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EIOPA Final Report on Public Consultations No. 13/011 on the Proposal for Guidelines on the Pre-application for Internal Models

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1. Scope

1.1. This Final Report sets out the feedback to the Consultation Paper (CP) No. 13/011. The Report provides an analysis of responses to the consultation including to the comments made by the Insurance and Reinsurance Stakeholders Group (IRSG), describes any material changes to the CP (or confirms that there have been no material changes), and explains the reasons for this in the light of feedback received.

1.2. It includes a feedback statement with EIOPA's opinion on the main comments received during the Public Consultation and the revised Guidelines.

2. Purpose

2.1. EIOPA is issuing Guidelines addressed to National Competent Authorities (NCAs) on how they should prepare for the application of Solvency II. The Guidelines follow EIOPA's Opinion on interim measures regarding Solvency II published on the 20 December 2012 (hereafter 'the Opinion'), within which EIOPA:

a) Set out its expectations that NCAs, by way of preparing for the new system, put in place, starting on 1 January 2014, important aspects of the prospective and risk based supervisory approach to be introduced by Solvency II.

b) Stressed the importance of a consistent and convergent approach with respect to these preparations, notwithstanding the current status of the negotiations on the Omnibus II Directive (OMDII) and the further delay to the application of Solvency II.

c) Committed to publish Guidelines addressed to NCAs on how they should meet the expectations described in the Opinion.

2.2. The measures set out in the Guidelines are preparatory for Solvency II. In order to ensure effective and meaningful preparation, there needs to be a defined and demonstrable progression towards it. This means that during the preparatory phase, NCAs are expected to ensure that undertakings take steps towards implementing the relevant aspects of the regulatory framework addressed by these Guidelines. In addition this would also ensure that when Solvency II is applicable in their jurisdiction undertakings are better prepared to fully comply with Solvency II. In turn, NCAs are expected to take the appropriate steps to promote industry's preparation towards Solvency II and to review and evaluate the quality of the information provided to them.

2.3. The package in this Final Report reflects EIOPA's position on the comments received and includes:

a) Feedback Statement;

b) Revised preparatory Guidelines;

c) Revised Explanatory Text; and

d) Appendixes:

- Appendix I: Impact Assessment
- Appendix II: Comments template

3. Feedback Statement

I. Introduction

3.1. EIOPA would like to thank stakeholders and the IRSG for having provided comments on CP No. 13/011. These comments provided valuable suggestions for improving the Guidelines and helped to identify areas needing further clarification.

3.2. The amendments that have been made cover not only clarifications, including the acceptance of a number of rewording suggestions from respondents, but also some changes to the content of the Guidelines.

3.3. The feedback statement outlines the comments received from stakeholders to CP No. 13/011 and the EIOPA responses to those comments along with resulting changes made to the Guidelines.

3.4. For a complete overview of all comments, responses and resulting changes made please refer also to the comments template (Appendix 2: Resolution of comments).

II. Comments in general

3.5. Generally stakeholders supported a move towards a harmonised regime. Stakeholders also highlighted that proliferation of national requirements should be avoided and a consistent approach adopted across all jurisdictions for the pre-application process for internal models was needed.

3.6. The following paragraphs address the main comments received and EIOPA's answer to those.

Purpose of the preparatory phase

3.7. Stakeholders questioned whether the purpose of the Guidelines was either preparation or early implementation of Solvency II.

3.8. EIOPA would like to stress that the measures set out in the Guidelines are preparatory for Solvency II. However, to ensure effective and meaningful preparation, there needs to be a defined and demonstrable progression towards Solvency II by both supervisors and undertakings.

3.9. EIOPA Guidelines on the Pre-application process for Internal Models aim to provide guidance to help undertakings and supervisors to prepare for the Solvency II internal modelling framework when it is applicable; in particular NCAs are expected to form a view on how prepared an insurance or reinsurance undertaking is to submit an application to be able to use an internal model for the calculation of the Solvency II Capital Requirement. As the emphasis of these Guidelines in on preparedness towards Solvency

II implementation, it is not expected at this stage that undertakings fully comply with all the internal models requirements.

3.10. In this respect a «provisional approval» of the internal model or parts of it, or a «plan towards compliance», as suggested by some of the comments received, is not within the scope of the pre-application process. A decision on the approval or rejection of the internal model, and therefore on whether the internal model fulfil the Solvency II requirements for its use for the calculation of the Solvency Capital Requirement, is to be given by NCAs after a formal application is submitted by the undertaking when Solvency II is applicable. It is the responsibility of the undertaking to prepare for Solvency II and in particular to plan the steps needed in order to submit an application.

Enforcement measures and supervisory actions

3.11. Stakeholders supported that the preparatory phase should enable NCA's to assess preparedness but that it should not lead to any enforcement measures.

3.12. EIOPA clarifies that NCAs are expected to comply with the Guidelines by ensuring that undertakings meet the specified outcomes taking into consideration its preparatory nature.

3.13. EIOPA Guidelines do not give indications on enforcement measures in relation to the implementation by undertakings of the preparatory Guidelines or in the specific way of implementation itself.

3.14. The means by which each NCA incorporates EIOPA Guidelines into their supervisory or regulatory frameworks is left at their discretion and it is not an EIOPA competence. When considering the best appropriate way to incorporate EIOPA Guidelines NCAs may be affected by their competences and powers and specific tools used at national level to incorporate the Guidelines.

3.15. Regardless of how NCAs incorporate the Guidelines at national level, EIOPA expects as an active step a dialogue to take place between NCAs and undertakings during the preparatory phase in order to prepare for Solvency II.

3.16. The preparatory Guidelines by themselves do not require supervisory actions, in particular regarding failures by undertakings to comply with Solvency II Pillar I requirements as a result of the information provided during the preparatory phase.

Status of the Solvency II Directive and Delegated Acts (Implementing measures and Technical Standards)

3.17. Stakeholders asked for clarifications about the interaction between the preparatory Guidelines and the overall Solvency II negotiation process.

3.18. The Guidelines provide some direct references to provisions sets out in the Solvency II Directive. EIOPA acknowledges that certain parts of the

Solvency II Directive are to be revised by the Omnibus II Directive and that Delegated Acts proposal have not finalised by the European Commission yet.

3.19. Under Solvency II an insurance or reinsurance undertaking applying for the use of an internal model to calculate the Solvency Capital Requirement will have to comply also with the Directive requirements as further specified in the Delegated Acts when issued.

Status of the Explanatory Text

3.20. Stakeholders commented on the status of the Explanatory Text. Stakeholders pointed out that the Explanatory Text should not provide a further layer of requirements, as it was not subject to public consultation.

3.21. EIOPA would like to clarify that the Explanatory Text is not subject to the comply-or-explain obligation. The aim of the Explanatory Text is to provide illustrations on how Guidelines or certain parts of them can work in practice, adding cross references, concrete applications or examples without creating new obligations. Its content is intended to offer support to the users of the Guidelines and therefore it does not need to be publicly consulted. For instance, the Explanatory Text provides examples of good practices on how requirements foreseen in the Guidelines.

Application by third countries

3.22. EIOPA does not expect that NCAs in third countries apply the preparatory Guidelines. The Guidelines are not subject of equivalence analysis nor do they pre-empt any decision taken in past or future by the European Commission regarding equivalence.

3.23. In the case of undertakings and groups with activities in third countries, when deemed appropriate by the College of Supervisors, the Competent Authorities of these third countries could participate in the pre-application process.

Comply-or-explain mechanism

3.24. Article 16 of the EIOPA Regulation sets out that NCAs have to report to EIOPA within 2 months from the publication of the preparatory Guidelines whether they comply or intend to comply with each Guideline. In case NCAs do not comply with a guideline they need to provide an explanation about the reasons for non-compliance. Such obligation is set in Article 16 of the EIOPA Regulation.

3.25. The responses on comply-or-explain provided by NCAs will be made publicly available by EIOPA. In the cases of not compliance, the reasons will be kept confidential unless agreed otherwise by the Board of Supervisors.

3.26. The NCAs replies provided during the comply-or-explain will be updated later on after the submission of the progress report by NCAs to EIOPA.

3.27. EIOPA recognises that in a significant number of member states, the NCA does not have the legal competence to enact the relevant financial legislation and is dependent on the powers bestowed upon it.

3.28. If NCAs do not comply with the Guidelines then, by nature EIOPA expectations on NCAs actions need to be considered accordingly.

Progress report

3.29. The progress report is a tool to facilitate communication between EIOPA and NCAs, but it is not part of the requirements for preparation towards Solvency II.

3.30. NCAs are required to submit a progress report to EIOPA by the end of February every year after the publication of the Guidelines. The first NCA's progress reports should be submitted by 28 February 2015, based on the period from 1 January 2014 to 31 December 2014.

3.31. It is up to the NCAs to decide how the level of detail of the information given to EIOPA in the progress reports and how this information has to be gathered at national level.

III. Specific issues raised by respondents

General Guidelines

3.32. Some stakeholders pointed out that it is critical that undertakings under pre-application receive feedback from NCAs in a timely and regular manner.

3.33. To address this comment, Guideline 3 has been revised in order to require NCAs to provide on-going feedback to the undertaking on the reviews they carry out on the internal model for the purposes of pre-application.

3.34. Some stakeholders pointed out that the requirement to notify to NCAs the changes made to the internal model during pre-application should not apply all to changes, only to relevant ones.

3.35. EIOPA wants to clarify that only changes the undertaking considers relevant are to be notified to the NCAs, and this is reflected in the Guidelines.

3.36. EIOPA would want also to stress that changes referred to in this Chapter on General Guidelines are only applicable to changes made to the internal model during pre-application. The aim of the Chapter on Model Changes is different: it aims to provide Guidelines on how to prepare for the fulfilment of the model changes requirements foreseen in Solvency II.

Model changes

3.37. Some stakeholders pointed out that some major changes to the internal model might be time-critical (e.g. the introduction of new products or legislative amendments) and call for the implementation of a fast track model change approach.

3.38. EIOPA stresses that, as provided by the Solvency II Directive, the Solvency Capital Requirement should only be calculated once the internal model has been approved. When considering a major change to the internal model, undertakings are encouraged to pro-actively engage with their supervisors before submitting an application for the approval of the change, especially when this approval is expected to be time critical. This might, in some cases, reduce the time needed by NCAs to approve the major changes.

3.39. Some stakeholders commented that the Guidelines seem to indicate that a change in the parameters of the internal model will fall within the scope of the model change policy and this will be onerous for undertakings and NCAs.

3.40. EIOPA wants to point out that the issue of parameters is dealt with in the Explanatory Text as an example. The update of parameters can have a significant impact on the model outputs and the Solvency Capital Requirement in particular and hence it is generally within the scope of the model change policy. NCAs, as part of the approval of the model change policy, might agree on the information to be provided as part of the reporting of minor changes. In any case, it is important that NCAs form a view on how the undertaking chooses its criteria for classifying changes so as to ensure that significant changes in material parameters are classified as major when appropriate.

Use Test

3.41. Some stakeholders pointed out that it is important to keep in mind that an internal model should support – and not replace – decision making. Decisions are made by people taking into account a variety of sources and tools, the results of the internal model being one of them.

3.42. EIOPA agrees and does not expect the internal model to replace decision making in the undertaking. What it is important is that the internal model results are taken into account in relevant decision making of the undertaking.

3.43. For some stakeholders it appears unclear what the requirement to identify inconsistencies and consider them to improve the internal model would mean in practice. In particular some stakeholders stated that the internal model cannot be a "reconciliation" tool and that retrospective verification of decision-making may not be possible at that granular level of a certain decision.

3.44. EIOPA acknowledges the concerns and some of the text is amended to avoid that some Guidelines, perceived as unclear, will not efficiently contribute to an effective preparation for Solvency II.

Assumption setting and expert judgement

3.45. Several stakeholders see the Guidelines on documentation and validation of the assumption setting process and the use of expert judgement as too demanding and unduly burdensome, potentially distracting knowledgeable resources.

3.46. EIOPA considers such documentation and validation as crucial for undertakings as expert judgement is generally most important in the frequent case that there is a lack of data and the assumption setting process involves a large degree of subjectivity. It is in their own interest to ensure that assumptions are set as a result of a validated and documented process.

3.47. The proportionality principle, of course, also applies here. The introductory Guideline asks to take into account the materiality of the impact of the use of assumptions as a key criterion. Accordingly, undertakings are expected to focus their limited resources on the processes for assumptions that are material. The thoroughness of the documentation and validation regarding less material assumptions may be comparatively lower. For the sake of clarity, EIOPA has amended this Guideline, pointing out that the materiality principle applies throughout all the Guidelines on assumption setting and expert judgement.

3.48. In this context, EIOPA also clarified by revision of the governance Guideline that only the most material assumptions qualify for sign-off at the most senior level of the administrative, management and supervisory body. Reliance can be on the expertise and advice of others, however, the administrative, management and supervisory body still takes the responsibility.

3.49. EIOPA does not share doubts from some stakeholders about the feasibility of feedback loops to be established between the providers and the users of assumptions. EIOPA can think of a variety of practicable implementations which are adapted for the typically large numbers of assumptions and users so that sufficient involvement and effective challenge is ensured.

3.50. EIOPA considers several comments raised by stakeholders as resulting from misunderstanding of some aspects of the requirements. Corresponding changes to the Guidelines have been made for the sake of clarification.

3.51. EIOPA wants to highlight that the content of these Guidelines is expected to apply also to the valuation of assets and liabilities when the final Guidelines for Solvency II are adopted.

Methodological Consistency

3.52. From the comments received on the Guidelines on Methodological Consistency EIOPA has had the impression that some stakeholders misunderstand the term "consistency" or fear that EIOPA interprets consistency synonym to "identity". Therefore, EIOPA takes the opportunity to reiterate that - due to the fundamentally different objectives - deviations between the methodology used to calculate the probability distribution forecast and the one used for the valuation of assets and liabilities for solvency purposes can exist. Deviations may exist with respect to the calculation methods used, data and parameter or underlying assumptions. In their consistency assessment undertakings demonstrate that the deviations identified do not result into any inconsistency (e.g. deviations resulting in conflicting output).

3.53. Some stakeholders consider the Guidelines on Methodological Consistency to be overly prescriptive and onerous.

3.54. EIOPA has developed principles-based Guidelines that provide undertakings with guidance on how to structure the consistency assessment. A wide scope for implementation is left to undertakings. Being aware that in some cases it is challenging to demonstrate consistency of the methodologies used and conclusion are sometimes ambiguous, EIOPA still believes that the requirement of consistency is not less important. For every solvency regime it is key that the valuation matches the risk calculation and resulting figures can be sensibly put into relation.

3.55. Some stakeholders ask how the assessment of methodological consistency relates to model validation. The consistency assessment is not a validation tool. As part of the Statistical Quality Standards (L1 Text Art. 121) the requirement is within the scope of the regular model validation process where appropriate tools that are fit for purpose have to be applied.

3.56. From EIOPA point of view, some comments raised by stakeholders are due to inconsistent wording. This has been the reason for some minor wording changes to the Guidelines.

Probability Distribution Forecast

3.57. The Guidelines on the Probability Distribution Forecast cover one of three selected areas within the Statistical Quality Standards where – based on the experience gained in pre-application processes – EIOPA has considered guidance as particularly helpful for internal model undertakings in the preparatory phase.

3.58. One stakeholder considers these Guidelines as too detailed and resulting in a compliance exercise rendering pragmatic solutions unworkable. Instead, the stakeholder calls for pragmatism and conservatism.

3.59. EIOPA considers such concepts as not fit for supervisory purposes. The concept of richness, however, is more suitable to control the quality of the probability distribution forecast. Richness is a rather abstract concept and as such can be applied to all possible risk models. The concept acknowledges for the imperfections, limitations and challenges faced by undertakings in internal modelling. Accordingly, the Guidelines should not be understood as a way of disqualifying certain modelling approaches or refraining undertakings from internal models.

3.60. Some stakeholders ask about the meaning of the generally accepted market practice in the context of the Probability Distribution Forecast Guidelines. In order to avoid misunderstanding, EIOPA has revised the respective Guideline and refers to the corresponding Explanatory Text. There it is clearly stated that the generally accepted market practice is one criterion among others for supervisory authorities to consider in their judgement and may serve them as a reference point.

Calibration

3.61. Due to the request from several stakeholders to clarify what kind of "approximations" the Calibration Chapter is referring to, an explicit reference to the Article 122(3) of Solvency II has been added to Guideline 31.

3.62. Several useful drafting suggestions from stakeholders to enhance the understanding of the Guidelines have also been taken into account through this Chapter.

Profit and Loss Attribution

3.63. Some stakeholders commented that the level at which the profit and loss attribution is performed should follow its uses, i.e. risk and business steering, and that the the profit and loss Attribution should not be performed at legal entity level or more granularly, consistently with the categorisation of risks in the internal model.

3.64. EIOPA wants to emphasize that since the capital requirement applies to the legal entity level, the profit and loss attribution is expected to be performed at this level or at a more granular level consistent with the categorisation of risks in the internal model.

3.65. Draft Guidelines 39 and 40 were perceived by some stakeholders as unclear and the requirement to document on an annual basis how the results of the profit and loss attribution are used in risk management and decision-making to be overly burdensome.

3.66. EIOPA acknowledges the concerns and some of the text is amended to avoid that some Guidelines, perceived as unclear, will not efficiently contribute to an effective preparation for Solvency II.

Validation

3.67. Some stakeholders commented on the independence of the validation and that good model building requires the builders to validate that the model being built meets the objectives.

3.68. EIOPA considers that the validation process has to be independent from the development and operation of the model to provide an effective challenge. The validation differs from the justification and controls put in place by the model developers but the validation does not aim at duplicating this work.

Documentation

3.69. Some stakeholders consider Documentation requirements as burdensome.

3.70. EIOPA has developed Guidelines on Documentation to help undertakings prepare to meet the documentation requirements when they will be able to submit an application. EIOPA considers the documentation of the model as crucial for undertakings. If documentation is not kept up to date, the undertaking is not protected from key-person risk, which is one of the main reasons that documentation is held.

3.71. The proportionality principle is particularly relevant for Documentation: for simpler internal models this might result in smaller amounts of documentation. However this should be a consequence of the level of complexity of the model, and not of the thoroughness of its documentation.

3.72. EIOPA also considers that some comments raised from stakeholders are due to misunderstanding of the requirements set out in some Guidelines. Some changes have been made to these Guidelines to clarify their purpose.

External Models and Data

3.73. Some stakeholders raised the point that compliance with the requirements (e.g. firms are required to have an understanding of the various aspects of the external models) may be very difficult to achieve due to vendor's confidentiality of their external model methodologies.

3.74. This concern was acknowledged and addressed by EIOPA opinion dated 2nd May 2012[1].

Functioning of colleges

3.75. Some stakeholders stated that Guidelines and in particular the ones on Functioning of Colleges do not differentiate between pre-application processes for Article 230 and Article 231. They also asked to replace NCAs "involved" by NCAs "concerned".

3.76. EIOPA considers that these Guidelines are in general applicable to pre-application processes for internal models for both Articles 230 and 231, following the logic of the process foreseen in the Solvency II framework on internal models for groups.

[1] https://eiopa.europa.eu/fileadmin/tx_dam/files/publications/opinions/1622_001.pdf

3.77. On the issue of NCAs involved and concerned, EIOPA wants to stress that NCAs involved but not concerned should have to play an important role in the pre-application process, even in the case of group internal models under Article 231: they have to contribute to the assessment of the appropriateness of not using the internal model for the group for the solo Solvency Capital Requirement calculation and the contribution of the local related undertaking to the group Solvency Capital Requirement.

3.78. Nevertheless, the wording of Draft Guideline 69 has been amended to allow NCAs concerned to consider specific provisions in the work plan which set up the allocation of tasks and communication rules between them in the case of group internal models.

3.79. Finally some slight changes have been made to the Guidelines in order to clarify specific issues raised in the consultation.

IV. Comments from Insurance and Reinsurance Stakeholders' Group (IRSG)

3.80. IRSG generally supports EIOPA's decision to provide preparatory Guidelines on Pre-application for Internal Models.

3.81. As mentioned in the IRSG Activity Report 2011 – 2013, in Spring 2012 EIOPA shared a previous version of first draft Guidelines on Internal Models, on which these preparatory Guidelines are based, with members of the IRSG in their personal capacity.

3.82. EIOPA would like to thank IRSG for the constructive and effective cooperation during the public consultation.

3.83. IRSG submitted a letter attached to the comments to the Guidelines on Pre-application for Internal Models where the following main concerns were highlighted:

a) Feedback from National Competent Authorities;

b) Effectiveness of the Guidelines with respect to the tasks assigned to an Internal Model; and

c) Burdensome requirements for some test and standards.

3.84. Many of these issues are already reflected upon in this Final Report. Please see the general comments and the specific comments above.

4. Revised Guidelines

Introduction

4.1. According to Article 16 of Regulation (EU) 1904/2010 of 24 November 2010 (hereafter, EIOPA Regulation)[2] EIOPA is issuing Guidelines addressed to national competent authorities on how to proceed in the preparatory phase leading up to the application of Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II)[3].

4.2. The present Guidelines apply to the pre-application process for internal models, where national competent authorities are expected to form a view on how prepared an insurance or reinsurance undertaking is to submit an application for the use of an internal model for the calculation of the Solvency Capital Requirement under Solvency II and to meet the internal models requirements set out in the Directive, in particular in Articles 112, 113, 115, 116, and 120 to 126.

4.3. In the absence of preparatory Guidelines European national competent authorities may see the need to develop national solutions in order to ensure sound risk sensitive supervision. Instead of reaching consistent and convergent supervision in the EU, different national solutions may emerge to the detriment of a good functioning internal market.

4.4. It is of key importance that there will be a consistent and convergent approach with respect to the preparation of Solvency II. These Guidelines should be seen as preparatory work for Solvency II by fostering preparation with respect to key areas of Solvency II in order to ensure proper management of undertakings and to ensure that supervisors have sufficient information at hand. These areas are the system of governance, including risk management system and a forward looking assessment of the undertaking's own risks (based on the Own Risk and Solvency Assessment principles), pre-application for internal models and submission of information to national competent authorities.

4.5. Early preparation is key in order to ensure that when Solvency II is fully applicable undertakings and national competent authorities will be well prepared and able to apply the new system. For this, national competent authorities are expected to engage with undertakings in a close dialogue.

4.6. As part of the preparation for the implementation of Solvency II, national competent authorities should put in place from 1st of January 2014 the Guidelines as set out in this document so that insurance and reinsurance undertakings take appropriate steps for the full implementation of Solvency II.

[2] OJ L 331, 15.12.2010, p. 48–83
[3] OJ L 335, 17.12.2009, p. 1-155

4.7. National competent authorities should send to EIOPA a progress report on the application of these Guidelines by the end of February following each relevant year, the first being by 28 February 2015 based on the period 1 January 2014 to 31 December 2014.

4.8. The EIOPA Guidelines on Pre-application for Internal Models aim to provide guidance on what national competent authorities and an insurance or reinsurance undertaking engaged in a pre-application process should consider in order that national competent authorities are able to form a view on how prepared this insurance or reinsurance undertaking is to submit an application for the use under Solvency II of an internal model for the calculation of the Solvency Capital Requirement. Therefore the pre-application proces is not a pre-approval of the internal model. Under Solvency II an insurance or reinsurance undertaking applying for the use of an internal model to calculate the Solvency Capital Requirement will have to comply with the Directive requirements as further specified in the Delegated Acts when issued.

4.9. The Guidelines aim to increase convergence of supervisory practices during the pre-application process. They should also in turn help an insurance or reinsurance undertaking to develop its internal model framework and thereby prepare to submit an application to use an internal model under Solvency II. They also extend the pre-application process for an undertaking aiming at submitting an application for decision on the use of an internal model from the first day on which Solvency II is applicable.

4.10. In the case of pre-application process for groups, there should be appropriate level of communication between national competent authorities within the colleges, in particular between the national competent authorities involved.

4.11. Communication between national competent authorities and the insurance or reinsurance undertaking should continue throughout the pre-application and the future assessment of the application the undertaking may submit under Solvency II, and after the internal model is approved through the supervisory review process.

4.12. More provisions on the pre-application process are contained in CEIOPS´ Level 3 Guidance on Pre-Application process for internal models (former CEIOPS Consultation Paper 80)[4].

4.13. National competent authorities are expected to ensure that these Guidelines are applied in a manner which is proportionate to the nature, scale and complexity inherent in the risks and business of the insurance and reinsurance undertaking. The Guidelines already reflect the application of the principles of proportionality by having the principle embedded and also by introducing specific measures in certain areas.

[4] https://eiopa.europa.eu/fileadmin/tx_dam/files/consultations/consultationpapers/CP80/CEIOPS-DOC-76-10-Guidance-pre-application-internal-models.pdf

4.14. All the Guidelines apply, unless otherwise explicitly stated, to the pre-application process for:

- An internal model, full or partial, that would be submitted for decision to use for the calculation of the Solvency Capital Requirement of an insurance or reinsurance undertaking under Solvency II.

- An internal model for a group, full of partial, as defined below, which would be submitted for this decision.

4.15. For the purpose of the Guidelines of Section II the following definitions apply:

- "*Internal model(s) for a group (or for groups)*" should be understood as both an internal model that would be used under Solvency II for the calculation only of the consolidated group Solvency Capital Requirement (under Article 230 of Solvency II) and an internal model that would be used under Solvency II for the calculation of the consolidated group Solvency Capital Requirement as well as the Solvency Capital Requirement of at least one related undertaking included in the scope of this internal model for the calculation of the consolidated group Solvency Capital Requirement (group internal model under Article 231 of Solvency II).

- "*The national competent authorities concerned*" should be understood as the national competent authorities of all the Member States in which the head offices of each related insurance and reinsurance undertakings included in the scope of a group internal model as referred to above (Article 231 of Solvency II) and for which the Solvency Capital Requirement would be calculated by the group internal model, are situated.

- "*The national competent authorities involved*" should be understood as the national competent authorities of all the Member States in which the head offices of related undertakings included in the scope of an internal model for a group (both under Article 230 and Article 231 of Solvency II) are situated.

  The *national competent authorities concerned* in the case of a group internal model under Article 231 of Solvency II are part of these *national competent authorities involved*.

- "*Expert judgment*" should be understood as the expertise of individual persons or committees with relevant knowledge, experience and understanding of the risks inherent in the insurance or reinsurance business.

- The concept of "*richness of the probability distribution forecast*" is determined mainly in two dimensions: the undertaking's extent of knowledge about the risk profile as reflected in the set of events underlying the probability distribution forecast and the capability of the calculation method chosen to transform this information into a distribution of monetary values that relate to changes in basic own funds. The concept of richness should not be reduced to the granularity of the representation of the probability distribution forecast because even a forecast in form of a continuous function might be of low richness.

- The "*reference risk measure*" should be understood as the Value-at-Risk of the basic own funds subject to a confidence level of 99,5% over a one-year period as set out in Article 101(3) of Solvency II.

- "*Analytical closed formulae*" should be understood as direct mathematical formulae that link the risk measure chosen by the undertaking to the reference one as defined above.

- "*t=0*" should be understood as the date of which the Solvency Capital Requirement computation will be made by the undertaking according to its internal model.

- "*t=1*" should be understood as one year after the date of which the Solvency Capital Requirement computation will be made by the undertaking according to its internal model.

- A quantitative or qualitative aspect of an internal model should be considered as "*material*" when a change or an error of this aspect could generate an impact on the outputs of this internal model, which could influence the decision-making or the judgement of the users of that information, including the national competent authorities.

4.16. These Guidelines shall apply from 1 January 2014.

Section I: General Provisions for Guidelines

Guideline 1 - General provisions for Guidelines

4.17. National competent authorities should take the appropriate steps in order to put in place from 1 January 2014 the present Guidelines on Pre-application for Internal Models.

4.18. During the pre-application process, national competent authorities should take the appropriate steps in order to form a view on how prepared an insurance or reinsurance undertaking engaged in a pre-application process is to submit an application for the use of an internal model for the calculation of the Solvency Capital Requirement under Solvency II and to meet the internal models requirements set out in Directive 2009/138/EC, in particular in Articles 112, 113, 115, 116, 120 to 126 and 231.

4.19. During the pre-application process, national competent authorities should form a view on how the insurance or reinsurance undertaking engaged in the pre-application process takes the appropriate steps to:

(a) build its internal model framework in a way that enables it to be prepared to use the internal model for both, risk management and decision-making purposes and the calculation of the Solvency Capital Requirement; and

(b) prepare for the eventuality that its internal model may not be approved and set up processes to calculate the standard formula Solvency Capital Requirement as well as to consider the capital planning implications.

Guideline 2 – Progress report to EIOPA

4.20. National competent authorities should send to EIOPA, a progress report on the application of these Guidelines by the end of February following each relevant year, the first being by 28 February 2015 based on the period 1 January 2014 to 31 December 2014.

Section II: Pre-application for internal models

Chapter 1: General Guidelines

Guideline 3 - National competent authorities' review

4.21. During the pre-application process, when defining and considering the extent of the reviews they carry out for the purposes of this process, national competent authorities should take into account at least:

(a) the specificities of the undertaking engaged in the pre-application process, and of its internal model;

(b) the relation between the aspect of the internal model being reviewed and other parts of the internal model; and

(c) the proportionality principle as set out in Article 29(3) of Solvency II bearing in mind that proportionality principle should not, however, be understood as waving or lowering any of the internal models requirements set out in Solvency II. In particular, national competent authorities should take into account the proportionality principle by considering:

(i) the nature, scale and complexity of the risks to which an insurance or reinsurance undertaking is exposed; and

(ii) the design, scope and qualitative aspects of the internal model of this undertaking.

4.22. National competent authorities should provide on-going feedback to the undertaking on the reviews they carry out on the internal model for the purposes of pre-application.

4.23. National competent authorities should ensure during the pre-application process that the undertaking submits to them the standard formula Solvency Capital Requirement. The information to be submitted should cover the overall Solvency Capital Requirement and the following risk categories for the risks within the scope of the internal model:

(a) Market risk;

(b) Counterparty default risk;

(c) Life underwriting risk;

(d) Health underwriting risk;

(e) Non life underwriting risk;

(f) Non - life catastrophe risk; and

(g) Operational risk.

The information to be submitted should be agreed by national competent authorities to the most granular level when they deem appropriate, and take account of the items as defined in Technical Annex I and the detail described in Technical Annex II of the "Guidelines on submission of information to national competent authorities". This submission of this information should follow the reference dates and deadlines to be agreed by the national competent authorities with the undertaking during the pre-application process.

Guideline 4 - Changes to the internal model during pre-application

4.24. National competent authorities should monitor and, where appropriate, review changes that the insurance or reinsurance undertaking makes to its internal model after some reviews have been completed during the pre-application process.

4.25. To this end, national competent authorities should ensure that the insurance or reinsurance undertaking notifies to them any changes to the internal model or plan of changes the undertaking considers relevant.

4.26. National competent authorities should, in relation to the changes the insurance or reinsurance undertaking makes to its internal model during the pre-application process, form a view on, at least:

(a) the governance the undertaking puts in place in relation to these changes, including the internal approval of changes, the internal communication, the documentation and the validation of the changes; and

(b) the classification of changes the undertaking establishes.

Chapter 2: Model changes

Guideline 5 - Scope of the policy for model changes

4.27. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, when establishing the policy for changing the model, covers all relevant sources of change that would impact its Solvency Capital Requirement, and at least the changes:

(a) in the system of governance of the undertaking;

(b) in the undertaking's compliance with the requirements to use the internal model;

(c) in the appropriateness of the technical specifications of the undertaking's internal model; and

(d) in the risk profile of the undertaking.

Guideline 6 - Definition of a major change

4.28. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking develops and uses a number of key qualitative or quantitative indicators to define a major change, and whether the insurance or reinsurance undertaking sets out an objective approach for classifying changes as major.

4.29. Whilst the quantitative impact of a model change on the Solvency Capital Requirement or on individual components of the Solvency Capital Requirement may be one of the indicators an insurance or reinsurance undertaking plans to use to identify major changes, national competent authorities should form a view on how the undertaking ensures that other qualitative and quantitative indicators are also used.

4.30. National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the indicators it develops take into account the specificities of the undertaking itself and of its internal model.

Guideline 7 - Combination of several changes

4.31. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking plans to evaluate the effect of each change in isolation and the effect of all changes combined on the Solvency Capital Requirement or its individual components.

4.32. National competent authorities should form a view on how the insurance or reinsurance undertaking plans to evaluate such effects in order to prevent individual impacts that offset one another and the combined impact of multiple changes from being overlooked.

Guideline 8 – Group internal model change policy (under Article 231 of Solvency II)

4.33. Through the pre-application process, in the case of a group internal model, the national competent authorities involved should form a view on how the insurance or reinsurance undertaking develops one model change policy.

4.34. The national competent authorities involved should form a view on how the insurance or reinsurance undertaking ensures that the model change policy includes a specification of major and minor changes with regard to the group, as well as each of the related undertakings which would use the group internal model to calculate their individual Solvency Capital Requirement.

4.35. National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that any change that is major at an individual undertaking is classified as a major change within the policy.

Chapter 3: Use test

Guideline 9 – Assessment of compliance

4.36. Through the pre-application process national competent authorities should form a view on the insurance or reinsurance undertaking's compliance with the use test as set out in Article 120 of Solvency II, and in particular in relation to, at least:

(a) the different uses of the model;

(b) how the model fits to the business;

(c) how the model is understood;

(d) how the model supports the decision-making; and

(e) how the model is integrated with the risk management system.

4.37. National competent authorities should form this view taking into account that no complete and detailed list of specific uses should be prescribed to the insurance or reinsurance undertaking.

Guideline 10 – Incentive to improve the quality of the internal model

4.38. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the internal model is used in its risk-management system and decision-making processes in a way that creates incentives to improve the quality of the internal model itself.

Guideline 11 – Fit to the business

4.39. Through the pre-application process national competent authorities should, in forming a view on how the insurance or reinsurance undertaking ensures that the level of detail to which the internal model fits its business is appropriate, consider at least the following factors:

(a) whether the uses of the internal model by the insurance or reinsurance undertaking in its decision-making process covers key business decisions, including strategic decisions, and any other relevant decisions;

(b) the insurance or reinsurance undertaking's risk management system and how granular this is;

(c) the granularity required for the decision-making process of the insurance or reinsurance undertaking;

(d) the decision-making structure in the insurance or reinsurance undertaking; and

(e) the internal record by the insurance or reinsurance undertaking related to the design of the output from the internal model.

Guideline 12 – Understanding of the internal model

4.40. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures understanding of the internal model by the administrative, management or supervisory body and relevant users of the internal model for decision-making.

4.41. With the aim of forming a view on their understanding of the internal model national competent authorities should consider using interviews of persons from the administrative, management or supervisory body and persons who effectively run the insurance or reinsurance undertaking.

4.42. National competent authorities should also consider reviewing the documentation of the minutes of the board meetings or appropriate decision-making bodies to form a view on how ready is the insurance or reinsurance undertaking to comply with the use test requirements.

Guideline 13 – Support of decision-making

4.43. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures and is able to demonstrate that the internal model is used in decision-making.

Guideline 14 – Support of decision-making

4.44. Through the pre-application process, national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the internal stakeholders of the undertaking, in particular its administrative, management and supervisory bodies, receive regular internal model results that relate to the relevant business decisions.

Guideline 15 – Support of decision-making

4.45. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the internal model is at a minimum able to measure the economic capital and to identify the impact on the risk profile of potential decisions for which the model is used.

4.46. National competent authorities should form a view on how the insurance or reinsurance undertaking also understands the effect such decisions will have on the Solvency Capital Requirement.

Guideline 16 – Frequency of calculation

4.47. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking develops a process to monitor its risk profile and how a significant change of the risk profile triggers a recalculation of the Solvency Capital Requirement.

Guideline 17 – Group specificities

4.48. Through the pre-application process, in case of a group internal model, the national competent authorities involved should form a view on how the participating undertaking and the related undertakings which would use the group internal model to calculate their individual Solvency Capital Requirement cooperate to ensure that the design of the internal model is aligned with their business.

4.49. The national competent authorities involved should form a view on the evidence provided by the participating undertaking and related undertakings that, at least:

(a) their individual Solvency Capital Requirement would be calculated with the frequency required by Article 102 of Solvency II and whenever it is needed in the decision-making process;

(b) they can propose changes to the group internal model, especially for components that are material to them or following a change in their risk profile and taking into account the environment in which the undertaking is operating; and

(c) the related undertakings possess the adequate understanding of the internal model for the parts of the internal model which cover the risks of that undertaking.

4.50. The national competent authorities involved should form a view on how insurance or reinsurance undertakings that would use a group internal model to calculate their Solvency Capital Requirement, ensure that the design of the internal model is aligned with their business and their risk-management system, including the production of outputs, at group level and at related undertaking level, that are granular enough to allow the group internal model to play a sufficient role in their decision-making processes.

Chapter 4: Assumption setting and expert judgement

Guideline 18 – Assumptions setting

4.51. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking sets assumptions and uses expert judgment in particular, taking into account the materiality of the impact of the use of assumptions with respect to the following Guidelines on assumption setting and expert judgement.

4.52. National competent authorities should form a view on how the undertaking assesses materiality taking into account both quantitative and qualitative indicators and taking into consideration extreme losses conditions.

4.53. National competent authorities should form a view on how the insurance or reinsurance undertaking overall evaluates the indicators considered.

Guideline 19 – Governance

4.54. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that all assumption setting, and the use of expert judgement in particular, follows a validated and documented process.

4.55. National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the assumptions are derived and used consistently over time and across the insurance or reinsurance undertaking and that they are fit for their intended use.

4.56. National competent authorities should form a view on how the insurance or reinsurance undertaking signs off the assumptions at levels of sufficient seniority according to their materiality, for most material assumptions up to and including the administrative, management or supervisory body.

Guideline 20 - Communication and uncertainty

4.57. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the processes around assumptions, and in particular around the use of expert judgement in choosing those assumptions, specifically attempt to mitigate the risk of misunderstanding or miscommunication between all different roles related to such assumptions.

4.58. National competent authorities should form a view on how the insurance or reinsurance undertaking establishes a formal and documented feedback process between the providers and the users of material expert judgement and of the resulting assumptions.

4.59. National competent authorities should form a view on how the insurance or reinsurance undertaking makes transparent the uncertainty of the assumptions as well as the associated variation in final results.

Guideline 21 - Documentation

4.60. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking documents the assumption setting process, and in particular the use of expert judgement, in such a manner that the process is transparent.

4.61. National competent authorities should form a view on how the insurance or reinsurance undertaking includes in the documentation the resulting assumptions and their materiality, the experts involved, the intended use and the period of validity.

4.62. National competent authorities should form a view on how the insurance or reinsurance undertaking includes the rationale for the opinion, including the information basis used, with the level of detail necessary to make transparent both the assumptions and the process and decision-making criteria used for the selection of the assumptions and disregarding other alternatives.

4.63. National competent authorities should form a view on how the insurance or reinsurance undertaking makes sure that users of material assumptions receive clear and comprehensive written information about those assumptions.

Guideline 22 - Validation

4.64. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the process for choosing assumptions and using expert judgement is being validated.

4.65. National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the process and the tools for validating the assumptions and in particular the use of expert judgement are being documented.

4.66. National competent authorities should form a view on how the insurance or reinsurance undertaking tracks the changes of material assumptions in response to new information and analyses and explains those changes as well as deviations of realizations from material assumptions.

4.67. National competent authorities should form a view on how the insurance or reinsurance undertaking, where feasible and appropriate, uses other validation tools such as stress testing or sensitivity testing.

4.68. National competent authorities should form a view on how the insurance or reinsurance undertaking reviews the assumptions chosen, relying on independent internal or external expertise.

4.69. National competent authorities should form a view on how the insurance or reinsurance undertaking detects the occurrence of circumstances under which the assumptions would be considered false.

Chapter 5: Methodological consistency

Guideline 23 - Consistency check points

4.70. Through the pre-application process, national competent authorities should form a view on how the insurance or reinsurance undertaking ensures consistency between the methods used to calculate the probability distribution forecast and the methods used for the valuation of assets and liabilities in the balance sheet for solvency purposes.

4.71. In particular national competent authorities should form a view on how the insurance or reinsurance undertaking checks consistency at the following steps of the calculation of the probability distribution forecast, in case that they are relevant to the model part under consideration:

(a) the consistency of the transition from the valuation of assets and liabilities in the balance sheet for solvency purposes to the internal model for the purpose of Solvency Capital Requirements calculations;

(b) the consistency of the valuation of assets and liabilities in the internal model at the valuation date with the valuation of assets and liabilities in the balance sheet for solvency purposes;

(c) the consistency of the projection of risk factors and their impact on the forecast monetary values with the assumptions on those risk factors used for the valuation of assets and liabilities in the balance sheet for solvency purposes; and

(d) the consistency of the re-valuation of assets and liabilities at the end of the period with the valuation of assets and liabilities in the balance sheet for solvency purposes.

Guideline 24 - Aspects of consistency

4.72. Through the pre-application process, national competent authorities should form a view on how the insurance or reinsurance undertaking, when assessing consistency, takes at least the following aspects into account:

(a) the consistency of the calculation methods applied in the valuation of assets and liabilities in the balance sheet for solvency purposes, and in the calculation of the probability distribution forecast;

(b) the consistency of data and parameters that are used as input for the respective calculations; and

(c) the consistency of the assumptions underlying the respective calculations, in particular assumptions on contractual options and financial guarantees, on future management actions and on expected future discretionary benefits.

Guideline 25 - Consistency assessment

4.73. Through the pre-application process, national competent authorities should form a view on how the insurance or reinsurance undertaking conducts regular consistency assessments as part of its internal model validation process as set out in Article 124 of Solvency II.

4.74. National competent authorities should form a view on how the insurance or reinsurance undertaking conducts the consistency assessment on a quantitative basis whenever possible and proportionate.

4.75. National competent authorities should form a view on how the insurance or reinsurance undertaking, in its consistency assessment:

(a) identifies and documents any deviation between the calculation of the probability distribution forecast and the valuation of assets and liabilities in the balance sheet for solvency purposes;

(b) assesses the impact of the deviations, both in isolation and in combination; and

(c) justifies that the deviations do not result in an inconsistency between the calculation of the probability distribution forecast and the valuation of assets and liabilities in the balance sheet for solvency purposes.

Chapter 6: Probability distribution forecast

Guideline 26 - Knowledge of the risk profile

4.76. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the set of events of the probability distribution forecast underlying the internal model is exhaustive.

4.77. National competent authorities should form a view on the processes that are put in place by the insurance or reinsurance undertaking in order to maintain sufficient and current knowledge of its risk profile.

4.78. In particular, national competent authorities should form a view on how the insurance or reinsurance undertaking aims to maintain the knowledge of risk drivers and other factors which explain the behaviour of the variable underlying the probability distribution forecast, so that the probability distribution forecast can reflect all relevant characteristics of its risk profile.

Guideline 27 - Probability distribution forecast richness

4.79. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking assesses the appropriateness of the actuarial and statistical techniques used to calculate the probability distribution forecast, and on how it considers the capability of the techniques to process the knowledge of the risk profile as an important criterion.

4.80. National competent authorities should form a view on how the insurance or reinsurance undertaking chooses techniques that generate a probability distribution forecast that is rich enough to capture all relevant characteristics of its risk profile and to support decision-making.

4.81. National competent authorities should also form a view on how the insurance or reinsurance undertaking as part of this methodological assessment considers the reliability of adverse quantiles estimated based on the probability distribution forecast.

4.82. National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the effort to generate rich probability distribution forecast does not impair the reliability of the estimate of adverse quantiles.

Guideline 28 – Assessment of richness of the probability distribution forecast

4.83. Through the pre-application process, to form a view according to Guideline 28, and with a view to ensure a harmonised approach for the pre-application and model changes, national competent authorities should take into account at least:

(a) the risk profile of the undertaking and to what extent it is reflected by the probability distribution forecast;

(b) the current progress in actuarial science and the generally accepted market practice;

(c) with respect to the level of probability distribution forecast richness, any measures that the insurance or reinsurance undertaking puts in place to ensure compliance with internal model test and each of the standards set out in Articles 120 to 126 of Solvency II;

(d) for a particular risk under consideration, the way in which the techniques chosen and the probability distribution forecast obtained by the insurance or reinsurance undertaking interact with other risks in the scope of the internal model as regards the level of richness of the probability distribution forecast; and

(e) the nature, scale and complexity of the risk under consideration as set out in Article 29(3) of Solvency II.

Guideline 29 – Probability distribution forecast enrichment

4.84. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking takes care not to introduce into the probability distribution forecast unfounded richness which does not reflect the original knowledge of its risk profile [cf. Guideline 26].

4.85. National competent authorities should form a view on how the methodology followed by the insurance or reinsurance undertaking to enrich the probability distribution forecast complies with the Statistical Quality Standards regarding methods, assumptions and data. Where these techniques involve the use of expert judgement the relevant Guidelines on assumptions setting and expert judgement should apply.

Chapter 7: Calibration - approximations

Guideline 30 - Knowledge of approximations

4.86. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking demonstrates a detailed understanding of the approximations allowed by Article 122(3) of Solvency II that it makes.

4.87. In particular, national competent authorities should form a view on how the undertaking at least:

(a) considers the error that is introduced by the approximations in the Solvency Capital Requirement;

(b) demonstrates that the approximations it makes do not result in a Solvency Capital Requirement that is materially underestimated compared to the result of the calculation with the reference risk measure, in order to ensure that policyholders are provided with a level of protection equivalent to that provided in Article 101(3) of Solvency II; and

(c) challenges and justifies the stability of the output of approximations over time, and under extreme loss conditions, according to its risk profile.

4.88. National competent authorities should make clear to the insurance or reinsurance undertaking that material uncertainty around approximations to recalibrate the Solvency Capital Requirement is not allowed if this uncertainty leads to an underestimation of the Solvency Capital Requirement.

Guideline 31 - Reference risk measure as an intermediate result

4.89. When the insurance or reinsurance undertaking can derive the reference risk measure as an intermediate result of the economic capital calculation process, through the pre-application process national competent authorities should form a view on how the undertaking is able to demonstrate that this result also reflects appropriately its risk profile.

Guideline 32 - Use of another underlying variable

4.90. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, if it uses for the calculation of the Solvency Capital Requirement the variation of an underlying variable different from the basic own funds, demonstrates:

(a) either that the difference between the basic own funds and the underlying variable is not material at t=0 and in any foreseeable situation up to and including t=1; or

(b) in case of this difference being material, that there cannot be any significant variation of it over the next period, especially under extreme losses conditions, according to the undertaking risk profile.

4.91. National competent authorities should form a view on how the insurance or reinsurance undertaking, if it uses the variation of an underlying variable different from the basic own funds to derive the value of basic own funds, demonstrates that:

(a) it is able to reconcile the difference between the basic own funds and the underlying variable at t=0; and

(b) it understands the difference between the basic own funds and the underlying variable in any situation up to and including t=1.

4.92. National competent authorities should form a view on how the balance sheet for solvency purposes that is run by the insurance or reinsurance undertaking enables such undertaking to determine the amount of eligible own funds available to cover the Solvency Capital Requirement, irrespectively of the calculation method used to calculate this Solvency Capital Requirement.

Guideline 33 - Use of analytical closed formulae

4.93. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, where it uses analytical closed formulae to recalibrate its capital requirement from the internal risk measure to the reference one, demonstrates that the assumptions underlying the formulae are realistic and are also valid under extreme losses conditions, according to the insurance or reinsurance undertaking's risk profile.

Guideline 34 - Management actions

4.94. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, where it chooses in its internal model a time period longer than one year, takes into account management actions in the context of the Solvency Capital Requirement calculation, and ensures that such management actions are modelled in a realistic and reasonable way and have effects on the balance sheet for solvency purposes between t=0 and t=1.

4.95. National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the general principles about the valuation of assets and liabilities hold at t=1 when considering management actions effects on the balance sheet for solvency purposes for the purpose of this Guideline.

Guideline 35 - Multiple approximations

4.96. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, where it has to make several approximations, assesses whether there are any interactions between these approximations that need to be allowed for explicitly.

Chapter 8: Profit and loss attribution

Guideline 36 – Definition of profit and loss

4.97. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking considers profit and loss as changes over the relevant period, in:

(a) basic own funds; or

(b) other monetary amounts used in the internal model to determine changes in basic own funds, such as the actual change in economic capital resources.

To this end the profit and loss attribution should exclude movements attributable to the raising of additional own funds, the repayment or redemption of those funds and the distribution of own funds.

4.98. When an undertaking uses a variable other than the basic own funds in its internal model, national competent authorities should form a view on how the insurance or reinsurance undertaking uses this variable for the purposes of profit and loss attribution.

4.99. National competent authorities should form a view on how, through the profit and loss attribution, the undertaking identifies how changes in the risk drivers relate with the movement in the variable underlying the probability distribution forecast.

Guideline 37 – Application of profit and loss attribution

4.100. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the profit and loss attribution is consistent with the intended applications of the profit and loss attribution in the use test and in the validation process.

Guideline 38 – Application of profit and loss attribution and validation

4.101. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that information relating to how the model has performed in the past provided by the profit and loss attribution feeds into the undertaking's regular validation cycle.

Chapter 9: Validation

Guideline 39 – Validation policy and validation report

4.102. Through the pre-application process, national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the validation policy it establishes sets out at least:

(a) the processes, methods and tools used to validate the internal model and their purposes;

(b) the frequency of regular validation for each part of the internal model and the circumstances that trigger additional validation;

(c) the persons who are responsible for each validation task; and

(d) the procedure to be followed in the event that the model validation process identifies problems with the reliability of the internal model and the decision-making process to address those concerns.

4.103. National competent authorities should form a view on how the insurance or reinsurance undertaking documents in a validation report the results of the validation as well as the resulting conclusions and consequences from the analysis of the validation.

4.104. National competent authorities should form a view on how the insurance or reinsurance undertaking includes in this report a reference to the validation data sets as mentioned in Guideline 50 as well as the sign-off from the main participants in the process.

Guideline 40 – Scope and purpose of the validation process

4.105. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, when specifying the purpose and scope of the validation, clearly sets out the specific purpose of the validation for each part of the internal model.

4.106. National competent authorities should form a view on how the insurance or reinsurance undertaking covers both qualitative and quantitative aspects of the internal model within the scope of the validation.

4.107. National competent authorities should form a view on how the insurance or reinsurance undertaking, when considering the scope of the validation, in addition to considering the validation of the various parts of the internal model, considers the validation in its entirety and in particular the appropriateness of the calculated probability distribution forecast to ensure that the level of regulatory capital will not be materially misstated.

Guideline 41 - Materiality

4.108. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking considers the materiality of the part of the internal model being validated, not only in isolation but also in combination, when using materiality to decide on the intensity of the validation activities.

4.109. When the insurance or reinsurance undertaking does not validate specific individual parts of the internal model with a high level of accuracy because of their lack of materiality, national competent authorities should form a view on how the insurance or reinsurance undertaking nevertheless takes into consideration that those parts in combination may be material when it decides how they should be validated appropriately.

4.110. National competent authorities should form a view on how the undertaking considers sensitivity testing when determining materiality in the context of validation.

Guideline 42 – Quality of the validation process

4.111. Through the pre-application process, national competent authorities should form a view on how the insurance or reinsurance undertaking sets out all the known limitations of the current validation process.

4.112. Where there are limitations to the validation of parts which are covered by the validation process, national competent authorities should form a view on how the insurance or reinsurance undertaking is aware of them and documents these limitations.

4.113. National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the assessment of the quality of the validation process explicitly states the circumstances under which the validation is ineffective.

Guideline 43 – Governance of validation process

4.114. Through the pre-application process national competent authorities should form a view on the governance the insurance or reinsurance undertaking puts in place around the communication of the results of the validation it carries out.

4.115. National competent authorities should form a view on how the insurance or reinsurance undertaking forms and communicates internally an overall opinion based on the findings of the validation process.

4.116. National competent authorities should form a view on how the insurance or reinsurance undertaking puts in place pre-defined criteria in order to determine whether the results, or part of the results, of the validation, are required to be escalated within this undertaking.

4.117. National competent authorities should form a view on whether the insurance or reinsurance undertaking specifies under which conditions the results of the validation process should be escalated; and on how the insurance or reinsurance undertaking clearly defines and sets the escalation path in such a way as to maintain the independence of the validation process.

4.118. National competent authorities should form a view on how the validation policy the insurance or reinsurance undertaking establishes sets out how the results of the different validation tools are reported, for both regular validation as well as additional validation triggered by specific circumstances, and how they are used if the tests show that the internal model does not perform as intended.

Guideline 44 – Roles in validation process

4.119. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, if parties other than the risk-management function contribute to specific tasks in the validation process, ensures that the risk-management function fulfils its overall responsibility as set out in Article 44 of Solvency II, including the responsibility to ensure the completion of the various tasks within the validation process.

4.120. National competent authorities should form a view on how the insurance or reinsurance undertaking formally explains the role of each party in the validation process defined.

4.121. National competent authorities should form a view on whether the allocation of tasks for the entire validation process is covered by the undertaking in the validation policy it establishes.

Guideline 45 – Independence of the validation process

4.122. Through the pre-application process national competent authorities should form a view on how the risk-management function of the insurance or reinsurance undertaking, in order to provide an objective challenge to the internal model, ensures that the validation process is done independently from the development and operation of the model and that the tasks set out in the validation policy it establishes create and maintain the independence of the validation process.

4.123. National competent authorities should form a view on how the insurance or reinsurance undertaking, when deciding the parties which contribute to the tasks related to the validation process, takes into account the nature, scale and complexity of the risks that this undertaking faces, the function and the skills of people to be involved, the internal organisation of the undertaking and its governance system.

Guideline 46 – Specificities for group internal models

4.124. Through the pre-application process for a group internal model the national competent authorities should form a view on how the insurance or reinsurance undertaking considers the validation of the internal model in the context of the calculation of both the consolidated group Solvency Capital Requirement and the Solvency Capital Requirement of related undertakings which would be calculated with the group internal model; and on how the insurance or reinsurance undertaking explicitly sets out this consideration in the validation policy it establishes for the group internal model.

4.125. National competent authorities should form a view on how the participating undertaking and the related undertakings for which the Solvency Capital Requirement would be calculated with the internal model, establish a single validation policy to cover the validation process both at group and individual level.

Guideline 47 – Universe of tools

4.126. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the qualitative or quantitative validation tools it uses are appropriate and reliable to validate the internal model for internal use of the internal model as well as for the Solvency Capital Requirement calculation.

4.127. National competent authorities should form a view on how the insurance or reinsurance undertaking understands the validation tools it uses and acknowledges that different tools have different characteristics and limitations.

4.128. National competent authorities should form a view on whether the insurance or reinsurance undertaking considers which validation tools or combination thereof are the most appropriate to meet the purpose and scope of the validation, as set out in the validation policy it establishes.

4.129. National competent authorities should form a view on how the insurance or reinsurance undertaking puts a process in place to choose the appropriate set of validation tools in order to ensure a robust validation process. National competent authorities should form a view on how the insurance or reinsurance undertaking documents this process and whether it considers at least the following characteristics when selecting the validation tools:

(a) level of complexity: validation tools ranging from simplified techniques to sophisticated methods;

(b) nature: validation tools being qualitative, quantitative or a combination of both;

(c) knowledge required: the extent of knowledge required by the persons performing the validation;

(d) independence: the level of independence required by the person performing the validation;

(e) information required: potential restrictions to the amount or the type of information available for external versus internal validation; and

(f) cycle of validation: validation tools relevant to cover every key assumption made at different stages of the internal model from development, to implementation and to operation.

Guideline 48 – Stress tests and scenario analysis

4.130. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking uses stress tests and scenario analysis as part of the validation of the internal model.

4.131. In particular national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the stress tests and scenario analysis it uses cover the relevant risks and are monitored over time.

Guideline 49 – Application of the tools

4.132. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking is able to explain which parts of the internal model are being validated by each of the validation tools used and why these validation tools are appropriate for the particular purpose by describing at least:

(a) the materiality of the part of the model being validated;

(b) the level at which the tool will be applied from individual risks, modelling blocks, portfolio, business unit to aggregated results;

(c) the purpose of this validation task; and

(d) the expected outcome from the validation.

Guideline 50 – Validation data sets

4.133. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the selected data and expert judgement used in the validation process effectively allow it to validate the internal model under a wide range of circumstances that have occurred in the past or could potentially occur in the future.

Chapter 10: Documentation

Guideline 51 - Control procedures

4.134. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the documentation of the internal model is kept up to date and regularly reviewed.

4.135. In particular, national competent authorities should form a view on how the insurance or reinsurance undertaking puts in place at least:

(a) an effective control procedure for internal model documentation;

(b) a version control procedures for internal model documentation; and

(c) a clear referencing system for internal model documentation which should be used in a documentation inventory.

Guideline 52 - Documentation of methodologies

4.136. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking produces documentation which is detailed enough to evidence detailed understanding of the methodologies and techniques used in the internal model, including at least:

(a) the underlying assumptions;

(b) the applicability of such assumptions given the undertaking's risk profile; and

(c) any shortcomings of the methodology or of the technique.

This should also applyin case a methodology or any other technique used by the insurance or reinsurance undertaking in the internal model is documented by an external party.

4.137. National competent authorities should form a view on how the insurance or reinsurance undertaking, when documenting the theory, assumptions and mathematical and empirical basis underlying any methodology used in the internal model, in accordance with Article 125(3) of Solvency II, includes, if available, the material steps of the development of the methodology, as well as any other methodologies which were considered but not subsequently used by the insurance or reinsurance undertaking.

Guideline 53 - Circumstances under which the internal model does not work effectively

4.138. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking includes in its documentation an overall summary of the material shortcomings of the internal model, consolidated in a single document, containing at least the following aspects:

(a) the risks which are not covered by the internal model;

(b) the limitations in risk modelling used in the internal model;

(c) the nature, degree and sources of uncertainty connected with the results of the internal model including the sensitivity of the results for the key assumptions underlying the internal model;

(d) the deficiencies in data used in the internal model and the lack of data for the calculation of the internal model;

(e) the risks arising out of the use of external models and external data in the internal model;

(f) the limitations of information technology used in the internal model;

(g) the limitations of internal model governance, and

(h) the work done to identify these shortcomings and any plans for model improvements.

