding the motivation of the Task Force on the choices made in the standard. | 20 September  2016 |

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|  | **Organization** | **Comments** | **Date Received** |
| 10 | Royal Dutch Actuarial Association (cont’d) | Our overall conclusion is that, given the explanations on the choices made, we support the standard,  but at the same time,  we would also like to have a discussion in the IAA on the minimal requirements and criteria to be applied with respect to the content of standards within the IAA including a discussion on the different views on what is considered educational.  More specific:  - We concluded that the discussion on this final draft standard is not a discussion on specific elements that should or should not be added, but is more a discussion of what the minimum requirements and criteria are for a good standard of the IAA.  - We understand that important criteria which have been applied are: (1) IAA standards are model standards for all standard-setting bodies around the world and each country can adopt or add guidance to the standard, (2) the guidance should be applicable in all member countries, (3) educational material that can be provided in International Actuarial Notes and other IAA material is excluded and (4) the standards of the IAA complement each and therefore duplication of guidance included in other standards is avoided. |  |
| 12 | Institute and Faculty of Actuaries | We have considered the responses provided by the ASC/Task Force to the points raised in the IFoA’s consultation response and accept that the ASC has provided proper reasons for not accepting some of those suggestions.  In particular, while the IFoA’s response suggested that ISAP 5 might have a wider scope, we accept that the ASC has given a reasoned explanation as to why that suggestion has not been adopted.  There are, however, a couple of comments that we felt it might be useful to raise at this stage: | 27 September  2016 |

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|  | **Organization** | **Comments** | **Date Received** |
| 12 | Institute and Faculty of Actuaries  (cont’d) | 1. The IFoA’s consultation response suggested that consideration might be given to the introduction of an ISAP on solvency modelling as well as the one for ERM. The comments indicate that this would be put to the ASC but it would be useful to understand the outcome of the ASC’s consideration of that proposal (if that consideration has now taken place).   (ii) The response also provided specific comment on 2.3.1 and observed that this seemed to imply that the actuary should always consider management actions when setting assumptions. It was suggested that the drafting of this section might be amended to clarify if this is proposing more prudent approach than under solvency II (which would require the actuary to justify their inclusion). There does not appear to be any changes made to section 2.3.1 to reflect this comment and there is also no response from the ASC/Task Force. It would be helpful to understand the ASC’s response to those comments. |  |