Guideline 54 - Appropriateness to addressees

4.139. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking considers having documentation of the internal model that consists of more than one level of documentation for the internal model, commensurate with the different uses and target audiences.

Guideline 55 - User manuals or process descriptions

4.140. Through the pre-application process national competent authorities should form a view on how, as part of its documentation of the internal model, the insurance or reinsurance undertaking puts in place user manuals or process descriptions for operation of the internal model which should be sufficiently detailed to allow an independent knowledgeable third party to operate and run the internal model.

Guideline 56 - Documentation of model output

4.141. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking documents and retains, not necessarily in a single document, the outputs of the model that are relevant to satisfy the requirements of Article 120 of Solvency II.

Guideline 57 - Software and modelling platforms

4.142. National competent authorities should form a view on how the undertaking, in its documentation, provides information about the software, modelling platforms and hardware systems used in the internal model.

4.143. National competent authorities should form a view on how the undertaking, where using software, modelling platforms and hardware systems, provides in the documentation sufficient information to be able to assess and justify their use, and enable national competent authorities to assess their appropriateness.

Chapter 11: External models and data

Guideline 58 – External data

4.144. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, given the nature of external data, demonstrates an appropriate level of understanding of the specificities of external data used in the internal model including any material transformation, rescaling, seasonality and any other processing inherent in the external data.

4.145. In particular, national competent authorities should form a view on how the insurance or reinsurance undertaking at least:

(a) understands the attributes and limitations or other peculiarities of the external data;

(b) develops processes for identifying any missing external data and other limitations;

(c) understands the approximations and processing made for missing or unreliable external data; and

(d) develops processes to run timely consistency checks including comparisons with other relevant sources to the extent that data are reasonably available.

Guideline 59 – Understanding of the external model

4.146. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking demonstrates that all parties involved in the use of the external model have a sufficiently detailed understanding of parts of the external model relevant to them including assumptions, technical and operational aspects.

4.147. National competent authorities should form a view on how the insurance or reinsurance undertaking gives particular attention to the aspects of the external model that are more relevant to its risk profile.

Guideline 60 – Reviewing the choice of external model and data

4.148. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking periodically reviews its justification for selecting a particular external model or set of external data.

4.149. National competent authorities should form a view on whether the insurance or reinsurance undertaking is not overly reliant on one provider and on how the undertaking puts in place plans to mitigate the impact of any failures of the provider.

4.150. National competent authorities should form a view on how the insurance or reinsurance undertaking pays attention to any updates of the external model or of the data that allows the undertaking to better assess its risks.

Guideline 61 – Integration within the internal model framework

4.151. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking demonstrates that the approach for incorporating the external model into the internal model framework is appropriate; including the techniques, data, parameters, assumptions selected by the undertaking, and the external model output or outputs.

Guideline 62 – Validation

4.152. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking performs its own validation of the material assumptions of the external model that are relevant to its risk profile and of the process for incorporating the external model and data within its own processes and internal model.

4.153. National competent authorities should form a view on how the insurance or reinsurance undertaking assesses the appropriateness of the selection or the non-selection of features or options which are available for the external model.

4.154. National competent authorities should form a view on how, as part of its own validation, the insurance or reinsurance undertaking considers appropriate information and in particular the analysis performed by the vendor or other third party, and, when doing so, on how the insurance or reinsurance undertaking ensures at least that:

(a) the independence of the validation process from the development and operation of the internal model is not compromised;

(b) it is consistent with the validation process the insurance or reinsurance undertaking sets out and is clearly laid out in the validation policy; and

(c) any implicit or explicit bias in the analysis performed by the vendor or other third party is taken into account.

Guideline 63 - Documentation

4.155. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking demonstrates that that the documentation of external models and data meets the documentation standards.

4.156. National competent authorities should form a view on how the insurance or reinsurance undertaking produces documentation on at least the following:

(a) the aspects of the external model and external data that are relevant for its risk profile;

(b) the integration of the external model or external data within its own processes and internal model;

(c) the integration of data, in particular inputs, for the external model, or outputs from the external model, within its own processes and internal model; and

(d) the external data used in the internal model and its source and use.

4.157. If, as part of its own documentation, the insurance or reinsurance undertaking leverages on the documentation produced by the vendors and service providers, national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that its ability to meet the documentation standards is not compromised.

Guideline 64 - National competent authorities' relationship with vendors of external models

4.158. Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking keeps its responsibility for discharging its obligations related to its internal model and for the role of external model or data in the internal model and any other requirements.

4.159. National competent authorities should make clear to the insurance or reinsurance undertaking that any contact between national competent authorities and the vendors of an external model to inform national competent authorities' reviews of such model should not exempt the insurance or reinsurance undertaking from demonstrating that the external model fulfils the internal model requirements.

4.160. National competent authorities should form a view on the use of an external model entirely for each individual pre-application process.

4.161. National competent authorities should make clear to the insurance or reinsurance undertaking that they will reject any application for using an external model if the insurance or reinsurance undertaking fails to provide the specific information required in order for an assessment of the application to be carried out by national competent authorities.

Guideline 65 - Role of service providers when using external models and data

4.162. Through the pre-application process national competent authorities should form a view on whether the insurance or reinsurance undertaking uses an outsourcing agreement when it chooses not to operate the external model directly.

4.163. Similarly, national competent authorities should form a view on whether the insurance or reinsurance undertaking, through an outsourcing agreement, mandates a service provider to perform some tasks related to the external data.

4.164. National competent authorities should make clear to the insurance or reinsurance undertaking that it should not consider such outsourcing agreements to be a justification for exemption from demonstrating that the internal model fulfils the requirements.

4.165. National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that any outsourcing agreement regarding the operation of an internal model or the performance of tasks related to the external data, in application of the requirements set out in Article 49 of Solvency II, defines the duties of the parties.

4.166. National competent authorities should form a view on how the insurance or reinsurance undertaking, irrespective of which party actually performs the tasks associated with the service provided, retains overall responsibility.

Chapter 12: Functioning of colleges during the pre-application process for internal models for groups

Guideline 66 - Forming a view about the scope of the internal model during the pre-application process for internal models for groups

4.167. During the pre-application process for an internal model for a group, when forming a view about the appropriateness of the scope of the internal model, the group supervisor, the other national competent authorities involved and other national competent authorities identified by the college should consider at least:

(a) the significance of related undertakings within the group with respect to the risk profile of the group;

(b) the risk profile of related undertakings within the group compared to the overall group risk profile;

(c) if applicable, a transitional plan by the group to extend the scope of the model at a later stage and the timeframe to do so;

(d) the appropriateness of the standard formula or another internal model under pre-application that would be used for the calculation of the Solvency Capital Requirement of any related insurance or reinsurance undertaking included in the scope of the internal model; and

(e) the appropriateness of the standard formula or another internal model under pre-application that would be used for the calculation of the Solvency Capital Requirement of any related insurance or reinsurance undertaking within the group but not included in the scope of the internal model for the group.

4.168. When forming a view about the appropriateness of the exclusion of related undertakings within the group from the scope of the internal model, the group supervisor and the other national competent authorities involved, should assess whether the exclusion of the undertakings could lead to:

(a) an improper allocation of own funds based on individual undertaking Solvency Capital Requirements rather than on its contribution to the risk profile of the group;

(b) inconsistencies that would derive from the use of the internal model to calculate the group solvency capital requirement and the use of the standard formula or a different internal model under pre-application by any related undertaking within the group to calculate its Solvency Capital Requirement;

(c) weaknesses in risk management of the group and related undertakings within the group resulting from the limited scope of the internal model; or

(d) an inadequate group Solvency Capital Requirement in relation to the risk profile of the group.

Guideline 67 - Tasks of the group supervisor and the other national competent authorities involved and participating in the pre-application process for internal models for groups

4.169. During the pre-application process for an internal model for a group, the group supervisor and the other national competent authorities involved should agree on the most efficient and effective allocation of tasks among the different national competent authorities involved.

4.170. The group supervisor, in consultation with the other national competent authorities involved, should record the agreed allocation of tasks and set up a work plan and the communication rules to follow among them.

4.171. In the case of a group internal model under Article 231, the group supervisor and the other national competent authorities concerned should consider including in the work plan specific provisions which set up the allocation of tasks and communication rules between them.

4.172. When appropriate, the group supervisor, in consultation with the other national competent authorities involved, should update the work plan.

4.173. The group supervisor should ensure that the work plan covers the timeline, main steps and deliverables for the pre-application process.

4.174. The group supervisor should ensure that the work plan, at least:

(a) establishes when and how to consult and involve in the pre-application process the other national competent authorities involved;

(b) establishes when and how to allow the other national competent authorities within the college of supervisors to participate in the pre-application process, bearing in mind that their participation would be limited to identifying and preventing circumstances where the exclusion of parts of the business from the scope of the internal model could lead to a material underestimation of the risks of the group, or where the internal model could conflict with another internal model under pre-application that would be used for the calculation of the Solvency Capital Requirement of any of the insurance or reinsurance undertakings in the group; and

(c) identifies the priorities for the assessment, taking into account the scope of the internal model, the specificities of each related undertaking within the group, the risk profile of the group and related undertakings within the group and the available and relevant information about the internal model.

4.175. Whenever a national competent authority involved identifies a substantial point of concern regarding the pre-application process, it should share its concern with the group supervisor and the other involved authorities as soon as feasible.

Guideline 68 - Joint on-site examinations carried out during the pre-application process for internal models for groups

4.176. During the pre-application process for an internal model for a group, the group supervisor and the other national competent authorities involved should propose and discuss when and how to organize joint on-site examinations to verify any information concerning the pre-application process, with the aim of ensuring the effectiveness of this process.

4.177. The national competent authorities proposing a joint on-site examination should inform the group supervisor by indicating the scope and purpose of this examination, taking into account the objectives of joint on-site examinations in relation to the pre-application process as defined by the national competent authorities involved.

4.178. The group supervisor should then notify the other national competent authorities involved in the pre-application process, EIOPA, and, where relevant, other national competent authorities within the college, the national competent authorities responsible for the supervision of significant branches as referred to in Article 248(3) of Solvency II, and the national competent authorities responsible for the supervision of other branches.

4.179. Once the national competent authorities participating in the joint on-site examination have been identified, they should discuss and agree the final scope, purpose, structure and allocation of tasks of the examination.

4.180. The national competent authority organising the on-site examination, if other than the group supervisor, should provide the relevant documentation to the group supervisor.

4.181. The group supervisor should make the relevant documentation available to the national competent authorities involved in the pre-application process, to the other national competent authorities participating in the joint on-site examination and to EIOPA. The group supervisor should provide the rest of college members and participants with a list of the relevant documentation received and provide them with the relevant documentation upon specific request.

4.182. On the basis of a report stating the main findings of the joint on-site examination, the national competent authority organising the on-site examination should discuss with the national competent authorities involved the outcome of the joint on-site examination and the actions to be taken.

4.183. The group supervisor should notify the rest of college members about the outcome and actions as part of the agreed communication within the college.

Guideline 69 – Off-site activities on internal models during the pre-application process for internal models for groups

4.184. During the pre-application process for an internal model for a group, national competent authorities involved should share and discuss the main findings of their off-site activities with the group supervisor and the other national competent authorities involved.

4.185. The national competent authorities involved should share the approach they are following in the review of the elements of the internal model with the group supervisor and the other national competent authorities involved.

4.186. If, as a result of this sharing, the national competent authorities involved identify substantial differences in the approaches followed, they should discuss and they should agree on a process to develop consistent approaches when they consider appropriate to have this alignment.

4.187. When they deem appropriate, the national competent authorities involved should consider sharing the tools and techniques they are using for the review of the elements of the internal model with the other national competent authorities involved.

Guideline 70 - Involvement of third country national competent authorities during the pre-application process for internal models for groups

4.188. During the pre-application process for an internal model for a group, the group supervisor and the other national competent authorities involved should form a view on whether and which third country national competent authorities should be consulted.

4.189. Before consulting the third country national competent authority, the group supervisor, with the support of the national competent authorities involved, should take appropriate steps to ensure that the legislative provisions on the confidentiality of information of the jurisdiction where the third country national competent authority is situated are equivalent to the professional secrecy requirements resulting from Solvency II, other EU Directives and national legislation applicable to the involved national competent authorities.

Compliance and Reporting Rules

4.190. This document contains Guidelines issued under Article 16 of the EIOPA Regulation. In accordance with Article 16(3) of the EIOPA Regulation, Competent Authorities shall make every effort to comply with guidelines and recommendations.

4.191. Competent authorities that comply or intend to comply with these Guidelines should incorporate them into their regulatory or supervisory framework in an appropriate manner.

4.192. Competent authorities shall confirm to EIOPA whether they comply or intend to comply with these Guidelines, with reasons for non-compliance, within two months after the publication.

4.193. In the absence of a response by this deadline, competent authorities will be considered as non-compliant to the reporting.

Final Provision on Review

4.194. These Guidelines shall be subject to a review by EIOPA.

5. Revised Explanatory Text

Introduction

5.1. The EIOPA Guidelines on Pre-application for Internal Models aim to provide guidance on what national competent authorities and an insurance or reinsurance undertaking engaged in a pre-application process should consider in order that national competent authorities are able to form a view on how prepared this insurance or reinsurance undertaking is to submit an application for the use under Solvency II of an internal model for the calculation of the Solvency Capital Requirement. Therefore the pre-application proces is not a pre-approval of the internal model. Under Solvency II an insurance or reinsurance undertaking applying for the use of an internal model to calculate the Solvency Capital Requirement will have to comply with the Directive requirements as further specified in the Delegated Acts when issued.

5.2. The Guidelines aim to increase convergence of supervisory practices during the pre-application process. They should also in turn help an insurance or reinsurance undertaking to develop its internal model framework and thereby prepare to submit an application to use an internal model under Solvency II. They also extend the pre-application process for an undertaking aiming at submitting an application for decision on the use of an internal model from the first day on which Solvency II is applicable.

5.3. In the case of pre-application process for groups, there should be appropriate level of communication between national competent authorities within the colleges, in particular between the national competent authorities involved.

5.4. Communication between national competent authorities and the insurance or reinsurance undertaking should continue throughout the pre-application and the future assessment of the application the undertaking may submit under Solvency II and after the internal model is approved through the supervisory review process.

5.5. More provisions on the pre-application process are contained in CEIOPS´ Level 3 Guidance on Pre-Application process for internal models (former CEIOPS Consultation Paper 80)[5].

5.6. All the document apply, unless otherwise explicitly stated, to the pre-application process for:

- An internal model, full or partial, that would be submitted for decision to use for the calculation of the Solvency Capital Requirement of an insurance or reinsurance undertaking under Solvency II.
- An internal model for a group, full of partial, as defined below, which would be submitted for this decision.

5.7. For the purpose of Section II the following definitions apply:

[5] https://eiopa.europa.eu/fileadmin/tx_dam/files/consultations/consultationpapers/CP80/CEIOPS-DOC-76- 10-Guidance-pre-application-internal-models.pdf

- "*Internal model(s) for a group (or for groups)*" should be understood as both an internal model that would be used under Solvency II for the calculation only of the consolidated group Solvency Capital Requirement (under Article 230 of Solvency II) and an internal model that would be used under Solvency II for the calculation of the consolidated group Solvency Capital Requirement as well as the Solvency Capital Requirement of at least one related undertaking included in the scope of this internal model for the calculation of the consolidated group Solvency Capital Requirement (group internal model under Article 231 of Solvency II).
- "*The national competent authorities concerned*" should be understood as the national competent authorities of all the Member States in which the head offices of each related insurance and reinsurance undertakings included in the scope of a group internal model as referred to above (Article 231 of Solvency II) and for which the Solvency Capital Requirement would be calculated by the group internal model, are situated.
- "*The national competent authorities involved*" should be understood as the national competent authorities of all the Member States in which the head offices of related undertakings included in the scope of an internal model for a group (both under Article 230 and Article 231 of Solvency II) are situated. The national competent authorities concerned in the case of a group internal model under Article 231 of Solvency II are part of these national competent authorities involved.
- "*Expert judgment*" should be understood as the expertise of individual persons or committees with relevant knowledge, experience and understanding of the risks inherent in the insurance or reinsurance business.
- The concept of "*richness of the probability distribution forecast*" is determined mainly in two dimensions: the undertaking's extent of knowledge about the risk profile as reflected in the set of events underlying the probability distribution forecast and the capability of the calculation method chosen to transform this information into a distribution of monetary values that relate to changes in basic own funds. The concept of richness should not be reduced to the granularity of the representation of the probability distribution forecast because even a forecast in form of a continuous function might be of low richness.
- "*The reference risk measure*" should be understood as the Value-at-Risk of the basic own funds subject to a confidence level of 99,5% over a one-year period as set out in Article 101(3) of Solvency II.
- "*Analytical closed formulae*" should be understood as direct mathematical formulae that link the risk measure chosen by the undertaking to the reference one as defined above.
- "*t=0*" should be understood as the date of which the Solvency Capital Requirement computation will be made by the undertaking according to its internal model.

- "*t=1*" should be understood as one year after the date of which the Solvency Capital Requirement computation will be made by the undertaking according to its internal model.
- A quantitative or qualitative aspect of an internal model should be considered as "*material*" when a change or an error of this aspect could generate an impact on the outputs of this internal model, which could influence the decision-making or the judgement of the users of that information, including national competent authorities.

5.8. The boxes included in this document reproduce the Guidelines that have been published by EIOPA in the Consultation Paper 13/011. They only aim to facilitate the reading of the document and are not subject to public consultation.

Section I: General provisions

Guideline 1: General provisions

National competent authorities should take the appropriate steps in order to put in place from 1st of January 2014 the present Guidelines on Pre-application for Internal Models.

During the pre-application process, national competent authorities should take the appropriate steps in order to form a view on how prepared an insurance or reinsurance undertaking engaged in a pre-application process is to submit an application for the use of an internal model for the calculation of the Solvency Capital Requirement under Solvency II and to meet the internal models requirements set out in Directive 2009/138/EC, in particular in Articles 112, 113, 115, 116, 120 to 126 and 231.

During the pre-application process, national competent authorities should form a view on how the insurance or reinsurance undertaking engaged in the pre-application process takes the appropriate steps to:

(c) **build its internal model framework in a way that enables it to be prepared to use the internal model for both, risk management and decision-making purposes and the calculation of the Solvency Capital Requirement; and**

(d) **prepare for the eventuality that its internal model may not be approved and set up processes to calculate the standard formula Solvency Capital Requirement as well as to consider the capital planning implications.**

Guideline 2 - Progress report to EIOPA

National competent authorities should send to EIOPA, a progress report on the application of these Guidelines by the end of February following each relevant year, the first being by 28 February 2015 based on the period 1 January 2014 to 31 December 2014.

Section II: Pre-application for internal models

Chapter 1: General

Guideline 3 – National competent authorities' review

During the pre-application process, when defining and considering the extent of the reviews they carry out for the purposes of this process, national competent authorities should take into account at least:

(a) the specificities of the undertaking engaged in the pre-application process, and of its internal model;

(b) the relation between the aspect of the internal model being reviewed and other parts of the internal model; and

(c) the proportionality principle as set out in Article 29(3) of Solvency II bearing in mind that proportionality principle should not, however, be understood as waving or lowering any of the internal models requirements set out in Solvency II. In particular, national competent authorities should take into account the proportionality principle by considering:

(i) the nature, scale and complexity of the risks to which an insurance or reinsurance undertaking is exposed; and

(ii) the design, scope and qualitative aspects of the internal model of this undertaking.

National competent authorities should provide on-going feedback to the undertaking on the reviews they carry out on the internal model for the purposes of pre-application.

National competent authorities should ensure during the pre-application process that the undertaking submits to them the standard formula Solvency Capital Requirement. The information to be submitted should cover the overall Solvency Capital Requirement and the following risk categories for the risks within the scope of the internal model:

(a) Market risk;

(b) Counterparty default risk;

(c) Life underwriting risk;

(d) Health underwriting risk;

(e) Non life underwriting risk;

(f) Non - life catastrophe risk; and

(g) Operational risks.

The information to be submitted should be agreed by national competent authorities to the most granular level when they deem appropriate, and take

account of the items as defined in Technical Annex I and the detail described in Technical Annex II of the "Guidelines on submission of information to national competent authorities". This submission of this information should follow the reference dates and deadlines to be agreed by the national competent authorities with the undertaking during the pre-application process.

5.9. The requirements for the use of internal models for Solvency Capital Requirement calculations are set out in in Articles 112, 113, 115, 120 to 126, 230 and 231 of Solvency II, and would be further developed in the Delegated Acts issued by the European Commission and EIOPA standards and Guidelines. Such requirements need to be fulfilled by all undertakings (irrespectively of their size) if they want to use an internal model to calculate their Solvency Capital Requirement under Solvency II. It is expected that through the pre-application process national competent authorities form a view on how prepared the undertaking is to comply with such requirements. In doing so, national competent authorities consider the proportionality principle as described in Article 29(3) of Solvency II. Proportionality does not exempt any undertaking from complying with requirements set out in Solvency II or anyhow lower them, but the way to establish compliance vary depending on the specific nature, scale and complexity of each internal model and of the specific risks and business of each undertaking; proportionality has never to be put forward to justify a failure of the use test, not meeting the statistical quality standards or not properly validating the internal model and its use or any other requirement.

5.10. On the use test for instance, it is expected that national competent authorities form a view on how prepared the undertaking is to comply with the requirements set out in Article 120 of Solvency II. The review by national competent authorities is carried out on the basis of proportionality, as some uses may not be materially important to the undertaking given the nature of its business.

5.11. In relation to the statistical quality standards and the validation standards, national competent authorities need to consider that, as no particular method for the calculation of the probability distribution forecast for internal models is prescribed in accordance with Article 121(4) of Solvency II and as internal models have to be adapted to the specific business of the insurance and reinsurance undertaking, internal models may vary significantly in their methodology, the information, assumptions and data used for the internal model and in their validation processes. The statistical quality standards and the validation standards set out in Solvency II therefore provide some principle-based requirements.

5.12. In the case of documentation, smaller amounts of documentation would be a consequence of the level of complexity of the model, and not of the thoroughness of its documentation.

Guideline 4 - Changes to the internal model during pre-application

National competent authorities should monitor and, where appropriate, review changes that the insurance or reinsurance undertaking will make to its internal model after some reviews have been completed during the pre-application process.

To this end, national competent authorities should ensure that the insurance or reinsurance undertaking notifies to them any changes to the internal model or plan of changes the undertaking considers relevant.

National competent authorities should, in relation to the changes the insurance or reinsurance undertaking makes to its internal model during the pre-application process, form a view on, at least:

(a) the governance the undertaking puts in place in relation to these changes, including the internal approval of changes, the internal communication, the documentation and the validation of the changes; and

(b) the classification of changes the undertaking establishes.

Chapter 2: Model changes

5.13. As part of the initial approval of the internal model national competent authorities have to approve the policy for changing the internal model.

5.14. The Guidelines on model changes aim to provide guidance about what national competent authorities and an undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view about the relevance and the adequacy of the policy for changing the internal model the undertaking establishes.

Guideline 5 - Scope of the policy for model changes

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, when establishing the policy for changing the model, covers all relevant sources of change that would impact its Solvency Capital Requirement, and at least the changes:

(a) in the system of governance of the undertaking;

(b) in its compliance with the requirements to use the internal model;

(c) in the appropriateness of the technical specifications of its internal model; and

(d) in the risk profile of the undertaking.

5.15. It is good practice for an undertaking to update its internal model in order to keep the model and its parameters accurate and up-to-date. For example, to update methodologies as appropriate in order to reflect improved techniques.

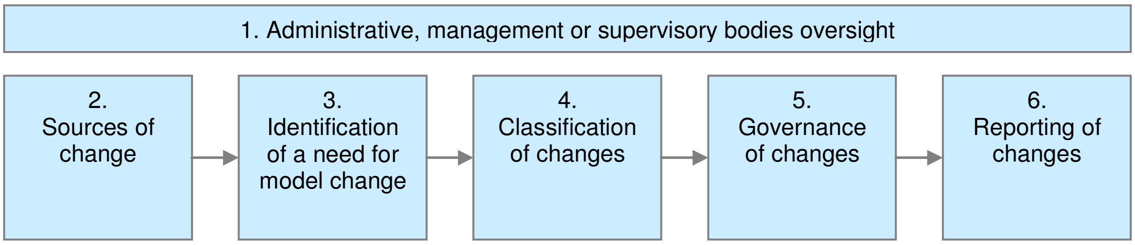
The purpose of the policy for model change is to describe the procedures the undertaking puts in place to ensure that the internal model is appropriate and would meet the requirements on an on-going basis.

5.16. The model change process is a framework for the undertaking and a useful tool for national competent authorities. In particular for national competent authorities as they would be able to use this information to satisfy themselves that the internal model, once the model is approved, would continue to comply on an on-going basis with the tests and standards for model approval. The model change policy is useful to help on the informational needs of national competent authorities as well as on the needs of the undertaking. National competent authorities would need to have at all times, as part of the on-going supervisory process, a clear picture of the current internal model and in particular enough information to be confident that the internal model complies with the tests and standards for model approval.

5.17. The policy for model change provides a framework to promote:

- Good modelling practices: undertaking's ability to change its internal model to adapt to changing circumstances;
- Enhanced risk management: the internal model provides a valuable tool for the undertaking to develop and constantly adapt its analysis and knowledge of its risks;
- Efficient supervision: the policy provides insight to national competent authorities into the undertaking's philosophy and appetite for making changes to the internal model.

5.18. National competent authorities expect that the policy for model change covers the following aspects:



5.19. The policy established by the undertaking is not intended to cover extension of the model scope, such as inclusion of additional risks or business units. Any such change to the model scope would automatically be subject to supervisory approval, following the same approval process as a major model change.

5.20. A change to the policy itself would be treated similarly, and so does not need to be covered by the policy.

5.21. The update of parameters can have a significant impact on the model outputs and the Solvency Capital Requirement in particular and hence it is generally within the scope of the model change policy. National competent authorities need to be kept informed by the undertaking about the currently used parameters. Some internal models include a great number of parameters which interact together in impacting the outputs of the internal model. Hence it may be more appropriate for the undertaking to consider the impact of changes to some parameters in batch instead of individually. The update of the parameters encompasses several aspects: the updating process, the internal governance and the changes in parameter values. EIOPA recognises that it is not always appropriate to report changes in value of individual parameters.

5.22. The process for updating the parameters and the governance, as approved by the national competent authority is also to be captured in the model change policy. When reliance is placed on the process for updating parameters to identify change to the internal model, the policy would identify the circumstances under which such reliance will cease to be appropriate in particular considering the impact on the Solvency Capital Requirement of the parameters update. The reliance on the process for updating the parameters, would be less appropriate if the process for updating the parameters is not adequately formalised, described and subject to appropriate level of governance. Notwithstanding the above, in some cases, significant changes in parameter values qualify for notification as model change. For example, national competent authorities would want to know when an undertaking providing significant interest rate guarantees starts using an unusually low value for interest rate volatility.

5.23. In all circumstances national competent authority, as part of the approval of the model change policy, might agree on the information to be provided as part of the reporting of minor changes. In any case, it is important that national competent authorities form a view on how the undertaking chooses its criteria for classifying changes so as to ensure that significant changes in material parameters are classified as major when appropriate.

5.24. In order to form a view on the appropriateness of the level of information that is reported by the undertaking when minor changes are performed, national competent authorities may look at how the undertaking sets in the policy for model change a summarised report.

5.25. A way for national competent authorities to form a view on how the undertaking "back-tests" that the model change policy, in general, and the definition of major changes, in particular, perform effectively, could be to review how the undertaking evaluates the model change policy in the light of past changes made to the model.

5.26. As potential sources for change, the model change policy may for instance, cover changes to or arising from but not limited to, the following areas:

- Structure of the model (including use of IT systems and platforms).
- Methods used to calculate the probability distribution forecast (including external models and data).
- Assumption and parameter, or process to derive such assumption and parameter if such process is clearly defined, documented and part of the model governance.

- Data governance, processing and application of data as well as the data policy.
- System for measuring diversification effects or to take into account the dependencies across risks categories.
- Use of the internal model including changes in reporting and outputs from the model.
- Nature, scale and complexity of the risk profile (including material changes in business model, business strategy, products and lines of business, emerging risks, asset management policy and any other relevant changes to the risk profile).
- Outsourcing (or in-sourcing activities previously outsourced) activities related to the internal model or the identification, measurement, monitoring and reporting of risks.
- Legal environment may impact the internal model either through changes in jurisdiction or changes in law relevant to the undertakings within the same regulation.
- Where applicable, any change that might impact the internal model, for example changes that might impact inputs to the internal models.

Guideline 6 - Definition of a major change

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking develops and uses a number of key qualitative or quantitative indicators to define a major change, and whether the insurance or reinsurance undertaking sets out an objective approach for classifying changes as major.

Whilst the quantitative impact of a model change on the Solvency Capital Requirement or on individual components of the Solvency Capital Requirement may be one of the indicators an insurance or reinsurance undertaking plans to use to identify major changes, national competent authorities should form a view on how the undertaking ensures that other qualitative and quantitative indicators are also used.

National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the indicators it develops take into account the specificities of the undertaking itself and of its internal model.

5.27. According to Article 115 of Solvency II, the policy for changing the internal model shall include a specification for identifying whether changes to the internal model are major or minor. The goal is for the undertaking to develop a reliable system to classify anticipated types of model changes.

5.28. National competent authorities form a view on how the undertaking ensures that this system is simple, but it has to be flexible enough to serve both the undertaking's need for creative innovations on risk models and national competent authorities' need to control the implementation of these innovations in order to maintain the overall integrity and adequacy of the internal risk model in an effective and efficient way.

5.29. If the undertaking put in place its own internal classification of model changes to meet internal needs, it can leverage this internal classification to determine minor and major changes, for instance through a clear mapping between the internal classification and minor and major changes.

5.30. The appropriate classification of model changes depends to a high degree on the individual situation of each undertaking. Therefore national competent authorities consider that indicators developed by the undertaking are specific to this undertaking and may satisfy a number of qualitative or quantitative criteria.

5.31. It is regarded as good practice that some of the indicators used are related to the tests or standards. National competent authorities take into account that the undertaking may also consider how they can use their validation report and their P&L attribution to design appropriate indicators. The impact on the Solvency Capital Requirement is also an indicator.

5.32. The criterion mentioned above regarding the impact on the Solvency Capital Requirement is obviously not applicable to changes to the model that would have no effect on the calculated Solvency Capital Requirement like changes in the system of governance or the use of the internal model. Furthermore, a change, even major, could have no consequences at a certain point in time on the Solvency Capital Requirement because of a specific risk profile of an undertaking (e.g. unpredictable netting effect). Even if a change has an effect, the magnitude depends strongly on the current parameterisation of the internal model. An example would be a change in the modelling of options and guarantees. If these are currently "deep out of the money" the immediate effect on the Solvency Capital Requirement may be negligible.

5.33. The impact of a change to the Solvency Capital Requirement may vary according to prevailing market conditions. This may be taken into consideration when drawing conclusions from the impact to the Solvency Capital Requirement.

5.34. The classification of changes into minor and major may take into account a series of qualitative as well as quantitative criteria such as to make the classification an objective and transparent process. The qualitative criteria may include for instance the areas of the model affected (such as governance, calculation methods, assumptions and parameters), the risks category (such as market risks, underwriting lines of business or product), or other relevant segmentation. The quantitative criteria include the impact to the Solvency Capital Requirement.

Guideline 7 - Combination of several changes

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking plans to

evaluate the effect of each change in isolation and the effect of all changes combined on the Solvency Capital Requirement or its individual components.

National competent authorities should form a view on how the insurance or reinsurance undertaking plans to evaluate such effects in order to prevent individual impacts that offset one another and the combined impact of multiple changes from being overlooked.

5.35. National competent authorities take into account that the undertaking may consider using different qualitative indicators for different type of changes, or different contributing parts of the probability distribution forecast.

5.36. National competent authorities take into account that in some instances the effects of several changes on the Solvency Capital Requirement may offset each other. With another parameterisation this effect may later disappear.

5.37. In other instances a combination of related minor changes each of which generating a limited impact on the Solvency Capital Requirement could in combination generate a high enough impact on the Solvency Capital Requirement.

5.38. The undertaking may decide a priori how to combine changes from pre-defined events for a consistent approach to change management.

Guideline 8 - Group internal model change policy (under Article 231 of the Directive 2009/138/EC)

Through the pre-application process, in the case of a group internal model, the national competent authorities involved should form a view on how the insurance or reinsurance undertaking develops one model change policy.

The national competent authorities involved should form a view on how the insurance or reinsurance undertaking ensures that the model change policy includes a specification of major and minor changes with regard to the group, as well as each of the related undertakings which would use the group internal model to calculate their individual Solvency Capital Requirement.

National competent authorities should form a view on howthe insurance or reinsurance undertaking ensures thatany change that is major at an individual undertaking is classified as a major change within the policy.

5.39. This Guideline aims to provide guidance on how national competent authorities form a view on how the undertaking maintains the integrity of the internal model as one model. There is always the risk that the model is changed independently at solo and group level resulting in models that are different. So the Guideline aims at ensuring that there is one model change policy and also that the relevant national competent authorities are informed of the changes that might happen at solo level.

Chapter 3: Use test

5.40. One of the requirements that an insurance or reinsurance undertaking needs to fulfil in order to use an internal model for the Solvency Capital Requirement calculation is the use test.

5.41. The Guidelines on the use test aim to provide guidance about what national competent authorities and an undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on how prepared the undertaking is to comply with the use test.

5.42. Internal models in Solvency II are more than a calculation kernel, sometimes referred to as the "actuarial model". An undertaking would not be able to meet the use test if it follows a modelling framework for internal decision-making and a different one for regulatory capital assessment. It is expected for example that the model used for the calculation of the regulatory solvency capital requirements is also used for the internal capital allocation.

5.43. These Guidelines reinforce the concept that national competent authorities need to take into account that the use test is specific to the undertaking and that a checklist approach of uses is not to be used by national competent authorities during pre-application to form a view on how the undertaking is ready to comply with the use test, model fitting to the business model, supporting decision-making and being an integral part of risk management. The people element of the use test is emphasised through the need that national competent authorities form a view on how the undertaking ensures proper understanding of the internal model by the administrative, management and supervisory body and by managers at different levels within the undertaking. There is guidance on how national competent authorities form a view about the application of the use test at group level.

5.44. To assist national competent authorities and undertakings during pre-application on understanding this complex area, some examples are provided on good and bad practices and also of how this can be assessed. Even though they are intended to be representative examples, they are not exhaustive and they are not intended to be used by the undertaking to build a checklist that they blindly abide to. The solutions proposed in these examples are not to be seen either as definitive or as prescriptive. The examples are high-level and simple to show how the use test assessment could work.

Guideline 9 – Assessment of compliance

Through the pre-application process national competent authorities should form a view on the insurance or reinsurance undertaking's compliance with the use test as set out in Article 120 of Solvency II, and in particular in relation to, at least:

(a) the different uses of the model;

(b) how the model fits to the business;

(c) how the model is understood;

(d) how the model supports the decision-making; and

(e) how the model is integrated with the risk management system.

National competent authorities should form this view taking into account that no complete and detailed list of specific uses should be prescribed to the insurance or reinsurance undertaking.

5.45. Through the pre-application process, national competent authorities form a view on how prepared the undertaking is to comply with the use test based on proportionality. Some uses may not be materially important to the undertaking given the nature of their business.

5.46. A number of inconsequential uses of the model alone would not be sufficient to comply with the use test requirement. National competent authorities could query, for example, why the internal model output is not being used in the risk management system.

5.47. Although there are minimum requirements in Solvency II for the use test, there is no detailed and complete list of uses that the undertaking has to abide with. National competent authorities take into account that the uses of the internal model vary from undertaking to undertaking.

5.48. The future uses of the internal model may be considered at the early stage of the development of the internal model and may form part of the drivers for the development and specifications of the internal model.

5.49. National competent authorities take into account that information from the undertaking such as communication and notes of feedback on the internal model and areas for improvement may be useful to identify the uses of the internal model.

5.50. Once an overall picture of the use of the internal model is developed, national competent authorities can then look at the components for each use. Note that different uses would have the components applied to a greater or lesser extent. For example, if the use considered is in respect of risk management, then the risk management component would apply more than others. If the use relates to pricing, then the decision-making component would apply more.

Guideline 10 – Incentive to improve the quality of the internal model

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the internal model is used in its risk-management system and decision-making processes in a way that creates incentives to improve the quality of the internal model itself.

5.51. National competent authorities take into account that this Guideline is not requiring the undertaking to extend the scope of a partial internal model, but to improve the internal model within its current scope. Furthermore national competent authorities take into account that it is neither a requirement to force the undertaking to implement changes which are not useful for it. It is expected that the undertaking only implements changes that would improve the internal model.

5.52. From an undertaking's or a national competent authority's perspective, changes as shown in the examples below may indicate a need to implement changes within the internal model:

- Methods used to assess risk within the undertaking's risk management system on a very granular basis have improved. Consequently national competent authorities may consider asking the administrative, management and supervisory body of the undertaking to plan to improve the calculation engine of their internal model, too, if this better reflects the risk profile and is proportionate to the nature, scale and complexity of the risks modelled.
- From a supervisory perspective the internal model may also be improved to reflect the increase in use, for example, if the undertaking is using the internal model output for more granular decisions.

Examples of how the Guideline can be applied

5.53. Examples relating to the internal model outputs and inputs from different parts of the calculation engine are calculated for regulatory purposes with little or no internal incentive for ensuring the quality of those outputs:

- The decision taker within an undertaking is using different tools to assess the outcome of their decisions. The administrative, management or supervisory body of the undertaking and national competent authorities might expect that the results of the different tools would not be un-reconcilable and that the decision taker has plausible reasons as to why he does not rely on the result of the internal model, and has documented the process for taking into consideration the different tools. National competent authorities would express their concern if there is no suggestion to improve the internal model at this point.
- The internal model supports the decision-making in the undertaking. The way the output of the internal model are prepared or are reported would allow or limit the manner in which it can be used by different users in an undertaking. Therefore it might be necessary to improve the quality of the internal model in such a way that the granularity of the internal model increases.
- The internal model uses output from external models and/or data and this might, in some circumstances, need to be changed or adapted. The undertaking could carry out this change either directly or indirectly:
    - ➢ Directly – the undertaking makes the relevant changes within the internal model, even if the external model and/or data provider does not update the external model and /or data. The undertaking needs to be aware of the consequences of such changes on the effectiveness of the external model, and the possible issues that may arise during further updates of the external model.

- ➢ Indirectly – the undertaking could require the provider to carry out the change taking into consideration the timeframe required for approval of a major change if relevant. In this case the undertaking also needs to ensure that, if the provider cease to operate or provide the services agreed, it would be able to carry out the necessary changes.

5.54. Examples relating to deterioration in the accuracy, robustness or timeliness of the internal model outputs is unlikely to be picked up by the undertaking's internal processes: the internal model governance and validation policy are joined up by the risk-management function. It can be the case where different parts of the internal model are maintained and operated by different parts of the undertaking (for example, an economic scenario generator is operated by the life actuarial team and a catastrophe model by the catastrophe modelling team). If the two teams do not discuss assumptions that are linked, such as inflation, but the two teams do, however, document fully what they are doing, then the risk-management function could encourage the information flow between the two teams.

5.55. Examples relating to the undertaking lacking a process for monitoring the appropriateness of the internal model and for improving it:

- The risk-management function is responsible for the tasks set out in Article 44(5) of Solvency II. If the internal model is complex, and covers several activities and business centres, monitoring appropriateness might be a lengthy and convoluted process;
- There are always changes in the environment of an undertaking, in its organisational structure, in the science and knowledge available with an impact on the modelling structure, etc. To address those challenges, the undertaking may implement a process which identifies and collects the changes that may improve the model (e.g. through the risk-management function). Such a process could include the following:
  - ➢ Feedback loop between the modelling team and the team which is responsible for validating the model (link to validation);
  - ➢ Feedback loop between the modelling team and the users of the internal model or users of its outputs;
  - ➢ Feedback loop between for example the internal audit and the modelling team;
  - ➢ Open communication with national competent authorities which guarantees that applications for the approval of major changes are submitted to national competent authorities without delay.

Guideline 11 – Fit to the business

Through the pre-application process national competent authorities should, in forming a view on how the insurance or reinsurance undertaking ensures that the level of detail to which the internal model fits its business is appropriate, consider at least the following factors:

(a) whether the uses of the internal model by the insurance or reinsurance undertaking in its decision-making process covers key business decisions, including strategic decisions, and any other relevant decisions;

(b) the insurance or reinsurance undertaking's risk management system and how granular this is;

(c) the granularity required for the decision-making process of the insurance or reinsurance undertaking;

(d) the decision-making structure in the insurance or reinsurance undertaking; and

(e) the internal record by the insurance or reinsurance undertaking related to the design of the output from the internal model.

5.56. National competent authorities can form a view on how the design process the undertaking went through, could be used by this undertaking to evidence that the internal model and the business model are aligned.

5.57. Demonstration of evidence by the undertaking that the internal model is adjusted for changes in the scope or nature of the business of the undertaking is an example of good practice. Examples of such changes include reorganisations, expansion into new markets or development of new lines of business.

5.58. The undertaking may want to consider the results of the profit and loss attribution in the assessment of goodness of fit of the internal model to the business model. For example, the profit and loss attribution may indicate that the internal model has not an appropriate level of detail, or that the structure of the internal model does not allow output that reflects the way the business is run.

5.59. Another example of good practice is when the internal model is capable of producing outputs that are at least as granular as the decision-making process of the undertaking. Additional guidance on this is provided as part of the profit and loss attribution (please refer to the relevant Guidelines). This demonstrates the alignment between the internal model and risk-management system.

5.60. Understanding the outputs and the management information produced by the internal model and how they are used in decision-making is a key component of this Guideline.

Guideline 12 – Understanding of the internal model

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures understanding of the internal model by the administrative, management or supervisory body and relevant users ofthe internal model for decision-making.

With the aim of forming a view on their understanding of the internal model national competent authorities should consider using interviews of persons from the administrative, management or supervisory body and persons who effectively run the insurance or reinsurance undertaking.

National competent authorities should also consider reviewing the documentation of the minutes of the board meetings or appropriate decision-making bodies to form a view on how ready is the insurance or reinsurance undertaking to comply with the use test requirements.

5.61. Both overall and detailed understanding may be gained from training provided by the undertaking. Thus evidence of training, seminars or workshops for the members of the administrative, management or supervisory body can be one way for national competent authorities of forming a view on the understanding of the internal model by the undertaking.

5.62. Training, seminars or workshops for the administrative, management or supervisory body could include the overall review of:

- The structure of the internal model;
- The scope and purpose of the internal model and the risks covered by the internal model, as well as those not covered;
- The way the model fits with the business and the risk-management system
- The general methodology applied in the internal model calculations;
- The limitations of the internal model;
- The interpretation of the relevant inputs and outputs of the internal model;
- The diversification effects taken into account in the internal model;
- Other relevant information for the manager.

5.63. The Guideline also applies to external models and data:

- Understanding the effect and significance of proprietary elements of external models including the differences that may arise between different models or outputs;
- Understanding all material risks related to the use and reliance of external models and data. For example: the risks arising given that the model provider may cease to operate, the risks arising given that in-house

expertise that understands the external models and data may leave the organisation, the risks arising given that information may be required from the model provider and they are not able to disclose this or it falls outside the boundary of the contract agreed.

5.64. National competent authorities form a view on how the undertaking considers how they access information from the vendor – especially if the administrative, management or supervisory body challenges key assumptions/limitations.

5.65. The CEIOPS Report on Lessons learned from the crisis also highlights the administrative, management or supervisory body understanding of the internal model as an important factor. The Report recommends that the administrative, management or supervisory body be required to understand the drivers behind market movements, together with its own portfolio positions, in particular in times when historical relationships in markets break down. It is expected that the risk management systems under Solvency II takes into consideration those lessons learned, and that this is reflected in the use of the internal model.

5.66. Thus demonstration of evidence of training, seminars, induction programmes or workshops for all members of the administrative, management or supervisory body or the persons effectively running the undertaking may be one way of forming a view on how ready is the undertaking to comply with the use test.

5.67. National competent authorities may want to consider what the objectives of these workshops are, how the objectives are achieved, how frequently they are run, participation rates and what assessment is done at the end. Supervisory review of a training handbook or other material does not prevent the responsible people within an undertaking being asked detailed questions to assess whether the contents of training has been understood.

5.68. In particular national competent authorities may use interviews of the administrative, management or supervisory body or other persons who effectively run the undertaking to assess the understanding of diversification effects, dependencies or understanding capital allocation, as well as other aspects of the internal model.

Applying the understanding

5.69. Furthermore it is expected that the outputs of the internal model are discussed with the risk-management function and that the results of this discussion are reported to the administrative, management or supervisory body and can therefore be seen in the minutes of the board meetings or of other committees and decision-making bodies. National competent authorities may review minutes from the relevant committees / decision-making bodies in the undertaking to assess how output from the internal model is used, i.e., how it is discussed, how the discussion is documented, how suggested improvements to the internal model output are fed back to the risk-management function, etc. Where minutes refer to actions to be carried out, national competent authorities may check that the actions have actually been implemented.

5.70. National competent authorities may also find it helpful to review what reports have been requested by members of the administrative, management or supervisory body. Then national competent authorities can ask the board members to explain the reports and how they change over time. The undertaking may wish to consider the format of the internal model reporting and how the format could be improved to enhance senior management understanding; for example, the inclusion of graphics or diagrammatic representation of data can enhance communication.

5.71. Consequently the minutes of the board meetings with discussions and results of those discussions on risk profile of the undertaking can be reviewed as a way of forming a view by national competent authorities. National competent authorities may also find it helpful to see how members agreed to act on the outcome of the discussions and how decisions were communicated and acted within the company.

Guideline 13 – Support of decision-making

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures and is able to demonstrate that the internal model is used in decision-making.

5.72. National competent authorities take into account that, in some cases, the internal model can produce results on more than one basis. However, these results need to be consistent with each other. National competent authorities form a view on how the undertaking would analyse and understand the different impact of various courses of action on various measures – e.g., economic capital, IFRS earnings, local GAAP, management accounting measures, rating agency capital, etc., so that the results produced by the internal model are appropriate for the use which the undertaking intends to make of the internal model. However, these results need to be consistent with each other.

5.73. National competent authorities consider that the internal model is not the only tool used to make decisions in the business, and it is expected that an undertaking has a number of tools used to support decisions made within the business.

5.74. The support of decision-making does not mean that it is expected that undertakings develops detailed assessments for all decisions but it needs to at least cover decisions likely to have a significant impact.

5.75. Support for decision-making can in this context be expressed as a reduction of the uncertainty of information used in the decision-making process.

5.76. It is regarded as good practice for the undertaking to document why significant decisions are made, including how the output of the internal model was factored into the eventual decision and why decisions differ from those indicated by the internal model output, and the additional information that has been used to arrive at the decision.

5.77. When forming their view, national competent authorities take into account that support for a decision can also contribute to create a higher acceptance of the internal model within the undertaking. For example the internal model may produce a single point in the distribution (e.g. 1 in 200), while the undertaking might have a risk appetite expressed at a different level (e.g. 1 in 250 rather than 1 in 200). In this case if the model is not trusted because it has not been fitted for other parts of the distribution it might not be useful for decision-making. Therefore national competent authorities would consider if the internal model is fit to the use.

Guideline 14 – Support of decision-making

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the internal stakeholders of the undertaking, in particular its administrative, management and supervisory bodies, receive regular internal model results that relate to the relevant business decisions.

5.78. National competent authorities form a view on how the undertaking ensures that internal communication processes and reporting are set up in a way that ensures that in particular the administrative, management and supervisory bodies receive regular and comprehensive internal model results that relate to the relevant business decisions. In addition, national competent authorities form a view on how persons at other relevant levels of the undertaking receive also appropriate regular and comprehensive reports. This might mean that additional transformations of internal model results are needed in order to make them “fit for management decisions”.

5.79. When forming a view on the use of internal model output in decision-making, and the discussion and debate around the decision, national competent authorities could look for the debate that took place in the undertaking in relation to the design and the output from the internal model. For example, the decision to be considered is framed in a robust way, with the key drivers for the decision clearly set out. The possible outcomes from different decisions need to be clear, and uncertainty in these outcomes set out. This might assist the decision-making process, by making the question being debated clear and agreed by all decision-makers, as well as highlighting the key assumptions and risks from different alternatives decisions, including changing nothing.

5.80. Support for decision-making could be for example as follows:

- Use of an internal model to reduce the uncertainty of information in the case of a merger or acquisition. If an undertaking considers acquiring a new company, from the risk perspective, this undertaking would have to absorb potential losses which might occur after having acquired the company. The internal model can be used in the assessment of the capital which has to be held to cover for potential future losses and hence supports the decision-making process. The internal model may at a minimum be able to produce the capital and risk management impact of a potential decision against which any assessed profit could be viewed. There might be a lack of data concerning the new company. In this case the undertaking might use assumptions or approximations. From a supervisory perspective it is important that such information is factored into the decision-making process accordingly;

- The internal model can be used for assessing the future cash flows of single products or lines of business;
- The internal model can also be used to support the quantification of the risks to which the future earnings are exposed and support decisions on capital allocation;
- The internal model can be used throughout the years to monitor how business is developing against an undertaking's business plan;
- The internal model can also be used as part of the pricing process. The undertaking may for example calculate the economic price for the product with the internal model. Therefore the undertaking may decide to add desired profit margin.

Guideline 15 – Support of decision-making

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the internal model is at a minimum able to measure the economic capital and to identify the impact on the risk profile of potential decisions for which the model is used.
National competent authorities should form a view on how the insurance or reinsurance undertaking also understands the effect such decisions will have on the Solvency Capital Requirement.

Adequate Pricing

5.81. If a new product is introduced, national competent authorities might expect that the results of the internal model are taken into account during the decision process. That does not mean that the undertaking has to provide a detailed assessment of the expected profit and losses. But from a supervisory perspective the undertaking would at least have to assess the amount of risk capital which has to be held. This amount of capital can afterwards be compared with the realised profit and losses. If the result of the comparison is that the amount of risk capital as an output of the internal model is not comprehensive enough we would from a supervisory perspective expect the internal model to be adjusted.

Efficient use of capital

5.82. It is expected that the results of the internal model would be used at least for business decisions that have a major impact on the risks of the undertaking. So the internal model is to be used in decision-making processes, including the setting of a business or risk strategy. The board of the undertaking needs to agree on a certain business or risk strategy and this agreement needs to be evidenced (e.g. in the minutes of the board meeting). To form a view on how the business or risk strategy is really implemented in the internal model accordingly, national competent authorities might compare the results of the internal model with the documented business or risk strategy. For example if the board agreed on reducing a certain kind of risk but the risk capital as an output of the internal model increased in this risk category this might indicate an incomplete implementation of the business or risk strategy.

Guideline 16 – Frequency of calculation

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking develops a process to monitor its risk profile and how a significant change of the risk profile triggers a recalculation of the Solvency Capital Requirement.

5.83. A continuous monitoring of risk profile is key to decision-making and planning. For governance purposes, national competent authorities form a view on how the undertaking develops processes to monitor its risks, including identifying new risks that they may be exposed to. It would be important that the undertaking links this process for the recalculation of the Solvency Capital Requirement with the process to change the internal model. The undertaking's processes would identify the circumstances under which a change to the risk profile can be adequately addressed through a recalculation of the Solvency Capital Requirement and the circumstances under which a change to the internal model is needed. This would ensure that the model is up to date and that the undertaking maximises the use of this model in decision-making.

Guideline 17 – Group specificities

Through the pre-application process, in case of a group internal model, the national competent authorities involved should form a view on how the participating undertaking and the related undertakings which would use the group internal model to calculate their individual Solvency Capital Requirement cooperate to ensure that the design of the internal model is aligned with their business.

The national competent authorities involved should form a view on the evidence provided by the participating undertaking and related undertakings that, at least:

(a) their individual Solvency Capital Requirement would be calculated with the frequency required by Article 102 of Solvency II and whenever it is needed in the decision making process;

(b) they can propose changes to the group internal model, especially for components that are material to them or following a change in their risk profile and taking into account the environment in which the undertaking is operating; and

(c) the related undertakings possess the adequate understanding of the internal model for the parts of the internal model which cover the risks of that undertaking.

The national competent authorities involved should form a view on how insurance or reinsurance undertakings that would use a group internal model to calculate their Solvency Capital Requirement, ensure that the design of the internal model is aligned with their business and their risk-management system, including the production of outputs, at group level and at related undertaking level, that are granular enough to allow the group internal model to play a sufficient role in their decision making processes.

5.84. In the context of a group internal model, the use test applies to the model used to calculate the Solvency Capital Requirement. In particular the use test applies to the undertakings using the internal model to calculate their Solvency Capital Requirement in relation to the outputs at group level but also in relation to the outputs at the level of that undertaking. A key component of the use test is how the internal model is embedded in decision making, which may vary by entity.

5.85. An appropriate governance of the internal model provides the framework for the group and the related undertakings to cooperate closely in the use of the internal model. Such governance may be formalised in the forms of contracts/ legal arrangements such as service level agreements or through policies and dedicated procedures. This cooperation may be a way to identify where the internal model would be used in their systems of governance.

5.86. They would be able to evidence that the group internal model would be adjusted to reflect changes in the group or in the related undertaking´s risk profile. For instance it is expected that the policy for changing the internal model foresees changes to the internal model as possible consequences of changes in the risk profile for all undertakings in the scope of the internal model.

5.87. In order to be able to calculate their Solvency Capital Requirements properly and to meet the use test requirements, related undertakings would need to have adequate understanding about the internal model. A source of that understanding is, for example, having access to the relevant and up-to-date internal model documentation, created either at group or at solo level.

5.88. The above-mentioned requirements are equally important when the group uses external models or chooses not to operate the external model directly.

5.89. The undertakings fully or partially within the scope of an internal model for a group that would be used to calculate the group Solvency Capital Requirement, but which would not be used to calculate their solo Solvency Capital

Requirement would need also to comply with the use test in relation to the output of the internal model at group level. This implies that:

- The model would be able, at the minimum, to produce outputs at the level of those related undertakings;
- Those related undertakings are able to demonstrate an overall understanding for the parts of the internal model which would cover their risks;
- The consolidated group Solvency Capital Requirement would need to be recalculated if the risk profile of the related undertaking alters significantly since the last reported group Solvency Capital Requirement such as materially impacting the group Solvency Capital Requirement.

Chapter 4: Assumption setting and expert judgement

5.90. One of the requirements that an insurance or reinsurance undertaking needs to fulfil in order to use an internal model for the Solvency Capital Requirement calculation is being able to justify the assumptions underlying the internal model to national competent authorities.

5.91. The models for risk ("internal models") use assumptions which must be based on the expertise of individual persons or committees with relevant knowledge, experience and understanding of the risks inherent in the insurance or reinsurance business (expert judgement). Expert judgement is therefore an important ingredient in the assumption setting process. These Guidelines on assumption setting and expert judgement aim to provide guidance about what national competent authorities and an undertaking do through the pre-application process to ensure that national competent authorities are able to form a view on how prepared the undertaking is to comply with the requirements in relation to the setting of those assumptions and in particular to the use of expert judgement on which these assumptions are based.

5.92. Especially where data availability or quality is limited, as well as in other situations where modelling decisions contain a large degree of subjectivity, risk models (as well as valuation models) need to overcome limitations in data by the use of assumptions which are based on expert judgement. In extreme cases, appropriate data may not be available at all and expert judgement can allow risk assessment which otherwise would not be possible. In these cases, the use of assumptions based on expert judgement is actively encouraged. But even in cases where there is sufficient data the need for expert judgement arises in selecting the data to use.

5.93. Therefore, the focus of these Guidelines is the choice of modelling assumptions which are closely tied to limitations in data, although they apply to all assumptions for valuation and risk models in general. As an assumption overcoming the limitations in data is hard to be separated from other assumptions based on the expertise of persons with relevant knowledge, experience and understanding of the risks inherent in the insurance or reinsurance business thereof, the scope of the term "assumptions based on expert judgement" is kept rather broad and no explicit boundaries are given.

5.94. While the choice of assumptions based on expert judgement is associated with a large degree of subjectivity and, due to their nature, such assumptions do not lend themselves naturally to traditional methods for validation, it is important to ensure that the use of expert judgement as the basis for such assumptions happens in a controlled environment. Other controls take precedence such as a tight governance framework [Guideline 19], good communication that includes limits and uncertainties of the assumptions based on expert judgement [Guideline 20] and thorough documentation [Guideline 21]. Validation also still plays a role, for example in the maintenance of a track record [Guideline 22].

5.95. The Guidelines on assumption setting and expert judgement provide guidance in order that national competent authorities are able to form a view on how the undertaking sets up these controls and explains their background.

5.96. Where committees rather than individual persons provide assumptions based on expert judgement, national competent authorities also form a view on how these committees set such assumptions and use expert judgement on which these assumptions need to be based.

Guideline 18 – Assumptions setting

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking sets assumptions and uses expert judgment in particular, taking into account the materiality of the impact of the use of assumptions with respect to the following Guidelines on assumption setting and expert judgement.

National competent authorities should form a view on how the undertaking assesses materiality taking into account both quantitative and qualitative indicators and taking into consideration extreme losses conditions.

National competent authorities should form a view on how the insurance or reinsurance undertaking overall evaluates the indicators considered.

5.97. In any internal model, the various assumptions differ widely in their materiality.

5.98. This would also hold in the context of setting up a balance sheet for solvency purposes. This can either be the case where assumptions need to be taken for the valuation of assets where market values are not available and a model is required for this purpose or where the valuation of liabilities requires such assumptions to determine the value of the best estimate or the risk margin.

5.99. When the undertaking assesses materiality, it can take into account indicators and metrics such as the solvency capital requirement, technical provisions, own funds and other related metrics. The evaluation may differ depending on the indicator or the set of indicators that has been used.

5.100. Examples for quantitative indicators for materiality in relation to internal models are the estimated impact of the typical change or uncertainty in such assumptions on capital or other model outputs, or results of any tool used in model validation such as stress and scenario testing or sensitivity analysis. Qualitative indicators can also be used to determine whether assumptions can be material or not.

5.101. Where individual assumptions are immaterial, they may still be related or sufficiently similar and together they may become material on the whole. In this case, they are to be treated according to this aggregate materiality. An example for this may be the individual entries in a correlation matrix, which individually have very little impact on model output, but together can change model results dramatically.

Guideline 19 – Governance

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that all assumption setting, and the use of expert judgement in particular, follows a validated and documented process.

National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the assumptions are derived and used consistently over time and across the insurance or reinsurance undertaking and that they are fit for their intended use.

National competent authorities should form a view on how the insurance or reinsurance undertaking signs off the assumptions at levels of sufficient seniority according to their materiality, for most material assumptions up to and including the administrative, management or supervisory body.

5.102. This Guideline is connected with Guideline 21 on documentation. The documentation of the process enables to assess the validity of the resulting assumptions.

5.103. Instead of being the product of a black box, an assumption based on expert judgement is to be viewed as the end result of a process with distinct steps. This improves documentation and transparency, and serves to differentiate the hypotheses on which the assumption is based from the processing of these hypotheses and the resulting judgement itself. In addition, validation efforts can focus on the steps of the process as well as the outcome.

5.104. A stylized view of the process of choosing the assumption based on expert judgement may consist of the following steps:

a. definition of the domain of the problem;

b. selection and briefing of the expert, e.g. by reminding experts about the inherent biases and shortcomings of judgements;

c. collection of available information which could be quantitative or qualitative in nature;

d. processing the available data and synthesis of the resulting assumption. This may involve construction of a micro-model[6] in the internal model context;

e. reporting and documentation;

f. validation.

5.105. Likewise, where assumptions on the same issue are derived by several experts in the same undertaking, for example in geographically dispersed locations, the process ensures consistency between these assumptions. Benchmarking of assumptions across entities by a group function may be a tool for ensuring consistency across the group.

Guideline 20 - Communication and uncertainty

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the processes around assumptions, and in particular around the use of expert judgement in choosing those assumptions, specifically attempt to mitigate the risk of misunderstanding or miscommunication between all different roles related to such assumptions.

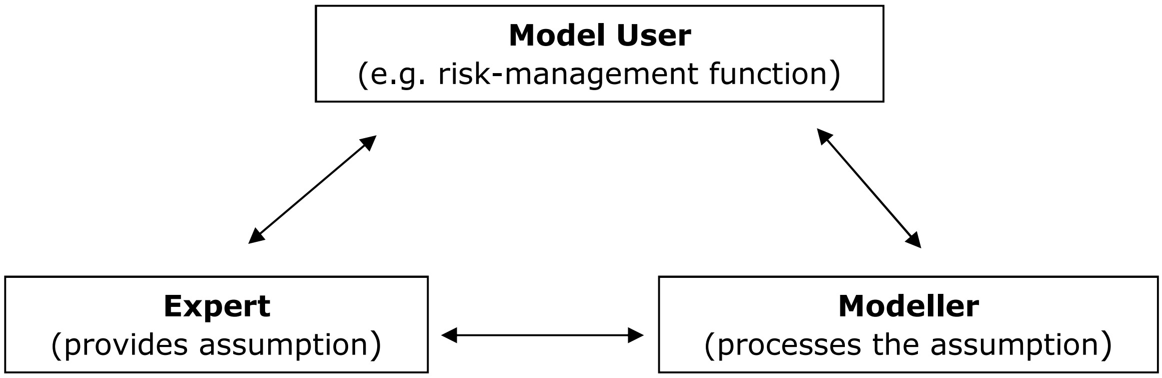
National competent authorities should form a view on how the insurance or reinsurance undertaking establishes a formal and documented feedback process between the providers and the users of material expert judgement and of the resulting assumptions.

National competent authorities should form a view on how the insurance or reinsurance undertaking makes transparent the uncertainty of the assumptions as well as the associated variation in final results.

5.106. Sometimes, there is the risk that the context and meaning of an assumption based on expert judgement is not fully understood by its users. For example, the expert responsible for providing an assumption and its users may be part of organisationally or geographically distant units with little regular communication. However, this Guideline does not imply that two roles cannot fall on the same person.

5.107. Generally, three different roles related to internal modelling and assumptions in the scope of this Guideline can be distinguished:

[6] In this context, micro-model refers to the mechanism that translates the information used by the expert into something that is useable for the internal model.



5.108. Miscommunication can appear on all three sides of this triangle. Even in cases where two roles fall on the same person (e.g. modeller and expert are the same person), there is still one communication link which can fail.

5.109. A formalized feedback between all three different roles reduces the risk of misunderstanding or misusing assumptions based on expert judgement.

5.110. An example for evidencing this feedback is to include in the documentation addressed in Guideline 21:

- A summary of the context and application of assumptions based on expert judgement, jointly signed off by the provider and the user;
- Minutes of meetings where decisions on assumptions have been made;
- Reports of working groups on which the decisions were based.

5.111. While a sound process, feedback and sign-off, as well as documentation and validation may reduce or eliminate bias in an assumption based on expert judgement and increase its reliability, some uncertainty always remains.

5.112. The remaining uncertainty can be made transparent in a variety of ways, both qualitative and quantitative ones: for example, the expert gives a qualitative indication of the degree of certainty; alternatively the expert provides plausible upper and lower bounds in case of a parameter setting.

5.113. Knowing the degree of uncertainty inherent in assumptions based on expert judgement enables the undertaking to judge its impact on the final model output as well as identifying areas of model risk and potential future model improvements, taking into account the materiality of the assumptions based on expert judgement.

Guideline 21 - Documentation

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking documents the assumption setting process, and in particular the use of expert judgement, in such a manner that the process is transparent.

National competent authorities should form a view on how the insurance or reinsurance undertaking includes in the documentation the resulting assumptions and their materiality, the experts involved, the intended use and

the period of validity.

National competent authorities should form a view on how the insurance or reinsurance undertaking includes the rationale for the opinion, including the information basis used, with the level of detail necessary to make transparent both the assumptions and the process and decision-making criteria used for the selection of the assumptions and disregarding other alternatives.

National competent authorities should form a view on how the insurance or reinsurance undertaking makes sure that users of material assumptions receive clear and comprehensive written information about those assumptions.

5.114. Transparent documentation implies that instances in which an assumption based on expert judgement is used can be easily identified from the documentation. National competent authorities can consider that the undertaking might, for example, maintain an up-to-date index or reference list of instances where expert judgement is used, or make the use of electronic search tools feasible for the purpose.

5.115. National competent authorities can consider that another implication of transparent documentation is that the undertaking provides thorough, i.e. clear and comprehensive, documentation for all material judgement. It may not be necessary or reasonable to provide extensive and highly detailed documentation on all instances in which an assumption based on expert judgement is used. The proportionality in the setting of the assumption (cf. Guideline 18) needs to be taken into account and could be reflected in the level of detail of documentation provided that all relevant information with respect to the particular assumption is still included in the documentation.

5.116. National competent authorities form a view on how the documentation of the model describes the assumptions in such a manner that they are transparent and that their validity can be assessed by assumptions users and national competent authorities. In this regard, the documentation needs to clarify:

- How and what kind of expert judgement is involved in choosing the assumption;
- The materiality in the setting of the assumption (cf. Guideline 18);
- The context of the use of expert judgement, if not evident;
- The reasons to call for the assumption, if not evident;
- Evidence for the expertise of the assumption provider; and
- The rationale for the assumption, including the information basis used.

5.117. The context and the reasons to call for the judgement with respect to the undertaking's internal modelling or valuation process and application of the judgement need to become clear from the documentation. The initial context, in which the assumption based on expert judgement was intended to be applied, as presented to the expert(s), is to be consistent with the context in which the assumption is being finally applied. Any inconsistency in this respect needs to be documented. National competent authorities form a view on how the undertaking is aware of any limitations of the application of the judgement to ensure it is correctly and appropriately used.

5.118. Assumptions may be based on expert judgement formed by a group/committee or an individual. In the former case, the name and position of all experts with a specified role in the elicitation process and providing essential contribution to the process would be documented. Providing collective evidence for the expertise (the level and variety of knowledge) for the whole group/committee may in most instances be sufficient. Any relevant professional experience such as education, on-the-job-training and the access to information bases in the relevant field could be used as evidence for expertise.

5.119. National competent authorities form a view on how the undertaking documents the rationale for the opinion, including the information basis used, in order to make assumptions transparent. The documentation is expected to describe the problem-solving processes and methods, and report and justify all instances where an assumption based on expert judgement was changed, overruled or disregarded before its application. The description for the rationale behind the problem-solving processes and methods could include:

- Inputs, interpretations and hypotheses on which the assumption is based (information basis), as well as how expert judgement has been used;
- Output(s) and any relevant shortcomings and uncertainty surrounding them. Where relevant, references to alternative assumptions are made. The opinions of all experts with essential contribution and involvement in the elicitation process are to be reported, irrespective of the opinions being used or not;
- Processes and methods for deriving the assumption. The processes and methods used to derive the assumption, particularly when multiple and differing expert responses are aggregated, are explained to the extent possible and relevant for the assumption under consideration.

5.120. National competent authorities form a view on how the undertaking also documents the results of the validation (cf. Guideline 22).

Guideline 22 - Validation

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the process for choosing assumptions and using expert judgement is being validated.

National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the process and the tools for validating the assumptions and in particular the use of expert judgement are being documented.

National competent authorities should form a view on how the insurance or reinsurance undertaking tracks the changes of material assumptions in response to new information and analyses and explains those changes as well as deviations of realizations from material assumptions.

National competent authorities should form a view on how the insurance or reinsurance undertaking, where feasible and appropriate, uses other validation tools such as stress testing or sensitivity testing.

National competent authorities should form a view on how the insurance or reinsurance undertaking reviews the assumptions chosen, relying on independent internal or external expertise.

National competent authorities should form a view on how the insurance or reinsurance undertaking detects the occurrence of circumstances under which the assumptions would be considered false.

5.121. National competent authorities take into account that, as quantitative validation can be difficult, the validation by undertaking of the process of creating an assumption based on expert judgement is very important.

5.122. The validation of the process can include in particular the validation of the following items: definition of the problem to be addressed by expert judgement, criteria for selection of the expert(s), data and information gathered and used, decision, rationale of the decision (it needs to be transparent enough to clearly identify the factors weighted in the decision), uncertainty or conditions under which the selected decision would not be valid, and sign-off.

5.123. One purpose of the validation is to ensure a sufficient level of confidence in the assumptions that have a material impact on the output of the model and/or on decisions taken.

5.124. The process of tracking the assumptions against actual experience and new information is a key tool to determine whether the expert judgement is applied appropriately, both initially and on an on-going basis. National competent authorities form a view on how the undertaking considers materiality in deciding which assumptions would require tracking against actual experience and new information, as it may be impractical to complete this tracking for all assumptions.

5.125. Peer review, whether internal or external, can contribute to providing senior management with sufficient confidence in the areas of expert judgement affecting their decisions. It may contribute to the independence of the validation process, and increase over time the consistency across the undertaking.

5.126. Where possible, assumptions need to be compared against reality and to other external information.

5.127. National competent authorities form a view on how the undertaking using an internal model, includes in the validation process the documentation of the process and the tools for validating assumptions and in particular the use of expert judgement.

Chapter 5: Methodological consistency

5.128. One of the requirements that an insurance or reinsurance undertaking needs to fulfil in order to use an internal model for the Solvency Capital Requirement calculation is the consistency between the methods used to calculate the probability distribution forecast and the methods used for the calculation of technical provisions. Therefore, through the pre-application process, national competent authorities form a view on how the undertaking ensures this methodological consistency.

5.129. For the purpose of calculating the Solvency Capital Requirement of an insurance or reinsurance undertaking, an internal model produces a probability distribution forecast of certain monetary amounts. The probability distribution forecast determines the impact of possible future events on the monetary amounts at the end of the time horizon, which determine the financial situation of the undertaking.

5.130. As the calculation of the probability distribution forecast aims at capturing changes in the undertaking's basic own funds, which are in turn caused by changes in the values of assets and liabilities, a set of assumptions used by the undertaking for the calculation of the probability distribution forecast would be common with those used in the valuation of assets and liabilities for solvency purposes. In practice the calculation methods, data and parameters used for the valuation and their underlying assumptions may not be identical to their counterparts in the calculation of the probability distribution forecast. The different objectives introduce deviations to some extent, which may have a material impact on the results.

5.131. However, Article 121(2) of Solvency II sets out that the methods used by the undertaking to calculate the probability distribution forecast shall be based on adequate actuarial and statistical techniques.

5.132. With respect to the ability of the internal model to capture changes in basic own funds, adequate methods used by the undertaking to calculate the probability distribution forecast would be consistent with the valuation of assets and liabilities. Accordingly, national competent authorities form a view on how the undertaking chooses methods for the calculation of the probability distribution forecast that are consistent with the methods used for valuation of assets and liabilities in the balance sheet for solvency purposes, and in particular consistent with the calculation of technical provisions.

Guideline 23- Consistency check points

Through the pre-application process, national competent authorities should form a view on how the insurance or reinsurance undertaking ensures consistency between the methods used to calculate the probability distribution forecast and the methods used for the valuation of assets and liabilities in the balance sheet for solvency purposes.

In particular national competent authorities should form a view on how the insurance or reinsurance undertaking checks consistency at the following steps of the calculation of the probability distribution forecast, in case that they are relevant to the model part under consideration:

(a) the consistency of the transition from the valuation of assets and liabilities in the balance sheet for solvency purposes to the internal model for the purpose of Solvency Capital Requirement calculations;

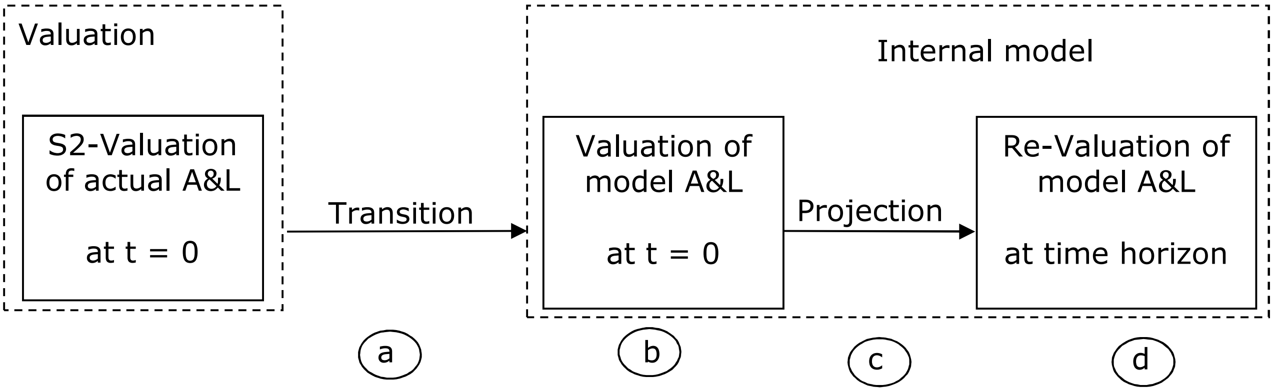
(b) the consistency of the valuation of assets and liabilities in the internal model at the valuation date with thevaluation of assets and liabilities in the balance sheet for solvency purposes;

(c) the consistency of the projection of risk factors and their impact on the forecast monetary values with the assumptions on those risk factors used for the valuation of assets and liabilities in the balance sheet for solvency purposes; and

(d) the consistency of the revaluation of assets and liabilities at the end of the time period with the valuation of assets and liabilities in the balance sheet for solvency purposes.

5.133. In principle, the calculation of the probability distribution forecast can be decomposed into an initial valuation, a projection step and a re-valuation. Depending on the risk type under consideration and the design of the internal model, some of these steps may coincide.

5.134. The consistency check points are indicated in the following illustration:



a. at the first step, the assets and liabilities contained in the balance sheet for solvency purposes may not be used directly as input for the internal model, but may be transformed into model assets and liabilities that are better suited for the projection and re-valuation steps within the internal model;

b. the initial value of the model assets and liabilities is calculated to determine the starting point of the projection;

c. the model assets and liabilities - more precisely, the underlying risk factors to which they are exposed - are projected into the future;

d. the model assets and liabilities are re-valued at the end of the time horizon.

5.135. The decomposition of the internal model calculation into an initial valuation, a projection and a re-valuation step can often be observed explicitly in practice or implicitly in the underlying theoretical framework of the internal model.

5.136. The assessment of consistency at step (a) (transition) and step (b) (initial valuation) ensures that the “starting point” of the projection is aligned with the values in the balance sheet for solvency purposes.

5.137. The assessment by the undertaking of consistency of the transition step needs to take into account that “consistency” is not a question of “similarity” between the valuation framework and the internal model. The calculation of the probability distribution forecast can be considerably different from the methods used for valuation in some cases, e.g. a Replicating Asset Portfolio approach may be used to project and re-value the liabilities of a Life Insurance undertaking, although a full projection is used to calculate the value of technical provisions.

5.138. At step (b), consistency can be assessed for instance by reviewing whether the techniques applied for the initial valuation of model assets and liabilities differ from the corresponding methods that were applied in the calculation of the balance sheet for solvency purposes.

5.139. Consistency at step (c) (projection) ensures that the development of the monetary values that are projected in the internal model are consistent with the calculation of corresponding monetary values within the valuation of assets and liabilities, and that the projected distribution of risk factors in the internal model is consistent with the assumptions that are applied in the valuation of the best estimate.

5.140. In most risk classes (mortality, for example), consistency typically requires a strong correspondence of parameters between risk and valuation model. For instance, national competent authorities form a view on how the undertaking reconciles the expected value of the projected distribution of future claims reserves with the best estimate of these reserves and explains the remaining differences.

5.141. With respect to economic assumptions and market risk factors such as interest rate curves, equity returns, credit spreads, volatilities and their interdependence, the consistency assessment at step (c) takes into account that assumptions for valuation purposes typically are subject to a "risk neutral" framework and intended to reproduce observable prices, whereas the risk factors in the internal model are designed to emulate possible "real world" developments. This means that for market risk factors, parameters such as drift assumptions or volatilities can differ significantly between valuation model and internal model. Nevertheless, the valuation assumptions and the distribution of risk factors would be derived from a consistent basis, e.g. with respect to risk free interest rates or dependencies.

5.142. Consistency at step (d) (re-valuation) ensures that the re-valuation of the modelled assets and liabilities (or more generally, the calculation of projected basic own funds) at the end of the projection happens in a way that is consistent with the calculation method used for the balance sheet for solvency purposes.

5.143. For a given internal model, some of these steps may coincide and the decomposition may not be fully applicable. National competent authorities form a view on how the undertaking specifies the consistency check points outlined in the Guideline accordingly. For example, the valuation itself may already be based on model assets and liabilities rather than the original items, e.g. if a stochastic valuation model is applied. If the internal model uses the same model assets and liabilities, the transition step is trivial. National competent authorities form a view on how the undertaking, if using in its internal model another representation of assets and liabilities, assesses the consistency of the transition.

Guideline 24 – Aspects of consistency

Through the pre-application process, national competent authorities should form a view on how the insurance or reinsurance undertaking, when assessing consistency, takes at least the following aspects into account:

(a) the consistency of the calculation methods applied in the valuation of assets and liabilities in the balance sheet for solvency purposes, and in the calculation of the probability distribution forecast;

(b) the consistency of data and parameters that are used as input for the respective calculations; and

(c) the consistency of the assumptions underlying the respective calculations, in particular assumptions on contractual options and financial guarantees, on future management actions and on expected future discretionary benefits.

Methods of Calculation

5.144. If the calculation of a certain monetary value – for instance, the future development of claims reserves in non-life – is performed differently in the valuation of assets and liabilities in the balance sheet for solvency purposes and in the calculation of the probability distribution forecast, national competent authorities form a view on how the undertaking ensures consistency of the methods.

Data and Parameters

5.145. If the data used for valuation differs from the data used in the internal model, e.g. with respect to data aggregation, national competent authorities form a view on how the undertaking assesses consistency of the data.

5.146. This also applies to calculation parameters.

Assumptions

5.147. National competent authorities form a view on how the undertaking ensures that the underlying assumptions of valuation and Solvency Capital Requirement calculation by the internal model are consistent with each other, with special attention given to key assumptions.

5.148. In particular this holds for assumptions concerning:

- Contractual options and financial guarantees;
- Future management actions;
- Expected future discretionary benefits.

Guideline 25 - Consistency assessment

Through the pre-application process, national competent authorities should form a view on how the insurance or reinsurance undertaking conducts regular consistency assessments as part of its internal model validation process as set out in Article 124 of Solvency II.

National competent authorities should form a view on how the insurance or reinsurance undertaking conducts the consistency assessment on a quantitative basis whenever possible and proportionate.

National competent authorities should form a view on how the insurance or reinsurance undertaking, in its consistency assessment:

(a) identifies and documents any deviation between the calculation of the probability distribution forecast and the valuation of assets and liabilities in the balance sheet for solvency purposes;

(b) assesses the impact of the deviations, both in isolation and in combination; and

(c) justifies that the deviations do not result in an inconsistency between the calculation of the probability distribution forecast and the valuation of assets and liabilities in the balance sheet for solvency purposes.

5.149. Prescribing a defined set of consistency criteria limiting the extent of permissible methodological deviations would probably not lead to the desired goal, given the great variety in internal modelling. National competent authorities form a view on how the undertaking reflects in its consistency assessment the specific properties of its risk profile and of the design of its internal model.

5.150. Establishing a tailored process for assessing consistency together with appropriate criteria and checking consistency on an on-going basis requires the undertaking to regularly identify any differences in the actuarial and statistical techniques used in the calculation of the probability distribution forecast and the valuation of assets and liabilities in the balance sheet for solvency purposes, respectively. Therefore, national competent authorities form a view on how the undertaking ensures this.

5.151. National competent authorities form a view on how the undertaking, when developing consistency criteria, investigates all relevant methodological characteristics of the internal model. However, national competent authorities take into account that particular attention needs to be paid by the undertaking to the key model assumptions as referred to in Article 124 of Solvency II and to the parameterisation of the model.

5.152. National competent authorities form a view on how the undertaking particularly focuses the concept of consistency on adverse scenarios. If consistency would not be met with respect to tail events, the model would thus estimate a variation of a value that would not represent at all the variation of the balance sheet in these extreme scenarios, although this is typically the aim of the internal model.

5.153. A quantitative assessment may not always be possible for the undertaking. However, if a quantitative assessment is possible, national competent authorities form a view on how the undertaking conducts a quantitative assessment according to the principle of proportionality.

5.154. For example, the undertaking may contrast the value of the technical provisions with the average internal model outcome, i.e. the expected value of the probability distribution forecast.

5.155. It is essential that national competent authorities form a view on the undertaking's awareness of every deviation as it may happen that the significance of a deviation changes over time.

5.156. For instance, policyholder options that were of little value and caused only negligible risk in former market conditions might have been excluded by the undertaking from the scope of the internal model and considered as "immaterial deviations". In other market conditions the risk inherent in those policyholder options may become material. Even if each individual deviation is small, the impact of a combination of deviations could result in an inconsistency and affect adversely the decision-making or the judgement of the users of that information.

Chapter 6: Probability distribution forecast

5.157. Some of the requirements that an insurance or reinsurance undertaking needs to fulfil in order to use an internal model for the Solvency Capital Requirement calculation are related to the probability distribution forecast, as defined in the Article 13(38) of Solvency II.

5.158. Internal modelling within a supervisory solvency regime generally focuses on distributions rather than risk numbers. For risk management purposes distributions represent a much more detailed and richer source of information than single numbers given that both representations are of comparable degree of reliability. Accordingly, Article 121(1) of Solvency II highlights the probability distribution forecast as the internal model output.

5.159. In accordance with Article 13(38) of Solvency II, this mathematical function is expected to display rich information about the undertaking's risk profile. This means illustratively that a rich probability distribution forecast well reflects the material features of the risk profile in the sense that, among other things, it informs about the range of possible outcomes, whether they are favourable or unfavourable, the expected outcome or the most probable outcome; it contains information especially in the tail of extreme loss events and allows the computation of certain statistical quantities.

5.160. Through the pre-application process, national competent authorities form a view on how the undertaking allows for a methodological preference for richer probability distribution forecasts as they better enable in-depth analyses of the risk profile, permit a flexible use of risk management and risk mitigation techniques, support decision-making, facilitate the application of validation tools and may allow for a better risk aggregation and capital allocation.

5.161. Depending on limitations in the knowledge of the risk profile, in particular when relevant data and information is scarce, and/or on limitations in the capability of available calculation methods, the richness of the resulting probability distribution forecast varies and might be comparatively lower or higher. To the extent that internal models that generate a probability distribution forecast of low richness contribute to adequate risk assessment and effective risk management and decision-making processes, national competent authorities do not generally form a negative view on those models.

5.162. When applying these Guidelines on probability distribution forecast national competent authorities form a view by looking at the highest level of the undertaking and all lower levels of aggregation taking into account the scope of the internal model. This applies by analogy to partial internal models. In the case of an internal model developed by a group, national competent authorities form a view on how the group aims to arrive at a probability distribution forecast wherever the internal model is used at the level of individual insurance or reinsurance undertakings which are expected to be part of the group for Solvency Capital Requirement calculation or risk management purposes.

Guideline 26 - Knowledge of the risk profile

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the set of events of the probability distribution forecast underlying the internal model is exhaustive.

National competent authorities should form a view on the processes that are put in place by the insurance or reinsurance undertaking in order to maintain sufficient and current knowledge of its risk profile.

In particular, national competent authorities should form a view on how the insurance or reinsurance undertaking aims to maintain the knowledge of risk drivers and other factors which explain the behaviour of the variable underlying the probability distribution forecast, so that the probability distribution forecast can reflect all relevant characteristics of its risk profile.

5.163. For an undertaking using an internal model, the probability distribution forecast forms an important basis for both risk management and regulatory capital. Any characteristics about an undertaking's risk profile which are not reflected in the probability distribution forecast can potentially lead to wrong management decisions or inadequate regulatory capital.

5.164. A prerequisite for all relevant characteristics of the risk profile to be reflected in the probability distribution forecast is that they first have to be included in the set of events underlying the probability distribution forecast. Clearly, this is subject to proportionality and depends on the availability of relevant data and information. New relevant data and information may become available as e.g. scientific knowledge evolves. Any characteristic of the risk profile which is not included in the set of events is also not represented in the probability distribution forecast and thus may impair risk management and the calculation of the Solvency Capital Requirement.

5.165. These characteristics of the risk profile may be represented by risk factors, where risk factors may include financial market information such as interest rates, economic variables such as inflation or other underwriting risk factors, or in other ways, e.g. by the distributional characteristics of claims data sets.

5.166. In a risk-factor based internal model, the term “exhaustive” in the definition of the probability distribution forecast given in Article 13 of Solvency II refers to the presence of risk factors, and specifically to their dependency as well as the granularity of individual risk factors. National competent authorities form a view on how the undertaking strives to improve both aspects of the set of events: the more information about the undertaking’s risk profile is contained in the set of events, the more reliable the probability distribution forecast can be as a basis for risk management. These aspects may also increase the reliability of the Solvency Capital Requirement.

5.167. Conversely, in such a model the exhaustiveness of the set of events can be jeopardized e.g. if the modelling of individual risk factors is not sufficiently granular.

Guideline 27 - Probability distribution forecast richness

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking assesses the appropriateness of the actuarial and statistical techniques used to calculate the probability distribution forecast, and on how it considers the capability of the techniques to process the knowledge of the risk profile as an important criterion.

National competent authorities should form a view on how the insurance or reinsurance undertaking chooses techniques that generate a probability distribution forecast that is rich enough to capture all relevant characteristics of its risk profile and to support decision-making.

National competent authorities should also form a view on how the insurance or reinsurance undertaking as part of this methodological assessment considers the reliability of adverse quantiles estimated based on the probability distribution forecast.

National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the effort to generate rich probability distribution forecast does not impair the reliability of the estimate of adverse quantiles.

5.168. Within internal modelling in accordance to Solvency II, the probability distribution forecast, defined by a mathematical function based on an exhaustive set of events, generally results from a comprehensive calculation methodology. This function provides rich information about the undertaking’s risk profile. Illustratively, one can say that the probability distribution forecast informs about the range of possible outcomes, whether they are favourable or unfavourable, as well as the expected outcome or the most probable outcome, etc. It is undisputed that a rich probability distribution forecast contains information especially in the tail of the function, i.e. for adverse quantiles.

Moreover, a rich probability distribution forecast may allow the computation of certain statistical quantities.

5.169. There are two stages of the concept of probability distribution forecast richness. The first stage refers to the underlying information basis, i.e. the knowledge of the risk profile, as the starting point from which the probability distribution forecast is constructed. The second stage refers to the methodology used in the calculation of the probability distribution forecast, i.e. the chosen actuarial and statistical techniques.

5.170. In the first stage, irrespective of the calculation methodology, the underlying information basis must be sound. As highlighted in Guideline 26, the probability distribution forecast can be reflective of all the relevant characteristics of the undertaking's risk profile only to the degree that the corresponding event set is exhaustive. In the second stage, the calculation method must be capable to transform the information into a rich distribution forecast[7]. In the current state of internal modelling, available and widely used methods differ substantially in respect of this capability. For illustration, one example for market risk is considered. In comparison to other risk categories the information basis available in market risk is quite substantial and usually not the limiting factor, ruling out some approaches to constructing the probability distribution forecast. Here, a stress scenario approach typically results in a less rich probability distribution forecast as compared to a stochastic capital market model: a forecast that consists of a few selected points of the distribution function compares to a forecast that ranks a high number of events according to their loss potential.

5.171. It is important to stress that the concept of probability distribution forecast richness is not to be reduced to the granularity of the probability distribution forecast representation. The output may even be a continuous distribution, as obtained, for example, by a scenario approach that is complemented with a distribution assumption: in absence of a method which is powerful enough to process an exhaustive event set, a small number of selected scenarios is calculated and used to parameterize the distribution function chosen. Nevertheless, in many cases one would not qualify a distribution forecast resulting from such a methodological approach as rich without further considerations. On the contrary, one would challenge the methodology and investigate if unfounded richness was introduced by making the distribution assumption (cf. Guideline 29). While it is not always easy for the undertaking and national competent authorities to judge a probability distribution forecast according to its richness, in some cases methodologies to calculate a probability distribution forecast exist that are more superior in terms of richness than others.

[7] More precisely a distribution of monetary values that relates to the change in basic own funds. In a risk factor based model, for example, realisations of risk factors are transformed into profits or losses.

Preference for rich probability distribution forecasts

5.172. Richer probability distribution forecasts generally provide a stronger basis for the undertaking's risk management and provide better support for its decision-making processes. National competent authorities form a view on how the undertaking, when assessing the adequacy of the methodology used in probability distribution forecast calculation, considers especially the richness of its output as an important criterion, being aware that there are other relevant criteria.

5.173. The preference for rich probability distribution forecasts can be most easily seen using an extreme example: single point probability distribution forecasts (maybe based on a stress scenario approach) as opposed to "full" probability distribution forecasts (maybe resulting from a purely stochastic simulation approach). Apart from this example, however, similar considerations do apply whenever the richness of a probability distribution forecast is affected due to some limitations.

5.174. First, some advantages of rich probability distribution forecasts are given, before possible negative implications of probability distribution forecasts of low richness are discussed.

5.175. A sound knowledge of the risk profile which is accurately represented by a rich probability distribution forecast

a. allows easy computation of many different risk measures:

- expected Shortfall / Tail VaR cannot be determined based on a single point in the distribution;
- different risk measures may be needed for different stakeholders (regulators, shareholders, rating analysts, etc.);
- if only one point of the distribution function is known, risk management informed by internal model results is reduced to capital management;

b. facilitates computation of stress tests and scenario analyses;

c. enables an in-depth analysis of the risk profile, showing which risks dominate at which quantiles and which risk factors impact which parts of the distribution;

d. permits different risk management tools to be targeted at different quantiles in the probability distribution forecast.

5.176. There are various negative implications if the richness of the probability distribution forecast is low. They are presented based on the core requirement that the internal model plays an important role in the undertaking's risk management system and decision-making processes as well as its economic and solvency capital assessment and allocation processes (Use Test). Accordingly, examples in the areas of risk management, aggregation, capital allocation and model validation are given.

Risk Management

5.177. Full ranges of possible outcomes may be overlooked.

5.178. Risk limits in terms of a single point in the distribution can easily be circumvented by pushing risks beyond the concerned quantile. Therefore, it would be useful for persons in charge of the risk-management function as well as business and senior management to know what the risks to the left and right of that quantile are, if and why there are risks that fall beyond that quantile.

5.179. Risk mitigation techniques which impact the tail beyond certain quantile(s) are invisible and therefore disincentivised.

Aggregation

5.180. Often, it is already difficult to infer a statistically sound dependency structure for those risks which are well known. This is even more difficult when the marginal distributions provide little information.

5.181. When aggregating sub-portfolios into a total portfolio, even a single quantile of the total portfolio distribution depends on the full distribution of sub-portfolios. Distributions and aggregation method interact, and to achieve the desired quality of the result, as much as possible needs to be known about the distributions.

5.182. Additionally, if only one point of the distribution (one quantile) is known, it is possible to construct examples where the sub-additivity property does not hold just as in the case of the VaR risk measure.

Capital Allocation

5.183. An (almost) full distribution of sub-risks is desirable for fair allocation of capital based on a complete risk profile. Any allocation method based on very few points of the distribution might lead to misallocation of capital because risks have not been accounted for in the allocation method. Conversely, a misspecification of the allocation method namely as a result of an incorrect application of enrichment techniques can result in significant bias in capital management and decision-making process.

Model validation

5.184. If only one quantile is available, the only back-testing exercise that can be carried out is whether observed changes, e.g. of basic own funds, are inside or beyond the quantile boundary. However, if the (almost) full distribution is available, such observations can be checked against the full distribution, which results in stronger basis for the application of validation tools.

Richness vs. Reliability

5.185. National competent authorities form a view on how the undertaking aims for rich probability distribution forecasts and judges the calculation methodology according to this criterion. This preference for rich probability distribution forecasts may be in conflict with the need for reliable probability distribution forecasts. For example, a methodological change could result in an increase of the probability distribution forecast richness, but possibly at the expense of its reliability. In those cases national competent authorities form a view on how the undertaking establishes a reasonable balance between the reliability and the richness of the probability distribution forecast, and ensures that the outputs of the internal model do not include an undue model error or estimation error.

5.186. Of outstanding importance is the reliability of the probability distribution forecast in its tail. In particular, estimates of adverse quantiles used in the calculation of economic or regulatory risk capital must be highly reliable. National competent authorities form a view on how the undertaking, while striving for a richer probability distribution forecast, does not impair the reliability of those estimates.

Guideline 28 –Assessment of richness of the probability distribution forecast

Through the pre-application process, to form a view according to Guideline 28 and with a view to ensure a harmonised approach for the pre-application and model changes, national competent authorities should take into account at least:

(a) the risk profile of the undertaking and to what extent it is reflected by the probability distribution forecast;

(b) the current progress in actuarial science and the generally accepted market practice;

(c) with respect to the level of probability distribution forecast richness, any measures that the insurance or reinsurance undertaking puts in place to ensure compliance with internal model tests and each of the standards set out in Articles 120 to 126 of Solvency II;

(d) for a particular risk under consideration, the way in which the techniques chosen and the probability distribution forecast obtained by the insurance or reinsurance undertaking interact with other risks in the scope of the internal model as regards the level of richness of the probability distribution forecast; and

(e) the nature, scale and complexity of the risk under consideration as set out in Article 29(3) of Solvency II.

5.187. The richness of the probability distribution forecast may be affected for mainly two reasons. In general, undertakings do not have full knowledge of every aspect of their risk profile. Often, relevant information or data as e.g. loss experience is scarcely available. Furthermore, there are limitations in the actuarial and statistical techniques available for calculation of the probability distribution forecast. The techniques may not be capable to process the undertaking's knowledge of the risk profile.

5.188. In the case of such limitations internal modelling may result into a comparatively low richness probability distribution forecast. If the internal model, for example, is not able to process a large number of different events, it is typically restricted to a selection of events and generates key points corresponding to some quantiles of a potential full distribution forecast. Then most often, these quantiles are exactly those required for internal and external use.

5.189. National competent authorities form a view on how the undertaking assesses the materiality of limitations in the knowledge of their risk profile and the capability of techniques chosen to calculate the probability distribution forecast. In doing so, national competent authorities form a view on how the undertaking considers particularly the implications for the probability distribution forecast in terms of its richness (as pointed out in the explanatory text of Guideline 27).

5.190. It is an important but difficult task for national competent authorities to form a view on the adequacy of the internal model according to the richness of the resulting probability distribution forecast. Is the basic knowledge of the risk profile sufficient? Is the event set processed exhaustive enough? Does the probability distribution forecast provide information rich enough for its use in risk management and decision-making? These questions are not at all easy to answer.

5.191. Of course, the answer must be given on a case-by-case basis. However, there are limitations in modelling that are quite common to certain risk categories or insurance markets, and therefore encountered by national competent authorities again and again in the course of their review work. This together with strong communication among national competent authorities facilitates harmonised supervisory decision-taking.

5.192. In their assessment national competent authorities take into account:

- Current progress in actuarial science and the generally accepted market practice;
- Measures taken to ensure compliance with internal model tests and standards;
- The interaction with other risks within the overall model scope; and
- The proportionality principle.

Scientific progress and market practice

5.193. A generally accepted modelling practice, provided that one has been established in the market for a particular risk category or type of business under consideration, may serve national competent authorities as a reference. The market practice could be more or less advanced regarding to the richness of the probability distribution forecast. By contrasting these methods to those chosen by the undertaking, national competent authorities may obtain an indication for the level of probability distribution forecast richness and the challenges faced by this undertaking. It is expected that this does not mislead the undertaking to simply adopt the market practice nor national competent authorities to urge the undertaking to use it. It is rather expected that the market practice – the applicability given – needs some sort of adaptation to the undertaking's specific risk profile.

5.194. Awareness of the progress currently made in actuarial science is also important. This allows evaluating the undertaking's efforts to strive for a rich probability distribution forecast. Low richness probability distribution forecasts occur in areas where scientific developments have so far not resulted in methodologies which generate distributions in the very strict sense of Article 13 of Solvency II. However, many of those areas are evolving, so that in future improved methods can be expected. These methods would probably first be used in the scientific and research community and may not immediately be applicable in a business or industry context, for example because of stability or performance issues. However, over time those newly-developed methods would mature and find their way into the undertaking's production environment. Where this is the case, the undertaking making use of internal models is expected, in the absence of good reasons to the contrary, to keep pace and continually improve its internal model. Accordingly, national competent authorities may ask the undertaking to show how the methodology chosen would be kept up-to-date or why they have chosen such methodology against existing alternatives. This is particularly advisable if alternative methodologies exist that would probably be appropriate and superior with respect to the richness of the probability distribution forecast.

Measures to comply with tests and standards

5.195. In case of limitations affecting the richness of the probability distribution forecast, the internal model may need to be subject to a more intensive model validation process by the undertaking and tighter integration into its system of governance. National competent authorities form a view on how the undertaking using such a model makes extensive use of validation tools (stress-testing, scenario analysis etc.) and puts more effort into improving the model.

5.196. In view of the possible implications, as outlined in the explanatory text to Guideline 27, the supervisory view on the adequacy of the internal model is largely determined by the effectiveness of any measures the undertaking puts in place to ensure compliance with internal model tests and standards.

Integration into the overall model scope

5.197. National competent authorities need to be aware that, within a modular approach, limitations in individual components of an internal model might be transferred to the internal model as a whole. Every single model component affects via aggregation the richness of the probability distribution forecast up to the topmost level of the undertaking (in line with the model scope). For this reason, national competent authorities need to consider the different levels of aggregation in their assessment.

Proportionality Principle

5.198. The considerations described above are clearly subject to the proportionality principle set out in Article 29(3) of Solvency II.

Guideline 29 – Probability distribution forecast enrichment

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking takes care not to introduce into the probability distribution forecast unfounded richness which does not reflect the original knowledge of its risk profile [cf. Guideline 26].

National competent authorities should form a view on how the methodology followed by the insurance or reinsurance undertaking to enrich the probability distribution forecast complies with the Statistical Quality Standards regarding methods, assumptions and data. Where these techniques involve the use of expert judgement the relevant Guidelines on assumptions setting and expert judgement should apply.

5.199. It is often necessary to enrich the probability distribution forecast. For a low richness probability distribution forecast consisting of only few points, for example, one might consider it beneficial to increase the number of data points, using techniques such as interpolation, extrapolation or fitting, thereby allowing for an advanced aggregation technique. Another example is to make additional assumptions in case that the tail risk is not appropriately reflected.

5.200. Enrichment heavily based on statistical or mathematical techniques with limited original information regarding to the specificity of the risk or possible outcomes needs to be appropriately challenged in order to ensure that the resulting probability distribution forecast adequately captures the risk profile.

5.201. National competent authorities form a view on how the undertaking avoids introducing unfounded richness into the probability distribution forecast, e.g. by adding unsubstantiated points to a single point probability distribution forecast. Moreover, enrichment must not be misused by the undertaking to establish desired properties of the probability distribution forecast. Otherwise the implication might be that the risk profile is represented incorrectly by the undertaking and the probability distribution forecast could be misleading for its use for risk management and decision-making processes.

5.202. Enrichment is part of the overall probability distribution forecast methodology, and consequently, the methodology used to enrich the output is subject to the Statistical Quality Standards too. The requirements regarding methods, assumptions and data do particularly apply. In practice, probability distribution forecast enrichment heavily relies on the use of expert judgement. Therefore, the corresponding Guidelines apply.

5.203. National competent authorities form a view on how the undertaking makes the enrichment transparent to the users of the probability distribution forecast. Especially in case that the impact is material, national competent authorities form a view on how the undertaking presents to such users the enriched probability distribution forecast together with the related assumptions, enabling users to assess objectively its reliability.

Chapter 7: Calibration - approximations

5.204. One of the requirements that an insurance or reinsurance undertaking needs to fulfil in order to use an internal model for the Solvency Capital Requirement calculation is the calibration standard.

5.205. National competent authorities form a view on how the insurance and reinsurance undertaking demonstrates that it is able to derive from its internal model the value of the Solvency Capital Requirement as defined in the Article 101(3) of Solvency II, namely the Value-at-Risk of the basic own funds subject to a confidence level of 99,5 % over a one-year period, which is referred as "the reference risk measure" for the sake of this Chapter. In doing so, an insurance or reinsurance undertakings is allowed by Article 122(3) of Solvency II to use approximations while ensuring that the Solvency Capital Requirement obtained provides a level of protection for policyholders which is equivalent to that set out in Article 101(3) of Solvency II.

5.206. The Guidelines on calibration-approximations aim to provide guidance on what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view about the relevance and the adequacy of the approximations that will be used by the undertaking to derive the Solvency Capital Requirements from an internal model using another risk measure, time horizon, or underlying variable, than the reference one (see definition of the reference risk measure).

5.207. The Guidelines do not provide guidance about the adequacy of the risk measure used in the internal model.

5.208. In practice, approximations to derive the reference risk measure from the probability distribution forecast may be justified in the following contexts:

1. Another mathematical risk metric: e.g. Tail-Value-at-Risk instead of Value–at-Risk;
2. Another confidence level: e.g. 99,95% instead of 99,5%;
3. Another time period or horizon: e.g. 5 years instead of 1 year;
4. Another underlying variable than basic own funds is used to determine the probability distribution forecast: e.g. IFRS equity.

5.209. This paper does not cover in a different way approximations arising at different levels of aggregation: there are no major differences in the process for assessing the adequacy of approximations at the topmost level of aggregation or at a lower one. Moreover, there is no need a priori to distinguish partial internal models from full internal models with respect to recalibration.

General explanation

5.210. If relevant, all the Guidelines apply directly to the four possible practical differences quoted above. However, some of them are worth an explanation in one of the four practical contexts.

Context 1: Another mathematical risk metric

5.211. The Value-at-risk metric chosen by Solvency II is not the only risk metric known in financial institutions and academia to quantify a risk. Thus, some undertakings could use another mathematical risk metric in practice. In particular, this could be the case for branches of groups whose headquarters are located in a jurisdiction where the insurance regulatory framework imposes another mathematical risk metric.

5.212. During pre-application, national competent authorities receive information from the undertaking about the use of a mathematical risk metric other than the reference one.

5.213. In particular, national competent authorities can form a view on how the undertaking describes the risk metric in respect of the following risk measurement properties:

- Monotonicity: if a portfolio produces almost certainly more losses than another portfolio, its risk measure is higher;
- Translation invariance: if there is the addition of an amount K of cash to the portfolio, the risk measure goes down by K. Similarly if there is the reduction of an amount K of cash to the portfolio, the risk measure goes up by K;
- Homogeneity: multiplying the size of a portfolio by a scalar x the risk measure is multiplied by x;
- Sub-additivity: the risk metric for two portfolios after they have been merged is no greater than the sum of their risk metrics before they were merged.

5.214. Without requiring the risk metric to follow the properties above, a detailed description of circumstances where the risk metric would not follow one or more of them could be asked by national competent authorities to form a view on the appropriateness of the approach followed by the undertaking.

Context 2: Another confidence level

5.215. For risk management purposes, or external reasons (e.g. facilitate reporting to ratings agencies) some undertakings use different levels of confidence to derive their economic capital.

Context 3: Another time period or horizon

5.216. The undertaking may decide to use a different time horizon in their internal model than the prescribed one year.

5.217. For example the time horizon used by the undertaking could be longer than one year and could be aligned to their:

- Risk appetite: Undertaking may set up their risk appetite for capital on a longer time horizon than one year for strategic reasons;
- Life cycle of products: Some undertakings may look at the average term structure of their products and plan their capital requirements based on this average term especially to align with payments;
- Business plan: Some undertakings may wish to align their capital requirements with their planning period, especially if smoothed earning over a long period is one of their goals and this is aligned to their dividend payments;
- Management style: Some undertakings may choose a longer time horizon (for example ultimate) for capital management rather than a mark to market approach where the portfolio could be transferred to another party in the next year.

5.218. In some situations an undertaking may decide to use time horizons of less than one year:

- To align with the average terms of its products;
- It could also have a planning period shorter than a year for operational/financial reasons;
- To capture management actions which occur more frequently than annually – e.g., dynamic hedging.

Context 4: Another underlying variable

5.219. The undertaking may decide to use a different variable on which to base its probability distribution forecast than the basic own funds specified in Articles 88 of Solvency II, provided that these amounts can be used to determine the changes in basic own funds and that the undertaking is able to justify the underlying assumptions, as required in the Article 121 of Solvency II. An undertaking may typically want to do this if its own risk appetite is linked to a variable different than the basic own funds.

5.220. This difference can originate from (see detailed examples of differences in the explanatory text of Guideline 30):

- Different valuation methods for asset or liabilities;
- Different ways of assessing own funds.

Guideline 30 - Knowledge of approximations

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking demonstrates a detailed understanding of the approximations allowed by Article 122(3) of Solvency II that that it makes.

In particular, national competent authorities should form a view on how the undertaking at least:

(a) considers the error that is introduced by the approximations in the Solvency Capital Requirement;

(b) demonstrates that the approximations it makes donot result in a Solvency Capital Requirement that is materially underestimated compared to the result of the calculation with the reference risk measure, in order to ensure that policyholders are provided with a level of protection equivalent to that provided in Article 101(3) of Solvency II; and

(c) challenges and justifies the stability of the output of approximations over time, and under extreme loss conditions, according to its risk profile.

National competent authorities should make clear to the insurance or reinsurance undertaking that material uncertainty around approximations to recalibrate the Solvency Capital Requirement is not allowed if this uncertainty leads to an underestimation of the Solvency Capital Requirement.

Explanation to Guideline 30 in context 1

5.221. When using approximations in the context of another mathematical risk measure, national competent authorities form a view on how the undertaking is able to explain how the approximations change the analysis of the four properties introduced above, if at all.

Explanation to Guideline 30 in context 3:

5.222. (c) National competent authorities form a view on how the undertaking challenges the stability of approximations over time, and under stressed conditions. National competent authorities form a view on how the undertaking understands the approximations needed when using a different time horizon. In order to understand such approximations, the undertaking may need to consider some of the following:

- If the undertaking is using a longer time horizon and then interpolating to one year, it would want to consider solvency not only at the final period, but also at intermediate periods. For shorter time horizon, the projections may need to include the anticipated change in business volume or product mix;
- When interpolating from longer time horizons, assumptions and future management actions such as tax treatment, allocation of expenses, bonus payments, may need to be well understood by the undertaking and taken into consideration. In smoothing over a longer time period, a larger smoothing window would be used and as a result the resulting volatility would be lower than if a smaller window was used. So the undertaking may wish to check whether the resulting curve used in the interpolation is adequate for calculating short term capital requirement. The same considerations may need to be taken into account for extrapolating from a short term horizon;
- When interpolating from longer time horizons, the undertaking may want to consider any discontinuity in the curve and the implications that this would have on the approximations, especially if the discontinuities occur in the 1 year time horizon. These step changes could be due to optionality features, payment of guarantees or dividends and in run-off businesses this could simply be due to natural run-off of certain portfolios. Extrapolation also considers any step changes in the capital requirement curve;
- When extrapolating from shorter time horizons, the undertaking may need to consider the appropriateness of the shocks applied over the shorter time horizon and be able to justify the translation of these shocks to the reference time period. For example, if an undertaking is using a time period of 1 month, a link with the 1-year shock with a proportional coefficient of 12 or the use of the 12th power may not be appropriate. Attention needs to be given to the dependency between time periods when providing this justification;
- Any curve used for interpolating (or extrapolating) the required capital may need to take into account business or underwriting cycle, ensuring that they do not diverge. For example, suppose the business cycle is indicating a period of high volatility. Typically, the undertaking would expect the curve used to show an increase of required capital over the reference period. If this is not the case, then the undertaking may wish to understand why their calculations are diverging from external macroeconomic forecasts;
- The curve used for interpolation and extrapolation of capital may need to be tested for adequacy and stability under a number of scenarios. This could be achieved by completing a number of stress scenarios.

Explanation of Guideline 30 in context 4

5.223. When forming a view on how the undertaking understands the approximations, national competent authorities take into account that there are various aspects that the undertaking may want to consider:

- Complexity: the complexity of the difference between the underlying variable chosen and the basic own funds may affect the work required by the undertaking to show that they have an appropriate understanding of the approximations required. A few examples of different complexity are given below:
  - ➢ The approximation could be an additive adjustment, for example an asset or liability could be adjusted by a fixed amount. In this case it may be easy for the undertaking to show that it understands the difference if it can demonstrate that the addition is constant over time and across different stress scenarios. The undertaking may want to perform stress tests to check whether the amount does not change under various stress conditions;
  - ➢ The approximation could be an interpolation between known points. In this case the undertaking may want to consider that the materiality, deviation and stability of the underlying curve can be well understood. The undertaking may also want to consider the approximations which are made by using a reduced number of points to represent a curve, as well as any approximations to represent the curvature of the resulting curve. The use of stress tests may be useful to understand the behaviour of the underlying curve under various stresses;
  - ➢ The approximation could be a transformation that re-values assets based on bespoke financial or actuarial models, for example a Black-Scholes derived formulation. In this case, the undertaking may want to consider materiality, deviation, and stability of the basic components of the models as well as the underlying assumptions. The undertaking may also want to ensure any weaknesses are well understood and tested under different scenarios.
- Materiality: it is thus important to understand the level of materiality both under normal conditions and under stressed conditions. In cases when there are step changes, whenever there is an optionality or guarantee, there is a risk that the materiality would be low under normal conditions but increase significantly under certain stress conditions;
- Error term and Bias: any approximation would usually be subject to an error term and a bias, especially as the approximation becomes more complex or uses statistical approaches such as regression. When considering the possible deviations and stability of the approximations, the undertaking may want to consider the level of the bias under different scenarios. The

undertaking may also want to consider the possible error term of the results through a variance or other measure of variation;

- Validation/Reconciliation: the undertaking shows that the approximations are adequate and that appropriate tests are used to demonstrate the appropriateness of the approximations; and on how this feeds into the validation process that the undertaking establishes;
- Documentation: national competent authorities form a view on how well the undertaking documents any approximation and follows the standards set in Article 125 of Directive 20096/138/EC: thus how the undertaking clearly documents the full technical aspects of the approximations as well as any underlying parameters and assumptions.

5.224. National competent authorities also form a view on how the undertaking documents the stresses and scenarios used to determine the stability of the approximations and the behaviour of the approximations under stressed conditions.

5.225. Reconciliation is not only the explanation of differences between two independent models, one being used regularly and for the assessment of the economic capital and the other only for regulatory purposes. It is rather a process explaining the differences in the ways the same model is used and their rationale.

Guideline 31 - Reference risk measure as an intermediate result

When the insurance or reinsurance undertaking can derive the reference risk measure as an intermediate result of the economic capital calculation process, through the pre-application process national competent authorities should form a view on how the undertaking isable to demonstrate that this result also reflects appropriately its risk profile.

Explanation to Guideline 31 in context 3:

5.226. If the undertaking is using a longer time horizon, but the model also produces distributions at interim time horizons, the undertaking may be able to read off the Solvency Capital Requirements from the interim distributions produced by the internal model.

5.227. In this case, national competent authorities form a view on how the undertaking ensures that the interim distributions give an appropriate reflection of the risk profile to which the undertaking is exposed.

Guideline 32 - Use of another underlying variable

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, if it uses for the calculation of the Solvency Capital Requirement the variation of an

underlying variable different from the basic own funds, demonstrates:

(a) either that the difference between the basic own funds and the underlying variable is not be material at t=0 and in any foreseeable situation up to and including t=1; or

(b) in case of this difference being material, that there cannot be any significant variation of it over the next period, especially under extreme losses conditions, according to the undertaking risk profile.

National competent authorities should form a view on how the insurance or reinsurance undertaking, if it uses the variation of an underlying variable different from the basic own funds to derive the value of basic own funds, demonstrates that:

(a) it is able to reconcile the difference between the basic own funds and the underlying variable at t=0; and

(b) it understands the difference between the basic own funds and the underlying variable in any situation up to and including t=1.

National competent authorities should form a view on how the balance sheet for solvency purposes that is run by the insurance or reinsurance undertaking =enables such undertaking to determine the amount of eligible own funds available to cover the Solvency Capital Requirement, irrespectively of the calculation method used to calculate this Solvency Capital Requirement.

Explanation of Guideline 32 in context 4:

5.228. National competent authorities form a view on how the undertaking, in determining the values of assets and liabilities in the balance sheet for solvency purposes, would be compliant with valuation requirements set out in Solvency II.

5.229. National competent authorities take into account that, where the differences between the underlying variable chosen and the basic own funds is either immaterial over all scenarios or constant over all scenarios, the approximations used by the undertaking in determining the Solvency Capital Requirements may be more straight forward. In either of these cases, national competent authorities form a view on how the undertaking is able to demonstrate that the difference is either immaterial or constant over all scenarios.

5.230. National competent authorities take into account that the undertaking might want to use a number of techniques to demonstrate that the difference is either immaterial or constant. These techniques may include:

- Quantitative techniques, such as scenario testing;

- Qualitative techniques, such as analysing the theoretical properties and expected behaviours of the differences;
- A combination of the above.

5.231. In the case where the difference is neither immaterial nor constant, national competent authorities form a view on further measures that may be required to the undertaking to justify the approximations it makes.

5.232. National competent authorities form a view on how the undertaking, when using any approximation in case of another underlying variable, is able to demonstrate that it understands the differences between the basic own funds and the internal measurement. This means that the undertaking is able to reconcile the differences between the basic own funds (as defined by Article 88 of Solvency II) and the approach used by the undertaking at the start of the period and after 1 year under a number of scenarios. The undertaking could not cherry pick some scenarios to verify whether they understand the differences but develop some analysis that allow them to develop core understanding and principles about the differences that would be applicable for all scenarios.

5.233. Special care may need to be taken by national competent authorities when reviewing approximations when the nature of the difference between the underlying variable and the basic own funds gives a different ranking to the same scenario. As an example, scenario j may represent the 99,5% point in the distribution for the underlying variable chosen by the undertaking. But, due to different risk sensitivity, scenario j may only represent the 97,5% point for the variance of basic own funds. In this case it would not be appropriate to use the impact on the basic own funds of scenario j directly, and further approximations would need to be made to get to the equivalent level of protection set out in Article 101(3) of Solvency II.

Guideline 33 - Use of analytical closed formulae

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, where it uses analytical closed formulae to recalibrate its capital requirement from the internal risk measure to the reference one, demonstrates that the assumptions underlying the formulae are realistic and arealso be valid under extreme losses conditions, according to the insurance or reinsurance undertaking's risk profile.

Explanation of Guideline 33 in context 3:

5.234. If an undertaking chooses to use a closed formulae approximation approach for the time horizon, it is important that national competent authorities form a view on how the undertaking understands all the underlying assumptions and that all the considerations mentioned in Guideline 31 are explicitly included in the closed formulaic derivation by the undertaking. In particular national competent authorities take into account that, if the undertaking is using a longer time horizon and then interpolating to one year, it would want to consider solvency not only at the final period, but also at intermediate periods as well. For example, the validity of square root adjustments for time horizon as commonly used for value at risk approximation would need to be explained in terms of the considerations mentioned above.

Explanation of Guideline 33 in context 4:

5.235. When an undertaking plans to use closed formulae, for example a financial model, national competent authorities form a view on how the undertaking demonstrates that the assumptions inherent in the formulae are credible and valid under stressed conditions. For example, in the case that assumptions of volatility and dependency tend to break down in periods of stress, national competent authorities form a view on how the undertaking ensures that the models used for approximations remain reliable. An undertaking may intend to use, for internal purposes, a different approach to risk margin to the one referred to in Solvency II, or develop an approximate approach to determine the required risk margin. Sometimes the undertaking may use derived functional forms to do either of these. In which case, it is important that national competent authorities form a view on how the undertaking makes clear the underlying assumptions under normal conditions and tests the assumptions for continued credibility under stressed conditions.

Guideline 34 - Management actions

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, where it chooses in its internal model a time period longer than one year, takes into account management actions in the context of the Solvency Capital Requirement calculation, and ensures that such management actions are modelled in a realistic and reasonable way and have effects on the balance sheet for solvency purposes between t=0 and t=1.

National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the general principles about the valuation of assets and liabilities hold at t=1 when considering management actions effects on the balance sheet for solvency purposes for the purpose of this Guideline.