***Responses to Comments Submitted***

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|  | **Comments from the Casualty Actuarial Society** |
| **Comment** | This commenter observed that 2.1.1. refers to “insurers” and suggested it should be “insurer”. |
| **Response** | We agreed and the term “insurers” has been changed to “insurer”. |
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| **Comment** | This commenter noted that the revised wording of 2.2 Proportionality addresses some of their earlier comments, but still includes the phrase “nature, scale and complexity of the underlying risks.” They are concerned that this phrase may be misinterpreted to mean: “Do less, if the insurer is small and specialized” and suggested cross-referencing ISAP 1 paragraph 1.5 to avoid this unintended consequence. |
| **Response** | The Proposed Final version that we have circulated reads:   * 1. **Proportionality**  – In applying ISAP 1 paragraph 1.5. Reasonable Judgment, and in particular paragraph 1.5.2., the actuary should also consider proportionality in respect of the nature, scale and complexity of the underlying risks.   ISAP 1 paragraph 1.5 is already referenced. We also believe it is clear that the “Proportionality” principle referenced here refers to the nature, scale and complexity of the underlying risks, not of the insurer in question. No action was taken. |
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| **Comment** | This commenter suggested that 2.3.2.c seems to imply that stress testing or scenario testing might or might not be performed and questioned whether there should be a stronger direction to indicate that the use of the ERM model should include stress testing or scenario testing. |
| **Response** | We believe that, while stress testing and scenario testing represent very important techniques that are available to actuaries who are performing ERM analyses, it would be improper to presume that it is appropriate to use these tests in every ERM modeling exercise. No action was taken. |
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| **Comment** | This commenter observed that 2.3.2. states “the actuary should “obtain” information from appropriate sources” and suggested that the wording should be changed to “obtain and examine.” . |
| **Response** | We agreed with the point and modified the wording to add “and reviewing”. |
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| **Comment** | This commenter observed that 2.3.3 addresses probability distributions and suggested that there should to be a corresponding paragraph for situations where scenario testing is used. |
| **Response** | We believe that it is clear that Paragraph 2.3.3. applies to all ERM modeling, including stress testing and scenario testing. No action was taken. |
| **Comment** | This commenter observed that 2.4.1 seems to imply that the disclosure requirement applies to all stress/scenarios that were performed rather than applying only to those tests where results are reported and suggested that this point should be clarified. |
| **Response** | We believe that it is understood that this standard, like all others, is intended to apply specifically to analyses performed that are relevant to the conclusions drawn by the actuary and would not require disclosure of work done which had no relevance to the results of the analyses. No action was taken |
| **Comment** | This commenter noted that ISAP1 Section 3 does not always require a report, and suggested a refinement to the draft language. |
| **Response** | We agreed with the commenter and recognized that a “report”, as defined in the Glossary, is a communication that appears in “recorded form”. Given that disclosures may be communicated in other forms, we modified paragraph 2.1.3 and paragraph 3.1 to remove the reference to “a report”. |
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|  | **Comments from the Canadian Actuarial Standards Board** |
| **Comment** | This commenter observed that in paragraph 2.3.3, the terms “distributions and correlations” and “distributions and their related co-dependencies” are both used and questioned why different terms are used to describe the same concept. |
| **Response** | We agreed and changed the latter reference to also read “distributions and correlations”. |
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| **Comment** | This commenter suggested that, in the Glossary, the definition of “model” was somewhat ambiguous. |
| **Response** | This comment relates to the work of the ISAP 1A Task Force and we referred the issue to them. |
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|  | **Comment from the Istituto degli Attuari and Ordine degli Attuari** |
| **Comment** | This commenter suggested that Educational material should be made available concurrently with the issuance of the model standard. |
| **Response** | The ASC cannot control the development and issuance of educational material. We will discuss this topic at our next meeting and then make an effort to direct this request to the appropriate committees within the IAA. |
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|  | **Comments: Original Response of the Royal Dutch Actuarial Association** |
| **Comment** | This commenter suggested that ISAP 5 should include a general discussion of what models are used in ERM (e.g., internal models, asset/liability models, capital models) and should also include specific guidance for each of these models. |
| **Response** | The ASC has consistently propagated a set of standards that are interrelated and are Principles based. As such we have intentionally avoided duplication of guidance included in other standards (such as ISAP 1 and ISAP 1A) and excluded educational material that can be provided in Practice Notes and other IAA material. The ASC has always subscribed to the belief that a discussion of the different kind of models which are used, and brief descriptions of the various methods that can be employed are more appropriately addressed in educational material. No action was taken. |
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| **Comment** | This commenter noted that ASOP 46 (U.S. Actuarial Standards Board) includes a much broader discussion of individual models and their applications, and suggested that ISAP 5 contain more educational material. |
| **Response** | The ASC and the ISAP 5 Task Force is very familiar with ASOP 46. Unlike IAA Model standards, US ASOPs are written as “stand-alone, self-contained” guidance with essentially no reliance on, or cross-reference to, other standards. It should also be noted that at the time of the development of ASOP 46, there was no ASOP providing guidance on “Models” as is the case with the IAA and ISAP 1A.  As noted above, we believe that educational material, while important, should not be included in a standard. |
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|  | **Comments: Final Response of the Royal Dutch Actuarial Association** |
| **Comment** | This commenter requested “*a discussion in the IAA on the minimal requirements and criteria to be applied with respect to the content of standards within the IAA including a discussion on the different views on what is considered educational*.” |
| **Response** | We agreed and, as an initial step, have added this topic to the agenda for the ASC meeting in Cape Town. |
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|  | **Comments from the Institute and Faculty of Actuaries** |
| **Comment** | This commenter suggested that consideration might be given to the introduction of an ISAP on solvency modelling as well as the one for ERM. The comments indicate that this would be put to the ASC but it would be useful to understand the outcome of the ASC’s consideration of that proposal (if that consideration has now taken place). |
| **Response** | The ASC has been made aware of this request and it will be discussed at the meeting in Cape Town. |
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| **Comment** | This commenter observed that, in 2.3.1. seemed to imply that the actuary should always consider management actions when setting assumptions. It was suggested that the drafting of this section might be amended to clarify if this is proposing a more prudent approach than under Solvency II (which would require the actuary to justify their inclusion). There does not appear to be any changes made to section 2.3.1 to reflect this comment and there is also no response from the ASC/Task Force. It would be helpful to understand the ASC’s response to those comments. |
| **Response** | As we mentioned in our Consultation Report, ISAPs are model standards intended to assist standard-setting bodies throughout the world and, as such, they avoid references to limitations imposed by laws or regulations (such as Solvency II). ISAP 5 requires the actuary to “consider” management actions but does not oblige the actuary to take these into account in the model if doing so is not appropriate. No action was taken. |