Explanation of Guideline 34 in context 3:

5.236. National competent authorities take into account that, even if the chosen time horizon is longer than one year, management actions could be taken into account in the context of the Solvency Capital Requirements calculation as long as they occur and have effects between t=0 and t=1, and can reasonably be expected to be implemented. At t=1, the general principles about the valuation of assets and liabilities hold. For example if hedges are used over a long time period and it is assumed that they would be renewed at expiration date, it may still not be possible to take them into account on the one year horizon, especially if an expiry date falls within that period. This is because renewing hedges may not be cost effective or bears a large carry-over cost under stressed conditions.

5.237. Likewise, when extrapolating from shorter time periods, attention would be given to the cost and availability of risk mitigating measures over the longer time period.

Guideline 35 - Multiple approximations

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, where it has to make several approximations, assesses whether there are any interactions between these approximations that need to be allowed for explicitly.

Explanation of Guideline 35 in context 2:

5.238. National competent authorities take into account that the issue of reconciling the level of confidence could in practice be closely linked with the reconciliation of risk measures. Further, if mathematical risk measures are also different, it could be better to first use approximations to reconcile the mathematical risk measure, and then align the level of confidence.

Explanation of Guideline 35 in context 3:

5.239. When several approximations are used, national competent authorities form a view on how the undertaking considers whether there are any interactions between those approximations that need to be allowed for explicitly. National competent authorities also form a view on whether the undertaking understands how the order of application of the approximations impacts the final result. For example, approximations for future premium may interact with that for time horizon as the long term assumption for future premium may not hold true for shorter term horizon.

Explanation of Guideline 35 in context 4:

5.240. When several approximations are used, national competent authorities take into account that the undertaking would want to consider whether there are any interactions between those approximations that need to be allowed for explicitly. National competent authorities also form a view on whether the undertaking understands how the order of application of the approximations impacts the final result. National competent authorities also form a view on how the undertaking understands the stability of the approximation and how the error term increases with a particular order of application of the different approximations. For example, an undertaking may need an approximation for adjusting for risk free rate and another approximation for allowance of future premium. Since the undertaking would need to discount the future premium, there would be an interaction between the approximation for interest rate and that for future premium. In this case both the interaction and the order application of the approximations are important and their impact needs to be understood.

<u>Chapter 8: Profit and loss attribution</u>

5.241. One of the requirements that an insurance or reinsurance undertaking needs to fulfil in order to use an internal model for the Solvency Capital Requirement calculation is the profit and loss attribution.

5.242. The Guidelines on profit and loss attribution aim to provide guidance about what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on how the undertaking ensures the relevance and the adequacy of the profit and loss attribution process.

5.243. These Guidelines provide a definition for profit and loss as the change in the economical capital resources. They also provide guidance on the categorisation of risks and develop a framework for the application of the profit and loss attribution.

Guideline 36 – Definition of profit and loss

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking considers profit and loss as changes over the relevant periodin:

(a) basic own funds; or

(b) other monetary amounts used in the internal model to determine changes in basic own funds, such as the actual change in economic capital resources.

To this end the profit and loss attribution should exclude movements attributable to the raising of additional own funds, the repayment or redemption of those funds and the distribution of own funds.

When an undertaking uses a variable other than the basic own funds in its internal model, national competent authorities should form a view on how the insurance or reinsurance undertaking uses this variable for the purposes of profit and loss attribution.

National competent authorities should form a view on how, through the profit and loss attribution, the undertaking identifies how changes in the risk drivers relate with the movement in the variable underlying the probability distribution forecast.

5.244. National competent authorities form a view on how the undertaking ensures that the definition of profits and losses for the purpose of the attribution is consistent with the variable underlying the probability distribution forecast.

5.245. National competent authorities also form a view on how the undertaking ensures that the attribution includes all material risks, not only those that are modelled internally.

5.246. Examples of capital movements are dividend payments or public offerings.

5.247. For the purpose of profit and loss attribution national competent authorities form a view on how the undertaking ensures that the consistency over time of the method applied allows a useful comparison of the profit and loss attribution from one period to another.

Guideline 37 – Application of profit and loss attribution

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the profit and loss attribution is consistent with the intended applications of the profit and loss attribution in the use test and in the validation process.

5.248. National competent authorities form a view on how the undertaking defines an appropriate risk categorisation that reflects its risk profile. The planned uses of the output of the internal model might influence the granularity of the internal model. Therefore the granularity of the profit and loss attribution might also differ depending on the planned application of the results of the profit and loss attribution.

5.249. National competent authorities form a view on how the undertaking ensures that the attribution of profits and losses to risk categories is consistent with the granularity of risks modelled within the internal model, which itself is needed for decision-making and risk management in the undertaking.

5.250. National competent authorities form a view on how the undertaking implements an appropriate process on an on-going basis with appropriate internal controls to implement relevant changes to the internal model as a result of the previous profit and loss attribution. More specifically, national competent authorities form a view on how the undertaking properly documents the process and evaluates the design and operating effectiveness of the internal controls on an on-going basis (at least annually). It is expected that the results of the process would lead to adequate action within the undertaking.

5.251. The results of the profit and loss attribution exercise provide information that is important and relevant for the system of governance (including the scope of the internal model, risk management, limit setting, allocation processes). Some areas where the profit and loss attribution might support the system of governance of the undertaking and potential applications of the profit and loss attribution to the use test are outlined.

The aim of the profit and loss attribution in the use test

5.252. The application of the results of the profit and loss attribution in the decision support and in the risk management of the undertaking is important. National competent authorities form a view on how the undertaking assesses whether the application of the profit and loss attribution for validation purposes might also help decision-making and risk management. National competent authorities form a view on how the undertaking evaluates on a regular basis, and at least annually the design and the operating effectiveness of the profit and loss attribution.

Potential applications of the profit and loss attribution within the decision support

5.253. The following examples might be potential applications by the undertaking of the profit and loss attribution within the decision support: the profit and loss attribution can be used to identify and analyse the sources of profits and losses. Therefore attribution of the realized profits and losses to the corresponding risk drivers can be performed. The decision taker is thus able to identify the risk drivers or risk categories which need further analysis. This gives the decision taker the ability to identify the parts of the realized profits or losses which might influence the future decision-making process. A next step could be a decision to analyse which part of the profit can be attributed, for example to the movement in the market and which part can be attributed to the performance of the responsible person for this risk category.

Potential application of the profit and loss attribution within the risk management

5.254. The intention of a risk management system of an undertaking is to manage losses before they can cause material damage to such undertaking. Therefore national competent authorities would expect the undertaking to review internal controls on an on-going basis for the risk management system to work effectively. The results of the profit and loss attribution may help the undertaking to improve the quality of its risk management system.

5.255. The following examples might be potential applications by the undertaking of the profit and loss attribution within its risk management system.

5.256. The profit and loss attribution might be used to identify and analyse the sources of profits and losses. High losses might be an indication of inappropriate internal controls. The responsible person can thus investigate the reasons for this. Another example is if the profit and loss attribution exercise underlies an emerging risk which was not identified by the risk management system. This may require action to revise the part of the risk management system dedicated to the identification of risks.

5.257. The profit and loss attribution can be used by the undertaking to review the risk identification process. All material quantifiable risks shall be taken into account by the undertaking and modelled within the internal model as set out in Article 121 of Solvency II. National competent authorities take into account that, if there are some material profits or losses which cannot be attributed by the undertaking to a specific type of risk or category of risks, then this might be an indication that the process of the risk identification followed by the undertaking might not be appropriate. Another reason could be that the application of materiality by the undertaking is inappropriate. For example, consider a risk category identified as non-material by the undertaking and not modelled within the internal model: if material loss arises that cannot be attributed to the categories of risks chosen in the internal model but can be attributed to this specific risk category which was not modelled as it was considered to be non-material then this might indicate that the application of materiality by the undertaking was not appropriate.

5.258. Consider as another example that the undertaking envisages the expansion of the business in developing markets: if the result of the profit and loss attribution is that there are material losses in this market this is not conclusive that the risk strategy is inappropriate but at least provides a reason to complete further analysis by the undertaking. Another application for the undertaking might be to check the implementation of the risk strategy: if the risk strategy demands that the engagement of a special risk category needs to be reduced then the profit and loss attribution gives an indication whether the responsible person in the operating unit acted accordingly. A high profit or loss in this special risk category might be an indication that the implementation of the risk strategy has not been effective.

5.259. The profit and loss attribution can be used by the undertaking to assess how it goes about setting its risk appetite. The comparison between the profits and losses attributed to the risk category and the limit for that risk category can give the undertaking an indication whether the risk appetite it has set is appropriate. National competent authorities are aware that the profit and loss attribution by the undertaking is completed after events have taken place and that it therefore cannot be used by the undertaking to recognize a breach of the limit in advance. However, the undertaking can use it to review the risk appetite setting process and to monitor on an on-going basis how close the limit is to being breached.

Guideline 38 – Application of profit and loss attribution and validation

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that information relating to how the model has performed in the past provided by the profit and loss attribution feeds into the undertaking's regular validation cycle.

5.260. National competent authorities take into account that there are several possible applications of profit and loss attribution that the undertaking can use for validating the model. The following paragraphs outline these applications. The way in which the profit and loss attribution is applied by the undertaking in the validation standards has an impact on the level of granularity at which the profit and loss attribution needs to be completed by the undertaking.

5.261. One potential application by the undertaking is to test whether all relevant risk factors have been identified correctly and whether the functional dependencies between risk factors and the amount at which assets and liabilities could be settled have been properly specified. To this end, the undertaking could compare the observed market values of assets or liabilities with the output of the internal model when the actual realisations of the risk factors are used as an input. This application is similar to the application described above.

5.262. If actual market values deviate significantly from the internal model output, the undertaking could identify the causes. To do this, the undertaking may need to carry out a profit and loss attribution at a more granular level ("drill down"). One possible outcome could be that risk factors not yet included in the internal model by the undertaking have had a significant impact on profits and losses.

5.263. However, even though there may be no observable market prices for liabilities, the change in "observable prices" for market liabilities can be estimated by the undertaking by using actual experience in order to derive the assumptions required to estimate a proxy market value.

5.264. The comparison mentioned above can be done by the undertaking at different levels (e.g. for single assets as well as for portfolios). A more granular approach could be more effective in identifying potential weaknesses on a case by case basis.

5.265. A second potential application of a profit and loss attribution the undertaking can use for validating the model is to compare the actual profit or loss with those from the probability distribution generated in the past by the internal model. This kind of back-testing plays a crucial role in the validation by the undertaking of market risk models for the trading activities of banks under the Basel II rules.

5.266. Unfortunately, this approach would normally not be readily transferable to the internal model of an insurance undertaking as the number of observations is usually limited, although it could be increased by using a shorter time horizon. But even if only one data point per year is available some conclusions might be drawn by the undertaking (e.g. if the probability function assigns the range in which the observed outcome lies a probability of zero) in particular regarding the underlying assumptions of the model.

5.267. In principle the undertaking can perform the comparison between actual profit or loss and the distribution forecast at every level where the internal model generates a probability distribution. The internal model might – for instance – generate a distribution forecast for profits and losses on the stock and bond portfolio and combine them to an overall probability distribution for the investment portfolio.

5.268. The comparison at different levels can yield different insights. While comparing forecast and actual result on the stock and bond level might be used to validate the modelling of these separate risks; a comparison for the investment portfolio might indicate shortcomings of the aggregation mechanism.

5.269. A third possible application by the undertaking is to test the effectiveness of management rules that might be incorporated in the internal model. These rules may refer to particular investment portfolios as well as to assets and liabilities simultaneously (e.g. if an undertaking limits its overall interest rate risk).

5.270. In the previous paragraphs possible applications for a profit and loss attribution that the undertaking can use for validating an internal model were described. But profit and loss attribution is only one instrument of the undertaking for validation. National competent authorities form a view on how the undertaking, in considering the use of profit and loss attribution for validation, takes into account the overall objectives of the validation policy it establishes, as well as other potential instruments for validation.

Chapter 9: Validation

5.271. One of the requirements that an insurance or reinsurance undertaking needs to fulfil in order to use an internal model for the Solvency Capital Requirement calculation is the validation standard.

5.272. The Guidelines on internal model validation aim to provide guidance on what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on the relevance and the adequacy of the validation process of the internal model.

5.273. These Guidelines cover both the validation process and the validation tools.

5.274. Regarding the validation process, by providing further details on:

- The process the undertaking establishes for the purposes of validation and the validation policy;
- The governance of the validation process;
- The independence of the validation process;
- Some specificities for groups.

5.275. Regarding the validation tools, by providing further details on:

- The universe of tools;
- The types of tools which are considered by the validators;
- The uses of the tools;
- The data sets for validation.

5.276. National competent authorities form a view on how the level of granularity of the validation of the internal model carried out by the undertaking is sufficient to provide the undertaking with enough comfort that the model is appropriate for the purpose for which the model is being used.

5.277. The validation of the internal model is not only the process of providing or reaching comfort that the quantitative aspects of the model, such as the data, methodology, assumptions and results are appropriate. Qualitative aspects of the model are to be considered as well.

5.278. The validation of the internal model is part of the wider internal model governance requirements for the undertaking. As a result, national competent authorities form a view on how the undertaking ensures that the findings of the validation process are escalated to the appropriate level of management.

Guideline 39 – Validation policy and validation report

Through the pre-application process, national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the validation policy it establishes sets out at least:

(a) the processes, methods and tools used to validate the internal model and their purposes;

(b) the frequency of regular validation for each part of the internal model and the circumstances that trigger additional validation;

(c) the persons who are responsible for each validation task; and

(d) the procedure to be followed in the event that the model validation process identifies problems with the reliability of the internal model and the decision-making process to address those concerns.

National competent authorities should form a view on how the insurance or reinsurance undertaking documents in a validation report the results of the validation as well as the resulting conclusions and consequences from the analysis of the validation.

National competent authorities should form a view on how the insurance or reinsurance undertaking includes in this report a reference to the validation data sets as mentioned in Guideline 50 as well as the sign-off from the main participants in the process.

5.279. There are many different types of internal models that may be used by an undertaking to calculate the Solvency Capital Requirement. These models or the outputs of the model are used in the undertaking’s business for different purposes and by different teams and individuals. This variety of internal models is supported by different processes, IT systems and software. In addition to all the possible differences in methodologies, processes and programmes, the risk profiles also vary from undertaking to undertaking.

5.280. Thus, setting out a detailed list of which validation procedures are deemed to be appropriate may cause difficulties, as different procedures may be more appropriate for different undertakings, depending on the type of model, the risk profile and the corporate structure of the undertaking. In addition, setting out validation procedures that are appropriate and sufficient now may not be appropriate and sufficient in the future.

5.281. Therefore it is more appropriate for each undertaking to design their own validation policy, which sets out the way in which they will validate their own internal model and why that way is appropriate.

5.282. As set out in Article 116 of Solvency II, the administrative, management or supervisory body of the undertaking shall have responsibility for putting in place systems which ensure that the internal model operates properly on a continuous basis. One of these systems would be an effective validation process.

5.283. The written policy and the written validation report may be one of the ways for the administrative, management or supervisory body to show its interest in the validation.

5.284. National competent authorities form a view on how the undertaking includes in the validation policy not only the various validation tools and methods to be used in the validation process, but also more information on the process, such as who is contributing to the validation tasks, what to do with the results of the validation tools, and explanation of how the validation is independent such as to provide and effective challenge to the model. The outcomes of the validation (to be documented in a validation report) may mention the strengths and weaknesses of the model and the conditions of its applicability regarding the environment where the model operates (for instance data and external environment) as well as the usage for which the model is appropriate.

5.285. Guideline 44 of this paper considers which parties could contribute to the different tasks in the validation process. Regardless of the parties contributing to the validation tasks, the validation report could include details of the validation which has taken place. This applies wherever parts of the validation have been performed with some input from internal or external parties. When it is appropriate to do so, the persons responsible for each validation task could be identified by their position and role.

Guideline 40 – Scope and purpose of the validation process

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, when specifying the purpose and scope of the validation, clearly sets out the specific purpose of the validation for each part of the internal model.

National competent authorities should form a view on how the insurance or reinsurance undertaking covers both qualitative and quantitative aspects of the internal model within the scope of the validation.

National competent authorities should form a view on how the insurance or reinsurance undertaking, when considering the scope of the validation, in addition to considering the validation of the various parts of the internal

model, considers the validation in its entirety and in particular the appropriateness of the calculated probability distribution forecast to ensure that the level of regulatory capital will not be materially misstated.

5.286. National competent authorities form a view on how the validation process developed by the undertaking would provide comfort that the qualitative and quantitative requirements of the model would be met and that the internal model would be fit for an appropriate calculation of the Solvency Capital Requirement.

5.287. In particular national competent authorities form a view on how the validation programme or test plans set out by the undertaking, to the extent that is it not already stated in a validation policy, states which validation test would be conducted on which part or aspect of the model.

5.288. When considering how there is comfort that the various tests and standards would be met, unambiguous sets of criteria may be established by the undertaking.

5.289. The undertaking may want to consider what validation processes are in place along the different steps of the modelling process. For example, the undertaking may want to consider what validation processes are in place for:

- The inputs that are fed into the modelling process, such as data and expert judgements;
- The processes and calculation methods that are applied to the inputs themselves, such as setting parameters, making assumptions and assessing the correct application of the methodologies;
- The outputs of the model.

5.290. The undertaking may also want to consider what validation procedures would be required at the different stages of the modelling process. For example, the undertaking may want to consider what validation processes are in place during:

- The strategic planning of the model (origination);
- The design of the model;
- The implementation of the model and roll out of further enhancement;
- The on-going and regular use of the model.

5.291. National competent authorities form a view on how the undertaking ensures that the validation is not limited to the origination and design of the model but that all stages of the modelling process are covered by the validation.

5.292. The undertaking may want to consider at what level of granularity the validation takes place. The level of granularity used needs to be sufficient to provide the undertaking with enough comfort that the model is appropriate for the purpose for which the model is being used.

5.293. If the validation tools are providing results that are not explainable by the undertaking, it may be an indication that more detailed validation is required.

5.294. Validation policies may differentiate between several type of validations; e.g. initial validation, implementation validation and on-going validation (other distinctions are also possible). For each type of validation the validation policy may state:

- The topics that are covered by the specific type of validation (e.g. methodology and assumptions, data quality, expert judgement);
- The type of activities (e.g. desk research, interviews, tests) and volume of validation activities that is performed;
- The expected outcome of the validation: some criteria or threshold to specify when the result of the validation is a "passed" and when it is a "failed".

5.295. If an undertaking decides to deviate from the policy on this point, it is expected that the validation report clearly states what the background and nature of the deviation is. The undertaking would need to also secure that items that were not covered by a validation, would be covered elsewhere or at another appropriate time.

5.296. Validation is not only the process of gaining comfort that the quantitative aspects of the model, such as the data, methodology, assumptions and results are appropriate. Qualitative aspects of the model need to be considered as well. The whole quantitative and qualitative aspects of the model that need to be validated would include at least the following areas: data, methods, assumptions, expert judgement, documentation, systems/IT (to the extent that it can materially impact the output of the internal model), model governance and use test. This is not an exhaustive list. For example, a challenge by means of quantitative evidence is warranted in the case of expert judgement. Particularly, the relevant (quantitative) information could form the basis to weigh alternative judgements, and contribute to the validation of the modelling choice.

5.297. The validation of qualitative aspects of the model, such as the model governance and the use test, may not only be performed by the quantitative tools. Instead, this part of the validation process may also relate to the steps taken by the undertaking to gain confidence that the qualitative aspects of the model are appropriate. For example, how has the undertaking gained confidence that they are meeting the use test, and how has the undertaking gained confidence that they have the appropriate governance systems in place? In addition to validating that the decisions on the internal model and relevant processes have been implemented, the validation may also include how the uses of the model and the governance in place satisfy the requirements.

5.298. In considering the validation in its entirety, the undertaking may understand limits of the validation process which may not be directly observable if all the validation components are considered in isolation. As an example, a number of components which are considered by the undertaking to be immaterial could have a material impact in combination. In this case if all of these immaterial components are not validated appropriately, then it may not be possible for the undertaking to get enough comfort from the model.

5.299. Consideration is to be given that the validation process aims particularly at building comfort in the appropriateness of the probability distribution forecast.

Guideline 41 - Materiality

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking considers the materiality of the part of the internal model being validated, not only in isolation but also in combination, when using materiality to decide on the intensity of the validation activities.

When the insurance or reinsurance undertaking does not validate specific individual parts of the internal model with a high level of accuracy because of their lack of materiality, national competent authorities should form a view on how the insurance or reinsurance undertaking nevertheless takes into consideration that those parts in combination may be material when it decides how they should be validated appropriately.

National competent authorities should form a view on how the undertaking considers sensitivity testing when determining materiality in the context of validation.

5.300. National competent authorities form a view on how the insurance or reinsurance undertaking takes a proportionate approach to the validation process, as it may not be feasible to apply all validation tools to all parts of the model at the most granular level.

5.301. For qualitative parts of the model, sensitivity tests may not always be possible. In this case, an indication of the materiality of the model component may be gained by considering the impact on the overall robustness and credibility of the model if that component were not in place.

5.302. When setting the validation process attention is given to the various components that form part of the internal model. The components cover the different structural elements of the internal model – such as modules - as well as the risks impacting or underlying the risk profile – down to the appropriate level of granularity – and also the qualitative aspects of the internal model – such as governance and compliance with the test and standards.

Guideline 42 – Quality of the validation process

Through the pre-application process, national competent authorities should form a view on how the insurance or reinsurance undertaking sets out all

the known limitations of the current validation process.

Where there are limitations to the validation of parts which are covered by the validation process, national competent authorities should form a view on how the insurance or reinsurance undertaking is aware of them and documents these limitations.

National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the assessment of the quality of the validation process explicitly states the circumstances under which the validation is ineffective.

5.303. National competent authorities form a view on how the undertaking sets out all the known limitations of the current validation process.

5.304. More specifically, if there are components of the internal model framework which are not covered by the validation with a high level of accuracy due to their lack of materiality, national competent authorities form a view on how the undertaking also explicitly states and justifies this.

5.305. In addition, where there are limitations to the validation of components which are covered by the validation process, national competent authorities form a view on how the undertaking is aware of and documents these limitations.

5.306. National competent authorities can form a view on how the undertaking sets out its planned developments of its validation process if applicable.

Guideline 43 – Governance of validation process

Through the pre-application process national competent authorities should form a view on the governance the insurance or reinsurance undertaking puts in place around the communication of the results of the validation it carries out.

National competent authorities should form a view on how the insurance or reinsurance undertaking forms and communicates internally an overall opinion based on the findings of the validation process.

National competent authorities should form a view on how the insurance or reinsurance undertaking puts in place pre-defined criteria in order to determine whether the results, or part of the results, of the validation, are required to be escalated within this undertaking.

National competent authorities should form a view on whether the insurance or reinsurance undertaking specifies under which conditions the results of the validation process should be escalated; and on how the insurance or reinsurance undertaking clearly defines and sets the escalation path in such a way as to maintain the independence of the validation process.

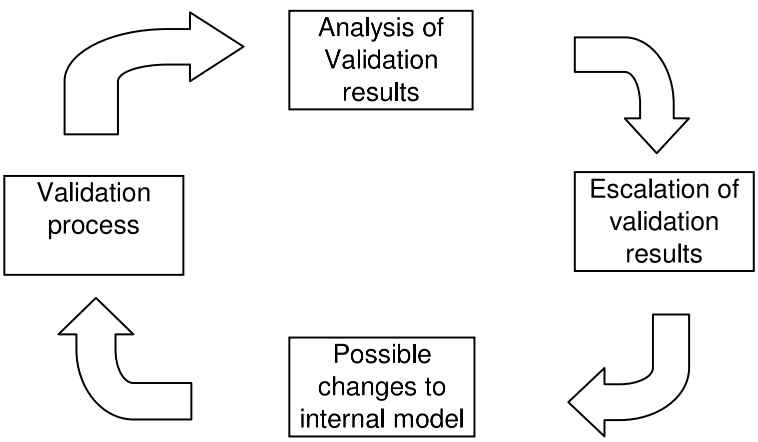
National competent authorities should form a view on how the validation policy the insurance or reinsurance undertaking establishes sets out how the results of the different validation tools are reported, for both regular validation as well as additional validation triggered by specific circumstances, and how they are used if the tests show that the internal model does not perform as intended.

5.307. The governance of the internal model is not to be confused with the overall governance requirements of Solvency II, set out in Articles 40 to 49 of Solvency II. The governance requirements set out in Articles 40 – 49 apply to all undertakings under Solvency II regardless of whether or not they would use an internal model to calculate the Solvency Capital Requirement. The governance referred to in this guidance paper only refers to the governance of the validation of the internal model.

5.308. National competent authorities take into account that the validation process of the undertaking includes the use of various validation tools. Once these validation tools are run, the results of the validation tools are analysed by the undertaking. This includes a qualitative analysis of the outputs of the quantitative validation tools.

5.309. An overall opinion presents the final result of a validation and is based on the underlying findings. The methodology to arrive at an overall opinion is not a mere mathematical exercise. The meaning of an overall opinion is clearly defined in terms of Solvency II compliance and of usability of the internal model.

5.310. The validation process is also linked to the wider internal model governance requirements, as the results of the analysis need to be escalated to the appropriate level of management within the undertaking. The undertaking then uses this information to determine any changes that may be required to the internal model. A simplified diagram of this validation process is included below:



5.311. This process is also linked to the principle of the use test requesting the undertaking to use the internal model in its risk-management system and decision-making processes in a way that creates incentives to improve the quality of the internal model itself. The validation process described above provides the opportunity for the undertaking to constantly monitor and improve the model, which may be required as a result from the pressure to improve the quality of the internal model.

Guideline 44 – Roles in validation process

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, if parties other than the risk-management function contribute to specific tasks in the validation process, ensures that the risk-management function fulfils its overall responsibility as set out in Article 44 of Solvency II, including the responsibility to ensure the completion of the various tasks within the validation process.

National competent authorities should form a view on how the insurance or reinsurance undertaking formally explains the role of each party in the validation process defined.

National competent authorities should form a view on whether the allocation of tasks for the entire validation process is covered by the undertaking in the validation policy it establishes.

5.312. National competent authorities take into account that, due to the wide scope of the nature of the validation process, different areas within an undertaking could contribute to complete the validation tasks within the validation process. Thus, it is possible that many different parties are involved in the overall validation process.

5.313. National competent authorities form a view on how the role of each party in the validation process is formally defined by the undertaking. The text below describes how different parties within the undertaking could contribute to the validation process.

Risk-management function

5.314. Article 44(5) of Solvency II sets out that the risk-management function shall cover testing and validating of the internal model. Thus it is the task of the risk-management function to ensure that all the necessary processes are in place to ensure that the tasks set out for the validation policy are met.

5.315. Due to the wide ranging scope of the internal model, it may be more effective and efficient in some cases for other parties to contribute to some of the tasks required in the validation process. This can be allowed, as long as the risk-management function remains responsible for the completion of the various tasks.

5.316. Other parties may contribute to certain parts of the validation process, as long as there are clear lines of reporting and the risk-management function is responsible for putting the validation process in place and ensuring its completion.

Administrative, management or supervisory body (through the feedback loop)

5.317. Although there is no direct requirement in the Solvency II Framework, the administrative, management or supervisory body (AMSB) to be involved in the overall validation, the AMSB plays a role in providing for a risk-management function as required per Article 44(4) of Solvency II. The risk-management function needs to be granted with necessary power and resources to perform, as part of its duties set out in Article 44(5) of Solvency II, the validation of the internal model and to report on the analysis of the performance of the internal model. It is expected that the results of the validation process would be covered in the report on the performance of the internal model, and that this report would be communicated to senior management and the AMSB.

5.318. The conditions under which results of the validation process are escalated to the senior management and AMSB are covered in the clear escalation path discussed in the previous Guideline.

Other parties

5.319. The following parties are examples of other parties that may contribute to the validation process:

Actuarial Function

5.320. Parts of the validation tasks include collecting and analysing information, for example providing an analysis of the actual against expected experience. It may be that there are systems in place within the actuarial function which have already been set up to collect this information. In this case it may be sensible for the actuarial function to be involved in contributing to some of the tasks in the validation process in order for the undertaking to streamline processes and to facilitate an efficient allocation of tasks.

Internal Audit

5.321. Internal audit may contribute to the assessment of the quality of the validation process and those activities may be used to support the validation by the risk-management function. As an example, internal audit may be involved in validating whether some of the processes required to meet the use test have been complied with or in validating the independence of the validation.

Internal control

5.322. Some of the tasks performed by the internal compliance function may be well co-ordinated with the tasks required to be performed for some of the validation tasks. Thus it may be efficient to leverage off some of the work done by the internal compliance function to complete some of the tasks required in the validation in particular regarding the suitability of processes and procedures.

External

5.323. The validation process may also include tasks performed by external providers, although having any of the tasks performed by external parties does not relax any of the other requirements set out for validation.

5.324. In accordance with the provisions from Article 44(5) of Solvency II, the risk-management function fulfils responsibility for the validation and to ensure the independence and expertise of external resources. For instance it is good practice for the risk-management function in charge of the model validation:

- To stay in close touch with the external party and to consider and perform any appropriate follow-up;
- To assess that the activities performed by the external party is free from restrictions and limitations that might influence the outcome;
- To assess that a realistic budget and timeframe are available for the services to be performed;
- To assess that the external party and the person who performs the validation activities do not have undue conflict of interest.

5.325. It is not required that all the above parties are involved in completing validation tasks. Also the above list is not exhaustive, and other parties may contribute to the validation process.

Guideline 45 – Independence of the validation process

Through the pre-application process national competent authorities should form a view on how the risk-management function of the insurance or reinsurance undertaking, in order to provide an objective challenge to the internal model, ensures that the validation process is done independently from the development and operation of the model and that the tasks set out in the validation policy it establishes create and maintain the independence of the validation process.

National competent authorities should form a view on how the insurance or reinsurance undertaking, when deciding the parties which contribute to the tasks related to the validation process, takes into account the nature, scale and complexity of the risks that this undertaking faces, the function and the skills of people to be involved, the internal organisation of the undertaking and its governance system.

5.326. National competent authorities take into account that the lack of objective challenge by the undertaking in the validation process would result in a low amount of credibility that can be placed on the validation results.

5.327. It is a requirement of Solvency II that the risk-management function of the undertaking is tasked with both the design and implementation of the internal model as well as the testing and validation of the model. The fact that the risk-management function is responsible for both tasks does not mean that it is impossible to create and maintain independence, as:

- The validation process is owned by the risk-management function, but other parties could contribute to them;
- A degree of independence can also be maintained by separating out tasks by different employees within the risk-management function.

5.328. The validation process of the undertaking can leverage on some activities performed or supported by people involved in the development (by running some tests and calculations for instance), but cannot rely entirely on this work. National competent authorities form a view on how the undertaking demonstrates that the tasks are set independently and that at least the most material tests, calculations and analysis are performed by people not involved in the development of the model.

5.329. When leveraging on activities performed or supported by development, the people or team in charge of the internal model validation within the undertaking may consider:

- Before the start of the validation, drafting a concise test plan including the minimum validation tests required to acquire sufficient comfort, in accordance with the validation policy;
- Verifying that:
  - ➢ The people or team in charge of the model development performed the necessary tests (according to the test plan) in an adequate manner;
  - ➢ The tests can be reproduced;
  - ➢ The people or team in charge of the model development has substantiated possible deviations of the test plan in an adequate manner.

5.330. In any case, the people or team in charge of the model validation would be expected to form its own independent opinion.

5.331. National competent authorities form a view on how the undertaking also considers how independence is maintained over time. As an example, if model changes are implemented in response to an independent review, the review of the change by the same reviewer in future validation cycles may result in a decrease in independence over time. A proportionate approach to maintaining independence over time would need to be taken by the undertaking to ensure that it is manageable.

5.332. In order to build an objective challenge, the undertaking may create opportunity for an internal challenge by knowledgeable staff and senior management. This challenge can for instance takes place between group staff and business units or between risk management and business people. To create the opportunity for this internal challenge, transfer of knowledge prior to the acceptance of the model is to be considered.

5.333. The principle of proportionality needs to be taken into account by national competent authorities, especially in the case of undertakings with limited resources; taking into consideration the objective of the independence of the validation to create an effective challenge. In this spirit, ensuring the independence through separated reporting line can be a means to that end. The right balance is struck between any potential conflict of interest that might arise in the course of the validation of the internal model on the one hand, and a disproportionate level of segregation of duties on the other hand.

Guideline 46 - Specificities for group internal models

Through the pre-application process for a group internal model the national competent authorities should form a view on how the insurance or reinsurance undertaking considers the validation of the internal model in the context of the calculation of both the consolidated group Solvency Capital Requirement and the Solvency Capital Requirement of related undertakings which would be calculated with the group internal model; and on how the insurance or reinsurance undertaking explicitly sets out this consideration in the validation policy it establishes for the group internal model.

National competent authorities should form a view on how the participating undertaking and the related undertakings for which the Solvency Capital Requirement would be calculated with the internal model, establish a single validation policy to cover the validation process both at group and individual level.

5.334. National competent authorities take into account that it may be possible for the undertaking to streamline the validation process, as some of the tasks performed to validate the components of the model used to calculate the group Solvency Capital Requirement are similar to the tasks performed to validate the components used to calculate the solo Solvency Capital Requirement.

5.335. The model may be using the same component in the calculation of both the group and some individual related undertakings. Some tasks performed to validate a component of the internal model in the context of the group Solvency Capital Requirement may provide comfort that the solo Solvency Capital Requirement is appropriate as well, while some tasks may only provide validation at the group level. In the latter case, some validation tasks need to be considered in the context of the solo Solvency Capital Requirement.

5.336. Particularly, it may be that validation tasks performed at the group level may be insufficient in the context of the solo Solvency Capital Requirement to provide the same quality of validation. Examples of this could include the following:

- There are different levels of materiality at group and at solo level. A component that is immaterial in the context of the group Solvency Capital Requirement may be very material in the context of the solo Solvency Capital Requirement;
- Validation which is done at group level for a component may include analysis of the performance of the model against actual experience, where the actual experience was taken from aggregated data across the group. It may be in this case that the same test completed only for the scope of the solo business may result in different validation results.

5.337. Note that the examples above are only two examples of how validation performed at group level may not be appropriate in the context of the solo Solvency Capital Requirement, and is not an exhaustive list.

5.338. National competent authorities form a view on how the undertaking explicitly considers, in the validation policy for the group internal model, how the validation is appropriate in the context of both the group and the solo Solvency Capital Requirement.

5.339. The risk-management function of the solo undertaking, given its understanding of the solo risk profile and how the model reflects this risk profile, may want to be involved in setting up the validation policy of the group internal model, to ensure that the validation provides appropriate comfort that the model is appropriate in the context of the solo Solvency Capital Requirement.

Guideline 47 – Universe of tools

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the qualitative or quantitative validation tools it uses are appropriate and reliable to validate the internal model for internal use of the internal model as well as for the Solvency Capital Requirement calculation.

National competent authorities should form a view on how the insurance or reinsurance undertaking understands the validation tools it uses and acknowledges that different tools have different characteristics and limitations. National competent authorities should form a view on whether the insurance or reinsurance undertaking considers which validation tools or combination thereof are the most appropriate to meet the purpose and scope of the validation, as set out in the validation policy it establishes.

National competent authorities should form a view on how the insurance or reinsurance undertaking puts a process in place to choose the appropriate set of validation tools in order to ensure a robust validation process. National competent authorities should form a view on how the insurance or reinsurance undertaking documents this process and whether it considers at least the following characteristics when selecting the validation tools:

(a) level of complexity: validation tools ranging from simplified techniques to sophisticated methods ;

(b) nature: validation tools being qualitative, quantitative or a combination of both;

(c) knowledge required: the extent of knowledge required by the persons performing the validation;

(d) independence: the level of independence required by the person performing the validation;

(e) information required: potential restrictions to the amount or the type of information available for external versus internal validation ; and

(f) cycle of validation: validation tools relevant to cover every key assumption made at different stages of the internal model from development, to implementation and to operation.

Guideline 48 – Stress tests and scenario analysis

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking uses stress tests and scenario analysis as part of the validation of the internal model.

In particular national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the stress tests and scenario analysis it uses cover the relevant risks and are monitored over time.

5.340. National competent authorities take into account that other validation tools may be developed by the undertaking, which may be more effective or more appropriate than tools currently available. Sometimes an undertaking may decide to check the output of a particular validation tool against a validation that has been done before and in which the undertaking has better understanding.

5.341. A universe of tools that would contribute to the validation process includes:

- Statistical tests;
- Alternative models or modelling techniques;
- Simplified models;
- Qualitative tools.

5.342. It is up to the undertakings themselves to set how they use those validation tools within their validation process. Even though some tools are prescribed in the Solvency II framework, national competent authorities form a view on how the undertaking is able to understand their scope, limitations and purpose.

Testing the results of the model against experience

5.343. The testing of results of the internal model against experience is used to assess the discrepancies between forecasts made by the model and actual realisations. Where actual realisations may not be directly available, the model forecasts may be compared to realisations made on the base of a comparable data set.

5.344. Undertakings need to justify why the chosen comparable data set is appropriate. The reliability of the test depends on the selection of data used and specific attention to the data selection would increase the benefit undertakings and national competent authorities may expect from the test.

5.345. This test against experience is referred to as "back-testing" and can be used by undertakings to find various kinds of errors. One objective of the analysis can be to determine whether differences come from omission of material risk factors from the model, whether they arise from errors from other aspects of the model specification such as the dependency structure including the assumptions of linearity, or whether the errors are purely random and thus consistent with acceptable performance of the model.

5.346. One way to use back testing is to statistically test the hypothesis that the observed frequency of exceptions equals the expected frequency. Of course this is subject to the amount of data reasonably available.

5.347. In addition to back-testing of the outputs, undertakings may perform additional tests such as fixing the outputs of the model and comparing actual experience conditions against the inputs to determine the quality of the parameter estimation, or overall goodness of fit tests to investigate the shape and stability of the distribution (please refer to the relevant Guideline in the Chapter on expert judgement).

Sensitivity testing

5.348. Another prescribed test in Article 124 of the Directive 2009/138/EC is sensitivity testing which aims at challenging the internal modelling by testing the sensitivity of the results to changes in key underlying assumptions. For instance out of sample testing, where relevant, may provide comfort that the results of the model are not dependent on particular sample used to set the assumptions.

5.349. The analysis may be performed by introducing small changes to the assumptions such as to the parameters, but also to some more structural aspects of the model like mathematical methods or statistical distributions. For instance, to test the sensitivity of the results to the choice of a particular statistical distribution selected, the undertaking may use a range of alternative distributions at risks or lines of business level and measure and analyse the impact on the results.

5.350. Sensitivity testing can also be used in validating parts of the internal model which place reliance on expert judgement, for example, where expert judgement is used to assist in determining the dependencies between risks.

5.351. Sensitivity tests may also examine the effect of making changes in a number of parameters or assumptions at the same time in order to validate the model for unexpected interactions, particularly if interactions between different variables are complex and material.

5.352. Testing the sensitivity of the internal model may also be useful to identify cases where a small difference in the input leads to significant changes in the output. In those cases, and where such behaviour can be justified, particular attention is given to the modelling of the cause-effect-relation.

Stability testing

5.353. Stability testing may be used to get comfort that the results produced by the internal model are reproducible, and that the same inputs lead to results which are similar. This is particularly relevant when using stochastic simulations, and can be used, for example, to validate that the number of iterations or simulations is sufficient to provide stable results, particularly in light of the calculation of the Solvency Capital Requirement, and regardless of the seed of the random number generator.

Stress tests and Scenario Analysis

5.354. Stress tests and scenario analysis are particularly useful to give insight into the tail of the loss distribution and in providing information relating to the dependencies between risks and capturing non-linearity. Stress or scenario testing as reverse testing may prove very useful in the process to internally challenge the model, and may provide useful opportunities for the senior management to develop their understanding on the model as well as to get comfort on its performance.

5.355. Stress test typically aims to assess the impact of a single event while scenario analysis aims to assess the impact of a combination of events. For a full stochastic model, the stress conditions/scenario may be represented by some of the simulated paths.

5.356. As a validation tool stress test and scenario analysis provides information about what the results may look like under various conditions including but not limited to exceptional but plausible large-loss events. It may also identify possible limitations of the model.

5.357. Scenario analysis may be particularly useful to validate the relations and dependencies between risks and variables under stress conditions. When reviewing this aspect, the undertaking pays particular attention in validating that tail and non-linear dependencies are appropriately captured.

5.358. By analysing the impact of stress events or scenarios, the undertaking may get insight into the features of the internal model such as tail of the loss distribution, and dependencies between risks including non-linearity. This type of validation may increase user's confidence that the internal model reflects appropriately the undertaking's risk profile.

5.359. Stress test and scenario analysis would be individually set out by the undertaking or group based on their own experience and their risk profile. The stress event or scenario may be derived using historical scenarios, deterministic or stochastically generated scenarios.

5.360. In addition to its function as validation tool, stress test and scenario analysis may provide the undertaking with some insight regarding its risk profile, and may prove useful in risk management and decision-making.

Reverse stress tests

5.361. In reverse stress tests the undertaking identifies the modelled stress and scenarios that could threaten its viability. This test induces the undertaking to consider scenario beyond normal business settings and leads to single out interaction between risks. In a group context, specific events including contagion and systemic factors may prove useful in validating the internal model at group level.

5.362. In addition to its function as validation tool reverse stress tests may be used to set risk management actions to mitigate the impact on the undertaking's viability of the unidentified events and scenarios.

Profit and loss attribution

5.363. More guidance is provided in the dedicated Guidelines on profit and loss attribution.

Additional validation tools

5.364. Some other tools may be used in the validation such as but not limited to:

Benchmarking

5.365. For instance benchmarking against alternative approach(es) or technique(s) of specific components of the internal model. When observing and analysing the differences produced by the alternatives approaches or techniques consideration is given to the appropriateness of the approaches and techniques to the risk profile. A particular weakness of this approach, that needs to be considered when using this tool, is the risk that it may incentivise herding behaviour that may result in creating systemic risk.

Analysis of change

5.366. Analysis of change from one period or run of the model to the next may provide comfort that changes in results are clearly understood and their causes identified.

Hypothetical portfolio

5.367. Hypothetical portfolio of assets and/or liabilities can be used to validate the model by estimating the risk profile underlying the portfolio. This technique can be used to validate changes in the internal model.

Simplified models

5.368. Simplified models may prove to be valuable tools, for instance in comparing the results from the internal model with results obtained from a more simple and easy to understand approach. Simplified methods or approaches may contribute to providing comfort regarding the output produced by the internal model. This tool may also be valuable for analysing the impact of assumptions.

Manual tracking of some internal model calculation

5.369. To reproduce the calculation steps of the internal model may be useful to validate a proper implementation of the internal model or the proper integration of different parts or components of the internal model.

Peer review

5.370. Peer review can be used as a validation tool assuming the process brings an effective challenge. This tool may be particularly relevant in validating expert judgement when the independence between the original expert judgement and the peer review is achieved.

Tool Selection

5.371. Having a well-defined process for choosing the appropriate tools allows the knowledge about the tools to feedback through the validation cycle and ensures that tools are chosen consistently and appropriately.

5.372. National competent authorities form a view on how the undertaking ensures, when choosing validation tools, that the complexity of the tools fits the purpose of the validation. Objective statistical methods may provide a more effective process of validation, particularly for the outputs for the model, but may have limitations in validating expert judgements. Nevertheless, when validating expert judgement, the challenge needs also to consider relevant data and numerical evidence. Some risk models can be more complicated than others with complex features and may require more advanced set of tools.

5.373. A suite of validation tools may complement each other, and help to convey an understanding of the model limitations. For instance, some tools are better at testing the model ability to rank risks, i.e. to segment on a relative basis, whereas other tools are better at testing the absolute forecast accuracy. Similarly a simplified technique such as an easy-to-process proxy model may contribute to the validation of the model for a specific range of circumstances, but a more sophisticated method may be necessary to validate the performance of the model under other circumstances.

5.374. The validation process may also be applied to simplified configurations of the internal model. For instance validation may be applied to the model while turning off some of the features of the internal model like future management actions and/or risk mitigations techniques. Those features or layers of complexity can then be turned on successively (or through the capture of intermediate results), in order to validate the impact of those features on the internal model results.

5.375. Tools can be classified as qualitative, e.g. interviews and expert judgement and quantitative, e.g. back-testing. It is important to bear in mind that such qualitative tools are not solely for qualitative aspects of the models. Sometimes when applying quantitative methods, a qualitative tool such as expert judgement may be needed to provide a complementing critical view and evaluation of the results.

5.376. The undertaking may consider some tools particularly relevant for specific aspects of the model, for instance sensitivity testing may be particularly useful at the level of a single output or at the level of a particular risk, while scenario analysis may be particularly useful at the aggregated level for example to analyse and contribute to validate the dependencies between risks, business entities or solo undertakings at the group level.

5.377. Validation is not a purely mechanical exercise and when designing a validation process or deciding on a tool, one has to take into consideration the purpose of the model and potential use and its overall control environment. Whether designing questionnaires for qualitative assessment or developing back-testing tools, one needs to take into account such information. Furthermore, validation performed by third party may lack this insight and the tools need to be designed to account for this.

5.378. The internal model follows a cycle from the design stage to the implementation and embedding stage. The validation process follows this cycle and takes into consideration that some validation tools may be more appropriate for some stages in the model life cycle (design, development, implementation and operation).

Guideline 49 – Application of the tools

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking is able to explain which parts of the internal model are being validated by each of the validation tools used and why these validation tools are appropriate for the particular purpose by describing at least:

(a) the materiality of the part of the model being validated;

(b) the level at which the tool will be applied from individual risks, modelling blocks, portfolio, business unit to aggregated results;

(c) the purpose of this validation task; and

(d) the expected outcome from the validation.

5.379. National competent authorities take into account that undertakings, when using the validation tools, may want to:

- Identify clearly what are the validation performed and communicate it to the administrative, management or supervisory body and the national competent authorities;
- Have performed a self-certification of the validation taking into consideration the limitations of the tools;
- Have robust processes in place to ensure that the validation was actually performed;
- Ensure that the tools and methods applied provide the comfort that the internal model is appropriate as set out in the validation policy.

5.380. A schematic of the model and role of validation tools may be a useful way to provide a clear and synthetic illustration of which components or aspects of the model are validated by the different tools used. This may help to ensure a robust process and be useful as a communication tool with the national competent authority to review and assess the validation of the internal model.

5.381. The tools and methods used when approaching different aspects of the internal model are selected taking into account the aspect of the internal model to be validated. It is important to understand and be able to explain the main purpose of using any particular tool. Some tools and methods, for example mathematical analysis, would be more appropriate to validate the model structure (conceptual model validation). Some tools and methods, for example walk-through processes and calculation using fixed values for some variables in order to check the model results against easily calculated values, would be more appropriate to validate the computer programming and implementation aspect of the internal model (model verification). Some tools and methods, for example validation against experience, would be more appropriate to validate the accuracy of the model related to its intention (operational validity).

5.382. Where either a bottom-up (testing the sub-models first then the overall model) or top-down (testing the overall model first then the sub-model) approach is adopted, particular attention is given to the validation of aggregation inside the internal model where it is appropriate for both the causal relationships as well as statistical dependencies.

5.383. Specific tools involve specific limitations. For instance some quantitative techniques may be sensitive to sampling error; therefore it would be appropriate to run the tool using several different samples of data or to apply appropriate criteria in the selection of data used during the validation. The reliability of other tests or tools may be limited by the scarcity of data.

5.384. National competent authorities form a view on how the undertaking takes into consideration the specific limitations of the validation tools used when applying and drawing conclusions from the validation process.

5.385. The purpose of a validation task drives the selection of the tool in light of the expected outcome. Different validation tasks would aim at different purposes such as for example: validating the accuracy of parameters. For example statistical test, validating the limited sensitivity of the results to the choice of a particular method etc. Before performing the validation tasks, the undertaking may set criteria to classify the outcomes of the tasks, for instance a confidence interval can be pre-set that would establish if the outcome of a statistical test would be pass or fail.

Guideline 50 – Validation data sets

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the selected data and expert judgement used in the validation process effectively allow it to validate the internal model under a wide range of circumstances that have occurred in the past or could potentially occur in the future.

5.386. National competent authorities take into account that data used by the undertaking in the validation of the internal model is a key factor for the success and the appropriateness of the validation process. The data sets used for testing individual components of the model may be different from the data sets used for testing the overall model. Furthermore, validating the model on a particular dataset may miss important limitations of the model, the attention given to the selection of the dataset or expert judgements to be used during the validation could mitigate this risk.

5.387. Deciding and generating the relevant datasets for validation need to be consistent across purposes. For example, where a validation cycle identified the need for changing the model, the data to check changes in the model need to be consistent to the datasets used in the original validation. Nevertheless different datasets might be used if this is appropriate and adequately explained.

5.388. Testing the model based on data, which are independent from the data used to calibrate the model can also remove any bias in the validation and gives a fairer view of the validity of the model.

5.389. Expert judgement is used in many aspects of the models. For instance there may be cases where the data-based validation alone does not allow covering sufficiently wide range of circumstances considering the calibration target of the Solvency Capital Requirement. In these cases appropriate validation tools (e.g. benchmarking to other models and statistical distributions or stress testing) can be used to supplement the information available in the data. There are also instances in validation where expert judgement is used, for example in the choice of the validation tool or in interpreting the results of the validation. In this regard, national competent authorities take into account that undertakings may refer to the relevant requirements for the use of expert judgement set out in the corresponding Guidelines.

Chapter 10: Documentation

5.390. One of the requirements that an insurance or reinsurance undertaking needs to fulfil in order to use an internal model for the Solvency Capital Requirement calculation is the documentation standard.

5.391. The documentation of an internal model is primarily a tool for the insurance and reinsurance undertaking but is also a tool for national competent authorities in their assessment of an internal model. The purpose of the documentation is not solely to support the internal model during the pre-application process and future approval process but also to support the undertaking in its use of the model.

5.392. The Guidelines on internal model documentation aim to provide guidance on what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on how prepared the undertaking is to fulfil the internal model documentation requirements.

5.393. Through the pre-application process, national competent authorities form a view on how prepared an insurance or reinsurance undertaking is to submit an application for the use of an internal model for the Solvency Capital Requirement calculation. To this end national competent authorities review the information provided by the undertaking as well as the internal model documentation. Additionally, national competent authorities may need to refer to additional pieces of evidence to form their view. For example, in order to form a view on how prepared an undertaking is to demonstrate understanding of the internal model, national competent authorities may want to ask the undertaking to evidence a training presentation describing the main features of the model which the members of the administrative, management or supervisory body have received.

5.394. The previous example illustrates some important considerations that need to be taken into account already in pre-application, both by national competent authorities and the undertaking:

- Some of the materials provided by the undertaking during pre-application are not part of the internal model documentation;
- During the pre-application process, national competent authorities are likely to ask for additional evidence to form a view on how prepared the undertaking is to meet the requirements. This evidence can be both in written form (e.g. the training materials in the example) or otherwise (e.g. interviews, processes, systems etc.);
- By the same principle, not all of the internal model documentation pursuant to Article 125 of Solvency II needs to be included in the materials provided by the undertaking during pre-application.

5.395. A number of ancillary documents may be necessary for national competent authorities to form a view on the internal model of the undertaking – for example, results of simulation runs, board minutes evidencing the use test, training material, validation results and output. It is not practicable to include all this documentation in a single documentation package, a practical approach could be to submit a documentation directory or similar. A specific reference could then be provided by the undertaking in the documentation submitted for pre-application purposes.

5.396. There may not always be a clear delineation between internal model documentation and supporting documentation necessary for the purposes of pre-application.

Guideline 51 - Control procedures

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that the documentation of the internal model is kept up to date and regularly reviewed.
In particular, national competent authorities should form a view on how the insurance or reinsurance undertaking puts in place at least:

(a) an effective control procedure for internal model documentation;

(b) a version control procedures for internal model documentation; and

(c) a clear referencing system for internal model documentation which should be used in a documentation inventory.

5.397. National competent authorities form a view on how the documentation of the internal model by the undertaking provides an audit trail, to recording the implementation of model changes (both minor and major).

5.398. In particular, an effective control procedure ensures that the internal model documentation is kept up to date and is regularly reviewed.

5.399. A clear reference system ensures that the undertaking's document references are precise.

5.400. The documentation does not have to be one single document or a set of documents nor does it need to be in paper form.

Guideline 52 - Documentation of methodologies

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking produces documentation which is detailed enough to evidence detailed understanding of the methodologies and techniques used in the internal model, including at least:

(a) the underlying assumptions;

(b) the applicability of such assumptions given the undertaking's risk profile; and

(c) any shortcomings of the methodology or of the technique.

This should also apply in case a methodology or any other technique used by the insurance or reinsurance undertaking in the internal model is documented by an external party.

National competent authorities should form a view on how the insurance or reinsurance undertaking, when documenting the theory, assumptions and mathematical and empirical basis underlying any methodology used in the internal model, in accordance with Article 125(3) of Solvency II, includes, if available, the material steps of the development of the methodology, as well as any other methodologies which were considered but not subsequently used by the insurance or reinsurance undertaking.

5.401. The validity of externally produced documentation which may have been written for a purpose other than documenting the internal model under consideration is recognised. In such cases, it is particularly important that the methodology or technique is appropriate for the situation to which it is being applied. Therefore, national competent authorities form a view on whether the undertaking is able to demonstrate sufficient understanding of the contents of the document in order to assess and justify the suitability of the technique or methodology for use in its model and the fit for its business.

5.402. In particular, national competent authorities form a view on how prepared the undertaking is to meet the requirements related to the assumptions underlying a methodology or technique (e.g. a probability distribution or an estimation method). National competent authorities also form a view on how the undertaking demonstrates through the documentation of methodologies understanding of any shortcomings of a methodology or technique of its internal model, and why any of such shortcomings are not material or do not render use of the methodology or technique inappropriate.

5.403. National competent authorities take into account that academic papers, by their nature, can be complex and they may assume a high level of prior knowledge. Reference to such papers on their own may not be sufficient to demonstrate an undertaking's understanding of a method or technique and its appropriateness to the undertaking's business. However, exact formulation of model equations and variables is regarded as good practice.

5.404. Methodology development often involves trial and error. A record of that development could be useful for both national competent authorities in assessing the appropriateness of the methodology, and for the undertaking (including the validation function) in further improving the model. Whilst the initial stages of such development may not be documented formally as they happen, documentation of the development of a methodology can enable the undertaking to prepare itself for the fulfilment of the requirements of paragraph 3 of Article 125 of Solvency II.

Guideline 53 - Circumstances under which the internal model does not work effectively

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking includes in its documentation an overall summary of the material shortcomings of the internal model, consolidated in a single document, containing at least the following aspects:

(a) the risks which are not covered by the internal model;

(b) the limitations in risk modelling used in the internal model;

(c) the nature, degree and sources of uncertainty connected with the results of the internal model including the sensitivity of the results for the key assumptions underlying the internal model;

(d) the deficiencies in data used in the internal model and the lack of data for the calculation of the internal model;

(e) the risks arising out of the use of external models and external data in

the internal model;

(f) the limitations of information technology used in the internal model;

(g) the limitations of internal model governance; and

(h) the work done to identify these shortcomings and any plans for model improvements.

5.405. National competent authorities take into account that where internal models take a modular form, it is quite likely that separating the documentation of each module would allow the undertaking to address any shortcomings of that particular module. However national competent authorities form a view on how the undertaking carries out an overall assessment of shortcomings in a single summary document.

5.406. National competent authorities expect that any plans for model improvements are considered by the undertaking at a high level and therefore that a detailed model development plan is not included by the undertaking in this document.

5.407. This summary overview would also allow the undertaking and national competent authorities to assess the materiality of any circumstances under which the internal model does not work effectively, the appropriateness of the model for the undertaking and any plans to address the shortcomings.

Guideline 54 - Appropriateness to addressees

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking considers having documentation of the internal model that consists of more than one level of documentation for the internal model, commensurate with the different uses and target audiences.

5.408. Tailored documentation for key bodies and key personnel facilitates more effective implementation and control of the internal model.

5.409. National competent authorities do not expect that users of the model, such as the administrative, management or supervisory body and the other persons who effectively run the undertaking, use the same documentation as the model design team. However national competent authorities expect that the documentation for the administrative, management or supervisory body and the other persons who effectively run the undertaking is sufficiently detailed to allow them to meet the requirements of the use test, including understanding.

Guideline 55 - User manuals or process descriptions

Through the pre-application process national competent authorities should form a view on how, as part of its documentation of the internal model, the insurance or reinsurance undertaking puts in place user manuals or process descriptions for operation of the internal model which should be sufficiently

detailed to allow an independent knowledgeable third party to operate and run the internal model.

5.410. User manual**s** or process descriptions for operation of the internal model is an important mitigant to key person risk, which exists both at model design level and model operation level.

Guideline 56 - Documentation of model output

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking documents and retains, not necessarily in a single document, the outputs of the model that are relevant to satisfy the requirements of Article 120 of Solvency II.

5.411. National competent authorities take into account that the undertaking may run a model several times at each valuation date, with each run possibly comprising many thousand simulations. It is recognised that retaining the output of every simulation for every run may be of limited value.

5.412. National competent authorities form a view about how the undertaking retains the full simulation input and output, with appropriate level of detail, for the run used to calculate the Solvency Capital Requirement for the undertaking at that valuation date.

5.413. For other stress and scenario tests the undertaking may develop its own policy on retention of model output. In doing this national competent authorities form a view on how the undertaking recognises that there is value in analysing simulation output, as part of its risk management and model validation processes. National competent authorities form a view on how the undertaking ensures that the use of the model outputs in risk management or decision-making processes forms part of its use of the model.

5.414. National competent authorities form a view on how the undertaking ensures that the output of the internal model includes management information, such as risk dashboards, risk registers and other reports used for risk management or decision-making.

Guideline 57 - Software and modelling platforms

National competent authorities should form a view on how the undertaking, in its documentation, provides information about the software, modelling platforms and hardware systems used in the internal model.

National competent authorities should form a view on how the undertaking, where using software, modelling platforms and hardware systems, provides in the documentation sufficient information to be able to assess and justify their use, and enable national competent authorities to assess their appropriateness.

5.415. A platform differs from an external model if the implementation of the model is independent of the platform on which it is run. For example, a model would theoretically give the same output if run on two different simulation platforms (with the same calibration), whereas two different natural catastrophe models would give different output.

5.416. In some cases, there may not be a clear distinction between what constitutes a modelling platform and what constitutes an external model. In such cases the undertaking and national competent authorities are expected to consider the appropriate level of documentation, and the need to monitor potential restrictions arising from the use of external models.

Chapter 11: External models and data

5.417. The Guidelines on external models and data aim to provide guidance on what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on how prepared the undertaking is to comply with the standards related to external models and data in the context of an internal model intended to be used for the calculation of the Solvency Capital Requirement. These Guidelines do not cover technical provisions but only external models and data intended to be used for the calculation of the Solvency Capital Requirement.

5.418. The requirements relating to the internal models and data set out in Solvency II also apply to external models intended to be used for the calculation of the Solvency Capital Requirements, and external data intended to be used in an internal model. National competent authorities form a view on the insurance or reinsurance undertaking pays particular attention to the specificities of such models and data.

Guideline 58 – External data

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, given the nature of external data, demonstrates an appropriate level of understanding of the specificities of external data used in the internal model including any material transformation, rescaling, seasonality and any other processing inherent in the external data.

In particular, national competent authorities should form a view on how the insurance or reinsurance undertaking at least:

(a) understands the attributes and limitations or other peculiarities of the external data;

(b) develops processes for identifying any missing external data and other limitations;

(c) understands the approximations and processing made for missing or

unreliable external data; and

(d) develops processes to run timely consistency checks including comparisons with other relevant sources to the extent that data are reasonably available.

5.419. National competent authorities take into account that some external data can be used directly by the undertaking such as market data, but external data is also quite important in external models.

5.420. The undertaking may decide to have a process for classification of data as external. The classification could for example, encompasses external data that are used directly in the internal model and data that is used indirectly for the development or calibration of external models and for transformations of inputs (e.g. inflation).

5.421. Article 126 of Solvency II requires that the same data quality standards apply to external data. The data quality standards are set out in Article 121.

5.422. By their very nature, external data may pose further challenges that the undertaking may need to consider when assessing the quality standards of the external data used in its internal model.

5.423. In cases where a reference source is readily available, periodical reasonability checks may be used to assess the quality of the data. For example, when indices are used, the undertaking may need to understand how they were created to account for seasonal adjustments and changes in basis. The adjustments for these changes may be included in a data directory to ensure continuity of the checks and the changes that need to be made on the data.

5.424. Where other processed data, such as volatility is used, the undertaking may need to understand and document the historical data used and the transformations applied to it.

5.425. When the source of external data or information is not available, for e.g. in proprietary data or where raw data is too onerous to gather, then the provider may need to provide the sufficient information with specific references wherever possible. The undertaking may find it useful to set up processes for developing an understanding of the attributes and weaknesses of the data (e.g. resolution, limited record length, missing data, etc.).

5.426. In some cases especially for calibrating catastrophe models, due to lack of exposure and claims data, a catastrophe model for a country may have been calibrated using data from another country or with the use of expert knowledge. In other cases, expert judgement and analytical methods, for example extrapolation is used to complement scarce data. National competent authorities form a view on how the undertaking clearly communicates and documents these limitations, and assesses the implications.

Guideline 59 – Understanding of the external model

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking demonstrates

that all parties involved in the use of the external model have a sufficiently detailed understanding of parts of the external model relevant to them including assumptions, technical and operational aspects.

National competent authorities should form a view on how the insurance or reinsurance undertaking gives particular attention to the aspects of the external model that are more relevant to its risk profile.

5.427. National competent authorities take into account that some models such as CAT models, Economic Scenario Generators and credit models can be classified as external models. In addition, external models may also include calculation components, libraries and risk models obtained from third-parties, which have an impact on the results of the internal model and are usually specifically designed for modelling of risks to which an insurance or reinsurance undertaking is exposed.

5.428. The undertaking may differentiate between external models and external platforms. However, some IT systems and software usually classified as platform may be regarded as external models. In some cases functions such as random number generator can have a significant impact on the calculation of the Solvency Capital Requirement. Similarly, the undertaking may decide to classify custom built functions (such as C++ library functions) as external models depending on their use in the internal model.

5.429. Article 126 of Solvency II sets out that the use of an external model shall not be considered to be a justification for exemption from any of the tests and standards set out in Article 120 to 125 of Solvency II. Therefore, national competent authorities form a view on how the undertaking meets for the external model and data the same standard of understanding as required for other parts of the internal model.

5.430. An effective channel for regular communication between the undertaking and the vendor or service provider may give a positive indication of appropriate understanding of the model. This may be evidenced by the undertaking through meetings, emails and other correspondence and participation to educational seminars.

5.431. Many of the external models are complex and a full understanding of the whole model may not be possible, or relevant for the undertaking. The external model may cover risks to which a particular undertaking is not exposed and as such are not relevant to the undertaking. National competent authorities form a view on how the undertaking, as it is applicable for the understanding of the theory and assumptions underlying the internal model, ensures a detailed understanding of the components of the external model that are used in the internal model.

5.432. National competent authorities form a view on how the undertaking, for parts of the external model relevant to its risk profile, develops an understanding of the methodologies applied and relevant assumptions including expert judgement on which the methodology used is based.

5.433. In order to form a view on the detailed understanding by the undertaking of the external model used within the internal model, national competent authorities can review how the undertaking:

- Demonstrates that all the significant limitations and uncertainties have been communicated to and are understood by the relevant stakeholders at all the levels within the undertaking;
- Ensures that persons who effectively run the undertaking have a sufficiently detailed understanding of the parts of the internal model used in the area which they are responsible of. This may include understanding the basic properties of the inputs, assumptions and the outputs and how they may impact the Solvency Capital Requirement and any decision based on them;
- Demonstrates that the users understand in detail the main components of the external model (for instance in case of a catastrophe model the usual components are: the event set module, the hazard module, the vulnerability module and the financial module), main operational aspects and outputs of the model. This includes understanding the calibration of the model and the data used for the calibration;
- Documents and justifies the processes for selection of any external model and ensures by regular reviews that the process is up-to-date and an appropriate external model is used;
- Documents major changes in the external model either done externally or any adaptation made internally. This may include, for example, documentation of major updates to the models or how the outputs of the external model have been modified prior to use in the internal model.

Guideline 60 – Reviewing the choice of external model and data

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking periodically reviews its justification for selecting a particular external model or set of external data.

National competent authorities should form a view on whether the insurance or reinsurance undertaking is not overly reliant on one provider and on how the undertaking puts in place plans to mitigate the impact of any failures of the provider.

National competent authorities should form a view on how the insurance or reinsurance undertaking pays attention to any updates of the external model or of the data that allows the undertaking to better assess its risks.

5.434. National competent authorities take into account that there may be some constraints for the undertaking to change the external model or data used in the internal model regularly. For instance the model or data may be embedded in the undertaking business processes, and in some cases changing the model and data may create additional risks related for instance to the appropriateness of IT systems. However, the undertaking may decide to have processes in place to assess whether the external model or data is still adequate given any change in its risk profile. The undertaking may decide on a frequency for reviewing the justification of selecting a particular model or data.

5.435. National competent authorities form a view on how the undertaking, when selecting an external model or set of data, particularly assesses the adequacy of the model or data to its risk profile, including the ability for the undertaking to collect appropriate data needed to run or parameterise the model.

5.436. National competent authorities take into account that if there are risks inherent in being overly reliant on one provider (such as in case of bespoke systems), the undertaking may decide to have risk mitigation plans in place, for example, source code escrow, identified alternative systems and expertise.

5.437. Similar attention could be paid to components of modelling platforms, software and hardware systems that can affect the use or results of the internal model. There are a number of ways that the undertaking and national competent authorities can assess the appropriateness and robustness of components of modelling platforms, software and hardware systems. Available methods for such an assessment include: stress and scenario tests, mini-models to replicate results, replicating results on other platforms, benchmarking run-times on other systems.

5.438. National competent authorities take into account that, when any deviation of the risk profile occur, the undertaking may consider if any available update of the external model or data is appropriate to address this deviation in the risk profile.

5.439. In some cases, the undertaking may decide on the use of multiple models:

- As a way to mitigate the risk of over reliance on a particular model;
- As a tool in the validation process; or
- To avoid over-reliance on a particular service provider or vendor as long as it fits its risk profile.

5.440. A multi-model approach can also be used for assessing the uncertainty around a particular risk. A multi-model approach can involve multiple vendors, one vendor and also models developed internally. National competent authorities form a view on how the method applied by the undertaking, where it chooses to blend output from multiple models, for instance as a way of mitigating the over-reliance on one model vendor, complies with the requirements applicable to the internal model and particularly the statistical quality standards as well as the validation standards. National competent authorities form a view on how the undertaking gives particular attention to establishing and maintaining a written explanation of the calculation of the blended output. In doing so the undertaking may set out a priori criteria or blending parameters, or explain any deviation from pre-set criteria and parameters.

5.441. National competent authorities form a view on how the intended use by the undertaking, of multiple models as a basis for calculation of the Solvency Capital Requirement does not prevent it from taking views and decisions on any material model assumptions. National competent authorities form a view on how the undertaking in this context acknowledges that the choice of a particular external model often involves taking a particular view on the risk in the tail.

5.442. The undertaking may identify some shortcomings of the external model and may want to resolve those shortcomings by adapting the external model or its output. As identification of shortcomings could be viewed by national competent authorities as an indicator of a detailed understanding by the undertaking; national competent authorities form a view on how the undertaking, when adapting the external model or its output, ensures that the adaptations comply with all the relevant tests and standards including statistical quality standards and that governance processes are in place for adapting the model.

Guideline 61 – Integration within the internal model framework

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking demonstrates that the approach for incorporating the external model into the internal model framework is appropriate, including the techniques, data, parameters, assumptions selected by the undertaking, and the external model output or outputs.

5.443. National competent authorities take into account that there are many aspects that an undertaking may need to consider when incorporating the external model in its internal model framework. There are different approaches for doing this but all of them involve aligning systems, data and assumptions.

5.444. For example, the dependency structure inherent in the outputs of an external model may compromise the dependency structure used in the internal model or the systems may introduce operational risks in transferring data from one system to another. Also, the assumptions may not be properly aligned.

5.445. In order to ensure the appropriateness of the approach for incorporating the external model into the internal model framework, the undertaking can, for example:

- Check and document the consistency of the assumptions and the input data of the components incorporated;
- Make clear the ownership of the different phases of the process;
- Demonstrate that the external model is fit for its use as internal model;
- Notify and document the reasons for the approach used for processing inputs and outputs of the external model;

- Develop a change process with defined timelines, such as setting a process for the continuous improvement of the granularity and quality of the exposure data used in the external model and ensuring the regular and timely update of the process with strategic feedback loops;
- Evidence and justify the choice of the output and the way it is used.

Guideline 62 – Validation

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking performs its own validation of the material assumptions of the external model that are relevant to its risk profile and of the process for incorporating the external model and data within its own processes and internal model.

National competent authorities should form a view on how the insurance or reinsurance undertaking assesses the appropriateness of the selection or the non-selection of features or options which are available for the external model.

National competent authorities should form a view on how, as part of its own validation, the insurance or reinsurance undertaking considers appropriate information and in particular the analysis performed by the vendor or other third party, and, when doing so, on how the insurance or reinsurance undertaking ensures at least that:

(a) the independence of the validation process from the development and operation of the internal model is not compromised;

(b) it is consistent with the validation process the insurance or reinsurance undertaking sets out and is clearly laid out in the validation policy; and

(c) any implicit or explicit bias in the analysis performed by the vendor or other third party is taken into account.

5.446. As defined in Guideline 45 of the Validation Chapter, the proportionality principle applies to the validation process.

5.447. National competent authorities can form a view on how the validation process by the undertaking particularly:

- Covers the key assumptions of the external model;
- Covers any material adjustments made to the inputs of the model, the model itself or its outputs by, at least, demonstrating their appropriateness and explaining their underlying reason(s);
- Is specific to the undertaking and focuses on parts of the model that are relevant to the risks and lines of business underwritten by the undertaking;

- Includes tests of outputs or performances against experience (sense checks);
- Makes use of the service providers or other expert knowledge and competencies to create / calibrate tests;
- If validation activities is delegated to service providers, ensures that the delegated activities are performed consistently with the undertaking validation process including for instance:
  - ➢ Specific validation report but deeper analysis to specific risks;
  - ➢ Frequency of validation;
  - ➢ Checks when changes happen.

5.448. National competent authorities take into account that the undertaking may use the model through reinsurance intermediaries (brokers) rather than holding the licence for the model. The undertaking may decide to use aspects of the validation performed by vendors or brokers provided that it can gain comfort on the validation performed by the brokers that it meets the requirements. The undertaking may decide to do their own validation for a better understanding of the modelling of material assumptions and as the final onus for the validation checks performed is on the undertaking.

5.449. For example, an external validation report provided to the undertaking by the vendor, the service provider or an independent party may be used by the undertaking to base their approval assuming that the report provided is consistent with the validation process the undertaking establishes and complies with the Solvency II requirements on validation.

5.450. National competent authorities form a view on how a validation performed by the undertaking covers the approach for incorporating the external model or data into its internal model.

5.451. National competent authorities take into account that, although common practice for validating specific aspects of the model and data used by vendors in the development of their external models, the peer review by a third party (e.g. university or other independent institution) of the models could be used by the undertaking as a piece of evidence of a qualified and objective generic validation of the external model. The independence of such a process could be assessed taking into consideration the remuneration structure of the persons involved. Using this third party review does not prevent the undertaking from explaining how this review is relevant to its own use of the external model.

5.452. The undertaking may decide that this review could be used for:

- The selection process of the service provider and the setting up of adequate contingency plan;
- Setting the frequency of validation;

- Setting the frequency of update;
- Assessing other soft aspects (e.g. user friendliness, flexibility, stability);
- The validation of the outputs.

5.453. When complementing the vendors' validation, the undertaking may like to further develop their understanding of the validation performed through sensitivity analysis and benchmarking. National competent authorities form a view on how the undertaking, as part of its validation process, justifies and documents the use of options selected and the use of switches.

5.454. The undertaking may decide to validate the outputs of the model by demonstrating their understanding of (but not exhaustively):

- The material risk drivers;
- The limitations of the outputs.

5.455. The undertaking may decide to validate the inputs of the model by checking their appropriate treatment and demonstrating its understanding of:

- Whether the data provided by the undertaking used by the service provider reflects the undertaking risk profile;
- The integration of the external model within the internal model framework;
- The audit trail within the external model.

Guideline 63 – Documentation

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking, , demonstrates that that the documentation of external models and data meets the documentation standards.

National competent authorities should form a view on how the insurance or reinsurance undertaking produces documentation on at least the following:

(a) the aspects of the external model and external data that are relevant for its risk profile;

(b) the integration of the external model or external data within its own processes and internal model;

(c) the integration of data, in particular inputs, for the external model, or outputs from the external model, within its own processes and internal model; and

(d) the external data used in the internal model and its source and use.

If, as part of its own documentation, the insurance or reinsurance undertaking leverages on the documentation produced by the vendors and

service providers, national competent authorities should form a view on how the insurance or reinsurance undertaking ensures that its ability to meet the documentation standards is not compromised.

5.456. National competent authorities form a view on how the undertaking documents any material adjustments made to the inputs, modelling components or outputs of the external model together with the reasons and appropriateness. The same holds for the potential blending of any modelling results in the case that a multi-modelling approach is adopted.

5.457. National competent authorities form a view on how the undertaking documents its understanding of the model. The undertaking may decide to build its internal documentation around information and documentation provided by the vendors or service providers assuming this does not compromise its ability to meet the documentation standards. If the information and documentation provided are sufficiently detailed then this allows the undertaking to develop an appropriate level of understanding of the model.

5.458. Additionally, an undertaking may decide to document that the incorporation of its data (in vendor models or service providers' frameworks) was done correctly.

Guideline 64 – National competent authorities' relationship with vendors of external models

Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking keeps its responsibility for discharging its obligations related to its internal model and for the role of external model or data in the internal model and any other requirements.

National competent authorities should make clear to the insurance or reinsurance undertaking that any contact between national competent authorities and the vendors of an external model to inform national competent authorities' reviews of such model should not exempt the insurance or reinsurance undertaking from demonstrating that the external model fulfils the internal model requirements.

National competent authorities should form a view on the use of an external model entirely for each individual pre-application process.

National competent authorities should make clear to the insurance or reinsurance undertaking that they will reject any application for using an external model if the insurance or reinsurance undertaking fails to provide the specific information required in order for an assessment of the application to be carried out by national competent authorities.

5.459. The pre-application process is between national competent authorities and the undertaking which would use of the internal model under pre-application to calculate the Solvency Capital Requirement. Thus national competent authorities deal directly with the undertaking during the pre-application process in order to form a view on how prepared the undertaking is to comply with the tests and standards as set out in Articles 120 to 125 of Solvency II.

5.460. More detailed provisions on this subject can be found in EIOPA Opinion on External Models and Data[8].

5.461. Nevertheless, national competent authorities may want to contact the external model vendor directly in order to gain information on the external model which would be used in an undertaking's internal model. This information may vary and could include, for example:

- Context of the external model;
- Historical development of the external model;
- Theoretical basis of the model and assumptions;
- Data on which the external model has been calibrated;
- Optionality available within the external model.

5.462. The information gained by national competent authorities may inform their review of internal model which includes the external model provided by the vendor, but the pre-application process is entirely based on each individual internal model.

5.463. National competent authorities expect that vendors, as part of their commercial relationship with undertakings, assist their clients in preparing themselves for the use of the model during pre-application and for the compliance with the requirements particularly, but not exclusively, regarding the documentation and validation of the external model, and where appropriate, the adaptation of the model to the client's needs.

Guideline 65 – Role of service providers when using external models and data

Through the pre-application process national competent authorities should form a view on whether the insurance or reinsurance undertaking uses an outsourcing agreement when it chooses not to operate the external model directly.

Similarly, national competent authorities should form a view on whether the insurance or reinsurance undertaking, through an outsourcing agreement, mandates a service provider to perform some tasks related to the external data.

[8] https://eiopa.europa.eu/fileadmin/tx_dam/files/publications/opinions/1622_001.pdf

National competent authorities should make clear to the insurance or reinsurance undertaking that it should not consider such outsourcing agreements to be a justification for exemption from demonstrating that the internal model fulfils the requirements.

National competent authorities should form a view on how the insurance or reinsurance undertaking ensures that any outsourcing agreement regarding the operation of an internal model or the performance of tasks related to the external data, in application of the requirements set out in Article 49 of Solvency II, defines the duties of the parties.

National competent authorities should form a view on how the insurance or reinsurance undertaking, irrespective of which party actually performs the tasks associated with the service provided, retains overall responsibility.

5.464. National competent authorities consider that, through the outsourcing policy, as per Article 49 of Solvency II, the provider may be required to provide further evidence that appropriate checks and validation have been carried out.

5.465. In case of catastrophe models, the undertaking may mandate a reinsurance broker to run one or more catastrophe models using undertaking's specific exposures. National competent authorities form a view on how the undertaking remains responsible for demonstrating that the external models used and the tasks performed comply with the requirements.

<u>Chapter 12: Functioning of colleges during the pre-application process for internal models for groups</u>

5.466. In the case of a pre-application process for an internal model for a group composed of several insurance or reinsurance undertakings which are supervised by national competent authorities of different Member States, during the pre-application process, those national competent authorities work together in order to form a view about the internal model.

5.467. All the Guidelines in this Chapter apply to both:

- The pre-application process for an internal model submitted to pre-application that would be used for the calculation only of the consolidated group Solvency Capital Requirement (Article 230 of Solvency II); and
- The pre-application process for an internal model submitted to pre-application that would be used for the calculation of the consolidated group Solvency Capital Requirement as well as the Solvency Capital Requirement of at least one related undertaking included in the scope of this internal model for the calculation of the consolidated Solvency Capital Requirement (group internal models under Article 231 of Solvency II) unless otherwise stated.

5.468. In addition to the role described above, the following provisions are useful background information:

- From Article 248(3) of Solvency II, the membership of the college of supervisors shall include the group supervisor and national competent authorities of all the Member States in which the head office of all subsidiary undertakings is situated. The national competent authorities of significant branches and related undertakings shall also be allowed to participate in the college of supervisors. However, their participation shall be limited to achieving the objective of an efficient exchange of information;
- During the pre-application process, the group supervisor consults the national competent authorities involved. The other national competent authorities within the college of supervisors, that are not involved, are also to be allowed to participate in the pre-application process. However, their participation would be limited to identifying and preventing circumstances where the exclusion of parts of the business from the scope of the internal model under pre-application could lead to a material underestimation of the risks of the group, or where the internal model could conflict with another internal model under pre-application that would be used for the calculation of the Solvency Capital Requirement of any of the insurance or reinsurance undertakings in the group;
- During the pre-application process for a group internal model under Article 231 of Solvency II, the group supervisor is expected to provide all relevant information to the other national competent authorities concerned.

Guideline 66 - Forming a view about the scope of the internal model during the pre-application process for internal models for groups

During the pre-application process for an internal model for a group, when forming a view about the appropriateness of the scope of the internal model, the group supervisor, the other national competent authorities involved and other national competent authorities identified by the college should consider at least:

(a) the significance of related undertakings within the group with respect to the risk profile of the group;

(b) the risk profile of related undertakings within the group compared to the overall group risk profile;

(c) if applicable, a transitional plan by the group to extend the scope of the model at a later stage and the timeframe to do so;

(d) the appropriateness of the standard formula or another internal model under pre-application that would be used for the calculation of the Solvency Capital Requirement of any related insurance or reinsurance undertaking included in the scope of the internal model; and

(e) the appropriateness of the standard formula or another internal model

under pre-application that would be used for the calculation of the Solvency Capital Requirement of any related insurance or reinsurance undertaking within the group but not included in the scope of the internal model for the group.

When forming a view about the appropriateness of the exclusion of related undertakings within the group from the scope of the internal model, the group supervisor and the other national competent authorities involved, should assess whether the exclusion of the undertakings could lead to:

(a) an improper allocation of own funds based on individual undertaking Solvency Capital Requirements rather than on its contribution to the risk profile of the group;

(b) inconsistencies that would derive from the use of the internal model to calculate the group solvency capital requirement and the use of the standard formula or a different internal model under pre-application by any related undertaking within the group to calculate its Solvency Capital Requirement;

(c) weaknesses in risk management of the group and related undertakings within the group resulting from the limited scope of the internal model; or

(d) an inadequate group Solvency Capital Requirement in relation to the risk profile of the group.

5.469. The national competent authorities involved in the pre-application process, with the participation of the other members of the college, cooperate in assessing the justification provided by the undertaking for the scope of the internal model it would use, either full or partial, and its appropriateness.

5.470. When assessing the appropriateness of an internal model under pre-application with a limited scope, any transitional plan to extend the internal model may provide useful indication of whether the internal model would play an important role in the system of governance of the undertaking on an on-going basis.

5.471. In forming their view about the scope on the internal model for a group under pre-application, the national competent authorities involved take into consideration the following points:

- The undertakings included in the scope of the internal model under pre-application that would be used for the calculation of the group Solvency Capital Requirement; and
- In case of group internal models under Article 231 of Solvency II under pre-application, the related undertakings which would use the internal model to calculate the Solvency Capital Requirement.

5.472. Forming a view about the scope and the intended use of an internal model under pre-application is different depending on the process (i.e. either under Article 230 or Article 231 of Solvency II) and on the situation of each related undertaking.

5.473. Where the exclusion of a related undertaking from the scope of the internal model could create the situation listed in the Guideline above, it is desirable that the group supervisor and national competent authorities involved consider the situations outlined below.

5.474. If the exclusion of the related undertaking could result in an improper allocation of own funds, assuming the Solvency Capital Requirements would be appropriate, it is desirable that particular attention is given to the technique applied to integrate the partial internal model with the standard formula as the allocation of the diversification benefit between related undertakings would be the reason for the improper allocation of own funds.

5.475. If the exclusion of the related undertaking could create inconsistencies from the use of more than one model, it is desirable that the national competent authorities participating in forming a view on the scope of the internal model under pre-application consider how those inconsistencies could impact the risk management system and the decision-making processes. In particular they may consider how the inconsistencies could impact the on-going compliance with the use test for the relevant internal models.

5.476. While evaluating the consequences of excluding related undertakings from the scope of the internal model under pre-application it is desirable that the group supervisor considers in particular whether national competent authorities of related undertakings not yet included in the scope of the internal model but which are likely to be included in a future extension of the scope of the internal model, could be provided with relevant documents to enable them to participate in the current pre-application process and to prepare for the likely extension of the scope of the internal model.

5.477. If the exclusion of the related undertaking of the scope of the internal model under pre-application could weaken the risk management system, it is desirable that the group supervisor and national competent authorities involved seek additional explanations from the undertaking on how this risk is being addressed.

5.478. If the exclusion of a related undertaking could result in an inadequate group Solvency Capital Requirement, then some remediating action would be needed:

- If the standard formula would not be appropriate for the excluded undertaking, the national competent authority responsible for this undertaking may mention this inadequacy to the undertaking and the group supervisor may mention the possibility of an extension of the scope of the internal model;
- In case the exclusion of the undertaking could result in an inappropriate integration of the partial internal model with the standard formula because, for example, the integration technique applied fails to accurately capture

some dependency between the risks or major business units within the scope of the partial internal model, and the risks or major business units outside the scope of the partial internal model, the group supervisor may mention this inadequacy.

5.479. An example of the different purposes of the pre-application process review for a related undertaking depending on different situations is outlined in the following table:

	The group internal model (Article 231) under pre-application would calculate A SCR	**The internal model for a group under pre-application would not calculate A SCR**
Undertaking A (related undertaking) included in the scope of the internal model for a group under pre-application for the purpose of the group SCR calculation	Review the appropriateness of the group internal model for both the calculation of A SCR and for the A contribution to the group SCR	• Review the appropriateness of the internal model for the A contribution to the consolidated group SCR; • Review the appropriateness of the exclusion of A for the calculation of its solo SCR with the internal model
Undertaking A (related undertaking) not included in the scope of the internal model for a group under pre-application for the purpose of the group SCR calculation	Non-applicable	• Review the appropriateness of the exclusion of A for the calculation of its SCR with the internal model; • Review the appropriateness of the exclusion of A for the calculation of the consolidated group SCR with the internal model;

		• Identifying and preventing the circumstances where the exclusion of parts of the business from the scope of the internal model could lead to a material underestimation of the risks of the group, or where the internal model could conflict with another internal model under pre-application that would be used for the calculation of the Solvency Capital Requirement of any of the insurance or reinsurance undertakings in the group

Guideline 67 - Tasks of the group supervisor and the other national competent authorities involved and participating in the pre-application process for internal models for groups

During the pre-application process for an internal model for a group, the group supervisor and the other national competent authorities involved should agree on the most efficient and effective allocation of tasks among the different national competent authorities involved.

The group supervisor, in consultation with the other national competent authorities involved, should record the agreed allocation of tasks and set up a work plan and the communication rules to follow among them.

In the case of a group internal model under Article 231, the group supervisor and the other national competent authorities concerned should

consider including in the work plan specific provisions which set up the allocation of tasks and communication rules between them.

When appropriate, the group supervisor, in consultation with the other national competent authorities involved, should update the work plan.

The group supervisor should ensure that the work plan covers the timeline, main steps and deliverables for the pre-application process.

The group supervisor should ensure that the work plan, at least:

(a) establishes when and how to consult and involve in the pre-application process the other national competent authorities involved;

(b) establishes when and how to allow the other national competent authorities within the college of supervisors to participate in the pre-application process, bearing in mind that their participation would be limited to identifying and preventing circumstances where the exclusion of parts of the business from the scope of the internal model could lead to a material underestimation of the risks of the group, or where the internal model could conflict with another internal model under pre-application that would be used for the calculation of the Solvency Capital Requirement of any of the insurance or reinsurance undertakings in the group; and

(c) identifies the priorities for the assessment, taking into account the scope of the internal model, the specificities of each related undertaking within the group; the risk profile of the group and related undertakings within the group and the available and relevant information about the internal model.

Whenever a national competent authority involved identifies a substantial point of concern regarding the pre-application process, it should share its concern with the group supervisor and the other involved authorities as soon as feasible.

5.480. The work plan referred to in the Guideline may be included in the work plan of the college, as defined in the coordination arrangement. The work plan can be adapted as appropriate as the review work is proceeding.

5.481. To ensure an effective pre-application process, all national competent authorities involved make their best effort to perform the allocated tasks.

5.482. The work plan for the pre-application process would be reviewed and updated as appropriate in order for the national competent authorities involved to keep an up-to-date view of the preparedness of the undertaking for instance because of changes made to the model or change in the scope: additional reviews would be scheduled and the work plan amended accordingly. Also, a change or delay in the delivery of documentation, evidence or information by an undertaking within the group may lead the national competent authorities involved to revise the work plan. Similarly, findings and preliminary views during the review work may also lead the group supervisor to amend the work plan in some circumstances either to perform more review in a specific area of the model or of the requirements or to reallocate review work to other areas.

5.483. The following examples illustrate how the application process may look like in the case of group internal models under Article 231 of Solvency II.

5.484. Example 1: assume a group made up of a DE, FR, PL and BE entities, where FR is the group supervisor. The group submits to the FR national competent authority, an application under Art. 231 of Solvency II to use an internal model to calculate the group Solvency Capital Requirement covering FR, DE, BE but excluding PL and to calculate the Solvency Capital Requirement of the DE and FR entities and not the BE and PL ones. The joint decision with respect to the approval of the group internal model would have to be made by the national competent authorities of FR and DE (concerned national competent authorities), as the internal model would be used by the related undertakings they supervise for the calculation of their individual Solvency Capital Requirement. The national competent authority in BE would have to be involved in the assessment, and the national competent authority in PL is to be allowed to participate for the limited purpose of identifying and preventing circumstances where the exclusion of parts of the business from the scope of the internal model could lead to a material underestimation of the risks of the group, or where the internal model could conflict with another internal model that would be used for the calculation of the Solvency Capital Requirement of any of the insurance or reinsurance undertakings in the group.

5.485. Example 2: Assume starting from Example 1, that the group internal model would now be used to calculate the Solvency Capital Requirement for the individual undertaking of BE. In this case the new joint decision would be taken by the previous national competent authorities concerned (FR and DE) and BE (which thus becomes concerned). PL would still be allowed to participate for the limited purpose described in the previous paragraph.

5.486. Example 3: Assume starting from Example 1 that the scope of the internal model used for the calculation of the group Solvency Capital Requirement would be extended to PL, but the PL entity would not be using the group internal model for the calculation of its individual Solvency Capital Requirement. In this case the new joint decision would be taken by the same national competent authorities concerned as Example 1 (FR and DE). The national competent authorities in BE and PL would have to be involved in the assessment.

5.487. It is important to note that in the case of examples 2 and 3, the group internal model would already have been approved. However, this would not automatically lead to the approval of the extensions of the use of the internal model.

5.488. It is expected that, in the case of a pre-application process for group internal model under Article 231 of Solvency II, the national competent authorities concerned contribute more heavily and more actively to the pre-application process than the national competent authorities only involved but not concerned.

5.489. In the case of a group internal models under Article 231 of Solvency II, where the internal model would be only used for the calculation of the Solvency Capital Requirement of related undertakings whose head offices are based in the same Member State as the group supervisor, the decision would be taken by the group supervisor only, although all national competent authorities involved would be consulted.

5.490. In all other circumstances than the in previous paragraph, for group internal model under Article 231 of Solvency II, more than one national competent authority would be concerned in the joint decision.

5.491. This Guideline aims to ensure efficiency and avoid diverging and inconsistent views on the same topic between different national competent authorities. In essence, the pre-application process for an internal model for the calculation of the group Solvency Capital Requirement is a combination of off-site activities and on-site examinations carried out at both group and related undertaking levels for the different components of the internal model.

5.492. The contribution of each national competent authority in the pre-application process is agreed upon by the group supervisor and the other national competent authorities involved in the pre-application process. The process needs to be adapted to suit the pre-application. Nevertheless a process that maximises the efficient use of the resources is desirable. For this aim, the participation in colleges provides the opportunity for a horizontal view that may help spreading observed good practices among colleges.

5.493. It is desirable not to duplicate work related to the pre-application process of an internal model methodology which would be used consistently across the different entities of the groups. Although national competent authorities involved in the process may have different views about the adequacy of this methodology for the different related undertakings, it would be more efficient to coordinate the review activities.

5.494. In the case of pre-applications for a group internal model under Article 231 of Solvency II, each national competent authority review the implementation of the common methodology referred to in the paragraph above for their respective related undertaking, although aiming at leveraging this work through common on-site examinations. This approach is not contradictory to the aim of an efficient allocation of tasks as long as this implementation can be assessed at the level of the related undertaking.

5.495. In order to achieve the most efficient process in allocating tasks, the group supervisor and the other national competent authorities involved may in particular take into consideration for each component of the group internal model under pre-application:

- The persons who are responsible for designing the component;
- The persons who are responsible for validating the component;

- The persons who are responsible for providing the data;
- The persons who are responsible for the parameterisation; and
- How the component is integrated in the internal model at group level and/or at related undertaking level.

5.496. The group supervisor and the other national competent authorities involved in the process set up a work plan to allow each authority involved to give its views on its area of competence while optimising the use of the resources of all national competent authorities.

5.497. For example, if component "A" of the internal model under pre-application applies the same methodologies through-out the group and the tools provided by the group are used by local entities, on local data, it is likely that the process would be more efficient as it leads to:

- Common off-site activities at group level to study the methodology;
- Common on-site examination at group level to assess the tools; and
- Separate on-site local examination by the national competent authorities involved to check that data is adequate and by the authorities concerned to check that the component is implemented properly.

5.498. If, on the other hand, component "B" is strictly limited to undertaking A, it may be more efficient to:

- Arrange on-site examinations at local level involving the national competent authority of the individual undertakings and if it chooses to do so the group supervisor; and
- Apply a process at group level to assess how this component is integrated in the group internal model under pre-application.

Guideline 68 - Joint on-site examinations carried out during the pre-application process for internal models for groups

During the pre-application process for an internal model for a group, the group supervisor and the other national competent authorities involved should propose and discuss when and how to organize joint on-site examinations to verify any information concerning the pre-application process, with the aim of ensuring the effectiveness of this process.

The national competent authorities proposing a joint on-site examination should inform the group supervisor by indicating the scope and purpose of this examination, taking into account the objectives of joint on-site examinations in relation to the pre- application process as defined by the national competent authorities involved.

The group supervisor should then notify the other national competent authorities involved in the pre-application process, EIOPA, and, where relevant, other national competent authorities within the college, the national competent authorities responsible for the supervision of significant branches as referred to in Article 248(3) of Solvency II, and the national competent authorities responsible for the supervision of other branches.

Once the national competent authorities participating in the joint on-site examination have been identified, they should discuss and agree the final scope, purpose, structure and allocation of tasks of the examination.

The national competent authority organising the on-site examination, if other than the group supervisor, should provide the relevant documentation to the group supervisor.
The group supervisor should make the relevant documentation available to the national competent authorities involved in the pre-application process, to the other national competent authorities participating in the joint on-site examination and to EIOPA. The group supervisor should provide the rest of college members and participants with a list of the relevant documentation received and provide them with the relevant documentation upon specific request.

On the basis of a report stating the main findings of the joint on-site examination, the national competent authority organising the on-site examination should discuss with the national competent authorities involved the outcome of the joint on-site examination and the actions to be taken.

The group supervisor should notify the rest of college members about the outcome and actions as part of the agreed communication within the college.

5.499. This Guideline applies to joint on-site examinations carried out during the pre-application process of an internal model for groups organized either by the group supervisor, by another national competent authority involved, or by one of the other national competent authorities within the college.

5.500. For the purpose of pre-application process, national competent authorities involved or other authorities within the college may also in addition of joint on-site examinations, conduct local on-site examinations. This Guideline is applicable to joint on-site examinations, not to local ones.

5.501. Verifying information is not limited to checking information for accuracy based on what has already been submitted by the undertaking, or from off-site analysis carried out by the national competent authorities within the college as part of the pre-application process: it includes in the broadest sense investigating, probing and evaluating any information needed for the pre-application process.

5.502. Some joint on-site examinations would be already foreseen in the work plan agreed for the pre-application process, but further examinations can take place when deemed necessary for an effective pre-application process.

5.503. The participation in joint on-site examinations organised by the group supervisor of other national competent authorities involved is very useful for the efficiency of the process.

5.504. In particular such participation brings expertise about local specific products and helps the group supervisor and other national competent authorities involved in pre-application. The national competent authorities who participated in the joint on-site examinations provide input to the national competent authority responsible for reporting the main findings.

5.505. In the case of group internal models under Article 231 of Solvency II under pre-application, participating to joint on-site examinations is particularly useful for national competent authorities concerned, because some specificities designed at group level would be relevant for their individual Solvency Capital Requirement calculation by the group internal model under pre-application.

5.506. Joint on-site examinations organised by national competent authorities involved other than the group supervisor may be useful in the context of both internal models under pre-application for the calculation only of the group Solvency Capital Requirement and group internal models for the calculation of both, the group Solvency Capital Requirement and one or several individual Solvency Capital Requirements. In the first case, the national competent authorities involved need to form a view on how the undertaking's risk profile would be reflected in the calculation of the consolidated group Solvency Capital Requirement, while in the second case, the national competent authority concerned also aims at assessing whether the group internal model would be appropriate to derive the Solvency Capital Requirement of the related undertaking. The national competent authorities who participated in the joint on-site examinations provide input to the national competent authority responsible for reporting the main findings.

5.507. If the joint on-site examination is organised by a national competent authority of a related undertaking included in the scope of the internal model for a group under pre-application, but which Solvency Capital Requirement would not be calculated by the internal model, this on-site examination may cover some of the following objectives:

- Assess the appropriateness of the individual contribution the related undertaking would have to the calculation of the group Solvency Capital Requirement using the internal model;
- Assess the appropriateness of the exclusion of the relevant related undertaking from the calculation of its Solvency Capital Requirement using the internal model;
- Assess the appropriateness of the internal model under pre-application itself, including in particular the reasons for the exclusion of undertakings from the internal model for the calculation of the group solvency, and the

reasons why the internal model would cover a related undertaking for the calculation of the consolidated group Solvency Capital Requirement but it would not be used to calculate the Solvency Capital Requirement of that related undertaking.

5.508. In the case of a group internal model under Article 231 of Solvency II under pre-application, if the joint on-site examination is organised by a national competent authority concerned, in addition to the previous paragraph, the examination may cover the assessment whether the group internal model under pre-application would be appropriate to calculate the individual Solvency Capital Requirement of the related undertaking, in particular, for the fulfilment of the tests and standards for this related undertaking.

5.509. A joint on-site examination may be also organized by one of the national competent authorities of a related undertaking not included in the scope of the internal model under pre-application. This on site-examination can only have the aim of identifying and preventing circumstances where the exclusion of parts of the business from the scope of the internal model under pre-application could lead to a material underestimation of the risks of the group, or where the internal model could conflict with an internal model that would be used for the calculation of the Solvency Capital Requirement of any of the insurance or reinsurance undertakings in the group.

5.510. The communication to the undertaking could take the form of a communication from the college, when national competent authorities taking part in the on-site examination or involved in the pre-application process for the internal model for a group consider it appropriate.

Guideline 69 - Off-site activities on internal models during the pre-application process for internal models for groups

During the pre-application process for an internal model for a group, national competent authorities involved should share and discuss the main findings of their off-site activities with the group supervisor and the other national competent authorities involved.

The national competent authorities involved should share the approach they are following in the review of the elements of the internal model with the group supervisor and the other national competent authorities involved.

If, as a result of this sharing, the national competent authorities involved identify substantial differences in the approaches followed, they should discuss and they should agree on a process to develop consistent approaches when they consider appropriate to have this alignment.

When they deem appropriate, the national competent authorities involved should consider sharing the tools and techniques they are using for the review of the elements of the internal model with the other national competent authorities involved.

5.511. The aim of this Guideline is to ensure that all the national competent authorities involved are aware of the relevant information necessary for an effective pre-application process.

5.512. This can be done at college meetings or other specialized teams meetings, by written procedure or any other appropriate channel, bearing in mind the responsibility of the group supervisor in the sharing of information within the college.

5.513. Major off-site activities would be foreseen in the work plan for the pre-application process, but further off-site activities can take place when deemed necessary for an effective pre-application process.

5.514. Off-site activities can be conducted by national competent authorities individually or in coordination between several national competent authorities involved or by other national competent authorities within the college for the relevant purposes.

5.515. The alignment of approaches for the review of the internal model under pre-application is important to ensure a convergent and efficient pre-application process.

5.516. This cannot justify a failure of the use test, not meeting the statistical quality standards or not properly validating the internal model and its use or any other requirement, for undertakings using the internal model for the calculation of the Solvency Capital Requirement.

Guideline 70 - Involvement of third country national competent authorities during the pre-application process for internal models for groups

During the pre-application process for an internal model for a group, the group supervisor and the other national competent authorities involved should form a view on whether and which third country national competent authorities should be consulted.

Before consulting the third country national competent authority, the group supervisor, with the support of the national competent authorities involved, should take appropriate steps to ensure that the legislative provisions on the confidentiality of information of the jurisdiction where the third country national competent authority is situated are equivalent to the professional secrecy requirements resulting from Solvency II, other EU Directives and national legislation applicable to the involved national competent authorities.

6. Appendixes:

Appendix I: Revised Impact Assessment

6.1. The EIOPA Guidelines on Pre-application for Internal Models aim to provide guidance on what national competent authorities and the insurance or reinsurance undertaking should consider, during the pre-application process, in order that national competent authorities are able to form a view on how prepared an insurance or reinsurance undertaking engaged in a pre-application process is to submit an application for the use of an internal model for the calculation of the Solvency Capital Requirement under Solvency II and to meet the internal models requirements set out in the Directive. These goals have been underlined by EIOPA in the "Opinion on interim measures regarding Solvency II" of the 20 December 2012[9].

6.2. EIOPA Guidelines will help:

(a) National competent authorities to form their view during the pre-application process and increasing the convergence of supervisory practices in this respect; and

(b) Undertakings to prepare for submitting an application to use an internal model under Solvency II and to build their internal model framework in a way that enables them to be prepared to use their model both for risk management and decision-making purposes, and for the calculation of the Solvency Capital Requirement.

Proportionality

6.3. When developing the proposed policies EIOPA has considered the respective proportionality aspects and has provided reference as appropriate. For the overall approach to proportionality on the Guidelines under consultation, please see the "Cover note for the Consultation Paper on Guidelines on preparing for Solvency II".

6.4. National competent authorities should take into account the proportionality principle when reviewing the internal model of the insurance or reinsurance undertaking engaged in a pre-application process in order to form a view on how prepared this undertaking is to fulfil the requirements for the use of internal models, bearing in mind that proportionality principle should not, however, be understood as waving or lowering any of the requirements.

6.5. In particular national competent authorities should take into account the proportionality principle by considering the nature, scale and complexity of the risks to which an insurance or reinsurance undertaking is exposed as well as the design, scope and qualitative aspects of the internal model of this undertaking when deciding on the extent of the reviews.

[9] https://eiopa.europa.eu/fileadmin/tx_dam/files/publications/opinions/EIOPA_Opinion-Interim-Measures-Solvency-II.pdf

Baseline Scenario

6.6. When analysing the impact from policies, the methodology foresees that a baseline scenario is applied as the basis for comparing policy options. This helps to identify the incremental impact of each policy option considered. The aim of the baseline scenario is to explain how the current situation would evolve without additional public intervention.

6.7. For the analysis of the potential related costs and benefits of the proposed Guidelines on Pre-application for Internal Models, EIOPA has applied as a baseline the current practice for the pre-application process including any preparation that has been made for implementing Solvency II and the provisions set out in the CEIOPS´ Level 3 Guidance on Pre-Application process for internal models. EIOPA has taken into account that undertakings applying for the use of an internal model to calculate the Solvency Capital Requirement under Solvency II will have to comply with Solvency II requirements as further specified in the Delegated Acts when issued.

6.8. Taking into account this baseline scenario, EIOPA considers that only the following Guidelines add new requirements:

(a) Validation report;

(b) Documentation user manuals or process descriptions; and

(c) Work plan for pre-application and setting out the tasks of the group supervisor and the other national competent authorities involved and participating in the pre-application process for internal models for groups.

6.9. Specific Impact Assessment reports for these Guidelines are included below.

6.10. The other Guidelines involve no additional requirements, taking into account that undertakings applying for the use of an internal model to calculate the Solvency Capital Requirement under Solvency II will have to comply with Solvency II requirements as further specified in the Delegated Acts when issued. Therefore they either do not create additional costs or create limited costs. Specific consideration of this can be found in the Appendix to this Annex.

I) Preliminary analysis of the opportunity of issuing Guidelines

6.11. Before analysing pros and cons of the proposed groups of Guidelines with respect to the baseline, it is necessary, on a logical basis, to justify the choice of issuing Guidelines now or not doing nothing and wait until the application of Solvency II.

6.12. For this null option it is possible to identify the following costs and benefits:

<u>Option 0, not issuing Guidelines</u>:

6.13. With regard to costs on the side of undertakings: it is expected that not having further details now on pre-application would make more difficult to be prepared for submitting an application under Solvency II to use an internal model, taking also into account the amount of resources undertakings are devoting in building their model. Moreover, without Guidelines on pre-application there may be less convergence in the national competent authorities' review of internal models, and this might increase costs in particular for groups established in several countries.

6.14. With regard to costs on the side of national competent authorities: it is expected that not having further details now on the review national competent authorities carry out during pre-application would make more difficult for national competent authorities and colleges to allocate resources in an efficient manner for the pre-application process. There may be a lack of consistency in national competent authorities' practices and reviews of internal models during the pre-application process, which may affect in particular colleges. In the future, when the final application may be submitted by the undertaking, the decision process may be less smooth.

6.15. With regard to benefits on the side of undertakings: taking into consideration the work performed until now during pre-application, it is expected that undertakings have already started their preparation for submitting an application, based on the already existing dialogue with national competent authorities as set out in the CEIOPS Guidance on Pre-application. The advantage for the undertaking could be that, now, it would not have to take into account new aspects or further elements during pre-application, while building its model in order to be prepared for submitting an application for the use under Solvency II. However, one can argue if that (not having guiding principles) is really an advantage.

6.16. With regard to benefits on the side of national competent authorities: taking into consideration the work performed until now during pre-application, national competent authorities have already started the dialogue with undertakings on the basis of the CEIOPS' Guidance on Pre-application. The advantage for national competent authorities could be that they would not have to take into account new aspects or further elements in the review they carry out during pre-application. However, one can argue if that (not having guiding principles) is really an advantage.

6.17. For consumers: no immediate advantage as any costs that may be reflected on policyholders would also happen with normal preparation of Solvency II. And this is true also on the side of possible costs.

The balancing between cons and pros led to the final evaluation that is beneficial for all providing now Guidelines, to help undertakings and national competent authorities in preparing and organising during the pre-application phase.

II) Validation report

1: Procedural issues and consultation of interested parties

6.18. The Impact Assessment was prepared in the course of the policy drafting process, with the contribution of experts on internal models from different national competent authorities and EIOPA.

6.19. Selected stakeholders were pre-consulted in the preparation of the Guidelines.

2: Problem definition

6.20. Through the pre-application process national competent authorities should form a view on how prepared the undertaking is to fulfil the validation requirements. To this end, national competent authorities should in particular form a view on how the undertaking deals with the results of each validation cycle it carries out and with the conclusions and consequences of this validation.

6.21. National competent authorities need to form a view on the appropriateness of the approach followed by the undertaking.

6.22. Undertakings need to prepare for the validation of the internal model they would use under Solvency II for the calculation of the Solvency Capital Requirement.

3: Objective pursued

6.23. The "Opinion on interim measures regarding Solvency II" issued by EIOPA on the 20th December 2012 states that it is important that there will be a consistent and convergent approach with respect to the preparation of Solvency II. Pre-application of internal models is one of the key areas that need to be addressed during the run-up to the new system.

6.24. In the light of this general goal, the objective of the Guideline on "Validation report" is to determine the best way the results, conclusions and consequences of each validation cycle could be set out by the undertaking in order for the national competent authorities to form the view referred to above and for the undertaking to prepare itself for submitting an application for the use of an internal model under Solvency II.

4: Policy options

6.25. Two Options were foreseen:

Option 1: Putting in place a validation report by the undertaking, documenting the results for each validation cycle as well as the resulting conclusions and consequences from the analysis of the validation.

Option 2: Not putting in place a validation report, that would imply having ad-hoc requests by national competent authorities on the conclusions of each validation cycle of the undertaking.

5: Analysis of impacts

6.26. With respect to the baseline it is possible to identify the following costs and benefits for each of the options.

Option 1:

6.27. With regard to costs on the side of undertakings:

(a) in preparing for submitting an application for the use of an internal model, they will need to devote time and resources for elaborating the formal validation report for each validation cycle;

(b) the materiality of these costs will vary depending on the level of detail of the validation process performed, the tools used and the actions to be taken as a result;

(c)

6.28. With regard to costs on the side of national competent authorities:

(a) during pre-application process, they will have to dedicate specific resources to review the way the undertaking puts in place the report in order to form a view about its readiness to comply with the validation requirements;

(b) in the future, in supervisory assessment of the on-going compliance of the internal model, the report produced by undertakings for each validation cycle could not fit to potential specific supervisory analyses. If it is the case, national competent authorities could find themselves in the need of asking additional information that cannot be immediately ready.

6.29. With regard to benefits on the side of undertakings:

(a) with formal reports, the validation activity will be carefully recorded in order to be able to ensure the efficiency of the validation and be better prepared to comply with validation requirements;

(b) each cycle of validation of the internal model will have its own formal report, so providing all information necessary to reconstruct and follow during time the evolution of the model and of the governance steps linked to it;

(c) moreover, with a formal report there will be incentives towards more control around all the validation process, identifying the data sets used and the different parts involved and their roles;

(d) if the results of the validation process are documented, it will be easier to report and escalate them within the undertaking in order to take the appropriate decisions and actions that may be needed in the internal model. From this point of view, a formal report works as a real tool to improve the governance around the validation process;

(e) if the reports cover all possible information and elements that national competent authorities may be interested in, it will help in saving costs associated with ad-hoc requests.

6.30. With regard to benefits on the side of national competent authorities: national competent authorities would benefit in the future from being able to verify overall on-going compliance with validation standards directly in the report, avoiding ad-hoc requests and saving costs associated to such requests. In particular, information available in the report would assume the status of official information, and this would simplify the relationship between undertakings and national competent authorities, limiting the number of ad-hoc request, and most of all those to ask confirmation, on a legal basis, and endorsement of single data or single features.

6.31. No additional costs are expected for consumers, while they surely will benefit from the sounder governance and the higher level of transparency associated with formal validation reports.

Option 2:

6.32. With regard to costs on the side of undertakings:

(a) they may not regularly document the results of each validation cycle, and therefore it will be more difficult to communicate internally and adopt the appropriate actions that may be needed in the internal model as a result of each validation cycle;

(b) they may lose some control over the validation process, in particular regarding the tools, data set used and the participants involved;

(c) it may be more difficult for them to prepare for the use of models under Solvency II and in particular for the validation requirements.

6.33. With regard to costs on the side of national competent authorities:

(a) in the case that in the future the model is approved, there would be a need to assess at every validation cycle whether a report of the validation should be requested to the undertaking;

(b) more resources needed to determine what the content of the ad-hoc request would be.

6.34. With regard to benefits on the side of undertakings: some costs may be saved, as they would not have to produce the report in each validation cycle.

6.35. With regard to benefits on the side of national competent authorities: ad-hoc requests would fit the purpose of specific supervisory needs.

6.36. Consumers would suffer from a less sound validation process.

6: Comparing the options

6.37. In relation to Option 1 it has to be considered that a validation report would be requested to be included in the application package for the internal model. This probably will help undertakings in producing the future reports for each validation cycle if their model is approved.

6.38. EIOPA considered, as an alternative option (Option 2), the possibility of not giving a formal nature to the report. The costs of having a formalized report compared to this alternative option are minor. Even if not formalized, the report would need anyway to be correct, complete and readable in all its information; so, all the costs of gathering data, analysing it and deriving management suggestions would be similar if the report was not formalised.

On the basis of these arguments, EIOPA opted for Option 1: National competent authorities will form a view on how the undertaking puts in place a formal validation report in order to stress the importance of the undertaking's validation procedure.

III) Documentation user manuals or process descriptions

1: Procedural issues and consultation of interested parties

6.39. The Impact Assessment was prepared in the course of the policy drafting process, with the contribution of experts on internal models from different national competent authorities and EIOPA.

6.40. Selected stakeholders were pre-consulted in the preparation of the Guidelines.

2: Problem definition

6.41. Through the pre-application process national competent authorities should form a view on how prepared the undertaking is to fulfil the documentation requirements.

6.42. Undertakings need to prepare for the use of internal model they would use under Solvency II for the calculation of the Solvency Capital Requirement and for operating it in a proper manner.

6.43. Since the result from the internal model would form the Solvency Capital Requirement and would also form the basis for steering and making decisions (use test) in the undertaking on an on-going basis, it is necessary that documentation enables an independent knowledgeable third party to determine the state, appropriateness and reliability of the internal model at all times.

3: Objective pursued

6.44. The "Opinion on interim measures regarding Solvency II" issued by EIOPA on the 20th December 2012 states that it is important that there will be a consistent and convergent approach with respect to the preparation of Solvency II. Pre-application of internal models is one of the key areas that need to be addressed during the run-up to the new system.

6.45. In the light of this general goal, the objective of the Guideline on "Documentation user manuals or process descriptions" is to determine the best way the undertaking could ensure that the operation of the model could remain appropriate at all times, and how documentation could help on this. Through the pre-application process national competent authorities will form a view on how the undertaking ensures this.

4: Policy options

6.46. Two Options were foreseen:

Option 1: Putting in place by the undertaking of detailed user manuals or process descriptions as part of the documentation of the model which should be sufficiently detailed to allow an independent knowledgeable third party to operate and run the model.

Option 2: Not doing anything in addition to the baseline.

5: Analysis of impacts

6.47. With respect to the baseline it is possible to identify the following costs and benefits for each of the options.

Option 1:

6.48. With regard to costs on the side of undertakings:

(a) in preparing for submitting an application for the use of an internal model, they would need to devote time and resources to put in placedetailed manuals or process descriptions as part of the documentation of the internal model;

(b) the materiality of these costs would vary depending on the level of detail of the specific internal model.

6.49. With regard to costs on the side of national competent authorities: not foreseen.

6.50. With regard to benefits on the side of undertakings:

(a) the different users of the model would be able to better understand how the model operates;

(b) user manuals or process descriptions for operation of the internal model is an important mitigant to key-person risk, which exists both at model design level and model operation level.

6.51. With regard to benefits on the side of national competent authorities: in the same direction as undertakings, national competent authorities would be able to more easily form a view on the appropriateness of the way the undertaking run the model.

6.52. No additional costs are expected for consumers, while they surely would benefit from a better way to operate the model by the undertaking.

Option 2:

6.53. With regard to costs on the side of undertakings:

(a) the key-person risk would be increased;

(b) it would be more difficult to deep into the operation of the model by different users.

6.54. With regard to costs on the side of national competent authorities: it would be more difficult to form a view on the appropriateness of the way the undertaking runs the model.

6.55. With regard to benefits on the side of undertakings: they would not dedicate resources to put in place user manuals or process descriptions.

6.56. With regard to benefits on the side of national competent authorities: they would not dedicate resources to form their view on how the undertaking puts in place user manuals or process descriptions.

6.57. Consumers may be less protected as undertaking would be more exposed to the key person risk.

6: Comparing the options

6.58. The benefits of Option1 are higher than the ones of Option 2.

6.59. These benefits of Option 1 clearly overcome the costs related to its implementation.

6.60. Since the result from the internal model would form the Solvency Capital Requirement and will also form the basis for steering and making decisions (use test) in the undertaking on an on-going basis, it is necessary that documentation enables an independent knowledgeable third party to determine the state, appropriateness and reliability of the internal model at all times.

6.61. If the documentation does not include a tool specifying the design and operational details which is not thorough enough, sufficiently detailed and sufficiently complete to be understandable by an independent knowledgeable third party, the undertaking could be faced with increased key-person risk.

Therefore it was decided to follow the Option 1: National competent authorities should form a view on how the undertaking puts in place user manuals or process descriptions for operation of the internal model.

IV) Work plan for pre-application and setting out the tasks of the group supervisor and the other national competent authorities involved and participating in the pre-application process for internal models for groups

1: Procedural issues and consultation of interested parties

6.62. The Impact Assessment was prepared in the course of the policy drafting process, with the contribution of experts on internal models from different national competent authorities and EIOPA.

2: Problem definition

6.63. Through the pre-application process national competent authorities should form a view on how prepared a group undertaking is to submit an application to use an internal model that would be used to calculate the consolidated group Solvency Capital (Article 230 of Solvency II), or to calculate the consolidated group Solvency Capital Requirement, as well as the Solvency Capital Requirement of at least one related undertaking (group internal model under Article 231 of Solvency II).

6.64. In the case of a pre-application process for an internal model for a group composed of several insurance or reinsurance undertakings which are supervised by national competent authorities of different Member states, during the pre-application process, those national competent authorities will work together in order to form a view about the internal model.

3: Objective pursued

6.65. The "Opinion on interim measures regarding Solvency II" issued by EIOPA on the 20th December 2012 states that it is important that there will be a consistent and convergent approach with respect to the preparation of Solvency II. Pre-application of internal models is one of the key areas that need to be addressed during the run-up to the new system.

6.66. In the light of this general goal, the objective of the Guideline on work plan for pre-application is to ensure that national competent authorities involved in the pre-application process for a group work in an effective and coordinated way.

4: Policy options

6.67. Two Options were foreseen:

Option 1: Setting out a detailed work plan for the pre-application process, covering the timeline, the steps, the deliverables and the priorities of the pre-application process for an internal model for groups. This plan should be updated whenever necessary.

Option 2: Not doing anything in addition to the baseline.

5: Analysis of impacts

6.68. With respect to the baseline it is possible to identify the following costs and benefits for each of the options.

Option 1:

6.69. With regard to costs on the side of undertakings: no particular costs, as the costs are generated for the pre-application process per se and for the need to react on the requests the national competent authorities would make to the different undertakings within the group in order to form a view about the model under pre-application.

6.70. With regard to costs on the side of national competent authorities:

(a) all national competent authorities involved in pre-application (and other national competent authorities in the colleges), in particular the group supervisor, would have to dedicate specific resources to prepare, discuss and agree on the detailed plan and on its update when necessary;

(b) national competent authorities would have to stick to the work plan, so less flexibility can be expected.

6.71. With regard to benefits on the side of undertakings: the requests from national competent authorities involved would follow a logical sequence and the risk of receiving duplication of requests would be reduced.

6.72. With regard to benefits on the side of national competent authorities:

(a) they would benefit from a clearer a more efficient pre-application process;

(b) national competent authorities involved would know the tasks they are expected to perform;

(c) the governance around the pre-application process would be increased;

(d) the risk of duplication of tasks would be reduced;

(e) an efficient pre-application would make easier the future approval process of the application the group may submit.

6.73. No direct costs and benefits are expected for consumers, while they would indirecly benefit from the more efficient process.

Option 2:

6.74. With regard to costs on the side of undertakings: in the lack of a detailed and coordinated planning, the risks of duplication of requests from different national competent authorities within the college would increase significantly.

6.75. With regard to costs on the side of national competent authorities:

(a) the pre-application process could become difficult to manage, making it less efficient and more demanding in terms of resources and timing;

(b) the risk of duplications of tasks would be increased.

6.76. With regard to benefits on the side of undertakings: not foreseen.

6.77. With regard to benefits on the side of national competent authorities: the process could be somehow more flexible.

6.78. Consumers could be penalised due to a less efficient process.

6: Comparing the options

6.79. A formal work plan, as set out in Option 1, is an extremely helpful tool to ensure the effectiveness of the pre-application process and to stress the importance of a full cooperation between national competent authorities involved and other national competent authorities in the college during the pre-application process.

6.80. EIOPA believes that, in the absence of this document (Option 2), the pre-application process could become difficult to manage, making it less efficient and demanding in terms of resources and timing, and increasing the risk of duplications of tasks.

6.81. The advantages of having clear and detailed work plan clearly overcome the costs of establishing such plan.

Bearing in mind the high importance of ensuring a good cooperation within the college during the pre-application process and that the national competent authorities within the college will have to agree in forming a view about the internal model, it was decided to follow the Option 1.

6.82. The following Guidelines involve no additional requirements, and therefore they either do not create additional costs or create limited costs. In fact they simply work as clarifications and explications of the elements that national competent authorities and undertakings should take into account in order that national competent authorities form their view during the pre-application process on how prepared the undertaking is to submit an application to use an internal model for the calculation of the Solvency Capital Requirement.

General Guidelines pre-application

6.83. The aim of this group of Guidelines is to explain what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on how prepared the undertaking is to submit an application for the use of an internal model for the calculation of the Solvency Capital Requirement under Solvency II and to meet the internal models requirements for this use.

6.84. The Guideline on national competent authorities' review only clarifies how national competent authorities should review the model for the purposes of pre-application, introducing the proportionality principle and the necessity to take into account the specificities of each undertaking.

6.85. The Guideline on changes during pre-application provides some light about what to do in the case of changes made by the undertaking to its model during pre-application. It might create costs to national competent authorities in respect of the need to monitor and, where appropriate, review changes to the internal model during the pre-application process, but this is necessary to form a view on the model for the purposes of this process.

6.86. No additional options were foreseen for the Guidelines.

Model changes

6.87. The aim of this group of Guidelines is to provide guidance about what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view about the relevance and the adequacy of the policy for changing the internal model the undertaking establishes (Article 115 of Solvency II).

6.88. The first Guideline of this Chapter explains that national competent authorities will form a view on how the policy for changing the model developed by the undertaking covers some relevant aspects. An alternative option would have been to include in the policy any change that would make necessary to alter the substance of the documentary evidence of the model compared with the last application for the use of such model. The option embedded in the Guideline was considered more useful and straightforward than the alternative one.

6.89. The second Guideline requests national competent authorities to form a view on how the undertaking develops a reliable system to identify major changes, taking into account quantitative and qualitative criteria. An alternative option would have been to specify and list what should be considered as major changes for all cases. This last option was not followed as it was considered not proportional: it gives no responsibility to the undertaking to choose its own set of indicators that would fit its risk profile and specific needs.

6.90. The final Guideline of the Chapter provides explanations for model changes and policy for model changes in the context of group internal models that would be used for the calculation of both the group Solvency Capital Requirement and the Solvency Capital Requirement of some related undertakings. An alternative option to the one embedded in the Guideline would have been to let every related undertaking in the group to develop its own policy. This alternative option was not selected because it was considered against the principle of economic unity of a group.

6.91. For the rest of Guidelines no alternative option was foreseen.

Use test

6.92. The aim of this group of Guidelines is to provide guidance about what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on how prepared the undertaking is to comply with the use test as set out in Article 120 of Solvency II.

6.93. In the case of the first Guideline of this Chapter, it was foreseen as an alternative option that national competent authorities could form a view on how undertakings demonstrate a list of mandatory and specific uses that would have been applicable in any case. Since the internal model and its use are specific for each undertaking, this alternative option was not chosen.

6.94. Regarding the Guideline requesting the need to improve the quality of the internal model, an alternative option would have been the use of the internal model by the undertaking in the risk management system and decision-making without analysing any potential changes of the internal model that could improve it. This option was rejected as it does not incentivise the continuous improving of modelling practices, which is considered by EIOPA as a core principle of an internal model framework.

6.95. For the rest of Guidelines, no additional options were foreseen.

Assumption setting and expert judgement

6.96. The aim of this group of Guidelines is to provide guidance about what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on how prepared the undertaking is to fulfil the requirements related to assumptions setting and expert judgement.

6.97. The Guidelines allow for a better control and knowledge by the undertaking around the assumptions made in the internal model and the use of expert judgment. No alternative options were taken into account.

Methodology consistency

6.98. The aim of this group of Guidelines is to provide guidance about what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on how prepared the undertaking is to fulfil the requirements related to the consistency between the methods used for the calculation of the probability distribution forecast and the methods that would be used for the valuation of assets and liabilities for solvency purposes.

6.99. Regarding the Guideline on consistency check points and the one on aspects of consistency, no alternative options were considered.

6.100. Regarding the Guideline on consistency assessment, the option on forming a view about how the undertaking carries out its analysis about consistency was preferred to the option of the setting out of a standardised way to assess it. The first option was considered as more flexible and it has the advantage that it adapts the consistency checks to the specificities of the undertaking.

6.101. For the rest of Guidelines no alternative options were considered.

Probability distribution forecast

6.102. The aim of this group of Guidelines is to provide guidance about what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on how prepared the undertaking is to fulfil the requirements related to the probability distribution forecast and knowledge of its risk profile by the undertaking.

6.103. The first Guideline of this Chapter allows for a better expectation management for undertakings in order that the probability distribution forecast can reflect all relevant characteristics of its risk profile. National competent authorities should form a view on how the undertaking ensures that. An alternative option would have been to ask for more specific information not up-front, but in the course of on-site inspections. This was considered more onerous and time-consuming and not less costly for the undertaking.

6.104. The second Guideline further elaborates on the topic dealt with in the first one.

6.105. The rest of Guidelines clarify how to form a view by national competent authorities on when requirements would be met by the undertaking in the case of some features that can affect the richness of the probability distribution forecast. No alternative options were considered.

Calibration - approximations

6.106. The aim of this group of Guidelines is to provide guidance about what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on how prepared the undertaking is to fulfil the requirements related to approximations that would be used to derive the Solvency Capital Requirement from internal models adopting another risk measure than the reference one in the context of Article 122 of Solvency II.

6.107. No alternative options that the ones embedded in the Guidelines were considered.

Profit and loss attribution

6.108. The aim of this group of Guidelines is to provide guidance about what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on how prepared the undertaking is to fulfil the profit and loss attribution requirements set out in Article 123 of Solvency II.

6.109. An alternative option has been considered only for the first Guideline of this Chapter. In this case, it could have been possible a link with the regulatory capital for the purposes of profit and loss, instead of the option embedded in the Guideline. It was decided to reject this option, as it was considered that undertakings should follow for these purposes what it makes sense for them from an economic point of view and internal purposes.

Validation

6.110. The aim of this group of Guidelines is to provide guidance about what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on how prepared the undertaking is to fulfil the validation requirements set out in Article 124 of Solvency II.

6.111. Only the Guideline on validation report adds a specific new requirements: "National competent authorities form a view about how the undertaking documents the results of the validation as well as the resulting conclusions and consequences from the analysis of the validation, and how this report includes a reference to the validation data set as well as the sign off from the main participants in the process". So to prepare for the use of the model, undertakings will need to put in place validation reports at each cycle of the validation process it carries out on its internal model. This would apply even after the internal model has been approved. What EIOPA Guideline adds is the important specification of the formality and of the cyclicality. A detailed Impact Assessment for this Guideline is carried out in previous pages.

6.112. For the other Guidelines, no alternative options were taken into consideration. In some cases, though they do not add requirements, these Guidelines may appear generating some limited costs, due to the fact that they make clear and explicit some elements in order to help national competent authorities to form a view on - and the undertaking to prepare itself for - the validation of internal models performed by the undertaking. Nevertheless the benefits for undertakings and national competent authorities clearly overcome these costs.

Documentation

6.113. The aim of this group of Guidelines is to provide guidance about what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on how prepared the undertaking is to fulfil the documentation requirements set out in Article 125 of Solvency II.

6.114. Only the Guideline on user manuals or process descriptions adds new specific requirements. A detailed Impact Assessment for this Guideline is carried out in previous pages.

6.115. With respect to the rest of Guidelines, only the first one (Control procedures) does not add new costs, because it provides only further guidance on the elements that national competent authorities should take into account to form their view.

6.116. The other Guidelines may be source of some slight additional costs, but the benefits for undertakings and national competent authorities clearly overcome these costs.

6.117. The Guideline stating the need that national competent authorities form a view on how the undertaking evidences, trough the documentation of the internal model, detailed understanding about some aspects of the model, further specifies some of the elements that have to be taken into account during the pre-application in relation to the documentation of the model. These elements can be seen as deriving from the need that national competent authorities form a view on how prepared the undertaking is to demonstrate a detailed understanding of the internal model and in particular a detailed understanding of the theory and assumptions underlying it.

6.118. In respect of the Guideline stating that national competent authorities should form a view on how the undertaking includes in the documentation an overall summary of the shortcomings of the internal model consolidated in a single document, and a summary of the work done to identify the shortcomings as well as any plans to improve the model, it should be noted that national competent authorities should also form a view on how prepared the undertaking is to fulfil the use test requirements, including the need that the undertaking's board is made aware of all possible shortcomings of the internal model. A slight cost may arise from the fact that undertakings will have to consolidate in a single document all the relevant information. Nevertheless this consolidation is useful for both undertakings to contribute to the efficiency of the documentation and for national competent authorities to be able to form a view during pre-application on how prepared the undertaking is to fulfil the internal models requirements.

6.119. The Guideline stating that national competent authorities should form a view on how the undertaking considers establishing more than one level of documentation commensurate with the different uses and target audiences, aims at tailoring the documentation of the model to key bodies and key personnel. This is very important since it will facilitate more effective implementation and control of the internal model as well as more effective supervisory review. This Guideline can add some costs but, at the same time, it should be noticed that putting in place different levels of documentation is not statutory and is left to the consideration of the undertaking.

6.120. In respect of the Guideline stating that national competent authorities should form a view on how the undertaking documents the outputs of the internal model that are relevant for satisfying requirements of Article 120 of Solvency II, some costs may arise for the undertaking from the fact that they will need to retain and analyse these outputs. Nevertheless it should be noticed that this EIOPA Guideline simply makes more explicit an element that needs to be taken into account for forming a view in relation to the use test.

6.121. National competent authorities will form a view on how ready the undertaking is to fulfil the documentation requirements and uses also the documentation of the model to develop an understanding by all users at all relevant levels. The request for forming a view on the undertaking's documentations, possibly with different levels of details for different audiences, acts as evidence that the undertaking is preparing to acquire this understanding. A high level of understanding of all parts involved in the internal models is beneficial for all relevant parties: for undertakings it is essential in order to develop a sound governance system; for policy holders as they will have the guarantee that the most effective choices are implemented by the undertaking to manage risks; and for national competent authorities as the review of the internal model is made easier: crucial aspects of the internal model and its understanding by the undertaking are described in detail and summarized in documents formally endorsed by this undertaking.

6.122. EIOPA considered also different options for each Guideline.

6.123. For the first Guideline of the Chapter, the alternative option was not expecting undertakings to put any control procedure for the documentation. Here, giving further guidance to ensure convergent practices was preferred, given the importance of the issue.

6.124. For the second Guideline, it was considered the option of not to admit in the undertaking's documentation, documentation prepared by third parties. Bearing in mind that the fact that the undertaking relies on the documentation produced by an external provider does not exempt the undertaking to fulfil the documentation requirements, it was essential to clarify that national competent authorities should also form a view on how the undertaking demonstrates a sufficient level of understanding of the documentation provided by third parties.

6.125. For the Guideline on the summary of shortcomings, the alternative option was not expecting undertaking to put in place an overall summary of all shortcomings of the internal models in a single document. This option was rejected because it was considered important that the undertaking puts in place a single document presenting shortcomings of the internal model. The cost of the option embedded in the final Guideline was considered to be overcome by the benefits it brings.

6.126. For the Guideline on tailored documentation, an alternative option would have been to expect from the undertaking a single level of documentation. Here, it was deemed more useful for the undertaking and national competent authorities to allow the undertaking to consider different levels of documentation according to users and of audience.

6.127. For the Guideline related to the outputs of the model, there were two alternative options: either not treating the issue at all, or expecting the undertaking to retain the complete set of all runs of the model (not only the outputs). An intermediate solution was chosen for the Guideline, this was considered more useful and straightforward for the undertaking.

6.128. Finally, regarding the last Guideline of the Chapter, the alternative options were again two: either to exclude platforms from the documentation, or to expect undertakings to fully include them. An intermediate solution was found again to ensure both an effective and a proportionate approach: national competent authorities form a view on the undertaking provides sufficient information about their IT systems used in the model.

External models and data

6.129. The aim of this group of Guidelines is to provide guidance about what national competent authorities and the undertaking need to consider, through the pre-application process, in order that national competent authorities are able to form a view on how prepared the undertaking is to fulfil the external models and data requirements set out in Article 126 of Solvency II. The use of external models or data does not exempt undertakings to comply with internal models requirements.

6.130. Only some limited additional costs may arise as a consequence of the fact that EIOPA Guidelines extend for external models and external data the general requirements and other Guidelines set out for other areas for internal models and internal data, such as statistical technical standards, use test, validation standards or documentation standards. These limited costs cannot be attributed to EIOPA Guidelines in a strict sense. EIOPA simply made them explicit, taking into account that external models and data are subject to the same requirements as models and data internally developed by the undertaking as set out in Article 126 of Solvency II.

6.131. The Guideline clarifying how supervisory review of external models and data should be carried out and their relationship with external vendors does not introduce new requirements as this is the normal process national competent authorities should conduct to form a view on how ready the undertaking is to fulfil the internal model requirements.

6.132. No alternative options have been taken into consideration in the Guidelines.

Functioning of Colleges

6.133. The aim of this group of Guidelines is to explain how Colleges of supervisors should function during the pre-application process for internal models for groups submitted to pre-application that would be used to calculate the consolidated group Solvency Capital Requirement or both the consolidated group Solvency Capital Requirement and the Solvency Capital Requirement of some related undertakings.

6.134. Only the Guideline related to tasks of the group supervisor and of the other involved national competent authorities is expected to add a new concrete requirement: a written work plan that the group supervisor, in consultation with the other national competent authorities involved, should establish, covering the timeline, the steps, the deliverables and the priorities of the process for the pre-application process for an internal model for groups. A detailed Impact Assessment for this Guideline is carried out in previous pages.

6.135. The rest of Guidelines may create some costs for national competent authorities within the respective college but these are normal in the process to form a view in the context of internal models for groups. For these Guidelines no alternative options have been taken into consideration.

Appendix II: Resolution of comments

Summary of Comments on Consultation Paper EIOPA-CP-13/011 CP-13-011_Pre-Application_Internal_Models				27 September 2013
EIOPA would like to thank Aon Ltd, ASSOCIATION OF BERMUDA INSURERS AND REINSURERS (ABIR), ASSOCIATION OF FINANCIAL MUTUALS, ASSURALIA, BMA, CRO Forum CFO Forum, Deloitte, DIMA (Dublin International Insurance & Management , FEE, German Insurance Association (GDV), Groupe Consultatif Actuariel Européen, Institut des Actuaires, Insurance and Reinsurance Stakeholder Group (IRSG), Insurance Europe, Insurance Ireland, International Underewriting Association of London, Lloyd's, MetLife, Munich Re, Polish Chamber of Insurance, PZU, RSA Insurance Group, and Steptoe & Johnson LLP The numbering of the paragraphs refers to Consultation Paper No. 13/11 (EIOPA-CP-13/11)				
No.	**Name**	**Reference**	**Comment**	**Resolution**
1.	ASSOCIATION OF BERMUDA INSURERS AND REINSURERS (ABIR)	General Comment	The Association of Bermuda Insurers and Reinsurers (ABIR) is grateful for the opportunity to provide comments on the Consultation Paper. ABIR is a professional trade association representing Bermuda's Class 4 insurers and reinsurers. Our 21 members write a significant amount of insurance and reinsurance from both subsidiary corporations in Europe and from cross border export sales from Europe to our Bermuda underwriting headquarters. Eighteen of our 21 member companies have European subsidiary corporations.	Noted
2.	ASSOCIATION OF FINANCIAL MUTUALS	General Comment	The Association of Financial Mutuals represent financial mutual insurers within the UK, with 53 member companies and assets approach £100 billion. We welcome the chance to comment on this consultation paper. We believe the Guidelines are useful and provide practical guidance for national competent authorities (NCAs) to start reviewing undertakings	Noted

			readiness according to the Guidelines from 1 January 2014. Considering this it should be stressed the importance of not basing any supervisory enforcement actions, including add-ons, on the outcome of the Guidelines. We would welcome a statement making this recommendation clear. It should be recognised that undertakings plan a phased progress towards compliance up to formal application date.	The Guidelines on pre-application aim to help undertakings and supervisors to prepare for the use of internal models under Solvency II. As stated in the feedback statetment of the Guidelines: the Guidelines do not, require NCAs to take supervisory action as a result of a failure by undertakings to comply with Solvency II requirements, including the pillar one requirements It is not expected that undertakings fully comply with internal models requirements as of 1 January 2014. The aim of the Guidelines is precisely helping undertakings to develop their internal model framework and thereby prepare to submit a final

			Some of the requirements, especially on documentation, extend somewhat beyond what was originally intended by creating an unnecessary and disproportionate level of detail. This envisaged level of detail seem not to bring any added value on assessing the quality of the models and contains the risk of turning the NCA assessment into a compliance exercise requiring more resources for both undertakings and regulators, instead of creating a constructive dialogue.	application We consider the Guidelines are useful to develop a robust and appropriate internal model framework under Solvency II. Please see also resolution of comments in the Documentation Chapter We do not agree with this statement. Ensuring constructive dialogue between supervisors and undertakings is the main aim of the pre-application process and the Guidelines are to be seen on this basis
3.	ASSURALIA	General Comment	Assuralia welcomes the opportunity to comment on the Consultation Paper on Proposal for Guidelines on Pre-application for Internal Models. A continuation of the pre-application process for internal models during the interim phase is considered as a positive approach in the preparation of Solvency II.	Noted Noted

			However, some requirements, especially those on documentation, go somewhat beyond what was originally intended creating an unnecessary level of detail. This envisaged level of detail may not bring little or any added value on the assessment on the quality of the models and risks to turn the supervisory assessment into a compliance exercise requiring significantly more resources for both undertakings and supervisors, instead of spending time in creating a constructive dialogue. We refer to the user manual in guideline 57 as an example to confirm our argument. Assurance should be given that the pre-application processes are from now on implemented without any country specific additions and that pre-application processes which are already or nearly completed will not have to be revised. It goes without saying that intensive discussions and pre-application activities have been taking place for years. Several (partial) internal models have been subject to extensive supervisory reviews and already show a high degree of maturity.	Please see last paragraphs of answer to comment 2 EIOPA recognizes the value of the extensive discussions that have already taken place during pre-application. National supervisors, and especially colleges of supervisors, are expected however to continue to work with undertakings on an on-going basis during the pre-application process and to plan appropriately to form a view on the undertaking's readiness to submit an application. This applies, in particular, when undertakings expect to submit an

				application for a decision on the use of an internal model from the first day on which Solvency II is applicable
			Most guidelines start with "national competent authorities (NCA) should form a view on…" There is however uncertainty on the criteria and the level of detail the NCA will use to form their view on the preparedness.	The criteria and the detail are based on the provisions set out in the Guidelines, taking into account also the requirements of the Directive and the upcoming Implementing Measures and Technical Standards. Also EIOPA is working to coordinate the approaches and criteria followed by supervisors and increase convergence of their practices
			It is also unclear on the basis of which criteria NCA's will evaluate an internal model and conclude the finalisation of the pre-application process.	EIOPA will deal with the issue of finalisation of the pre-application process and transition to application when there is more certainty about the Solvency II timing

4.	BMA	General Comment	The BMA is an integrated regulator and supervisor of financial institutions that includes (re)insurers of varying size and levels of complexity conducting a wide range of business activities and utilising diverse business models. The Bermuda Monetary Authority (BMA or Authority) appreciates the opportunity to comment on the Consultation Paper on the Proposal for Guidelines on Pre-application for Internal Models (CP). The Bermuda Monetary Authority (BMA or the Authority) notes that the CP is largely silent in respect of the involvement of third country supervisors. It is the opinion of the Authority that third country supervisors, with an internal model approval regime largely consistent with that described in this consultation paper, should be invited to support other competent authorities with the review of an internal model application on a peer review basis with member states. Therefore, in instances where a group, for which the BMA is the Group Supervisor, wishes to seek approval of its group model, the Authority would invite other competent authorities to support with the derivation of the scope of the model review and its subsequent implementation. To this end, the Authority would expect to extend the scope of its review of the group model beyond those issues material at the group level to include other issues material to the model of an undertaking based in a member state. Similarly, where a Group, for which the group supervisor is a competent authority from a member state, has an undertaking in Bermuda, the Authority would expect to be consulted by the Group Supervisor. Failure to involve a third country regulator in an instance where the group is intending to use an approved internal model to set statutory capital in that third country, is likely to result in additional costs for both the undertaking and the competent authorities. Furthermore, where the Group Supervisor is a competent authority from a third country, we feel it prudent for member states to be involved with any model approval project given that competent authorities from these member states will be relying upon the group capital requirement derived	Noted Third country competent authorities could participate in the pre-application process as provided in Guideline 70

			from the model approved by the third country supervisor. The Authority would welcome the opportunity to discuss this matter further with EIOPA.	
5.	CRO Forum CFO Forum	General Comment	Joint CFO Forum and CRO Forum feedback on Interim measures We reiterate our support for the efforts made by EIOPA in seeking to achieve harmonised progress towards the implementation of Solvency 2 in the European Union and welcome the opportunity to comment on these consultations. We look forward to engaging with you and your team constructively as EIOPA finalises the guidelines for the interim period. We have some key considerations in respect of the Pre-Application for Internal Models as set out below. 1. A prolonged interim period could result in companies having to engage to model change processes before their internal model has in fact been approved. It is proposed that the requirements in this paper will come into force from 01/01/14. Any review pre-application should be undertaken with the aim of assessing whether a firm will be ready to meet the requirements for model approval by the point of application, in line with the firm's existing plans. The implementation of these requirements should not, in effect, bring forward the date at which the tests and standards for model approval need to be met. This is important as any need to accelerate plans is likely to lead to increased cost and additional challenges where some requirements (e.g. use test) cannot be fully met in advance of final Omnibus 2, Level 2 and Level 3 texts being	Noted The aim of Guidelines published by EIOPA is to help getting prepared for the application of Solvency II Without such preparation, there is a risk that momentum is lost and the benefits of the financial and human resources already devoted to the Solvency II project are dissipated During the preparatory phase it expected that undertakings take steps towards implementing the relevant aspects of the regulatory framework addressed in these Guidelines, so that when Solvency II is applicable, its requirements can be fully complied with

			available. We recommend to rather step into a model change phase during which the further review is concentrated solely on unapproved remainders and changes to the calculation kernel.	NCAs will be expected to set up the necessary procedures to enable them to review and evaluate the quality of the information provided to them, and it is likely to be appropriate to discuss with undertakings the progress being made In an application for approval of an internal model undertakings and groups must demonstrate that they meet the requirements set out in the Solvency II Directive The aim of the pre-application process is for NCAs to form a view on how prepared the undertaking is to submit an application to use an internal model for the calculation of Solvency Capital Requirements when Solvency II is applied The pre-application process is not pre-approval of an internal model. It is therefore not

				possible to follow the approach suggested in the comment. The moment when the NCAs should take a binding decision on the internal model is in the application phase Starting from 1 January 2014, NCAs should make every effort to comply with the Guidelines (Article 16 EIOPA Regulation) However, this does not mean that undertakings are expected to comply with all internal model test and standards as of 1 January 2014 It is expected that during the pre-application process the undertaking builds and/or refines its model with a view to submit an application when Solvency II is applicable. The on-going dialogue with NCAs and feedback provided will help on that

			Furthermore we are concerned about the wording "national competent authorities involved". Within the past years of the pre-application the NCA core colleges efficiently focused on these countries in which the undertaking plans to apply for an internal model. In order to benefit from this experience and collaboration we propose to change the wording into "… authorities concerned". We understand that this implies to some extent an uncertainty as the undertaking may enhance the scope of the planned internal model applications. Nonetheless we think that groups will rather limit this uncertainty by an early and strong commitment to the scope of the pre-application. 2. The review of internal models should be based solely on harmonised EIOPA guidelines. Overall we appreciate the proposed guidelines and generally agree with most of them. We understand and appreciate that there is still a necessary room for interpretation and application. However we are worried about the additional explanatory	In the case of internal models for groups, these guidelines cover both procedures under Articles 230 and 231, following the logic of the process foreseen in the Solvency II framework on internal models for groups The NCAs involved but not concerned should have to play an important role in the process, even in the case of group internal models under Article 231: they have to assess the appropriateness of not using the internal model for the group for the solo SCR calculation and the contribution of the local related undertaking to the group SCR The Explanatory Text has no legal status and therefore it does not need to be consulted. It is intended only to give further explanation to the

			texts which narrow the leeway of the guidelines as they are by far more detailed. Further, we consider certain elements in the explanatory texts as not appropriate which is particularly concerning as this is not embraced by the consultation process directly. Therefore we propose that the review of the internal models should be based solely on the guidelines. Two examples of specifications we are concerned about are given below: a. Parameter/model changes: The explanatory text paper 13/027 states at paragraph 3.13 that 'The regular update of parameters would fall into the scope of a model change'. This goes beyond the scope of the level 1 and level 2 texts. Specifically, note that the regular update of parameters, using the same process, IS NOT a change to the internal model. The guidelines need to make this clear. More generally, note that a firm's change control policy is a matter for NCA approval. Given that prescribing what represents a change goes beyond EIOPA's remit, this sentence should be removed. b. Profit and loss attribution: Consideration is to be given on the explanatory text that refers to "test or standards" and to the "validation report and their P&L attribution" to design appropriate indicators. We worry that this will lead some regulators to request this while we do not see how this could work in practise. There is also an area of inconsistency between the Level 1 and 2 Text and the Guidance. Consistency Assessment has not been included in previous drafts of the Level 1 and 2 Text as a "Validation Tool". Clarification is needed around its importance relative to the other validation tools (e.g. stress and scenario testing, Sensitivity testing, P&L Attribution etc).	Guidelines, but do not set requirements in its own. The comply-or- and explain mechanism does not apply to the Explanatory text In the Explanatory Text, examples on how the Guidelines can be applied are given Supervisors will have to base their assessment and judgement on the basis of the Directive, Level 2 Implementing Measures when issued, Technical Standards and EIOPA Guidelines Please see answer to comment 325

6.	Deloitte	General Comment	We welcome the preparatory guidelines as ensuring convergence of practices across Europe ahead of Solvency II's implementation is critical. To improve the contribution of these guidelines to Solvency II preparedness, we believe that they should be cross-referenced with the envisioned Level 2 and Level 3 measures. This would ensure that the preparatory guidelines are actually seen as a "stepping stone" to the full Solvency II requirements and not a separate set of rules, requiring additional work from undertakings already dealing with much change. We feel that if these preparatory guidelines were an additional burden, not a stepping stone to full Solvency II reporting, this would not serve the purpose which EIOPA aim for but, rather, would distract undertakings from their core implementation activities and have a detrimental effect on their work towards compliance.	EIOPA cannot include in these Guidelines cross references to Level 2 Implementing Measures as such measures are not yet public
7.	DIMA (Dublin International Insurance & Management	General Comment	Existing "Solvency I" regulatory requirements will continue in force during the "interim arrangements" period and until Solvency II is fully implemented. It is important that requirements under the interim arrangements are not in conflict with the legislative requirements currently in force.	The Guidelines only aim to help undertakings and supervisors preparing for the use of internal models when Solvency II is fully implemented The Guidelines do not, however, require NCAs to take supervisory action as a result of a failure by undertakings to comply with Solvency II requirements, including the pillar one requirements

8.	FEE	General Comment	FEE welcomes this paper, which provided clarification and expansion on the areas that national competent authorities will consider during the pre-application process.	Thank you
9.				
10.	German Insurance Association (GDV)	General Comment	The pre application process is a valuable tool which should be offered to all interested undertakings. An early exchange between supervisors and undertakings is key in preparation for the approval process. Early feedback e.g. from on-site visits is very useful for undertakings to optimize the performance of their models and to help smoothening the approval process. We therefore highly welcome the idea of continuing and fostering the pre-application-process. Nonetheless, intensive discussions and pre-application-activities already have been taking place for years. Several (partial) internal models have been subject to extensive supervisory reviews and show a high degree of maturity.Therefore, the time has come to raise the pre-application-process to a higher level of commitment: During the ongoing pre-application-process NCAs should already be allowed to provide more binding commitments regarding the maturity of an internal model or specific parts of it. This should be combined with a strong position of the group supervisor within the colleges. One possible solution could be to support so called Model-Change-Approaches. This would reduce uncertainties and efforts during the final approval process.	Please see answer to comment 5
11.	Groupe Consultatif Actuariel Européen	General Comment	At insurers, actuaries have been and will continue to be, intensively involved in model-building and in participating in the dialogues with NCAs over model approval. Likewise actuaries work for NCAs and work on the processing of Pre-Applications and will remain involved until and including the model approval decision by NCA. Groupe Consultatif therefore has many observations on CP-13/011.	Guidelines aim to increase consistency in the assessment of models by Supervisory Authorities

			Overall, Groupe Consultatif welcomes the guidelines and the clear and well written consultation paper. Groupe Consultatif believes that guidelines are necessary to promote convergence and consistency of practices among and within NCAs. However, as is noted the detailed feedback below, Groupe Consultatif fears that there remains substantial scope for interpretation in some areas and that, absent any changes, the goal of consistency may not be achieved. The goal of the guidelines must also be to promote the use of well-constructed and governed internal models which better reflect the (re)insurance undertakings' risk profiles, but recognises that all models are imperfect. As is also highlighted in the feedback below, the Groupe Consultatif fears that this goal may not be attained if an unattainably high standard is set, in particular around certain areas of documentation and validation, where "form" and "process" may come at the expense of "substance" (ie analysis and understanding of what the model is and is not telling us). There is inevitably a tension between the higher level of prescription which would aid consistency and the proportionality necessary to promote the development and use of models and the Groupe Consultatif stands ready to assist EIOPA in ensuring that it strikes the right balance. Finally, given that the application and approval process cannot be legally introduced until Solvency II takes effect and many undertakings wish to secure model approval from the start of Solvency II, it is understandable that such an extensive pre-application process has been designed. However, it is unclear how the pre-application and application process will fit together and whether EIOPA foresees the balance changing in the years following Solvency II coming into effect.	EIOPA is also working beyond the Guidelines to increase convergence through regular meeting between supervisors of the different Member States, the Centre of Expertise on Internal Models, and developing ad-hoc tools and instruments EIOPA is also aware of the need of having the right balance as stated in the comment and is happy to work with Groupe Consultatif and other stakeholders to achieve this EIOPA will deal with the issue of finalisation of the pre-application process and transition to application when there is more certainty about the Solvency II timing

12.	Institut des Actuaires	General Comment	The Institut des Actuaires welcomes this CP. Instead of a full implementation as at 1/1/2016, this CP should state a "phasing in" as mentioned in 4.3 of the cover note, in order to get a realistic progressive approach. The burden of the internal model process (72 guidelines representing 199§ for this CP) discourages internal models which is a key innovation of S2. The standard formula is still required for ORSA and solvency calculations , while an internal model is used for both; when an IM is approved, this requirement to use the standard formula should be released. If NCAs were tempted to require the maximum of the standard formula and the internal model, it would discourage internal modeling.	It should be a clear distinction between preparatory phase (pre-Solvency II); and when Solvency II is fully implemented and undertakings can apply for the use of models During the preparatory phase, there is no model approved, models are under pre-application. Therefore undertakings should use this phase to prepare for submitting an application when Solvency II is applicable, but they need also to face the eventuality that their internal model may be not approved (therefore they may have to use the standard formula for SCR calculations) and set up processes to calculate the standard formula Solvency Capital Requirement as well as to consider the capital planning implications

				See also answer to comment 5
13.	Insurance and Reinsurance Stakeholder Group (IRSG)	General Comment	We understand the guidelines as the requirement for NCAs to start reviewing undertakings readiness according to the guidelines from 1/1/2014. We do not understand it as a requirement for undertakings to be able to demonstrate compliance with internal model approval criteria at this date. It should be recognized that undertakings plan a staged progress towards compliance up to formal application date. We would welcome a statement in the guidelines regarding this review process where undertakings and NCA should provide joint realistic agenda towards compliance and demonstrate progress over the time, supported by formal NCAs reports summarising their findings and concerns along the review process.	Please see answer to comment 5
14.	Insurance Europe	General Comment	The Guidelines are overall useful and provide practical guidance for national competent authorities to start reviewing undertakings readiness according to the Guidelines from 1 January 2014. Considering this goal we stress the importance of not basing any supervisory enforcement actions on the outcome of the Guidelines. We would welcome a statement making this recommendation clear. We further believe that the following - the comments apply to both individual and group level - should be taken into consideration: - The Guidelines should state that undertakings and national competent authorities should develop a joint realistic plan towards compliance and demonstrate progress over time.	Please see answer to comment 2 and 5

			It is not totally clear if the Guidelines establish requirements for undertakings to demonstrate compliance with all criteria at 1 January 2014. It should be recognized that undertakings plan a phased progress towards compliance up to formal application date. As such, we would welcome a statement in the Guidelines regarding this review process stating that undertakings and national competent authorities should develop a joint realistic plan towards compliance and demonstrate progress over time. - Supervisory assessments and findings during the pre-application process should be regularly notified to the insurance undertakings. The review process should be supported by formal reports produced by the national competent authorities summarising their findings and concerns along the review process. - More binding commitments should be requested from national competent authorities in regard the pre-application process and should be clarified what is sufficient for finalising the pre-application process. The Guidelines state that the national supervisor should form a view of how the undertaking “develops”, “plans to” or “does” something. Further clarification on the content of this view would be helpful.	 Agreed. “on-going” feedback will be included in Guideline 3

			Assurance should be given that the pre-application processes are further fostered. Intensive discussions and pre-application activities have already been taking place for years. Several (partial) internal models have been subject to extensive supervisory reviews and show a high degree of maturity. Therefore, it is appropriate to raise the pre-application-process to a higher level of commitment: it should be possible for national competent authorities to give more binding feedbacks based on the assessments already made. One possible solution could be to allow for a so called Model-Change-Approach. This would allow national competent authorities to remove uncertainties and potentially reduce effort in the final approval process. - Some of the requirements, especially on documentation, extend somewhat beyond what was originally intended by creating an unnecessary level of detail. This envisaged level of detail may not bring any added value on the assessment on the quality of the models and risks to turn the supervisory assessment into a compliance exercise requiring significantly more resources for both undertakings and supervisors, instead of spending time in creating a constructive dialogue. We refer to the user manual in guideline 57 as an example to confirm our argument.	
15.	Insurance Ireland	General Comment	Insurance Ireland broadly welcomes the draft Guidelines and their aim of promoting a consistent structure across Europe in advance of the implementation of Solvency II. This consistency is particularly important for insurers operating on a cross border basis.	Noted

			Please clarify how the development of the draft Level 2 and Level 3 text should be addressed as part of the Internal Model Approval Process, and particularly how the Guidelines forming the interim regime may be superseded in the approach to full Solvency II implementation. The draft guidelines require NCAs to feed back on models. We would query whether, given available resources, the requirements will be feasible in practice for all markets, particularly those with a high proportion of internal models. Some (re)insurance entities may be planning a revised organisational structure with effect from the full implementation of Solvency II to optimise capital efficiency. Local NCAs should have the flexibility to anticipate these changes when applying the guidelines.	EIOPA will deal with the issue of finalisation of the pre-application process and transition to application when there is more certainty about the Solvency II timing Under Solvency II an undertaking applying for the use of an internal model to calculate the Solvency Capital Requirement will have to comply with the Directive requirements as further specified in the Delegated Acts when issued, Technical Standards and Guidelines EIOPA acknowledges these challenges, but expects that they can be tackled
16.	International	General	We believe it to be important that firms should not be kept in a prolonged	EIOPA acknowledges

	Underewriting Association of London	Comment	state of uncertainty, where they maintain heavy annual investment in complying with new regulatory requirements that remain subject to potentially substantial future alterations. It will also be important to ensure that insurers are not subject to parallel legislative regimes: Solvency I , Solvency II and national requirements. Regulated firms should be able to operate in a context of minimum uncertainty and clarity, while appropriate flexibility should also be maintained to enable each jurisdiction and each firm to comply with the law in the context of changing national circumstances. For those reasons, we propose that, prior to the effective implementation of Solvency II, each jurisdiction should implement flexible phasing-in plans for interim compliance with internal model requirements that are adapted to the needs of each individual jurisdiction and each individual firm, subject to phased-in compliance with the spirit of Solvency II. Supervisors should also take care not to implement new regulations that will not fit into the Solvency framework when it does come into effect. Given the reigning uncertainty, they should, furthermore, operate through dialogue and avoid imposing abrupt changes to previously approved aspects of applications for internal models, or indeed the standard formula. Alterations, unless essential, should be made after discussion and over time. The setting of timeframes also needs to be flexible to take into account future possible postponements in the implementation of Solvency II. If it is delayed for additional years, then requirements dependent on implementation should be delayed also. NCAs will also need to take into account the difficulty in complying for groups operating in different member states where different rules will apply. It will also be important to consider how to take into account fairly and consistently subsidiaries, branches and indeed parents outside the EEA.	these challenges Guidelines are there to help undertakings in preparation for Solvency II
17.	Lloyd's	General Comment	Lloyd's supports the efforts made by EIOPA in seeking to achieve harmonised progress towards the implementation of Solvency II in the European Union. Lloyd's welcomes the opportunity to comment on this	Please see answer to comment 2

			consultation paper. This appears to be a list of items that National Competent Authorities (NCAs) should review in their assessment of undertakings' internal models. The items mentioned contain no surprises. We note that generally each point states that 'NCAs should form a view on XYZ' and generally does not set out the criteria that would enable the authority to arrive at a positive view, or into the consequences for either the NCA potentially providing internal model approval or for the undertaking, of the NCA forming one view or another. We consider that greater clarity in this area would be of assistance to both NCAs and undertakings.	
18.	MetLife	General Comment	MetLife is grateful for the opportunity to respond to EIOPA's Consultation Paper on the Proposal for Guidelines on Pre-application for Internal Models. As one of the largest insurers in the world, with operations in 50 countries, including 17 EU Member States, we have some particular insights on the life insurance sector. We also have many years' experience of the interplay between individual undertakings and National Competent Authorities (NCAs) in Europe and elsewhere. We should stress that, for MetLife, endeavouring to meet EIOPA's Guidelines and be fully prepared for Solvency II is not simply a compliance exercise. It is a way of running and managing our business so that we manage risks effectively and efficiently. That is our ultimate aim, which we are striving to achieve. Within that context, we would like to say from the start that we are firmly	Please see answer to comments 2, 5 and 16 Proportionality principle is embedded in the Guidelines and EIOPA will work to make sure this principle is followed

			committed to the European Single Market. We believe harmonisation across Europe is of paramount importance and we are keen to work with EIOPA and regulators towards that end. We therefore applaud EIOPA's efforts to encourage preparation for Solvency II among NCAs and undertakings. We agree that the interests of policyholders, insurers and supervisors are best served in this manner and we believe, like EIOPA, that implementation should be consistent across Europe. We do however, believe that some of the proposals within the Guidelines put an unnecessary strain on our business for reasons we explain below. Flexibility and proportionality should be encouraged: EIOPA suggest that the Guidelines should be applied in a manner that is both proportionate and practical and allows for some flexibility. We would endorse this, noting that the Guidelines are meant to help prepare for Solvency II and not for its full implementation. We believe it would be helpful if NCAs focused on undertakings' overall progress during this preparatory phase. Greater clarity on implementation would prove beneficial: In the absence of clarity around when Solvency II will be in force, our preparatory work in compliance with these Guidelines may persist for longer than initially expected, thus placing extra stress on costs and resources. We recommend avoiding swift or overly onerous demands in the early part of the preparatory phase and recommend instead a phased-in approach allowing undertakings to ensure they are moving in the right direction	

			without placing undue stress on the business. Pre-application for internal models: We have developed tools and processes and are preparing for full compliance with Solvency II requirements. However, we are concerned that many of the requirements set out in this Consultation Paper place a considerable burden on undertakings. These include, but are not limited to, the requirements around documentation, the use test, model changes and the use of external models. In keeping with EIOPA's proposals, we would request that NCAs adopt a practical and proportionate approach when assessing these requirements. This could be achieved by imposing the full requirements only after Solvency II is fully implemented. There are, for example, likely to be a large number of model changes during the interim period. We would suggest it is unnecessary to carry out the full governance process for each change. It would instead be reasonable for the board to approve only the more significant changes during this time. It should also be reasonable for documentation during the interim period to be concise and pitched at a level that is practical for users of the internal model. The full, more detailed documentation would then be prepared in time for Solvency II implementation. We believe that complying fully with the proposed guidelines in this consultation paper would be very onerous and costly to the industry. A proportionate approach should be adopted so that the benefits of	

			implementing an internal model are not negated by the additional resources and effort required to comply with the guidelines.	
19.	Munich Re	General Comment	1. The pre application process is a valuable tool which should be offered to all interested undertakings. An early exchange between supervisors and undertakings is key in preparation for the approval process. Early feedback e.g. from on-site visits is very useful for undertakings to optimize the performance of their models and to help smoothening the approval process. We therefore highly welcome the idea of continuing and fostering the pre-application-process. 2. Nonetheless, intensive discussions and pre-application-activities already have been taking place for years. Several (partial) internal models have been subject to extensive supervisory reviews and show a high degree of maturity. Therefore, the time has come to raise the pre-application-process to a higher level of commitment. We suggest that more binding commitments should be requested from NCAs based on the assessments already made. One possible solution could be to offer a so called Model-Change-Approach. This would allow NCAs to remove uncertainties and potentially reduce effort in the final approval process.	Please see answers to comments 2 and 5
20.	Polish Chamber of Insurance	General Comment	There are fundamental concerns regarding the implementing of the regulatory framework which is neither entirely defined on an European level nor implemented into local national legislation. The pillar one which is a basis for the regulatory framework is still not defined and the core conceptual piece, economic evaluation of the balance sheet, is still under discussion as the adjustment mechanisms are still in the phase of testing. The quantitative part of the framework (pillar one) is the base for two other pillars. Without deciding upon the final shape of pillar one two remaining pillars could be hardly implemented, especially in the context of calculation solvency position in ORSA and building the reporting tools for the supervisory reporting. Forcing insurers to comply with regulations which are not legally binding and may be significantly changed may lead to huge investments both in money terms and human resources which in	Please see the feedback statement in the final Report of the preparatory Guidelines

			the end could be a waste of money. Without deciding upon the final shape of the solvency framework the phasing in should be limited to implementing soft elements, like corporate governance, limited reporting similar to QIS exercises if necessary. All the Stakeholders should seriously consider the costs and organizational/regulatory risks which would be certainly associated with partial implementation as in the end it will jeopardize confidence for the insurance sector creating systemic risk and transferring additional costs for consumers. There should be an alternative proposal in case Omnibus II is not voted at the latest in October 2013	
21.	PZU	General Comment	Timeline for the Guidelines Implementation The time table for guidelines implementation should to greater degree incorporate proportionality principle and should not force implicitly (indirectly) earlier, de facto implementation of Solvency II requirements like calculation of Pillar II requirements at excessively detailed level generating costs that are not justified by the purpose of guidelines. Requirements of “step-by-step” implementation should not be too burdensome and cannot generate costs not proportionate to the aim of the regulations. Additionally, as we understand, EIOPA intends to publish the guidelines in the areas covered by this consultation in the autumn of this year. According to Article 16(3) of the EIOPA Regulation NCAs ‘shall make every effort to comply’ with the guidelines. This means in practice, that NCA and insurance undertakings will have limited time of two months, following issuance of the guidelines (the date of issuance of the guidelines is the date on which the guidelines are published in each of the official EU languages) to confirm whether they comply or intend to	Please see answers to comments 2 and 5 and Report of the Guidelines

			comply with the guidelines. It is clear that such confirmation should not be automatic but result from a solid analysis of the proposed requirements vis a vis existing capacities (people, IT, infrastructure, budgets) both in NCA and insurance undertakings. And even if in some cases the answer might be positively confirming readiness to comply in other cases, requiring technical preparation, budgets, project, and people, this will not be possible to implement on proposed date. Hence, taking these arguments into account, we have doubt if it is possible for insurance undertakings to prepare for implement the guidelines from 1 January 2014. In our opinion it would be advisable to spend 2014 for local consultations (i.e. based on intensive, technical dialogue between local regulators and local insurance industry) to better prepare for the implementation of the guidelines. Then, it is more realistic that the guidelines could go live starting January 2015. Basis for Guidelines Implementation We welcome the view, that EIOPA recognises that in a significant number of member states, the NCA does not have the legal competence to enact the relevant financial legislation and is dependent on the powers bestowed upon it. Additionally, special attention should be paid by NCAs to determine how to comply with EIOPA guidelines by incorporating them into their regulatory or supervisory framework in an appropriate manner, especially if they are less stringent or less precise than local legally binding regulations (e.g. in case of outsourcing; fit & proper requirements). Moreover we support the EIOPA view that the guidelines do not require NCAs to take supervisory action, and in our opinion – it should be clearly stated that no such regulatory actions should be taken, as a result of a failure by undertakings to comply with Solvency II requirements, including the pillar one, two and/or three requirements. Role of local NCAs	

			In our opinion the role of local NCAs should be significantly stronger. The Solvency II requirements, especially in the area of internal model, should be based on the specificity of local market and its risks. Local verification of internal models will ensure the application of unified standards of risk assessment on the local market. As the internal models will be used to derive required capital, the local NCA is expected to have a possibility to analyse sufficiency of calculated required capital. The local NCA must have appropriate tools to take supervisory actions in purpose of ensuring the stability of local insurance market. In our opinion such tools should be defined before the introduction of local guidelines. Proportionality and Transparency A. Documentation Requirements: During the Internal Model pre-application process the main focus should be on appropriateness of applied model rather than on quantity and quality of documentation supporting model implementation process. The NCA should put the main effort on challenging model concept and seek local market standard, not on meeting the formal requirements regarding documentation. The overall effort should then be balanced between quantity of documentation and quality of Internal Model. Otherwise there is a risk that the Internal Model pre-application process shall become the purely bureaucratic process. In our opinion the pre-application is more about making sure that the application is complete than reviewing the model itself. Moreover in our opinion it is of key importance that the local requirements regarding documentation are consistent and unified throughout the whole market especially in the areas which are common to all undertakings. For example in case of Poland the risk connected with the same market-wide stock index is expected to be considered is the same way and, as a result, lead to the same result.	EIOPA agrees with this statement and considers that Guidelines help on this Guidelines on Documentation have been drafted with the aim of helping undertakings preparing to fulfill the documentation requirements when Solvency II is applicable Documentation of the model should be taylored to the specific undertaking and it is its responsibility to ensure this

			B. Transparency: The process of Internal Model pre-application should be transparent for both the NCA and the undertaking taking part in the process. The transparency of process is crucial as the companies must have appropriate knowledge about process flow and requirements. Also the convergence between NCAs from different countries is regarded as critical so the expectations and requirements of NCAs are consistently applied to companies in different countries. Model Changes A. Distinction between "major" and "minor" model changes: The qualitative and quantitative criteria of definition of "major" and "minor" model changes must be precise - the clearer principles are expected to be settled by EIOPA. Although this issue has already been raised with EIOPA, it has not been addressed in the proposed guidance. The examples of model changes would be most welcome so the companies could use them as a guidance/benchmark. B. Process of model change approval: The proposal of model changes approval process by NCAs is perceived to be burdensome and may lead to extensive additional work load. The process may increase the risk of not meeting the final reporting deadlines by the undertaking. This is directly connected with the inevitability of precise defining of "major" and "minor" model changes so the process of model changes approval could be applied only to material model changes. Assumptions A. Expert judgement:	EIOPA agrees with this statement and thinks Guidelines help on this Please see answers of comments in model changes Chapter According to Article 115 of the Directive major changes approval follows the same process as the internal model approval Not agreed

			The definition of expert judgement is perceived to be very strict – as a result the application of expert judgement is very limited. In our opinion the expert judgement is sometimes the most efficient way to setup assumptions for example when appropriate data are not available. B. Assumptions setting process: Process of calibrating the model assumptions is assessed to be significantly time and resource consuming. The quality of input data required may seem to be unrealistic. Together with limited expert judgement the assumptions calibration process is expected to bring bulk of additional work. Cooperation The widespread cooperation between insurance group, local undertaking and both NCAs (local NCA and NCA from the insurance group country) is perceived as crucial. Without the proper cooperation there is a huge potential for doubling regulations and reworking the same cases twice. Due to this fact the NCAs should present the active involvement in communication between each member of the group of interest.	The definition of expert judgement in para 1.15 is comprehensive. Accordingly, the scope of the term "assumptions based on expert judgement" is kept rather broad and no explicit boundaries are given (see Explanatory Text para 3.89). EIOPA explicitly encourages the use of assumptions based on expert judgement (see Explanatory Text para 3.88). Please note that the requirements from the guidelines on assumption setting and expert judgement are subject to the materiality principle (cf. Guideline 19). EIOPA is extremely supportive of having this cooperation

			Potential interpretation issues The phrase "national competent authorities should form a view" is present in many of paragraphs. In our opinion general requirements (mutual for each country) for preapplication process should be prepared. Country unit specific deviations from general requirements should be introduced only if supported with sufficient evidence by NCAs. Annual Progress report In our opinion the annual progress report prepared by local NCA should not be supplemented by any kind of comply or explain procedure (e.g. local peer review report etc.). Such report would require the analysis of compliance of each undertaking with the interim measures requirements. We believe that the compliance should be tested on the basis of final requirements after the official introduction of Solvency II.	Guidelines introduce provisions that are applicable in every Member State. The requirements should be the same and no deviation is expected from general requirements The assumption that the comply-or-explain mechanism requires the analysis of the compliance of each undertaking individually is not correct. The progress report does not require such detailed analysis either
22.	RSA Insurance Group	General Comment	We consider that there is value in having guidelines which require national competent authorities to operate a pre-application process and which provide a framework for the functioning of colleges in the pre-application process. We see no value in guidelines which effectively replicate rules contained	We do not agree with the statement as Guidelines provide further guidance and specifications on how to meet the requirements established in the Directive and in the

			in the Draft Level 2 text. Such guidelines will either be a faithful restatement of the Level 2 rules, in which case they are redundant, or they will be different, in which case they will cause confusion and may breach the fundamental principle that Level 3 guidance must not extend the scope of Level 2 rules. As an example we would point to Guideline 57 on the user manual which introduces a criterion for internal model documentation which is inconsistent with that in the Level 2 text. Accordingly, guidelines 4 to 67 should be omitted.	upcoming Level 2 Implementing Measures
23.	Steptoe & Johnson LLP	General Comment	We note that the Guidelines are silent as to which entity in the (re)insurance group may develop, seek approval for, maintain and operate the internal model for a group during the pre-application process. We consider that it would be useful to clarify this issue in the Guidelines. (Re)insurance groups differ from each other in their structure and organisation. In particular, we note that insurance holding companies may fulfil different roles within the groups Insurance holding companies may fulfil different roles: they may carry out a financial or non-financial, industrial activity, or their corporate object and sole activity may be limited to holding shares in subsidiaries (we refer to this last category as "inactive holding companies"). Inactive holding companies do not carry out a regulated activity and do not actively participate or control the subsidiaries' business activities. Conversely, active insurance holding companies may centralise the management and supervision of the group companies, establish the risk appetite for the group and control capital allocation for efficiency purposes. Where the (re)insurance group is headed by an inactive holding company, the latter may not be the appropriate entity to develop the internal model for a group. An operating subsidiary (re)insurance undertaking may be better placed in terms of knowledge and interest to	According to the Solvency II framework on internal models, the participating insurance or reinsurance undertaking is the one responsible to submit an application to use an internal model for the calculation of the group SCR Therefore we consider that it is the participating insurance or reinsurance undertaking who has also the responsibility mentioned in this comment

			develop, obtain approval for, maintain and operate such a model during the pre-application process. Therefore, we suggest that the Guidelines should expressly allow the national supervisor to permit, when appropriate, the parent undertaking to delegate the tasks of developing, obtain approval for, maintaining and operating an internal model for the group to an operating subsidiary (re)insurance undertaking. Furthermore, where the parent is an inactive holding company and depending on the risk profile and the structure of the group, the operating subsuididary should be able to use a model which has been approved for its own use to serve the modelling needs of the group. Model approval relative to a truly inactive holding company would not be practicable given the absence of governance and risk appetite structure at group level.. The inclusion of this possibility in the Guideline would also be consistent with other EI0PA guidelines. For instance, we note that under the Guidelines on the System of Governance the entity responsible for fulfilling the governance requirements at group level may be other than the parent undertaking. This entity would also have a duty to design the group forward looking assessment of the undertaking's own needs. We consider that the entity responsible for fulfilling the governance requirements at group level would normally be best placed to develop, obtain approval for, maintain and operate the internal model for a group during the pre-application process.	
24.	ASSOCIATION OF BERMUDA INSURERS AND REINSURERS (ABIR)	Introduction. General Comment	1 ABIR fully understands why EIOPA considers that European firms and groups need now to undertake active preparations for the Solvency II regime. It is unlikely to come into force until 2016, but its success requires an active preparation process and for that process to be managed in a reasonably consistent way across Europe. 2 On the other hand care needs to be taken in the application of any	The Guidelines are not subject of equivalence analysis nor do they pre-empt any decision taken in past or future by the European Commission

			interim regime to ensure that it is not unduly burdensome. It should take account of the fact that the level 1 text is not fully settled. The level 2 rules and much of the level 3 and 3.5 material is yet to be settled and published. 3. In particular the full details of the equivalence and interim equivalence regimes is yet to be settled. That said, so far as Bermuda is concerned, the preparatory work of EIOPA strongly suggests that Bermuda will be recognised as equivalent. 4. The Solvency II regime may ultimately have some degree of extra-territorial effect, depending on which non European regimes are recognised as equivalent. It is wholly inappropriate for that extra-territoriality to be applied on an interim basis, especially in jurisdictions such as Bermuda which are likely to achieve recognition as equivalent. Only European firms should be subjected, directly or indirectly, to requirements at this stage which require any degree of adaptation to the Solvency II regime. 5. The preparations which European firms and groups may be required to make for Solvency II require them to provide information concerning non European operations. At this interim stage it is disproportionate to do anything other than accept information by reference to relevant non EEA rules and in such format as non EEA firms are able to generate from their existing systems. This should be clearly recognised in the EIOPA guidelines. Otherwise non EEA firms may be subject to a patchwork of different requirements depending on how each national supervisor chooses to apply EIOPA's interim guidelines. ABIR is of the opinion that EIOPA should be consistent in its approach across all of the Guidelines and allow groups to use the local group statutory requirements in order to avoid a burdensome approach. We understand why EIOPA may be hesitant to preempt the decision of the Commission relative to equivalence but believe there is an opportunity to recognize and acknowledge those jurisdictions that have already been	regarding equivalence

			approved by the Commission for equivalent assessment and in this regard, have already undertaken a detailed assessment by EIOPA. However, since EIOPA considered the option of the assumption of equivalence for third countries we would propose that those countries already approved by the Commission for assessment of equivalence and already undertaken an EIOPA assessment be granted "conditional equivalence" for the purposes of the guidelines given they are preparatory in nature and not for the full application of Solvency II. We would respectfully request at a minimum that General Guidelines be issued relative to a proposed approach that recognizes and acknowledges third country group supervisors and in particular those third country group supervisors that have already been approved by the Commission for equivalence assessment. Without a common approach, national competent authorities will be left to decide how they will apply the guidelines relative to third country groups and the inconsistencies will prove both burdensome and inefficient.	
25.	ASSOCIATION OF FINANCIAL MUTUALS	Introduction. General Comment	EIOPA should consider how to integrate these Guidelines with the already issued pre-application Guidelines (former CP 80).	These Guidelines, compared to former CP80, provide further detail, in particular in relation to tests and standards, on how undertakings and supervisors prepare during pre-application for the use of models under Solvency II EIOPA believes that it is important to issue further detailed guidance in this area, in view of the

				complex techniques involved in internal modelling and to increase convergence of supervisory practices EIOPA will evaluate in the future how CP80 could be better integrated with the Guidelines
26.	ASSURALIA	Introduction. General Comment	EIOPA should consider how to best align or even integrate these Guidelines with the already issued pre-application Guidelines (former CP 80).	Please see answer to comment 25
27.	DIMA (Dublin International Insurance & Management	Introduction. General Comment	When dealing with groups, it is unlikely that every EU jurisdiction will be equally implementing these guidelines; this becomes even more of an issue where the group extends to outside the EEA. Thus it will become severely challenging to apply the guidelines "at the level of the group".	EIOPA acknowledges these challenges, but expects that they can be tackled
28.	Insurance Europe	Introduction. General Comment	EIOPA should consider how to best align or even integrate these Guidelines with the already issued pre-application Guidelines (former CP 80).	Please see answer to comment 25
29.	German Insurance Association (GDV)	1.2.	EIOPA should in addition refer to Article 231 of the Directive to include requirements for group internal models. For example Guideline 8 in the paper refers to model changes of group internal models. We recommend to change the last sentence: "[…] Articles 112,113, 115,116, 120 to 126, and – for groups – Article 231."	Agreed. Changes will be made
30.	Groupe Consultatif Actuariel Européen	1.2.	Paragraph 1.2: "The present Guidelines apply to the pre-application process for internal models, where national competent authorities are expected to form a view on how prepared an insurance or reinsurance undertaking is to submit an application for the use of an internal model for the calculation of the Solvency Capital Requirement under Solvency II	Please see answer to comment 2

			and to meet the internal models requirements set out in the Directive, in particular in Articles 112, 113, 115, 116, and 120 to 126." The paragraph does not explain on what level of detail the supervisor should give this view, and what is actually enough to end the pre-application phase. Some countries have already adopted rules where the pre-application will in practice end when the model is deemed "reliable", which could be highly subjective and may lead to an extended process of review. Reference should also be made in this paragraph to Article 231.	Agreed. Changes will be made
31.	Insurance Europe	1.2.	Solvency II Directive does not require a pre-application process. Undertakings must be able to apply for the use of internal models when they consider that are ready and NCAs should have the necessary means to assess the application within the 6 months' time included in Article 112(4) of the Solvency II Directive. It should be included in the guidelines that entering into the pre-application process is not a pre-requisite before sending the formal application for the use of the internal model. It is unclear on what level of detail the NCA should give their view on the preparedness, and what is actually enough to end the pre-application phase. References to Articles 230 and 231 of the Solvency II Directive should also be included.	Please see answer to comment 2 See answer to comment 5 Agreed. Changes will be made

32.	Munich Re	1.2.	EIOPA should in addition refer to Article 231 of the Directive to include requirements for group internal models. For example Guideline8 in the paper refers to model changes of group internal models. We recommend to amend the last sentence: "[…] Articles 112,113, 115,116, 120 to 126, and – for groups – Article 231."	Agreed. Changes will be made
33.	BMA	1.3.	The Authority welcomes this initiative and would like to continue to be engaged throughout the process. During the interim period while Omnibus II is being considered, it is likely that competent authorities from third countries will implement model approval regimes in advance of Solvency II (The BMA approval process will go live during the third quarter of 2013). The Authority is committed to implementing an internal model approval regime broadly equivalent to that under Solvency II. By working with EIOPA and member states to develop a consistent and convergent approach, the Authority anticipates the output of its model approval regime in respect of groups for which the BMA is the Group Supervisor, to be of particular relevance to the competent authorities of member states.	Noted
34.				
35.	PZU	1.5.	According to point 1.5 the NCAs are "expected to engage with undertakings in a close dialogue" during the preparation phase in order to ensure that the undertakings are well prepared for the introduction of Solvency II in the area of Internal Model. In our opinion the "close dialogue" between NCAs and undertakings is the key of the Solvency II implementation process and it should be the basis for the final shape and scope of the local guidelines. As, according to point 1.6, the local guidelines are expected to be introduced by local NCAs on 1st of January 2014, the remaining period (after introduction of Omnibus II in Autumn 2013 it will be ca. 2-3 months) is perceived by us to be too short for setting proper communication process between local NCAs and undertakings. Therefore we would like to recommend to dedicate the	EIOPA considers the best date to introduce guidelines on 1st January 2014 for the reasons and with the explanations provided in Final Report of the Guidelines

			year 2014 to local discussions between NCA and undertakings and, as a result, to move the date of introduction of local guidelines to 1st of January 2015. Also please refer to General Comment (section: Timeline for the Guidelines Implementation).	
36.				
37.	PZU	1.6.	In our opinion the date of introduction of local guidelines (2014.01.01) is too close and there is a risk that either the local NCA will not be able to introduce such guidelines or the NCA will introduce imprecise and vague guidelines which will lead to interpretation and implementation issues. In our opinion it is of high importance that the local guidelines are well defined and unchangeable from the very date of their introduction as the undertakings will have a short time (ca. 1 year) to appropriately and entirely apply the guidelines requirements. Therefore we would like to recommend moving the date of introduction of local guidelines to 1st of January 2015. Also please refer point 1.5 and to General Comment (section: Timeline for the Guidelines Implementation).	Please see answer to comment 35
38.	BMA	1.7.	To ensure consistency, the Authority is of the opinion that further guidance with regards to the expected format and content of the 'Progress Report' would be helpful.	The progress report is a measure of communication between EIOPA and the NCAs but it is not part of the requirements for preparation towards Solvency II It is up to the NCAs to decide how the level of detail of the information

				given to EIOPA in the progress reports and how this information has to be gathered at national level. Please see Final Report of the Guidelines
			The Authority believes that it may also be helpful for third country regulators to voluntarily submit a progress report in respect of their own internal model regimes.	Noted
			Does EIOPA envisage that submitted progress reports will be shared with the competent authorities of other member states and those of equivalent third country regimes ? If not, will EIOPA be preparing a summary report? Such information is likely to be helpful to Group Supervisors when assessing how most effectively to share tasks between competent authorities. To this end, it may be helpful for the report to detail progress in respect of the development of technical expertise with regards various model components and risk categories.	The progress report is a measure of communication between EIOPA and the NCAs and will not be disclosed with the exception of an up-date of the comply-or-explain on the basis of that report. Please see Final Report of the Guidelines
39.				
40.	PZU	1.7.	In our opinion the annual progress report prepared by local NCA should not be supplemented by any kind of comply or explain procedure (e.g. local peer review report etc.). Such report would require the analysis of compliance of each undertaking with the interim measures requirements. We believe that the compliance should be tested on the basis of final requirements after the official introduction of Solvency II.	Please see Final Report of the Guidelines

41.	PZU	1.8.	According to point 1.8 the NCAs are expected "to be able to form a view" on how well the undertakings are prepared for the application process regarding Internal Model. In our opinion it should be precisely defined what sort of evidence will be required by NCA to prove that the undertaking is well prepared for the application process. The lack of such definition of evidence may lead to inconsistency between requirements in different countries (convergence issue). Moreover the specific form (report, opinion, assessment) should be defined in which the local NCA will be expected to "form a view". Also please refer to General Comment (section: Potential Interpretation Issues).	Please see answer to comment 2 EIOPA is working to reach convergent approaches on these issues
42.	German Insurance Association (GDV)	1.9.	Strongly supported (see «General Comment»).	Noted
43.	Groupe Consultatif Actuariel Européen	1.9.	It is not clarified how a firm or a group would exit pre-application and enter the application for approval, or how the supervisor would act in this case, even though stated in here that the guidelines "also extend the pre-application process for an undertaking aiming at submitting an application for decision on the use of an internal model from the first day on which Solvency II is applicable." More generally, the intended meaning of the last sentence of 1.9 is unclear.	National supervisors, and especially colleges of supervisors, are expected to continue to work with undertakings on an on-going basis during the pre-application process and to plan appropriately to form a view on the undertaking's readiness to submit an application. This applies, in particular, when undertakings expect to submit applications for a decision

				on the use of an internal model from the first day on which Solvency II is applicable
44.	Insurance Europe	1.9.	It is not clarified how an undertaking or a group would enter the application for approval, or how the NCA would act in this case, even though stated in paragraph 1.9 that the Guidelines " also extend the pre-application process for an undertaking aiming at submitting an application for decision on the use of an internal model from the first day on which Solvency II is applicable."	EIOPA will deal with the issue of finalisation of the pre-application process and transition to application when there is more certainty about the Solvency II timing
45.	Munich Re	1.9.	Strongly supported (cf. «General Comment»).	Thank you
46.	PZU	1.9.	According to point 1.9 the guidelines should help the undertaking "to develop its Internal Model framework and thereby prepare to submit an application to use an Internal Model under Solvency II". In our opinion the current shape and substance of guidelines is too broad and vague and as a result it cannot be easily used by undertaking in defining the Internal Model framework. We believe that the locally introduced guidelines should be more precise and should give a clear view on how to define the Internal Model framework and what will be required during the application process. To prepare such guidelines the local communication between NCA and undertakings is of key importance. As the deadline for local guidelines is concerned (2014.01.01), in our opinion the remaining period is too short to achieve it. Therefore we would like to recommend moving the date of introduction of local guidelines to 1st of January 2015. Also please refer to point 1.5 and 1.6.	Please see answers to comments 2 and 35 EIOPA is also in the view that communication between NCAs and undertakings is crucial. This is compatible with issuing Guidelines
47.	PZU	1.10.	We welcome the idea of communication between NCAs in case of pre-application process for groups. In our opinion such communication is	Noted

			necessary not only in case of groups but also in case of stand-alone undertakings. In other words the cooperation between NCAs should be defined as one of general requirements in terms of Internal Model application process. Without proper communication there is a risk that the final application requirements will differ between countries which is against the idea of convergence. Also please refer to General Comment (section: Cooperation).	
48.	German Insurance Association (GDV)	1.11.	In general, communication between national competent authorities and the insurance or reinsurance undertaking should continue throughout the pre-application and the future assessment of the application the undertaking may submit under Solvency II, and after the internal model is approved through the supervisory review process. We consider it important to stress that the group supvervisor should communicate – as far as possible – the results and assessments that national competent authorities reach within the colleges. We therefore propose a supplement: "Communication between the group supervisor and the ultimate parent undertaking of a group should cover the assessment of the colleges. In particular this should cover the national competent authorities concerned."	EIOPA is in favour of such communication between the group supervisor and the parent undertaking Transparency around this communication should be established also with relevant NCAs within the college and related undertakings of the group We do not see the need to specify that as it is already embedded in the Guidelines: Guideline 3 already cover the feedback of the reviews by NCAs to undertakings (this includes also all aspects related to groups) and specifc rules

				are set out in the functioning of colleges guidelines
49.	Groupe Consultatif Actuariel Européen	1.11.	We consider it important to stress that the group supvervisor should communicate – as far as possible – the results and assessments that national competent authorities reach within the colleges. Add "Communication between the group supervisor and the ultimate parent undertaking of a group should cover the assessment of the colleges. In particular this should cover the national competent authorities concerned."	Please see answer to comment 48
50.	Insurance Europe	1.11.	We consider important to stress that the group supervisor should communicate – as far as possible – the results and assessments that NCAs reach within the colleges. We therefore would propose to add the following: "Communication between the group supervisor and the ultimate parent undertaking of a group should cover the assessment of the college of supervisors including any views and reservations expressed by the national competent authorities concerned during the applicable period ."	Please see answer to comment 48
51.	Munich Re	1.11.	In general, communication between national competent authorities and the insurance or reinsurance undertaking should continue throughout the pre-application and the future assessment of the application the undertaking may submit under Solvency II, and after the internal model is approved through the supervisory review process. We consider it important to stress that the group supervisor should communicate – as far as possible – the results and assessments that national competent authorities reach within the colleges. We therefore propose a supplement: "Communication between the group supervisor and the ultimate parent undertaking of a group should cover the assessment of the colleges. In particular this should cover the national competent authorities concerned."	Please see answer to comment 48

52.	Groupe Consultatif Actuariel Européen	1.13.	This remains very general and does not prevent the NCAs from asking detailed questions about minor risks. We would like to see that EIOPA makes this clearer.	Guideline 3 refers to proportionality. More explanation of this principle can be found in the explanatory text EIOPA will monitor how this principle is followed on a more practical basis
53.	BMA	1.15.	As highlighted under our general comment above, the BMA notes that the definitions of "national competent authorities concerned" and "national competent authorities involved" do not appear to extend to allow for the compentent authorities of third countries. The Authority would expect to be sufficiently involved with a model approval process of a group with a materal undertaking in Bermuda (especially where that undertaking wishes to use an internal model for setting statutory capital in Bermuda). Furthermore, with respect to groups for which the BMA is the Group Supervisor, the Authority would expect to substantially perform the roles attributed to the Group Supervisor within theCP. It is hoped, therefore, that the exclusion of third country regulators from the provided definitions does not indicate that EIOPA envisages no significant involvement of third country regulators during the process.	NCAs "involved" referred to the guidelines are from EU Member States. Nevertheless third country competent authorities could participate as provided in Guideline 70
54.				
55.	Groupe Consultatif Actuariel Européen	1.15.	We welcome the perspective provided in bullet point 5 regarding the 'richness of the probability distribution forecast'. This is a helpful clarification. A statement as to what is material and what is not, is very welcome here. When materiality remains general, this can still result in very detailed questions about minor results.	Materiality is defined in general terms in the introduction. This is applicable to all guidelines Further detail is given in

				the Guidelines on PDF
56.	Insurance Europe	1.15.	We consider that given the different implications namely in terms of the level of participation of the NCAs concerned, the Guidelines would benefit if definitions clearly distinguish IM under article 230 and article 231. The same applies for the definitions of NCAs concerned/involved. We underline that although a definition of NCA concerned is given, the Guidelines seem to just refer to NCAs involved even when just referring to applications under article 231	Please see answer to comment 5 on "concerned" vs. "involved"
57.	PZU	1.15.	In our opinion the definition of "material" in the aspect of Internal Model is very vague. There is a risk that judgement of NCA or market might be different than the judgement of single undertaking (e.g. model change which is perceived by NCA as immaterial might we assessed as material by the undertaking and vice versa). We would expect a very precise definition of materiality with the appropriate reference to benchmark (e.g. materiality measured with reference to SCR, Own Funds etc.).	It is not possible to establish a benchmark for materiality as this may be not applicable in all circumstances. For instance something non material with reference to SCR can have a material effect on one test or standard for internal models approval (use test….) The definition of materiality follows the one provided in the Solvency II framewrok for internal models
58.				
59.	Groupe Consultatif Actuariel Européen	1.16.	1. We note the intention to implement the guideline from 1 January 2014. Despite this being on a preparatory basis we note that this is a challenging timeframe for undertakings (and NCAs) as this is the first time some of this information has been issued publically and NCAs will require time to consider how, and indeed, whether (as envisaged by	Please see answer to comments 2 and 5

			paragraphs 2.4 - 2.6 of the cover note), to implement the guidelines in their territory. This will create an additional communication delay and a further content uncertainty for undertakings. Clearly, this will impact on their ability, and the time needed, to respond to the requirements fully. 2. Additional clarity must be given as to the expectations of EIOPA and NCAs as at 1 January 2014. The cover letter implies that the requirements will be gradually phased in over the 'preparatory phase' and refers to specific and general phasing-in requirements. However, the consultation papers have a stronger statement that the requirements hold from 1 January 2014.	
60.	PZU	1.16.	Please refer to point 1.5, 1.6, 1.9 and General Comment (section: Timeline for the Guidelines Implementation).	Please see answers to these comments
61.	MetLife	Section I. General Comments	Whilst the guidelines are to be implemented from 1 January 2014 there is no explicit reference to the extent to which the guidelines have to be met between this date and Solvency II implementation. More clarity and certainty around the level to which the requirements need to be met would be useful to aid in planning as this will naturally have expense and resourcing implications.	Please see answers to comments 2 and 5
62.				
63.	PZU	1.17.	Please refer to point 1.5, 1.6, 1.9 and General Comment (section: Timeline for the Guidelines Implementation).	Please see answers to these comments
64.				
65.	CRO Forum CFO Forum	1.19.	We agree that the principles set out in this paragraph are sound, however we would like to bring to the attention of the NCAs that decision making at this stage would not necessarily be based on those internal models intended for SII compliance, and especially not capital planning.	The intention is to help undertakings to build their model for Solvency II use See answer to comment 5
66.	FEE	1.19.	The proposed guidelines are directed to national competent authorities. But, we consider that these proposals would give to the companies a	The intention of the guidelines is to increase

			clearer understanding of the areas to be considered by national competent authorities, when assessing their preparedness. As a result, national competent authorities will assist the companies in their ongoing development (and application) of internal model.	preparedeness of both undertakings and supervisors
67.				
68.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.19.	Point b) of such guidance requires undertakings to "prepare for the eventuality that its internal model may not be approved and set up processes to calculate the standard formula Solvency Capital Requirement as well as to consider the capital planning implications". There is no obligation to share standard formula outcomes. However, some supervisors have expressed a preference for SCRs determined using internal models to deviate only to limited extent from SCRs determined using the standard formula. Accordingly, NCAs might also be asked to report on whether they have, or intend to, establish such tolerances.	In pre-application there is no internal model approved. The intention of the guideline is to make sure that undertakings have plans in place in the case they should have to use the Standard Formula if the application to use the internal model is eventually rejected EIOPA is not aware of the statement suggested in relation to deviations compared to the standard formula. Internal models and the SCR derived from this model need to fit the specific risk profile of the undertaking
69.	Insurance Europe	1.19.	We agree that the principles set out in this paragraph are sound, however we would like to bring to the attention of the NCAs that decisions taken at this stage would not necessarily be based on those internal models intended for SII compliance, and especially not capital planning.	Please see answer to comment 65

70.	PZU	1.19.	In terms of building the undertaking's Internal Model framework we believe that the guidelines should present a precise requirements regarding the shape and scope of the framework for example in the area of processes, documentation, methodology etc. Also please refer to point 1.9.	Please see answer to comment 21
71.	ASSOCIATION OF FINANCIAL MUTUALS	1.20.	Suggest that EIOPA will disclose cases where the current binding national legal framework hinders compliance to specific Guidelines.	The progress report is a measure of communication between EIOPA and the NCAs and will not be disclosed with the exception of an up-date of the comply-or-explain on the basis of that report
72.	ASSURALIA	1.20.	We understand that NCAs cannot be expected to publicly disclose their respective progress report. However, undertakings should be informed about cases where the national legal framework is currently in contradiction with the Guidelines. We therefore would propose to add: "EIOPA will disclose cases where the current binding national legal framework hinders compliance to specific Guidelines"	The progress report is a measure of communication between EIOPA and the NCAs and will not be disclosed with the exception of an up-date of the comply-or-explain on the basis of that report
73.	Deloitte	1.20.	We believe yearly reports by February may not be frequent enough if the goal is a "checkpoint" to assess progress on the application of the guidelines. This is in particular true if Solvency II is implemented in 2016 (only one "checkpoint" in 2015 will be considered) or 2017 (only two "checkpoints"). We suggest EIOPA request a summary report by July of each year, in order to better assess the progress of harmonization and discuss any issue with NCAs (such as varying pace of implementation,	Disagree. EIOPA considered February the best option

			divergence in the application of the guidelines, etc.). We also suggest that EIOPA gives a high-level content for the progress report. A simple option being the organization of the report along each guideline.	This is the intention but that is an internal matter between EIOPA and the NCAs
74.				
75.	Insurance Europe	1.20.	We understand that NCAs cannot be expected to publicly disclose their respective progress report. However undertakings should be informed about cases where the national legal framework is currently in contradiction with the Guidelines. We therefore would propose to add: "EIOPA will disclose cases where the current binding national legal framework hinders compliance to specific Guidelines"	The progress report is a measure of communication between EIOPA and the NCAs and will not be disclosed with the exception of an up-date of the comply-or-explain on the basis of that report
76.	Munich Re	1.20.	Whereas we understand, that national competent authorities cannot be expected to publicly disclose their respective progress report, an undertakings should be informed about cases where the national legal framework is currently in contradiction to the guidelines. We therefore propose a supplement: "EIOPA will diclosue cases, where the current binding national legal framework hinders compliance to specific guidelines"	The progress report is a measure of communication between EIOPA and the NCAs and will not be disclosed with the exception of an up-date of the comply-or-explain on the basis of that report
77.	PZU	1.20.	In our opinion the annual progress report prepared by local NCA should not be supplemented by any kind of comply or explain procedure (e.g. local peer review report etc.). Such report would require the analysis of compliance of each undertaking with the interim measures requirements. We believe that the compliance should be tested on the basis of final	The assumption that the comply-or-explain mechanism requires the analysis of the compliance of each

			requirements after the official introduction of Solvency II.	undertaking individually is not correct. The progress report does not require such detailed analysis either
78.				
79.				
80.	FEE	1.21.	There is still a lack of guidance on the issue of proportionality, leaving it open to different interpretations by national competent authorities	The proportionality principle is applicable in all reviews carried out by the NCAs EIOPA will work to make sure this principle is applied consistently in practice
81.	Groupe Consultatif Actuariel Européen	1.21.	This guideline increases our concern that very stringent requirements are applied to minor risks and models.	The proportionality principle is applicable in all reviews carried out by the NCAs EIOPA will work to make sure this principle is applied consistently in practice
82.				
83.	ASSOCIATION OF FINANCIAL MUTUALS	1.22.	It is critical that the undertakings get feedback in a timely manner and not at the end of the process. As such, we propose rewording. "National competent authorities should provide continuous feedback to the undertaking on the reviews they carry out on the internal model for the purposes of pre-application."	Partially agreed. We will include "on-going feedback"

			The feedback should be specific so that the undertakings can take appropriate action and develop towards a binding commitment of the NCAs for the purpose of a "provisional approval" of mature and stable model components. The feedback of NCAs should indicate if the internal model is compliant with the requirements of the Directive. We therefore would add: "National competent authorities should indicate in their feedback if the internal model, or parts thereof, are compliant with the requirement set out in Directive 2009/138/EC, in particular Articles 112, 113, 115, 116, 120 to 126, 230 and 231."	The aim of pre-application is to form a view by supervisors on how ready the undertaking is to submit an application. It is not a pre-approval process as explained in the answer to comment 5. Therefor it is difficult to follow the approach suggested
84.	ASSURALIA	1.22.	Regular feedback from the supervisor during the whole pre-application process is highly appreciated. The feedback should be specific so that the undertaking can take appropriate actions.	Partially agreed. We will include "on-going feedback"
85.	Deloitte	1.22.	The guidelines puts the emphasis on the NCA's "forming a view" on the compliance of undertakings and groups with regards to the requirements for the approval of an internal model. Further to "provide feedback", the guidelines should also clarify the level of justification and improvement actions expected from the insurer to meet the requirements. It is proposed to complement the wording as "(…) NCAs should form a view on (…). They should communicate their view to the undertakings, with the facts and findings on which such view is based so that undertakings can identify and agree with the NCAs the steps to take to meet the requirements."	The aim of the pre-application process is to prepare for submitting an application for the use of the internal model. It is not a pre-approval process. It is up to the undertaking to build its internal model and plan the steps to be taken in order to submit the application when Solvency II is applicable. The on-going dialogue with NCAs and feedback

				will help on that
86.	German Insurance Association (GDV)	1.22.	Feedback for the purposes of pre-application should be developed towards a binding commitment of the NCAs for the purpose of a «provisional approval» of mature and stable model parts. The feedback of NCA should include instances, when – according to current Level2 / Level3 drafts – the internal model is compliant with the requirements of the Directive. We therefore propose a supplement: "National competent authorities should include in their feedback, when the internal model, or parts thereof, are compliant to the requirement set out in Directive 2009/138/EC, in particular Articles 112, 113, 115, 116, 120 to 126, and – for groups – Article 231."	EIOPA cannot follow this approach due to the reasons explained in the answer to comment 5
87.	Insurance Europe	1.22.	It is critical that the undertaking get the feedback in a timely manner and not at the end of the process. As such, we would propose adding " continuous ": "National competent authorities should provide continous feedback to the undertaking on the reviews they carry out on the internal model for the purposes of pre-application ". The feedback should also be specific so that the undertaking can take appropriate actions and developed towards a binding commitment of the NCAs for the purpose of a «provisional approval» of mature and stable model parts. The feedback of NCAs should indicate if according to current Level2 / Level3 drafts the internal model is compliant with the requirements of the Directive. We therefore would propose to add: "National competent authorities should indicate in their feedback if the internal model, or parts thereof, are compliant with the requirement set out in Directive	Partially agreed. We will include "on-going feedback" We cannot follow this approach due to the reasons explained in the answer to comment 5

			2009/138/EC, in particular Articles 112, 113, 115, 116, 120 to 126, 230 and 231."	
88.	International Underewriting Association of London	1.22.	In addition to feedback, we believe that there should be a close dialogue throughout the process to enable the firm to be fully aware of how the NCA views its application and its strengths and weaknesses. Time and resources will be saved if there is a minimum of uncertainty.	EIOPA encourages closed dialogue as indicated in the introduction
89.	MetLife	1.22.	It is important that NCAs provide both positive and negative feedback regarding their review of internal models that is consistent across firms and applied consistently over time. NCAs should also provide feedback regarding their view that the internal model approach is appropriate and reasonable for each of its intended purpose.	The current Guideline alows for positive or negative feedback
90.	Munich Re	1.22.	Feedback for the purposes of pre-application should be developed towards a binding commitment of the NCAs for the purpose of a «provisional approval» of mature and stable model parts. The feedback of NCA should include instances, when – according to current Level2 / Level3 drafts – the internal model is compliant with the requirements of the Directive. We therefore propose a supplement: "National competent authorities should include in their feedback, when the internal model, or parts thereof, are compliant to the requirement set out in Directive 2009/138/EC, in particular Articles 112, 113, 115, 116, 120 to 126, and – for groups – Article 231."	We cannot follow this approach due to the reasons explained in the answer to comment 5
91.	Polish Chamber of Insurance	1.22.	The wording should include « continuous ». « National competent authorities should provide continous feedback to the undertaking on the reviews they carry out on the internal model for the purposes of pre-application ». It is critical for the timely process that the undertaking get the feedback in a timely manner not at the end of the process.	Partially agreed. We will include "on-going feedback"
92.	ASSOCIATION	1.24.	A notification should not be required for any change. This requirement is	Only changes the

	OF FINANCIAL MUTUALS		too extensive. Further guidance on the relevance criteria would be helpful to assure a consistent and convergent approach. Also, often model changes result from feedback provided by the NCA. We would propose that EIOPA includes in the Guideline that in these cases the undertakings should refer to this feedback in their notification of changes.	undertaking considers relevant are to be notified We do not consider EIOPA should specify that
93.	ASSURALIA	1.24.	A notification should not be required for every little change. This requirement is too extensive. Further guidance on the relevance criteria would be helpful to assure a consistent and convergent approach.	Only changes the undertaking considers relevant are to be notified
94.	CRO Forum CFO Forum	1.24.	We understand the need for regulators to be aware of material changes to the model after the completion of any reviews. However, the text, as currently drafted, suggests that the regulator must be notified of «any changes». Given the model will still be under development pre-application, there is likely to be significant ongoing development and change to the model. In order to avoid an unnecessarily burdensome reporting process for both the firm and regulator, we would suggest that only major changes would be reported.	This Guideline refers to changes made to the model during pre-application Preparation to model changes and policy for model changes requirements of Solvency II are foreseen in Chapter 2 Only changes the undertaking considers relevant are to be notified During pre-application it is not expected to have major/minor changes, as

				this distinction is to be used when Solvency II is applicable
95.	DIMA (Dublin International Insurance & Management	1.24.	The requirement for groups and undertakings to notify any model changes during the pre-application process is overly extensive. It is more appropriate that the model changes groups or undertakings should notify to national competent authorites should be clear.	Only changes the undertaking considers relevant are to be notified
96.	German Insurance Association (GDV)	1.24.	Often model changes will refer to feedback provided by the NCA; in this case the undertaking should refer to this feedback in their notification of changes. We therefore propose the following supplement: "Where applicable, undertakings should refer to feedback of national cometent authorities".	Changes to the model can take place, as indicated, following feedback from NCAs Nevertheless it is the responsibiity of the undertaking to prepare for submitting an application. It us up to the undertaking to make changes to the internal model they consider appropriate in order to be better prepared for that
97.	Groupe Consultatif Actuariel Européen	1.24.	Often model changes will refer to feedback provided by the NCA; in this case the undertaking should refer to this feedback in their notification of changes. Add: "Where applicable, undertakings should refer to feedback of national competent authorities".	Please see answer to comment 96
98.	Insurance Europe	1.24.	A notification should not be required for any changes. This requirement is too extensive. We would suggest that only major changes would be reported.	Only changes the undertaking considers relevant are to be notified

			Also, often model changes result from feedback provided by the NCA. We would propose that EIOPA includes in the Guideline that in this cases the undertaking should refer to this feedback in their notification of changes.	
99.	International Underewriting Association of London	1.24.	We suggest that significant changes should be notified, but that reporting minor adjustments and improvements would not be useful and would overload the supervisor.	Only changes the undertaking considers relevant are to be notified
100.	MetLife	1.24.	It should be possible for the insurer to make small changes to the model without informing the NCA in advance. Such small changes should be reported annually to the NCA.	Only changes the undertaking considers relevant are to be notified
101.	Munich Re	1.24.	Often model changes will refer to feedback provided by the NCA; in this case the undertaking should refer to this feedback in their notification of changes. We therefore propose the following supplement: "Where applicable, undertakings should refer to feedback of national competent authorities".	We do not consider necessary to state that
102.	PZU	1.24.	According to this point the undertakings are expected to report to NCAs the changes in their Internal Model. We believe that the requirement of reporting model changes should refer only to major (material) model changes. Moreover in our opinion the idea of reporting of model changes require a set-up of formal model changes reporting process with predefined templates in which the undertakings will describe the introduced model changes. Taking into consideration the deadline for introduction of local guidelines (2014.01.01) there is a risk that local NCA will not be able to set up such reporting process. Therefore we would like to recommend moving the date of introduction of local guidelines to 1st of January 2015.	Only changes the undertaking considers relevant are to be notified Please see answer to comment 35

			Also please refer to point 1.5 and 1.6.	
103.	ASSOCIATION OF FINANCIAL MUTUALS	1.25.	The NCA should assess whether the model change alters the degree of compliance of the undertaking to the relevant requirements and should communicate its assessment to the undertaking. We therefore add: "The national competent authority should assess whether the model change requires the update of any feedback given to the undertaking."	Please see answer to comment 5, also applicable here Further, in relation to feedback, we consider that this is already covered by Guideline 3
104.	CRO Forum CFO Forum	1.25.	As noted above, we understand the need for the regulator to understand material changes to the model during the pre-application process. It will be important that the model is subject to appropriate change control during this period though we would suggest it is also important that this is applied in a proportionate way. Given the model will still be under development prior to final application, we would suggest that it is made clear that this requirement should not be interpreted as full implementation of the model change policy, reporting and controls prior to Solvency II implementation.	This Guideline refers to changes made to the model during pre-application Preparation to model changes and policy for model changes requirements in Solvency II are foreseen in Chapter 2
105.	German Insurance Association (GDV)	1.25.	The NCA should assess, whether the model change alters the degree of compliance of the undertaking to the relevant requirements, and should communicate their assessment to the undertaking. We therefore propose a supplement: "The national competent authority should assess whether the model change requires the update of any feedback given to the undertaking."	The feedbaack to be given to undertakings referred to in Guideline 3 also includes feedback on changes made during pre-application It is the responsibiity of the undertaking to prepare for submitting an application. It us up to the undertaking to make

				changes to the internal model they consider appropriate in order to be better prepared for that
106.	Groupe Consultatif Actuariel Européen	1.25.	The NCA should assess, whether the model change alters the degree of compliance of the undertaking to the relevant requirements, and should communicate their assessment to the undertaking Add: " The national competent authority should assess whether the model change requires the update of any feedback given to the undertaking." It is not clear what kind of classification is meant (in relation b). Will such a process remain a necessary part of pre-application when the application process is in operation? If so, then this could be unduly burdensome.	Please see answer to comment 103 b) Refers to the distinction made internally by the undertaking between the different changes This Guideline apply only to changes produced during pre-application
107.	Insurance Europe	1.25.	The NCA should assess whether the model change alters the degree of compliance of the undertaking to the relevant requirements and should communicate its assessment to the undertaking. We therefore would propose to add: "The national competent authority should assess whether the model change requires the update of any feedback given to the undertaking."	Please see answer to comment 103
108.	International Underewriting Association of London	1.25.	We suggest that the NCA should advise the firm of any concerns it may entertain following notification. Without feedback and dialogue, firms will respond inefficiently and waste resources.	EIOPA encourages such feedback and dialogue
109.	Munich Re	1.25.	The NCA should assess, whether the model change alters the degree of compliance of the undertaking to the relevant requirements, and should	Please see answer to comment 103

			communicate their assessment to the undertaking. We therefore propose a supplement: "The national competent authority should assess whether the model change requires the update of any feedback given to the undertaking."	
110.	ASSOCIATION OF FINANCIAL MUTUALS	Chapter 2. General Comments	Time-critical model changes that are proven necessary in the context of regular model updates, (e.g. the introduction of new products or legislative amendments) call for the implementation of a fast track model change approach. Example: 1. A change in the legal environment comes into force on 1st of December. 2. The impact of the change is classified as major according to the Model change policy. 3. The undertaking is prepared. The procedures are in place and the application for model change including calculations and documentation is sent to the NCA. 4. NCA takes 6 months for approval plus 1 month for a final decision by EIOPA. 5. This means that on the key date 31 December there are two models in place and for the "Solvency Balance sheet" and "SCR" two sets of numbers are available. First approach: The undertaking considers the numbers of the approved model. However these numbers are not adequate. Second approach: The undertaking considers the numbers of the changed model. The numbers are considered adequate, but the model is not approved. A pragmatic solution must be found for such cases.	As provided by the Directive the SCR should only be calculated by the internal model approved When considering major change to the internal model, undertakings should pro-actively engage with their supervisors before submitting an application for the change, especially when the approval of a major change is time critical. This might, in some cases, reduce the time needed by the supervisory authorities to approve the major changes
111.	CRO Forum	Chapter 2.	As noted in the previous comments, we agree that appropriate controls	The guidelines are

	CFO Forum	General Comments	should be in place over model change prior to application but suggest that this should not be interpreted as full implementation of the model change policy. The guidelines in this chapter should therefore be applied in this context. For example, guideline 6 proposes testing the definition of a major change. Whilst this would be appropriate in considering the model change policy, this should not lead to the full process for a model change being required to be in place until Solvency II is fully implemented. Whilst the notes in the explanatory text are not directly subject to consultation, we would suggest that it is important to highlight our concerns with the scope of model change outlined in this text. In particular, the text suggests that « regular update of parameters » would fall into the scope of model change. We understand the need for the regulator to understand changes to assumptions that have a material impact on model output. However, capturing all changes to model assumptions within the scope of model change is likely to be onerous for both the firm and regulator. We have similar concerns with other potential sources of change listed in the explanatory text (e.g. changes to model use). Applying such a wide scope of the definition of change is likely to lead to a significant reporting burden for both the firm and regulator and could distract focus from key material changes. We therefore would suggest that only major changes would be reported.	preparatory for Solvency II. Please refer to Guideline 4 related to the changes to the internal model during pre-application Regarding the comment on the explanatory text please refer to 118 Regarding the suggestion to report only major changes: that will be inconsistent with the Article 115 of the Directive
112.	German Insurance Association (GDV)	Chapter 2. General Comments	Time-critical model changes that have proven necessary in the context of regular model updates, the introduction of new products or by external factors (e. g. legislative amendments) call for the implementation of a fast track model change approach.	Please see answer to comment 110

			Example: 1. A change in legal environment comes into force on the 1st of December. 2. The impact of the change is classified as major according to the Model change policy. 3. The undertaking is prepared, procedures are in place, the application for model change including calculations and documentation is sent to the NCA. 4. The NCA takes 6 month for approval plus 1 month for a final decision by EIOPA. 5. This means on key date 31. December there are two models in place and for the reporting sheets "Solvency Balance sheet" and "SCR" two sets of numbers are available. First choice: Take the numbers form the approved model -> The numbers are not adequate. Second choice: Take the numbers from the changed model -> The numbers are considered adequate, but the model is not approved. We think that a pragmatic reliable solution must be found for such cases.	
113.	Groupe Consultatif Actuariel Européen	Chapter 2. General Comments	While acknowledging the importance of strong governance for approved internal models and the need to protect against the possibility of abusing an approved internal model status, it is important to recognise that the purpose of the model change framework should also be to encourage the company to improve its internal model on an on-going basis and keep the internal model up to date. In order to achieve this, the approval and reporting requirements to the authorities must also reflect the purpose and ensure that they are not unduly burdensome.	We agree, the model change policy, to be approved by the supervisory authorities as part of the initial approval is key to implement a robust and efficient model change framework
114.	Insurance and Reinsurance	Chapter 2. General	The Guidelines 1.32., 1.33 and 1.34 describe the process for group internal model under Article 231, and do not apply to an internal model	The guideline addresses considerations for group

	Stakeholder Group (IRSG)	Comments	that is only used for the consolidated group (Article 230). As the situation of NCAs involved (but not concerned) is similar in both situations, these guidelines should only be directed to NCAs concerned. We propose to change "national competent authorities involved" to "national competent authorities concerned"	internal models as they will be used to calculate both the group SCR and some solo SCRs (under Article 231) Nevertheless in this context, all supervisory authorities involved will have a role to play in the internal model approval process
115.	Insurance Europe	Chapter 2. General Comments	Time-critical model changes that are proven necessary in the context of regular model updates, the introduction of new products or by external factors (e. g. legislative amendments) call for the implementation of a fast track model change approach. Example: 1. A change in the legal environment comes into force on 1st of December. 2. The impact of the change is classified as major according to the Model change policy. 3. The undertaking is prepared. The procedures are in place and the application for model change including calculations and documentation is sent to the NCA. 4. NCA takes 6 months for approval (plus 1 month for a final decision by EIOPA). 5. This means that on the key date 31 December there are two models in place and for the "Solvency Balance sheet" and "SCR" two sets of numbers are available.	Please see answer to comment 110

			First approach: The undertaking considers the numbers of the approved model. However these numbers are not adequate. Second approach: The undertaking considers the numbers of the changed model. The numbers are considered adequate, but the model is not approved. A pragmatic solution must be found for such cases.	
116.	MetLife	Chapter 2. General Comments	The model change policy is to be developed during the pre-application process however we do not believe it is proportionate for any model changes during this period to be implemented following the process laid out in the model change policy. This is because during the pre-application phase there may be numerous model changes implemented as the model is developed and finalised. Following the requirements laid out in the model change policy during this time is overly onerous from both a developmental and resource perspective.	Those guidelines are for preparatory phase leading up to the application of Solvency II. In particular: • Guideline 4 (General section) provides a framework to deal with changes to the model made during the pre-application phase; • Chapter 2 provides guidelines on the preparation for the implementation of the model change framework when Solvency II applies
117.	Munich Re	Chapter 2. General Comments	Time-critical model changes that have proven necessary in the context of regular model updates, the introduction of new products or by external factors (e. g. legislative amendments) call for the implementation of a fast track model change approach. Example: 1. A change in legal environment comes into force on the 1st of	Please see answer to comment 110

			December. 2. The impact of the change is classified as major according to the Model change policy. 3. The undertaking is prepared; procedures are in place, the application for model change including calculations and documentation is sent to the NCA. 4. NCA takes 6 month for approval plus 1 month for a final decision by EIOPA. 5. This means on key date 31.12. the are two models in place and for the reporting sheets "Solvency Balance sheet" and "SCR" two sets of numbers are available. First choice: Take the numbers form the approved model: The numbers are not adequate. Second choice: Take the numbers from the changed model: The numbers are considered adequate, but the model is not approved. A pragmatic solution must be found for such cases.	
118.	CRO Forum CFO Forum	1.26.	We have no comment on the text being consulted upon (Guideline 5). However the explanatory text paper 13/027 states at paragraph 3.13 that 'The regular update of parameters would fall into the scope of a model change'. This may (and should) be intended to mean that where the process surrounding the update of parameters has changed, then this falls within model change. However it could be interpreted to mean that where the actual parameters are updated, then that triggers a model change. Clarification in this respect by EIOPA would be appreciated. Under 3.18 potential sources for changes are listed that might be viewed	The paragraphs 3.14 and 3.15 of the same section of the explanatory text provide some clarification. These paragraphs have been amended with the intention to bring more clarity Update in parameters can have a significant impact on the model outputs and the SCR in particular The model change policy could be used by

			as minimum requirements about the areas that should be addressed in the model change policy, while some are not relevant.	undertakings to agree with the supervisory authorities the process and governance around the update of parameters including report to the authorities as minor changes to the model or application for major changes. For instance, when appropriate the change could focus on the updating process more than on the value of the parameters themselves
119.				
120.	Groupe Consultatif Actuariel Européen	1.26.	As we commented on previous draft guidance: 1.the updating of parameters according to agreed formulae/rules should not be treated as a model changes. 2. It is difficult to see how changes that are external to the undertaking and beyond its control can follow the same pre-approval process and waiting for approval to be implemented, for example legal environment changes. It would be helpful to understand how a change in the of broad system of governance of the undertaking could or should lead to a change in the model/calculated SCR. The list should perhaps more clearly include obvious changes to the external risk environment e.g. the entry into or exit from currency peg/common currency.	1) Please see answer to comment 118 2) Some changes external to the undertakings can be the source for a change to the model. For instance changes in the tax code may require a change to the model. Similarly some changes in the governance may require changes to the model such as

				changes to the validation. Not all but some of those changes might be classified as major hence require pre-approval
121.	International Underewriting Association of London	1.26.	We suggest that the NCA should approach changes in a spirit of dialogue and flexibility that reflects proportionality and outcomes.	NCAs are expected to apply the guidelines in a manner which is proportionate to the nature, scale and complexity of the risks and business of the undertakings
122.	Lloyd's	1.26.	We have no comment on the text being consulted upon (Guideline 5). However the explanatory text paper 13/027 states at paragraph 3.13 that 'The regular update of parameters would fall into the scope of a model change'. This may (and should) be intended to mean that where the process surrounding the update of parameters has changed, then this falls within model change. However it could be interpreted to mean that where the actual parameters are updated, then that triggers a model change. Clarification in this respect by EIOPA would be appreciated.	Please see answer to comment 118
123.	CRO Forum CFO Forum	1.27.	The guideline itself is clear. One worry is the reference in the explanatory text under 3.23 that refers to " test or standards" and to the "validation report and their P&L attribution" to design appropriate indicators. We worry that this will lead some regulators to request this while we do not	We understand that the comment refers to a section of the explanatory text related

			see how this could work in practise.	to guideline 6: indicators related to the tests and standards might be relevant to classify changes as minor or major as compliance with those tests and standards is key to the appropriateness of the model
124.	FEE	1.27.	(Together with 1.33.) It remains unclear what constitutes a major or minor model change. Which are the qualitative and quantitative indicators to define a major change? They can be defferent from one country to another or they must be the same?	We expect the indicators to take into account the specificities of the model and of the undertaking itself
125.	Groupe Consultatif Actuariel Européen	1.27.	It would be helpful to ensure that any supervisory approval process around major changes to the model do not undermine the model's usefulness to the business or the business' ability to react swiftly to changes in the risk environment. Issue: It is the responsibility of undertakings to define major and minor changes, with both qualitative and quantitative criteria. This may lead to inconsistencies across Europe for both the calibration of major and minor changes and also in the time and cost of the approval process. Proposal: EIOPA to provide more guidance for the quantitative threshold for a major change as well as the time period in which changes are recognised. Further guidance on qualitative changes would be useful, i.e. examples by type of change that would qualify as a major change.	The indicators to classify changes as minor or major should take into account the specificities of the model and of the undertaking in order to deliver the intended outcome The model change policy, and as part of it the specification of minor and major changes will be approved by the supervisory authorities as part of the approval process

126.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.27.	“Material” is defined in the final bullet point of 1.15. Could Guideline 6 refer instead to this defined term rather than “major”?	Those are different concept. The changes that will be major to the internal model will be specified in the model change policy
127.	Insurance Europe	1.27.	We’re not convinced that the definition of a ‘major change’ can be entirely objective, as opposed to evidenced and justified	Hence the recommendation of using indicators to define major changes
128.	International Underewriting Association of London	1.27.	We would advocate that the approach to the indicators should be holistic, with due attention being paid to qualitative elements.	Undertakings are expected to use qualitative and quantitative indicators
129.				Companies are free to select their internal classification as long as this classification allows for the specification of minor and major changes
130.	PZU	1.27.	The qualitative and quantitative criteria of definition of “major model changes” must be precise - the clearer principles are expected to be settled. Although this issue has already been raised, it has not been addressed in the proposed guidance. The examples of model changes would be most welcome so the companies could use them as a guidance/benchmark.	Examples in the guidelines are not appropriate
131.	Deloitte	1.28.	The guidelines reads: “Whilst the quantitative impact of a model change on the Solvency Capital Requirement or on individual components of the Solvency Capital Requirement may be one of the indicators an insurance or reinsurance undertaking plans to use to identify major changes,…”	The impact on the SCR or on individual components of the SCR can be used as a quantitative indicator

			Is there a specific reason why the words “may be” are used? Based upon other paragraphs (e.g. 1.27 and 1.30) one could expect the use of words like “should be”.	
132.	German Insurance Association (GDV)	1.28.	It is necessary to ensure enough leeway on the qualitative side. We underline the fact that the measures under Solvency II are principles-based.	We believe the guideline does that
133.	Groupe Consultatif Actuariel Européen	1.28.	The change of SCR due to change of exposure should be treated differently to the change of SCR due to model technical specification. In many cases a change in SCR due to a change in exposure (which also preserves the materiality of each risk) should not be treated as a model change. More generally, a distinction must be drawn between voluntary (eg driven by changes in methodology, data source, risks entered into) and involuntary changes in SCR (eg driven by movements in markets, changes in best estimate liability). The latter cannot be pre-approved.	The classification relates to changes to the model. A change in exposures is not a change to the model, but in some circumstances it might trigger a change to the model
134.	Insurance Europe	1.28.	It is necessary to ensure enough leeway on the qualitative side. We underline the fact that measures under Solvency II are principles-based	Please see answer to comment 132
135.	International Underewriting Association of London	1.28.	We believe it to be important to recognise the specificity of each firm and group and for the supervisor to ensure that it is reflected in the model and processes of modification.	We believe the guideline does that
136.	Munich Re	1.28.	It is necessary to ensure enough leeway on the qualitative side. We underline the fact that the measures under Solvency II are principles-based.	Please see answer to comment 132
137.	PZU	1.28.	In our opinion it is not clear whether other qualitative or quantitative indicators, apart from quantitative impact of model change on the Solvency Capital Requirements, should be used to measure an impact of model change. We believe that the selection of indicator should be discussed and agreed with the national competent authorities.	The specification of minor and major changes will be included in the policy for model change and will be approved by the supervisory authorities as

				part of the approval process
138.	International Underewriting Association of London	1.29.	We would advocate that the approach to the indicators should be holistic, with due attention being paid to qualitative elements.	Please see answer to comment 128
139.	PZU	1.29.	With reference to point 1.27 and point 1.28: There is a lack of appropriate definition of qualitative and quantitative indicators. In our opinion the guidelines should define what sort of indicators is expected to be applied or at least present an example of such indicators with reference to appropriate benchmarks (e.g. SCR, Own Funds, Technical provisions etc.). Moreover, if the NCAs are expected to make sure that the indicators take into consideration the specificities of the undertaking and its Internal Model then it is necessary for the undertaking to discuss and agree the shape/character of each indicator with the local NCA. Without predefined expectations regarding mentioned indicators such process might be time consuming and increase a risk that within defined timeframe the undertaking won't be ready to enter the Internal Model application process.	The specification of minor and major changes will be included in the policy for model change and will be approved by the supervisory authorities as part of the approval process
140.	Groupe Consultatif Actuariel Européen	1.30.	Issue: A combination of changes over time may satisfy the criteria for a major change but not in isolation. The easiest example is with reference to changes in parameters where a "major" reduction in the risk profile over a year may be constituted of four "minor" reductions for each of the quarters. Proposal: In line with comments above, parameter changes to be excluded from the change criteria. EIOPA could also clarify the time horizon on which changes should be aggregated.	Regarding the parameters, please see answer to the comment 118
141.	International	1.30.	We would advocate that the approach to the indicators should be holistic,	Please see answer to

	Underewriting Association of London		with due attention being paid to qualitative elements.	comment 128
142.	PZU	1.30.	It should be clarified whether the insurance and reinsurance undertaking are expected to evaluate only the isolated effects of model changes and the effect of all changes combined or also the effects of multiple changes combined.	We believe that the intended outcome is clear enough, in particular in light of paragraph 1.31
143.	ASSOCIATION OF FINANCIAL MUTUALS	1.31.	The requirement to evaluate should be restricted to changes that are connected.	This would introduce a new concept that would need to be defined and assessed
144.	Deloitte	1.31.	In 1.30, the guidelines states that the effect of "all changes" should be evaluated in combination. In 1.31 it refers to « the combined impact of multiple changes ». We suggest to reword the guideline and refer to "all minor changes taken together" changes instead of "multiple changes". We also suggest that EIOPA clarify the scope of the word "all", in terms of timeline: since the inception of the model, the last validation, last calculation, etc. We suggest to define it as "since the last validation"	We believe the current wording better reflect our expectation Changes to the model should be covered by the validation process
145.	Insurance Europe	1.31.	The requirement to evaluate should be restricted to changes that are connected.	Please see answer to comment 143
146.	PZU	1.31.	Please refer to 1.30.	Please refer to 1.30
147.	ASSURALIA	1.32.	One model change policy (only) at group level is inappropriate since not all undertakings of a group may have the same businesses. Group subsidiaries may have different concerns and problems with the same model.	The model change policy for a group internal model will take into account the specificities of the model and of the undertakings
148.	CRO Forum	1.32.	This guideline describes the process for group internal model under	

	CFO Forum		Article 231, and does not apply to an internal model that is only used for the consolidated group (Article 230). As the situation of NCAs involved (but not concerned) is similar in both situations, this guidline should only be directed to NCAs concerned. We propose an amendment: "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 114
149.	Deloitte	1.32.	The guideline says that the "national competent authorities involved" should form a view on the Model Change policy of the group. This could mean that each related undertakings would have to discuss the group Model Change policy with the local authority, leading to an increased burden of coordination on both sides : undertaking and on the authorities. We suggest rewording as: "the national competent authority of the group should form a view…" (i.e. the "group supervisor"). "The group supervisor should discuss this view with the national competent authorities involved as appropriate".	We disagree
150.				
151.	German Insurance Association (GDV)	1.32.	This guideline describes the process for group internal model under Article 231 and does not apply to an internal model that is only used for the consolidated group (Article 230). As the situation of NCAs involved (but not concerned) is similar in both situations, this guidline should only be directed to NCAs concerned. We propose to change "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 114
152.	Groupe Consultatif Actuariel Européen	1.32.	What is meant by "one model change policy" here? Is this intended to refer to the need for a consistent policy applied across a group?	One means a unique policy
153.	Insurance Europe	1.32.	This Guideline describes the process for a group internal model under Article 231, and does not apply to an internal model that is only used for the consolidated group (Article 230). As the situation of NCAs involved	Please see answer to comment 114

			(but not concerned) is similar in both situations, this guideline should only be directed to NCAs concerned.	
154.	Munich Re	1.32.	This Guideline describes the process for group internal model under Article 231, and does not apply to an internal model that is only used for the consolidated group (Article 230). As the situation of NCAs involved (but not concerned) is similar in both situations, this Guideline should only be directed to NCAs concerned. We propose an amendment: "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 114
155.	CRO Forum CFO Forum	1.33.	This guideline leaves open how the college will deal with changes that are major at an individual undertaking, but not major at group level. We see the risk that each model change at a local entity will lead to a change request to the full college. We believe that major changes at solo entities, but minor at group level should not normally require a decision of the full college. Cf. 1.32. We propose an amendment: "national competent authorities involved" to "national competent authorities concerned".	A change will be classified as minor or major. A major change has to be approved by the NCAs concerned Please refer to answer above
156.				
157.	German Insurance Association (GDV)	1.33.	See 1.32. We propose to change "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 114
158.	Groupe Consultatif Actuariel Européen	1.33.	Issue: A major change at a Solo level triggering a major change at a Group level may invoke a very onerous and complex change process including; 1. Spurious changes from a Group and other Solo perspective requiring disproportionate reporting and time constraints at Group and	A change will be classified as minor or major. A major change has to be approved by the NCAs concerned

			other Solo level, e.g. a personnel change at the Solo level. 2. Delays in implementing non-major model changes at Group and other solo levels. 3. Further delays in the process and cost are likely if all Solo NCAs are required to also approve the major change along with the lead NCA. 4. Ultimately, significant time delays and additional cost may be anticipated or different versions of common model components maybe in force in different Solo entities 5. The above may be exacerbated if parameter updates are included as model changes. Note: Text does not explicitly require a major change at solo level to trigger a major change at Group level Proposal: EIOPA to consider appropriateness of allowing flexibility within the Group model change framework. Specifically, model components or criteria specific to a Solo entity which trigger a local major change should not necessarily trigger a Group major change. This does not preclude local NCAs in implementing a process outside the formal change process to monitor Solo internal models.	It is expected that the model change policy set out the governance in relation to changes to the model The comments identify the need for robust governance around the changes to the model There will only have one approved model at any given point in time Changes to the model should be monitor within the formal change process in particular through the reporting of minor changes and submission of application for major changes
159.	Insurance Europe	1.33.	See 1.32. We propose an amendment: “national competent authorities involved” to “national competent authorities concerned”.	Please see answer to comment 114
160.	Munich Re	1.33.	Cf. 1.32. We propose an amendment: “national competent authorities involved” to “national competent authorities concerned”.	Please see answer to comment 114
161.	PZU	1.33.	The same comment as in 1.27 but in accordance to group model changes.	Please see relevant answer

162.	CRO Forum CFO Forum	1.34.	We agree with the suggestion that there needs to be a clear definition of change across the Group based on a single group model change policy. Given there will be a need for change to be managed at local level, this could be supplemented by local change policies focused on implementation of the group policy at a local level. It will be important that what is defined as a major change at solo entity level is not automatically defined as a major change at group level. Cf. 1.32. We propose an amendment: "national competent authorities involved" to "national competent authorities concerned".	As per paragraph 132, a single model change policy is required. The drafting will be amended to clarify that a change that is major at the individual undertaking will be a major change within the policy
163.				
164.	German Insurance Association (GDV)	1.34.	See 1.32. We propose to change: "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 114
165.	Groupe Consultatif Actuariel Européen	1.34.	We welcome the change to the text from earlier draft guidance to recognise that major solo changes may not be major group changes.	That is not the intention. The drafting will be amended to clarify that a change that is major at the individual undertaking will be a major change within the policy
166.	Insurance Europe	1.34.	See. 1.32. We propose an amendment: "national competent authorities involved" to "national competent authorities concerned". It also should be noted that a change that is major at an individual undertaking (which could be small at group level) may not always be	The drafting will be amended to clarify that a change that is major at the individual undertaking will be a major change within the policy

			required to be a 'major change' at group level	
167.	Munich Re	1.34.	Cf. 1.32. We propose an amendment: "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 114
168.	PZU	1.34.	Please refer to 1.33.	Please refer to the related answer
169.	ASSURALIA	Chapter 3. General Comments	Requiring a use test during the first year after the implementation has limited added value.	During the preparatory phase firms can start using the model and be prepared for implementation
170.	CRO Forum CFO Forum	Chapter 3. General Comments	Review of the Use Test pre-application should be focused on how the firm is preparing to use the Internal Model rather than how the requirements of the Use Test are already met. Whilst final requirements are not available and the existing Solvency I regime remains in force, it is unrealistic to expect firms to fully utilise the model in the same way that the model will be used once Solvency II is in force. The extent of use is likely to increase closer to implementation as requirements are finalised. This is reflected in some, but not all, of the guidelines in this chapter. We would suggest that, where required, the guidelines should be updated to clearly reflect this approach. The notes in the explanatory text are not directly subject to consultation. However, we would suggest that it is important that these notes are clear that the Internal Model will only be one of a number of tools the firm may use to manage the business. It is unrealistic to assume, for example, that all of these tools will be directly reconcilable to the Internal Model.	We agree. These guidelines are for preparatory phase leading up to the application of Solvency II We agree. We do not see internal model as a reconciliation tool. See updated guidelines See above
171.	German Insurance	Chapter 3. General	It is important to keep in mind that an internal model should support – and not replace – decision making. Decisions are made by people taking	We agree. We don't expect internal model to

	Association (GDV)	Comments	into account a variety of sources and tools, the results of the internal model being one of them. However, all the results produced must be weighed against costs and benefits and deliberate decisions must be made, deliberate risks must be taken. We see a danger of reducing decisions within an (insurance) undertaking to a pure mechanical exercise which is neither desirable nor sensible in our view. We may need to have the freedom to use other methods for risk assessment than the ones of the approved internal model (see 1.43).	replace decision making. But internal model results should be taken into account in relevant decision making See comment above
172.	Groupe Consultatif Actuariel Européen	Chapter 3. General Comments	The uses of an internal model can be different from company to company, from class of business to class of business, from sector to sector and from country to country. It is challenging for the national competent authorities to be consistent in their view of the use test but at same time take differences, such as different legal regulation, into account. It would perhaps be useful for EIOPA to issue a list of core uses required where a company would need to explain why the model is not being used in this area One model can be good in one area but not useful for others. It is challenging to consider only one model in all decision making process. To achieve this, the ONE model would have to be very complex, and difficult to recalibrate and understand. The documentation practices may be differs from company to company. What is sufficient to document a use area? This needs to be clarified.	Undertakings should present how they are likely to use the internal model to NCAs. We do not expect it to be used in all decision-making Please see chapter 10 on documentation. We do not plan to provide rules on documentation for the use area. The undertaking should decide the level of documentation
173.	Insurance and Reinsurance Stakeholder Group (IRSG)	Chapter 3. General Comments	A number of guidelines around meeting the Use Test requirements require NCA's to consider a number of factors which themselves are not specific requirements of the Level 1 or 2 Text. In particular, Guideline 11 (Fit to the Business) sets out a number of factors to be considered to determine how well the Model fits the business. Firms should be allowed to provide as much information as necessary to prove the fit of the model to the business subject to materiality and proportionality.	We struggle to see the usefulness of an internal model that does not fit its business Firms are expected to provide relevant

			Although it is appropriate to expect evidence around the internal model output being used to inform decisions it is clear that the internal model is not the only tool used to make decisions in the business. Other (non-Internal Model) indicators may be more material and appropriate in the decision so the justification of such decisions being aligned with the internal model should not be part of the requirements. Furthermore the retrospective verification of such decisions according to what internal model outputs is also not practical. This issue also relates to the requirement around identifying inconsistencies and considering them to improve the internal model. The internal model should not be used as a "reconciliation" tool.	information given their specific circumstances Please see answer to comment 171 Agreed. See updated guidelines
174.	Insurance Europe	Chapter 3. General Comments	Review of the use test pre-application should be focused on how the undertaking is preparing to use the internal model rather than how the requirements of the use test are already met. Whilst final requirements are not available and the existing Solvency I regime remains in force, it is unrealistic to expect undertakings to fully utilise the model in the same way that the model will be used once Solvency II is in force.	Please see answer to comment 170
175.	Munich Re	Chapter 3. General Comments	The use test guidelines are very general in nature. It should be ensured that the NCA's do not tighten these requirements in the implementation of the consultation paper.	Noted. NCA will make judgement based on the review of the undertakings pre-application
176.	PZU	Chapter 3. General Comments	In case of a requirement of "forming a view" it is important to define on what basis the view is going to be formed. In other words if the local NCA is about to form a view on some aspect of Internal Model, the undertakings should have a precise knowledge of what sort of supporting information will be the basis for the NCAs opinion/conclusion.	NCAs will form views based on pre-application activities

			In our opinion there is a lack of information on what sort of evidence will be required by NCA to prove that : - the Internal Model is used in undertaking's risk management system and decision-making process (point 1.37); - the Internal Model appropriately fits undertaking's business (point 1.38); - the Internal Model will be used both in decision-making and to calculate the Solvency Capital Requirements (point 1.42); - the Internal Model gives prospective support to decision-making and provides retrospective verification of decision-making (point 1.44); - the internal stakeholders of the undertaking, in particular its administrative, management and supervisory bodies, receive regular Internal Model results (point 1.47); - the Internal Model is at a minimum able to measure the economic capital and to identify the impact on the risk profile of potential decisions for which the model is used (point 1.48); - the undertaking develops a process to monitor its risk profile and how a significant change of the risk profile will trigger a recalculation of the Solvency Capital requirement (point 1.50).	Pre-application activities will contribute to clarifying the NCA expectation. Internal model review is not a tick-box exercise
177.	Groupe Consultatif Actuariel Européen	1.35.	As we commented before some areas of use such as capital allocation will be challenging to use the same model, for example, physical allocation of capital. The physical allocation of capital is driven by local, standalone, regulatory capital requirements. This will be true for all entities and groups prior to Solvency II coming into force and so affects "use" prior to that date. For groups with BUs outside the EEA this may not be consistent with the Solvency II contribution to the group SCR (holding capital higher in the group, wherever permitted by local regulations, promotes fungibility.) It is important to distinguish between the modeling	The capital allocation is an important contributor to the appropriate protection of policyholders Also these guidelines are preparatory for implementation of Solvency II

			of risk factors over the one year horizon – the view of these should be consistent across processes and decision-making – and the metrics chosen to reflect value and drive decisions – here EIOPA should not be prescribing "own funds" as a measure of value or, in advance of Solvency II and outside the EEA, even a measure of capital that is relevant locally.	
178.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.35.	We suggest a possible addiction to 1.35(d) «how the model supports strategic and tactical decision-making>>. Possible new 1.35(e) "how the model is reflected in the undertaking's performance reporting"	We believe the current drafting covers those aspects
179.	German Insurance Association (GDV)	1.36.	We support this. The use test can only be judged in taking into accounts the specifics of each undertaking, e.g. the business and risk steering.	Noted
180.	Groupe Consultatif Actuariel Européen	1.36.	Agreed. Regulators should have sufficient capacity to request information regarding how specific decisions have been taken by the insurer / reinsurer and the support provided for these decisions by the internal model. Regulators should form these requests from the risk profile of the firm, materiality of decisions and experience of market practice. The guidance should make this authority clear.	Noted
181.	Insurance Europe	1.36.	We agree that the use test can only be judged in taking into account the specifics of each undertaking, e.g. the business and risk steering.	Noted
182.	Munich Re	1.36.	We support this. The use test can only be judged in taking into account the specifics of each undertaking, e.g. the business and risk steering.	Noted
183.	ASSOCIATION OF FINANCIAL MUTUALS	1.37.	The requirement to improve the model will be difficult to demonstrate in the initial phases of model use.	Please see answer to comment 169
184.	CRO Forum CFO Forum	1.37.	We would like to bring to the attention of regulators that the requirement to demonstrate incentive to improve the model is typically the kind of	We agree but it should be part of process in place

			requirement difficult to demonstrate in the initial phases of model use (see general comments)	
185.	German Insurance Association (GDV)	1.37.	We caution that this guideline could be misinterpreted in a way that high quality of the model is regarded as conservative calibration. It should be clarified that this is not meant in this guideline.	This guideline should not be misinterpreted as conservative calibration as high quality
186.	Groupe Consultatif Actuariel Européen	1.37.	As we commented before, it should be clarified how the use test applies to the SCR if a company calculates capital for internal purpose on a different basis from the SCR, which is acknowledged as a possibility in the calibration approximation guidelines	Please see guideline 16 paragraph 1.48 and Article 120 of the Directive
187.	Insurance Europe	1.37.	We underline that the requirement to demonstrate incentive to improve the model is typically the kind of requirement difficult to demonstrate in the initial phases of model use (see general comments). The guideline should be redrafted in order not to imply that the high quality of the model is regarded as conservative calibration.	Please see answer to comment 184 and 185
188.	Munich Re	1.37.	We caution that this Guideline could be misinterpreted in a way that high quality of the model is regarded as conservative calibration. In addition, the Guideline would be difficult to implement, because improvement of the quality of the internal model is not objective measurable. So this Guideline should be clarified or should be deleted from this consultation paper.	Please see answer to comment 185
189.	PZU	1.37.	Please refer to Chapter 3. General Comments.	Please see answer to comment 176
190.	ASSOCIATION OF FINANCIAL MUTUALS	1.38.	The model needs to fit the business. However this does not mean that all of the aspects listed under a) to f) need to be fulfilled for the internal model to fit the business. The risk model certainly needs to play a role in the key business decisions; however certain business decision will also require the use of additional models and/or considerations.	

			We also suggest deleting "(f) other relevant ones", as this doesn't provide guidance.	Point f) deleted
191.	ASSURALIA	1.38.	We suggest deleting point f. "other relevant ones" as this doesn't provide guidance and can leave room for interpretation.	Point f) deleted
192.	CRO Forum CFO Forum	1.38.	Company B See above for general comment about the use of the Internal Model prior to application. We would suggest that point (a) should be re-drafted to reflect assessment of where the model will be used rather than where the model is already being used. We suggest deleting point "f. other relevant ones" as this doesn't provide guidance.	These guidelines are preparatory Point f) deleted.
193.				
194.	German Insurance Association (GDV)	1.38.	The model needs to be fit to business, we nevertheless want to stress that this does not mean that all of the aspects listed under a - f need to be fulfilled for the internal model to be fit for business. Certain business decision will require the use of additional models and/or considerations. However, the risk model certainly needs to play a role in key business decisions.	We are unclear how an internal model be fit to business without taking into the factors in a) to e) into consideration. We agree that undertakings should use other tools in decision making
195.	Groupe Consultatif Actuariel Européen	1.38.	Guideline 11 implies that the model used to calculate the SCR should support all decision making. This is both impractical and dangerous. To build a model capable of supporting all decision-making would require a complexity that would incredibly difficult to understand and maintain. Stronger risk management systems permit, and indeed encourage, the construction of bespoke models tailored to the evaluation of the risks associated with particular decision. In this vein, it is worth noting that increasing granularity decreases the materiality of any single decision.	Please see answer to comment 172

			As we commented before a would be helpful to clarify, what is meant by the granularity of risk management system and is this the same thing as the risk management system referred to in the Directive. Is fit to the business only required for the current risk profile? If not, the guidelines should clarify the requirement on adapting to the change of risk profile in business.	Yes The model should be appropriate for its usages in particular the calculation of the SCR
196.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.38.	We suggest deleting point f. other relevant ones as this doesn't provide guidance. Re "Fit to the business". An additional factor could be "The undertaking's key risks"	Point f) deleted Noted
197.	Insurance Europe	1.38.	The model needs to be fit to business. However this does not mean that all of the aspects listed under a) to f) need to be fulfilled for the internal model to be fit for business. The risk model certainly needs to play a role in the key business decisions; however certain business decision will also require the use of additional models and/or considerations. We also suggest deleting point f. other relevant ones as this doesn't provide any guidance and can leave room for interpretation..	Please see answer to comment 194 Point f) deleted
198.	Munich Re	1.38.	The model needs to be fit to business, we nevertheless want to stress that this does not mean that all of the aspects listed under a-f need to be fulfilled for the internal model to be fit for business. Certain business	Please see answer to comment 194

			decision will require the use of additional models and/or considerations. However, the risk model certainly needs to play a role in key business decisions.	
199.	PZU	1.38.	Please refer to Chapter 3. General Comments.	Please see relevant answer
200.	ASSOCIATION OF FINANCIAL MUTUALS	1.39.	Regular discussions of models in the risk committees should also serve the purpose. Formal trainings should not be required. This also seems too extensive, so "and staff" should be deleted.	The board as a whole needs to able to demonstrate their understanding of the internal model such that they can be an effective challenge. Drafting amended
201.	ASSURALIA	1.39.	Regular discussions of models in the risk committees should serve the purpose. Formal trainings, seminars or workshops should not be required but strongly advised. In function of their available resources undertakings should have sufficient flexibility to planify the integration and implementation of their internal model over time.	Please see answer to comment 200
202.	CRO Forum CFO Forum	1.39.	We suggest deleting "including providing training, seminars or workshops" as each undertaking should be free to select the best way to ensure key users understand the internal model.	Drafting amended
203.	Deloitte	1.39.	The guideline should outline the level of understanding it expects from different staff groups. For example it should not be expected that the Board of a company should have a detailed understanding of copulas or distributions used in the internal model, but are aware of how the results of the internal model can be used and its weakness.	Added "relevant users"
204.	German Insurance Association	1.39.	Regular discussions of models in the risk committees should also serve the purpose. Formal trainings should not be required.	Please see answer to comment 200

	(GDV)			
205.	Groupe Consultatif Actuariel Européen	1.39.	The "administrative, management or supervisory body" may refer to different parts of organisation in different nations. The guideline should apply different requirements of understanding of the internal model to the Boards which have different functions (executive or supervisory). Can national competent authorities take those differences into consideration when they interview the Board members? A detailed technical understanding should not be expected of Board members. Instead the Board should have responsibility for and a familiarity with the controls and processes put in place to assure that the model remains fit for the purposes to which it is being put and the MI presented in support of decision making is accurate and appropriate. Further it seems unreasonable to expect the same level of understanding across all AMSB members. In this vein, it would be helpful to clarify whether, the requirements can be met by specialist of dedicated sub committees of the Board (e.g. a Risk Committee or Audit Committee), where these sub committees are comprised solely of Board members. Often the people in these ambiguous positions are going to be actuaries. Please refer also to comment 1.156.	During the pre-application undertaking should present their structure and identify the body that represent the AMSB as required by Article 40 of the Directive Please see answer to comment 200 Please see answer to comments on 1.156
206.	Institut des Actuaires	1.39.	It should be clear that not all the members of the AMSB should have the knowledge of internal models, but at least a few of them.	Please see answer to comment 205
207.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.39.	An additional paragraph similar to 1.39 could be added: "Through the pre-application process national competent authorities should form a view on how the insurance or reinsurance undertaking ensures understanding of the internal model by its external stakeholders."	Noted
208.	Insurance	1.39.	Regular discussions of models in the risk committees should also serve	Please see answer to

	Europe		the purpose. Formal trainings should not be a requirement. Undertakings should have sufficient flexibility to planify the integration and implementation of their internal model over time. This also seems too extensive during the pre-application process when it comes to "staff".	comment 200 Please see updated Guideline
209.	MetLife	1.39.	Guidance is unclear on the period of time over which training should have taken place prior to application for model approval. The level of understanding of the internal model should be proportionate and appropriate to the administrative, management or supervisory body or staff using the internal model for decision making purposes. It should not be necessary for the administrative, management or supervisory body or staff to have a detailed understanding of aspects of the internal model where they are not using output to make decisions.	Please see answer to comment 200
210.	Munich Re	1.39.	Regular discussions of models in the risk committees should also serve the purpose. Formal trainings should not be required.	Please see answer to comment 204
211.	MetLife	1.41.	Measure is unclear on the period over which historical minutes will be examined as part of the intenal model approval process. Internal models are only likely to be discussed at senior levels and used in decision making when the model is in its near-final state and produces stable results. Depending on development timelines this may only occur a short time before formal application for approval.	The undertakings should present their proposal to the NCA
212.	ASSOCIATION OF FINANCIAL MUTUALS	1.42.	Decisions are made by people taking into account a variety of sources and tools, the results of the internal model being one of them. There is a danger of reducing decisions within undertaking to a pure mechanical exercise which is neither desirable nor sensible in our view. There is a need to have the freedom to use other methods for risk assessment than the ones of the approved internal model (see 1.43).	We agree and we do not expect undertakings to only use the internal model for decision making
213.	DIMA (Dublin	1.42.	In the decision-making process, groups and undertakings take into	Please see answer to

	International Insurance & Management		account different tools, resources and methods. The output of the internal model is just one of these. Therefore, the internal model should support, not replace, decision making. Groups or undertakings should have the freedom to use other methods to access risks than the internal model.	comment 212
214.	German Insurance Association (GDV)	1.42.	See "Chapter 3. General Comments" and 1.43.	Please see relevant comment
215.	Groupe Consultatif Actuariel Européen	1.42.	It is clear that hundreds of decisions are made every second of every day within large insurance undertakings. More guidance may be necessary for NCAs and firms to understand the types of decisions being targeted.	Providing a list or detailed guidance will remove the ability of the undertaking to make the best use of the internal model
216.	Insurance Europe	1.42.	It is important to keep in mind that an internal model should support – and not replace – decision making. Decisions are made by people taking into account a variety of sources and tools, the results of the internal model being one of them. However, all the results produced must be weighed against costs . We see a danger of reducing decisions within an undertaking to a pure mechanical exercise which is neither desirable nor sensible in our view. We may need to have the freedom to use other methods for risk assessment than the ones of the approved internal model (seee 1.43).	We agree and we are not proposing that internal model is used without the users' judgement. The guideline clearly states that the internal model is there to support decision making
217.	Munich Re	1.42.	It is important to keep in mind that an internal model should support – and not replace – decision making. Decisions are made by people taking into account a variety of sources and tools, the results of the internal model being one of them. However, all the results produced must be weighed against costs and benefits and deliberate decisions must be made, deliberate risks must be taken. We see a danger of reducing decisions within an (insurance) undertaking to a pure mechanical exercise which is neither desirable nor sensible in our view. We may need	Please see answer to comment 216

			to have the freedom to use other methods for risk assessment than the ones of the approved internal model (cf. 1.43).	
218.	PZU	1.42.	Please refer to Chapter 3. General Comments.	Please see relevant comment
219.	ASSOCIATION OF FINANCIAL MUTUALS	1.43.	We do not understand what the requirement to identify inconsistencies and consider them to improve the internal model would mean in practice. Different frameworks exist with different objectives, assumptions, models. They are known by the undertakings and the management. The internal model cannot be a "reconciliation" tool.	Please see updated guidelines
220.	CRO Forum CFO Forum	1.43.	We welcome the comment in the explanatory text that "National competent authorities consider that the internal model is not the only tool used to make decisions in the business, and it is expected that an undertaking has a number of tools used to support decisions made within the business. » However we do not understand what the requirement for identifying inconsistencies and consider them to improve the internal model would mean in practice. Different frameworks exist with different objectives, assumptions, models. They are known by the undertakings and the management. The internal model cannot be a "reconciliation" tool.	Please see updated guidelines
221.	DIMA (Dublin International Insurance & Management	1.43.	The requirement of identifying inconsistencies of other methods used to make decisions and considering them to improve the internal model is not practical because the internal model is not a reconciliation tool.	Please see updated guidelines
222.				
223.	German Insurance Association (GDV)	1.43.	We welcome that undertakings will be allowed to use "additional tools […]as part of the decision-making process".	Noted
224.	Groupe Consultatif	1.43.	It is unclear what is meant by "inconsistencies" in this context.	Please see updated guidelines

	Actuariel Européen			
225.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.43.	We welcome the comment in the explanatory text that "National competent authorities consider that the internal model is not the only tool used to make decisions in the business, and it is expected that an undertaking has a number of tools used to support decisions made within the business. » However we do not understand what the requirement for identifying inconsistencies and consider them to improve the internal model would mean in practice. Different frameworks exist with different objectives, assumptions, models, and the undertakings and the management know them. The internal model cannot be a "reconciliation" tool.	Please see updated guidelines
226.	Insurance Europe	1.43.	We welcome the comment in the explanatory text that "National competent authorities consider that the internal model is not the only tool used to make decisions in the business, and it is expected that an undertaking has a number of tools used to support decisions made within the business." However we do not understand what the requirement to identify inconsistencies and consider them to improve the internal model would mean in practice. Different frameworks exist with different objectives, assumptions, models. They are known by the undertakings and the management. The internal model cannot be a "reconciliation" tool.	Please see updated guidelines
227.	Munich Re	1.43.	We welcome that undertakings will be allowed to use "additional tools […]as part of the decision-making process".	It is not our intention for the internal model to be the only tool used in decision making
228.	ASSOCIATION OF FINANCIAL MUTUALS	1.44.	Business decisions cannot be based only on internal model outputs, neither justification or retrospective verification of such decisions according solely to what internal model outputs are saying are relevant. Retrospective verification of decision-making may not be possible at that granular level of a certain decision. The P&L attribution is more	Please see updated guidelines

			appropriate. We therefore suggest deleting this part of guideline 14.	
229.	CRO Forum CFO Forum	1.44.	Decision making processes are using different tools/measures providing different views to fully inform decisions and then cannot rely on a single source/model of information. Then as the business decisions cannot be based only on internal model outputs, neither justification or retrospective verification of such decisions according to what internal model outputs are saying is relevant. We agree that is is essential to perform regular verification–eg through the P&L attribution- to ensure the internal model is appropriate to the business profile and therefore to feed decision-making processes. If this is what is meant by „retrospective verification", as reflected in the explanatory text, then we suggest clearly stated it in the Guideline to avoid inadequate interpretation.	Please see updated guidelines
230.	German Insurance Association (GDV)	1.44.	Retrospective verification of decision-making may not be possible at that granular level of a certain decision. The P&L attribution already publishes this aspect. We therefore suggest to delete this part of guideline 14.	Please see updated guidelines
231.	Groupe Consultatif Actuariel Européen	1.44.	As we commented before, what does "retrospective verification of decision making" mean and how is it achieved? The model's purpose is to provide a probabilistic assessment of the risks to which the organisation is exposed and their impact on own funds. This can be used to trial "what-ifs" and alternative strategies, but it is hard to see how it can meaningfully be applied to verify a decision. If the meaning was that the model is used to estimate, say, the the impact on the SCR of a switch of €1bn from equities into government bonds and then to verify, after the switch is made, that the impact on the SCR was in line with what had been estimated then this is a relatively meaningless check as the same model and inputs are being used.	Please see updated guidelines
232.	Insurance and Reinsurance Stakeholder	1.44.	Decision-making processes are using different tools/measures providing different views to fully inform decisions and then cannot rely on a single source/model of information.	Please see updated guidelines

	Group (IRSG)		Then as the business decisions cannot be based only on internal model outputs, either justification or retrospective verification of such decisions according to what internal model outputs are saying is relevant. However, we agree that is essential to perform regular verification–e.g. through the P&L attribution- to ensure the internal model is appropriate to the business profile and therefore to feed decision-making processes If this is what is meant by „retrospective verification", as reflected in the explanatory text, then we suggest clearly stated it in the Guideline to avoid inadequate interpretation.	
233.	Insurance Europe	1.44.	Decision making processes use different tools/measures that provide different views to fully inform decisions and as such cannot rely on a single source/model of information. As the business decisions cannot be based only on internal model outputs, neither justification or retrospective verification of such decisions according solely to what internal model outputs are saying are relevant. We agree that it is essential to perform regular verification (e.g. through the P&L attribution) to ensure the internal model is appropriate to the business profile and therefore to feed decision-making processes. If this is what is meant by "retrospective verification", as reflected in the explanatory text, then we suggest clearly stated it in the Guideline to avoid inadequate interpretation.	Please see updated guidelines
234.	Munich Re	1.44.	Retrospective verification of decision-making may not be possible at that granular level of a certain decision. The P&L attribution already published this aspect. We therefore suggest to delete this part of Guideline14.	Please see updated guidelines
235.	PZU	1.44.	Please refer to Chapter 3. General Comments.	Please see updated guidelines
236.	ASSOCIATION OF FINANCIAL MUTUALS	1.45.	Business decisions are not only based on internal model outputs and sometimes other indicators may be more material in the decision. We would amend "… and how the output is aligned with the decision" to	Please see updated guidelines

			"…and whether the decision is considering the output of the internal model"	
237.	CRO Forum CFO Forum	1.45.	We agree that evidence should be provided about the fact that internal model output was used to inform decisions. However, since business decisions are not only based on internal model outputs and sometimes, other indicators may be more material in the decision, justification of such decisions alignment with the internal model should not be part of the requirements. In addition, the requirement is too broad as it refers to decision-making. This could imply that any decision should consider the output of the internal model. The explanatory text also suggests that if the decision is not aligned to the outputs of the internal model, then this may indicate weaknesses in the internal model. We believe that a company may use other metrics for decision-making, resulting on a different decision being. This does not necessarily mean that there are weaknesses in the internal model.	Please see updated guidelines
238.	DIMA (Dublin International Insurance & Management	1.45.	As groups and undertakings take into account a variety of tools, resources and methods in the decision-making process, justifying the alignment between the internal model outputs and the decisions is not practical. It is more appropriate to justify whether the internal model outputs are considered in making decisions.	Please see updated guidelines
239.	German Insurance Association (GDV)	1.45.	The sentence could be interpreted in such a way that the output of the internal model is to be aligned to the decision. We think, that normally the decision should reflect the output of the model, and not vice versa, we suggest to reformulate the sentence "and how the output is aligned with the decision" to "and whether the decision is considering the output of the internal model".	Please see updated guidelines
240.	Groupe Consultatif Actuariel Européen	1.45.	The sentence could be read such that the output of the internal model is aligned to the decision. As we think that normally the decision should reflect the output of the model, and not vice versa, we suggest to reformulate this statement.	Please see updated guidelines

			Replace " and how the output is aligned with the decision" with "and whether the decision is arrived at considering the output of the internal model"	
241.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.45.	We agree that evidence should be provided about the fact that internal model output was used to inform decisions. However, since business decisions are not only based on internal model outputs and sometimes, other indicators may be more material in the decision, justification of such decisions alignment with the internal model should not be part of the requirements.	Please see updated guidelines
242.	Insurance Europe	1.45.	We agree that evidence should be provided about the fact that the internal model output was used to inform decisions. However, since business decisions are not only based on internal model outputs and sometimes other indicators may be more material in the decision, justification of such decisions alignment with the internal model should not be part of the requirements. We would suggest to reformulate the sentence "… and how the output is aligned with the decision" in this way: "…and whether the decision is considering the output of the internal model"	Please see updated guidelines
243.	International Underewriting Association of London	1.45.	In our view, many factors are taken into account in decision-making. We suggest that the emphasis should rather be on ensuring that the internal model outputs are given due consideration in decision-making.	Please see updated guidelines
244.	MetLife	1.45.	The documentation should be appropriate for the purpose of supporting decision taking. It is important that documentation is proportionate and is carried out at a level that is of value to the business to help understand why decisions have been taken. It should not be carried out at a level of detail that is fulfilling an academic purpose that is of little value to the business.	Please see updated guidelines
245.	Munich Re	1.45.	The sentence could be interpreted in such a way that the output of the	Please see updated guidelines

			internal model is aligned to the decision. We think, that normally the decision should reflect the output of the model, and not vice versa, we suggest to reformulate the sentence "… and how the output is aligned with the decision" in this way: "…and whether the decision is considering the output of the internal model"	
246.	ASSOCIATION OF FINANCIAL MUTUALS	1.46.	We would amend "where the output [...] with the decision" to "where the decision is not consistent with the output of the internal model" A significant amount of effort would be required if an undertaking should have to formalize and document every decision making process in the business and produce and update the documentation on a regular basis.	Please see updated guidelines
247.	CRO Forum CFO Forum	1.46.	We agree that evidence should be provided about the fact that internal model output was used to inform decisions. However, since business decisions are not only based on internal model outputs and sometimes, other indicators may be more material in the decision, justification of such decisions alignment with the internal model should not be part of the requirements (see also 1.45)	Please see updated guidelines
248.	DIMA (Dublin International Insurance & Management	1.46.	Groups and undertakings use different tools and methods to support their decision-making. To document where the outputs of the internal model are not aligned with the decisions is not practical, thus this requirement should be excluded.	Please see updated guidelines
249.	German Insurance Association (GDV)	1.46.	Reasoning similar to 1.45: The decision should be based on the output, not vice versa. We propose to reformulate the sentence "where the output [...] with the decision" to "where the decision is not consistent with the output of the internal model". A significant amount of effort would be required if an undertaking should have to formalize and document every decision making process in the business and produce and update the documentation on a regular basis. Key uses like the monitoring of limits and triggers are typically already	Please see updated guidelines

			well formalized and documented. We would expect that the supervisor reviews the uses throughout the pre-application/application process and points out areas where the uses are unclear. A costly metadocumentation should be avoided.	
250.	Groupe Consultatif Actuariel Européen	1.46.	Reasoning similar to 1.45; the decision should be based on the output, not vice versa. Replace "where the output ... with the decision" with "where the decision is not consistent with the output of the internal model"	Please see updated guidelines
251.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.46.	We agree that evidence should be provided about the fact that internal model output was used to inform decisions. However, since business decisions are not only based on internal model outputs and sometimes, other indicators may be more material in the decision, justification of such decisions alignment with the internal model should not be part of the requirements.	Please see updated guidelines
252.	Insurance Europe	1.46.	We agree that evidence should be provided about the fact that the internal model output was used to inform decisions. However, since business decisions are not only based on internal model outputs and sometimes other indicators may be more material in the decision, justification of such decisions alignment with the internal model should not be part of the requirements. Moreover, a significant amount of effort would be required if an undertaking should have to formalize and document every decision making process in the business and produce and update the documentation on a regular basis. Key uses like the monitoring of limits and triggers are typically already well formalized and documented. We would expect that the NCA reviews the uses throughout the pre-application/application process and points out areas where the uses are unclear. A costly metadocumentation should be avoided.	Please see updated guidelines
253.	Munich Re	1.46.	Reasoning similar to 1.45; the decision should be based on the output, not vice versa. We propose to reformulate the sentence "where the output [...] with the	Please see updated guidelines

			decision" in this way: "where the decision is not consistent with the output of the internal model" A significant amount of effort would be required if an undertaking should have to formalize and document every decision making process in the business and produce and update the documentation on a regular basis. Key uses like the monitoring of limits and triggers are typically already well formalized and documented. We would expect that the supervisor reviews the uses throughout the pre-application/application process and points out areas where the uses are unclear. A costly metadocumentation should be avoided.	
254.	CRO Forum CFO Forum	1.47.	We believe that the requirement should state that the internal stakeholders of the undertaking should receive internal model results with the frequency required to make the relevant business decisions.	Noted
255.	PZU	1.47.	Please refer to Chapter 3. General Comments.	Please see relevant comment
256.	Groupe Consultatif Actuariel Européen	1.48.	Please define what the "Economic capital" means. Is this capital used for standard formula/SCR, or can it be capital calculated for internal purposes? The internal model is for calculating the Solvency II capital requirement. The model does not necessarily provide an assessment of economic capital or information on the expected return.	Pelase see Article 120 of the Directive 2009/138/EC
257.	PZU	1.48.	Please refer to Chapter 3. General Comments.	Please see relevant comment
258.	MetLife	1.50.	There should be additional guidance regarding how firms should interpret a significant change in risk profile to ensure firms apply this consistently.	A significant change in risk profile depends on the nature and complexity of the business. We do not propose to apply a single rule for all undertakings

259.	PZU	1.50.	Please refer to Chapter 3. General Comments.	See relevant answer
260.	CRO Forum CFO Forum	1.51.	Thisguideline describes the process for group internal model under Article 231, and does not apply to an internal model that is only used for the consolidated group (Article 230). As the situation of NCAs involved (but not concerned) is similar in both situation, this guidline should only direct to NCAs concerned (compare 1.32). We propose an amendment from "national competent authorities involved" to "national competent authorities concerned".	NCAs "involved" will play a part in the assessment of the application. Hence we do not propose to change the guideline
261.	German Insurance Association (GDV)	1.51.	This guideline describes the process for group internal model under Article 231 and does not apply to an internal model that is only used for the consolidated group (Article 230). As the situation of NCAs involved (but not concerned) is similar in both situations, this guidline should only direct to NCAs concerned (compare 1.32). We propose to change "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 260
262.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.51.	This Guideline describes the process for group internal model under Article 231, and does not apply to an internal model that is only used for the consolidated group (Article 230). As the situation of NCAs involved (but not concerned) is similar in both situations, this guideline should only be directed to NCAs concerned. We propose to change "national competent authorities involved" to "national competent authorities concerned"	Please see answer to comment 260
263.	Insurance Europe	1.51.	This Guideline seems to just refer to an application under article 231. As such, theGuideline should only refer to NCAs concerned. Also it could be helpful to address applications under article 230 including in terms of the envisaged cooperation between NCAs and respective roles.	Please see answer to comment 260
264.	Munich Re	1.51.	This Guideline describes the process for group internal model under Article 231, and does not apply to an internal model that is only used for	Please see answer to comment 260

			the consolidated group (Article 230). As the situation of NCAs involved (but not concerned) is similar in both situation, this guidline should only direct to NCAs concerned (compare 1.32). We propose an amendment from "national competent authorities involved" to "national competent authorities concerned".	
265.	CRO Forum CFO Forum	1.52.	Cf. 1.51. Change "national competent authorities involved" to "national competent authorities concerned"	Please see answer to comment 260
266.				
267.	German Insurance Association (GDV)	1.52.	See 1.51. Change "national competent authorities involved" to "national competent authorities concerned"	Please see answer to comment 260
268.	Groupe Consultatif Actuariel Européen	1.52.	The wording here would seem to imply that the group model governance takes precedence over local model governance for group internal models used at a solo entity level, while not diminishing the need for solo entities to understand the relevant parts of the model and satisfy themselves that they remain appropriate ie that, provided that the solo entity does not believe that the group model/approach is inappropriate then it is fine to use it rather than feeling compelled to argue for the best possible model for local needs If confirmed, this is helpful in resolving the governance issue where "group" believes one thing about a risk and the local entity believes another. Solvency 1 still applies during the interim period. What happens if a Group applies in its governance a global solvency requirement (according to S2 and this guideline 18) which is lower than the S2 requirement?	Undertakings must meet the use test requirements both at group and at solo level
269.	Institut des Actuaires	1.52.	Solvency 1 still applies during the interim period. What happens if a Group applies in its governance a global solvency requirement (according to S2 and this guideline 18) which is lower than the S2 requirement?	We are in preparatory phase. Solvency I still applies
270.	Insurance and Reinsurance	1.52.	See comment under 1.51	Please see answer to comment 260

	Stakeholder Group (IRSG)			
271.	Insurance Europe	1.52.	See 1.51 including suggestion to change "national competent authorities involved" to "national competent authorities concerned" It would be helpful if the responsibility between NCAs could be dealt with explicitly.	Please see answer to comment 260
272.	Munich Re	1.52.	See 1.51. Change "national competent authorities involved" to "national competent authorities concerned"	Please see answer to comment 260
273.	CRO Forum CFO Forum	1.53.	Cf. 1.51. Change "national competent authorities involved" to "national competent authorities concerned"	Please see answer to comment 260
274.				
275.	German Insurance Association (GDV)	1.53.	See 1.51. Change "national competent authorities involved" to "national competent authorities concerned"	Please see answer to comment 260
276.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.53.	See comment under 1.51	Please see answer to comment 260
277.	Insurance Europe	1.53.	See 1.51 including suggestion to change "national competent authorities involved" to "national competent authorities concerned"	Please see answer to comment 260
278.	Munich Re	1.53.	See 1.51. Change "national competent authorities involved" to "national competent authorities concerned"	Please see answer to comment 260
279.	ASSOCIATION OF FINANCIAL	Chapter 4. General	We agree it is important to document and validate formally key material assumptions but Guidelines 22 and 23 are too demanding and would	Partially agreed. Due to the lack of data,

	MUTUALS	Comments	distract knowledgeable resources from ensuring quality and adequacy of assumptions to an administrative documentation exercise.	documentation and validation of expert judgement is crucial. However, the materiality should always be taken into account. This has been clarified in Guideline 19
280.	ASSURALIA	Chapter 4. General Comments	We consider that the requirements under Guidelines 22 and 23 are not enforceable from an operational point of view.We agree it is important to document and validate formally key material assumptions but Guidelines 22 and 23 are verydemanding and could create adverse effects. For instance, a big risk that the fulfilment of extensive documentation requirements in itself becomes a compliance exercise. This could distract knowledgeable resources from ensuring quality and adequacy of assumptions to an administrative documentation exercise.	Partially agreed. Materiality should always be taken into account in respect to Guidelines 22 or 23 (and the other guidelines in chapter 4). This has been clarified in Guideline 19
281.	CRO Forum CFO Forum	Chapter 4. General Comments	We consider that the requirements under Guidelines 22 and 23 are not enforceable from an operational point of view. We agree it is important to document and validate formally key material assumptions but guidelines 22 and 23 are too demanding and would distract knowledgeable resources from ensuring quality and adequacy of assumptions to an administrative documentation exercise. Whilst it makes sense that the assumption setting process is validated and documented, a balance needs to be found to ensure this does not become an overly burdensome documentation requirement and ensures that the documentation produced is consistent with what is needed by the business to support development and use of the model. In particular, this should avoid documentation being produced solely to meet regulatory requirements.	Please see answer to comments 279 and 280
282.	Groupe Consultatif Actuariel	Chapter 4. General Comments	Although we agree that documentation and validation are very important, we also have the feeling that the requirements are too demanding and lead to very time consuming and costly work. More specifically, it can	Please see answer to comments 279 and 280

	Européen		reduce the quality of the model as too much effort is asked from experts and other knowledgeable resources in respect of these tasks that might be better applied in analysing the results of implications from the modelling. Actuaries in many companies reporting EC and MCEV (or operating in regimes similar to Solvency II) have found themselves in a continual cycle of results production, validation and documentation with no time for analysis thereby negating any benefits to the companies that adopting the models may have offered. We are keen to see Solvency II avoid repeating this mistake. Important in modelling for non-market risks is the fact that the available data are sometimes very limited and pragmatic solutions need to be found.	
283.	Insurance and Reinsurance Stakeholder Group (IRSG)	Chapter 4. General Comments	Internal models typically depend on several hundred-model assumptions. There needs to be a greater emphasis on NCA's review on material assumptions for the various aspects of the Guidelines in Chapter 5. The guidelines ask for formal documented feedback between providers of material expert judgement & assumptions, and users. In practice there may be many users of particular assumptions so it may not be feasible to have a formal sign off between all parties. It may be more appropriate for the guidance to include a statement that indicates that a committee with appropriate representation from Users are able to provide sign-off on their behalf. We consider that the requirements under Guidelines 22 and 23 are not enforceable from an operational point of view. We agree it is important to document and validate formally key material assumptions but guidelines 22 and 23 is too demanding and would distract knowledgeable resources from ensuring quality and adequacy of assumptions to an administrative documentation exercise.	Please see answer to comment 279 Many variations of feedback loops are imaginable, and some of them will be suitable for many users of particular assumptions. The mentioned committee may be one example, but it is not the only one, and may not always be appropriate Please see answer to comment 279

284.	Insurance Europe	Chapter 4. General Comments	We consider that the requirements under Guidelines 22 and 23 are not enforceable from an operational point of view.We agree it is important to document and validate formally key material assumptions but Guidelines 22 and 23 are very demanding and could create adverse effects. For instance, the risk that the fulfilment of extensive documentation requirements in itself becomes a compliance exercise. This could distract knowledgeable resources from ensuring quality and adequacy of assumptions to an administrative documentation exercise.	Please see answer to comment 280
285.	International Underewriting Association of London	Chapter 4. General Comments	We believe that it will be important to ensure that the processes of documentation of assumption setting, expert judgement, governance and validation do not require the generation of disproportionatre quantities of detailed reporting which would only obscure understanding and judgement,	Agreed This is why 1.54 mentions the materiality of the impact of the use of assumptions as a key criterion to be considered throughout
286.	MetLife	1.55.	NCAs should publish their quantitative and qualitative indicators for benchmarking purposes and for assisting firms validate their materiality levels.	Not agreed Indicators will be specific to each internal model and are not suitable for publication. Also, publication could encourage herd behaviour and systemic risk
287.	PZU	1.55.	According to this point the NCAs are expected to form a view on how the undertaking assesses materiality taking into the quantitative and qualitative indicators. In our opinion the meaning of this point leads to conclusion that without unified and precise definition of materiality there is a risk of lack of convergence on the market in the area of materiality assessment. We believe that the rules for the assessment of materiality should precise, not left to be a subject of undertakings' interpretation.	Not agreed Indicators have to be specific to each internal model due to the wide range of situations where expert judgement can be

			Also please refer to point 1.15	applied
288.				
289.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.56.	Guideline 19: A new paragraph might be added: "National competent authorities should form a view on how the undertaking assesses sovereign credit risk".	Does not belong here Assessment of sovereign credit risk is too specific for this guideline
290.	ASSOCIATION OF FINANCIAL MUTUALS	1.57.	It is important to note that an internal model could have several hundred model assumptions. We propose to amend the text to focus on material assumptions setting and not all assumptions setting. We would delete "and the use of expert judgment in particular" and replace it with "follows a validated and documented process that would include requiring expert judgment to be justified".	1.54 mentions materiality as a general criterion for all requirements in chapter 4 Not agreed
291.	ASSURALIA	1.57.	It is important to note that an internal model could have several hundreds model assumptions. We propose to amend the text to focus on material assumptions setting and not all assumptions setting.	Please see answer to comment 290
292.	CRO Forum CFO Forum	1.57.	It is important to note that an internal model could have several hundreds model assumptions. We propose to amend the text to focus on material assumptions setting and not all assumptions setting. We suggest cancelling „and the use of expert judgment in particular" and replacing it with "follows a validated and documented process that would include requiring expert judgment to be justified"	Please see answer to comment 290
293.	Groupe Consultatif Actuariel Européen	1.57.	Referring to the general comments chapter 4: often many assumptions are needed for modelling insurance risk. The level of validation and documentation should depend on the materiality of these assumptions	Please see answer to comments 279 and 290
294.	Insurance and Reinsurance	1.57.	It is important to note that an internal model could have several hundreds model assumptions. We propose to amend the text to focus on	Please see answer to comment 290

	Stakeholder Group (IRSG)		material assumptions setting and not all assumptions setting.	
295.	Insurance Europe	1.57.	It is important to note that an internal model could have several hundreds model assumptions. We propose to amend the text to focus on material assumptions setting and not all assumptions setting. We also would suggest deleting "and the use of expert judgment in particular" and replace it with "follows a validated and documented process that would include requiring expert judgment to be justified" .	Please see answer to comment 297
296.				
297.	ASSOCIATION OF FINANCIAL MUTUALS	1.59.	Assumptions should be subjected to an appropriate senior management validation. In order to focus on what is to be achieved and not on how to achieve it, we propose to delete the text "up to and including the administrative, management or supervisory body."	Not agreed There are potentially very material assumptions on which the administrative, management or supervisory body needs to decide
298.	CRO Forum CFO Forum	1.59.	Assumptions should be subject to appropriate senior management validation. However this could and would be perfectly reached through a dedicated Assumption committee or equivalent where CFO, CRO and other senior executives are members and provide sign off with the opportunity of a real challenge that in some extent could not be reached through a full Executive Committee. So in order to focus of what is to be achieved and not on how to achieve it, we propose to delete the text "up to and including the administrative, management or supervisory body."	Please see answer to comment 297
299.	German Insurance Association (GDV)	1.59.	Assumptions and expert judgement are part of the internal model and its validation. Existing assumptions / expert judgements are subject to the reporting requirements to senior management (which might include the direct reporting to management board level). Changes to the internal model due to a reassessment of assumptions/ expert judgements are	Please see answer to comment 297

			part of the model change process (which again might include the direct involvement on management board level). Additional senior management involvement should not be required and is also not covered by the requirements envisaged in the draft Implementing Measures. We therefore propose to delete para 1.59.	
300.	Groupe Consultatif Actuariel Européen	1.59.	This is fine if the administrative, management or supervisory body is entitled to rely on the advice of others including the independent model reviewer.	The administrative, management or supervisory body can rely on the advice of others, but will still have to carry the responsibility for signing off on the most material assumptions
301.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.59.	Assumptions should be subject to appropriate senior management validation. However this could and would be perfectly reached through a dedicated Assumption committee or equivalent where CFO, CRO and other senior executives are members and provide sign off with the opportunity of a real challenge that in some extent could not be reached through a full Executive Committee. So in order to focus of what is to be achieved and not on how to achieve it, we propose to delete the text "up to and including the administrative, management or supervisory body."	Please see answer to comment 297
302.	Insurance Europe	1.59.	Assumptions should be subjected to an appropriate senior management validation. However this could and would be perfectly reached through a dedicated Assumption committee or equivalent of which CFO, CRO and other senior executives are members and provide sign-off, thereby providing opportunity for a real challenge that could not be reached in some extent through a full Executive Committee. So in order to focus on what is to be achieved and not on how to achieve it, we propose to delete the text "up to and including the administrative, management or supervisory body."	Please see answer to comment 297
303.	Munich Re	1.59.	Assumptions and expert judgement are part of the internal model and its validation. Existing assumptions / expert judgements are subject to the	Please see answer to

			reporting requirements to senior management (which might include the direct reporting to management board level). Changes to the internal model due to a reassessment of assumptions/ expert judgements are part of the model change process (which again might include the direct involvement on management board level). Additional senior management involvement should not be required and is also not covered by the requirements envisaged in the draft Implementing Measures. We propose to cancel para 1.59.	comment 297
304.	CRO Forum CFO Forum	1.61.	The requirement asks for formal documented feedback between providers of material expert judgement & assumptions, and users. In practice there maybe many users of particular assumptions so it maynot be feasible to have a formal sign off between all parties. Propose that the guidance includes a statement that indicates that a committee with appropriate representation from Users are able to provide sign-off on their behalf.	Please see answer to comment 283
305.	Groupe Consultatif Actuariel Européen	1.61.	It is unclear where the boundaries of the definition “users” of expert judgement are believed to lie.	Boundaries will be individual for each internal model depending on model setup, model environment and model use. There should be sufficient involvement of users in feedback loops to ensure that the goals stated in Guideline 61 para 1.60 can be achieved
306.	CRO Forum CFO Forum	1.63.	See our comments at 1.57	Please see above
307.	Insurance Europe	1.63.	See 1.57	Please see above

308.	PZU	1.63.	During the Internal Model pre-application process the main focus should be on appropriateness of applied model rather than on quantity and quality of documentation supporting model implementation process. The NCA should put the main effort on challenging model concept and seek local market standard, not on meeting the formal requirements regarding documentation. The overall effort should then be balanced between quantity of documentation and quality of Internal Model. Otherwise there is a risk that the Internal Model pre-application process will become a purely bureaucratic process. Moreover in our opinion it is of key importance that the local requirements regarding documentation are consistent and unified throughout the whole market especially in the areas which are common to all undertakings. For example in case of Poland the risk connected with the same market-wide stock index is expected to be considered is the same way and, as a result, lead to the same result.	Noted
309.	PZU	1.64.	In our opinion use of expert judgment is still very limited by the amount of required documentation and validation requirements.	Noted
310.	CRO Forum CFO Forum	1.65.	It is important to note that an internal model could have several hundreds model assumptions. We propose to amend the text to focus on material assumptions rational and not all assumptions. We recommend to add the text "… disregarding other alternatives when appropriate"	Guideline 19 para 1.54 mentions materiality as a general criterion for all requirements
311.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.65.	This paragraph is quite difficult to read. We appreciate the fact that documentation requirements regarding assumptions are based on materiality of the assumptions. Consistently we recommend to add the text "… disregarding other alternatives when appropriate"	Not agreed. Self-evident. Applies only when reasonable alternative assumptions could be considered
312.	Insurance Europe	1.65.	See 1.57	Please see above
313.	MetLife	1.65.	The decision taking process around the selection of assumptions should	Noted. Please see answer

			be proportionate to the importance of each assumption. The objective should be to determine assumptions that are appropriate to the company. It should not be necessary to consider alternative assumptions in significant detail where the company is satisfied that it has chosen the appropriate assumption.	to comment 310 Not agreed. Please see answer to comment 311
314.	PZU	1.65.	Please refer to 1.63.	Please see above
315.	PZU	1.66.	Please refer to 1.63.	Please see above
316.	PZU	1.68.	Please refer to 1.64.	Please see above
317.	PZU	1.69.	Please refer to 1.64.	Please see above
318.	ASSOCIATION OF FINANCIAL MUTUALS	1.72.	Requiring undertakings to monitor circumstances under which assumptions are false is paramount to requiring undertakings to monitor circumstances under which a decision would be considered a bad decision instead of a good one. This would suppose that all possible outcomes have been considered and those outcomes are seldom finite. Practical clarification would be requested as to what criteria exactly would be used to define this kind of a process other than those already required by internal model validation in which assumptions are challenged by being tested and justified.	Partially agreed. Wording changed to "[…] detects the occurrence of circumstances under which the assumption would be considered false" Expert judgement is typically based on little or no data. The required detection should serve as a minimum trigger for reviewing expert judgement
319.	CRO Forum CFO Forum	1.72.	We view this rule as an extension to the intended goal of ensuring that internal models and their underlying assumptions are well understood by imposing additional requirements that are not needed and would uselessly complicate the work of undertakings and regulators themselves. Requiring undertakings to monitor circumstances under which assumptions are false is paramount to requiring undertakings to monitor circumstances under which a decision would be considered a bad decision	Please see answer to comment 318

			instead of a good one. This would suppose that all possible outcomes have been considered and those outcomes are seldom finite. Practical clarification would be requested as to what criteria exactly would be used to define this kind of a process other than those already required by internal model validation in which assumptions are challenged by being tested and justified.	
320.	Insurance Europe	1.72.	We view this rule as an extension to the intended goal of ensuring that internal models and their underlying assumptions are well understood by imposing additional requirements that are not needed and would uselessly complicate the work of both undertakings and NCAs. Requiring undertakings to monitor circumstances under which assumptions are false is paramount to requiring undertakings to monitor circumstances under which a decision would be considered a bad decision instead of a good one. This would suppose that all possible outcomes have been considered and those outcomes are seldom finite. Practical clarification would be requested as to what criteria exactly would be used to define this kind of a process other than those already required by internal model validation in which assumptions are challenged by being tested and justified.	Please see answer to comment 318
321.	ASSOCIATION OF FINANCIAL MUTUALS	Chapter 5. General Comments	This discusses the requirement of consistency of methods used in the risk model and the calculation of technical provisions. While a certain method will be adequate to calculate technical provisions another one might be better to capture the aspects of risk measurement. Consistency in this cases means differences are not material if these methods are used for the same purpose e.g. to calculate the best estimate. The method chosen should be adequate for the task. Risk measurement and calculation of the best estimate might very well force the usage of different but consistent methods. Therefore, the discussion of consistency should be handled carefully.	Consistency between the methods used to calculate the probability distribution forecast and the methods used for the valuation of assets and liabilities for solvency purposes Noted

322.	CRO Forum CFO Forum	Chapter 5. General Comments	Firms should be allowed to provide as much information as necessary to prove the IM methodology is consistent with the valuation of the assets and liabilities subject to materiality and proportionality.	Agreed
323.	German Insurance Association (GDV)	Chapter 5. General Comments	Chapter 5 "methodological consistency" discusses the requirement of consistency of methods used in the risk model and the calculation of technical provisions. Consistency should not be rigorously read as "the same methods" – methods have to be chosen with respect to the specific use. While a certain method will be adequate to calculate technical provisions another one might be better to capture the aspects of risk measurement. Consistency in this cases means differences are not material if these methods are used for the same purpose e.g. to calculate the best estimate. The "solution" should never be to prescribe the usage of the same methods for both – the method chosen should be adequate for the task. Risk measurement and calculation of the best estimate might very well force the usage of different but consistent methods. Therefore, the discussion of consistency should be handled carefully – "consistency" is not similar to "identity". Often discussions concerning consistency seem not really relevant and do not lead to a satisfying solution. This is shown by the following example that covers the topic of paid and incurred methods for the assessment of claims provisions in nonlife insurance: The best estimate for claims provisions is usually calculated using paid and incurred methods for the assessment for the Solvency II balance sheet. Calculating the one-year reserve risk only paid methods (for example Bootstrap of paid triangles) are used, as there do not exist any standard actuarial methods combining paid and incurred information for this purpose. This discussion could be easily avoided: Just use only paid methods for calculating provisions for your balance sheet. This will save a lot of money as the Best Estimate provision will be much lower as well as the	Consistency between the methods used to calculate the probability distribution forecast and the methods used for the valuation of assets and liabilities for solvency purposes Noted. The Guidelines are clear w.r.t. to the meaning of consistency. Consistency does not imply identity. Cf. Explanatoty Text in para 3.126: *The different objectives may introduce deviations to some extent* A challenging example is mentioned here. Just

			corresponding SCR. But is such a solution really in the sense of the supervisor? Therefore, the discussion of consistency should be handled carefully and the relevance of methodological consistency should not be overestimated.	avoiding the discussion with its supervisor should not be a real option for a firm. After all, there are reasons for the firm's choice of different methods (as stated in the comment) The consistency requirement is important, however, EIOPA is aware that in practice the relevance of conclusions varies with the model at hand
324.	Groupe Consultatif Actuariel Européen	Chapter 5. General Comments	We are supportive of the overall aim of achieving methodological consistency, but actuaries working in this area have found that this is not easy to achieve in practice.	Noted
325.	Insurance and Reinsurance Stakeholder Group (IRSG)	Chapter 5. General Comments	There are a number of requirements in this chapter that appear to be overly prescriptive and onerous. The Level 2 Requirements states "The methods used to calculate the probability distribution forecast are consistent with the methods used for the valuation of assets and liabilities according to Articles 75 to 86 of Directive 2009/138/EC." The Guidance around the consistency of methodology covers 3 particular aspects (in depth in the explanatory text):	Not agreed. The guidelines clearly set out that consistency of methods should not be mistaken for identity of methods and provide guidance on how to structure the consistency assessment (→ check points based on ideal notion of a risk model; aspects of consistency:

			☐ Consistency at various points of the calculation (transformation, t=0, 1 and projections) ☐ Aspects of consistency that need to be considered (Methods, Data and Assumptions) ☐ Consistency Assessment (quantitative assessments in isolation and combination and setting criteria) Firms should be allowed to provide as much information as necessary to prove the IM methodology is consistent with the valuation of the assets and liabilities subject to materiality and proportionality. There is also an area of inconsistency between the Level 1 and 2 Text and the Guidance. Consistency Assessment has not been included in previous drafts of the Level 1 and 2 Text as a "Validation Tool". Clarification is needed around its importance relative to the other validation tools (e.g. stress and scenario testing, Sensitivity testing, P&L Attribution etc.).	methods, data & parameter, assumptions; deviations / inconsistencies) Please see answer to comment 322 Consistency is not a validation tool but a Statistical Quality Standards (see L1 Text Art. 121) requirement and as such it is within the scope of the regular validation process
326.	Insurance Europe	Chapter 5. General Comments	Chapter 5 "methodological consistency" discusses the requirement of consistency of methods used in the risk model and the calculation of technical provisions. Consistency should not be rigorously read as "the same methods" – methods have to be chosen with respect to the specific use. While a certain method will be adequate to calculate technical provisions another one might be better to capture the aspects of risk measurement. Consistency in this cases means differences are not material if these methods are used for the same purpose e.g. to calculate the best estimate.	Please see answer to comment 323

			The "solution" should never be to prescribe the usage of the same methods for both – the method chosen should be adequate for the task. Risk measurement and calculation of the best estimate might very well force the usage of different but consistent methods. Therefore, the discussion of consistency should be handled carefully – "consistency" is not synonym to "identity". Often discussions concerning consistency seem not really relevant and do not have a satisfying solution. This is shown by the following example that covers the topic of paid and incurred methods for the assessment of claims provisions in nonlife insurance: The best estimate for claims provisions is usually calculated using paid and incurred methods for the assessment for the Solvency II balance sheet. For calculating the one-year reserve risk only paid methods (for example Bootstrap of paid triangles) are used, as there do not exist any standard actuarial methods combining paid and incurred information for this purpose. As such, the suggestion would be just using paid methods for calculating provisions for the balance sheet. The Best estimate provision will be much lower as well as the corresponding SCR. That solution would probably not be acceptable to a NCA. Therefore, the discussion of consistency should be handled carefully and the relevance of methodological consistency should not be overestimated.	
327.	Deloitte	1.74.	Section (a): Could EIOPA clarify the difference between "the valuation of assets and liabilities for solvency purposes" and "the internal model for the purpose of Solvency Capital Requirements calculations". Does the first part relate to the economic balance sheet and the second to the SCR? Section (b) talks about "valuation of assets and liabilities for solvency purposes" whereas other sections in this paragraph talk only about "valuation of assets and liabilities" without mentioning solvency. Could EIOPA clarify whether it is referred to the valuation of assets and	Yes Guideline 24 has been revised to ensure that a consistent wording is

			liabilities for internal model purposes or for the purpose of calculation of technical provisions? Section (b) – Could EIOPA clarifies the difference between "initial valuation of assets and liabilities in the internal model at the valuation date" and "the original valuation of assets and liabilities for solvency purposes".	used The first term refers to valuation at t= 0 by means of the internal model that is used for SCR calculations. The second term refers to the valuation performed to establish the economic balance sheet at the same reference date
328.	Munich Re	1.74.	(d) the consistency of the revaluation of assets and liabilities at the end of the time horizon with the initial valuation.	This comment is unclear
329.	Deloitte	1.75.	In our opinion, consistency between marginal risk distributions and aggregation model should also be considered. We suggest adding this point to the guideline: "(d) the consistency of the probability distributions used for calculating solvency capital requirements for individual risks and the overall solvency capital requirement."	Not agreed The issue mentioned is relevant but not in scope of methodological consistency according to Level 1 Text Art 121
330.	CRO Forum CFO Forum	1.76.	There is also an area of inconsistency between the Level 1 and 2 Text and the Guidance. Consistency Assessment has not been included in previous drafts of the Level 1 and 2 Text as a "Validation Tool". Clarification is needed around its importance relative to the other validation tools (e.g. stress and scenario testing, Sensitivity testing, P&L Attribution etc).	Please see answer to comment 325
331.	Deloitte	1.76.	The Consistency Assessment included in these guidelines has not been included in previous drafts. Clarification is needed around its potential inclusion in the validation tools. If it is to be included in the validation	Please see answer to comment 325

			tools, guidance around its importance relative to the other validation tools needs to be provided.	
332.	Groupe Consultatif Actuariel Européen	1.76.	The Consistency Assessment included in these guidelines has not been included in previous drafts. Clarification is needed around its potential inclusion in the validation tools and if it is to be included in the validation tools guidance around its importance relative to the other validation tools needs to be provided. It would be useful if the guidelines defined what a "regular basis" is. We would propose defining a regular basis as "at a minimum annually or more frequently as required".	Please see answer to comment 325 Agreed. With reference to the validation process and the consistency assessment being part of the regular model validation cycle, the basic frequency of the consistency assessment is set to annually and the same provisions apply In line with current Solvency II framework an additional assessment beyond the regular one may be necessary. Also, not every test must be performed every year
333.	ASSOCIATION OF FINANCIAL MUTUALS	1.77.	A quantitative assessment of consistency is often difficult. Sometimes it will be even impossible, for example because there don't exist any consistent actuarial methods. Therefore an assessment has to be based mostly on expert judgement.	Agreed Please note that Guideline 26 para 1.77 only states a preference for quantitative assessment ("whenever

				possible and proportionate.") over a qualitative one. Cf. also Explanatory Text para 3.149
334.	German Insurance Association (GDV)	1.77.	A quantitative assesment of consistency is often difficult. Sometimes it will be even impossible, for example because there do not exist any consistent actuarial methods. Therefore an assessment has to be based mostly on expert judgement.	Please see answer to comment 333
335.	Insurance Europe	1.77.	A quantitative assesment of consistency is often difficult. Sometimes it will be even impossible, for example because there don't exist any consistent actuarial methods. Therefore an assessment has to be based mostly on expert judgement.	Please see answer to comment 333
336.	Deloitte	1.78.	We interpret from this guideline (and also paragraph 1.80) that the Consultation Paper distinguishes between "deviations" and "inconsistencies". We suggest clarifying what is meant by "deviations" as this can be interpreted in several ways.	Deviations in the methodologies used for the two purposes can exist w.r.t. calculation methods, data and parameter as well as the underlying assumptions The deviations can result in inconsistencies, for example, when resulting in conflicting output
337.				
338.	Groupe Consultatif Actuariel Européen	1.78.	Materiality should be a determinant of the need for documentation. We would reiterate past comments that the valuation of assets and liabilities will typically be through risk neutral models calibrated using market derived parameters whereas the probability distribution forecast will be made using a real world model calibrated from historical data analysis and forward looking expert judgement. It is unclear against this context	Partially agreed. Materiality determines the level of detail in documentation of the deviations

			what “consistency” between the two approaches means.	The issue of “risk neutral vs. real world models” mentioned is covered by consistency check point (c) in para 1.74 of Guideline 24 (see also Explanatory Text para 3.136 and 3.137). The question of inconsistencies due to deviations between these two “approaches” must be dealt with case-by-case. Therefore, only an example for an aspect of consistency that might be relevant in the assessment is given here The risk neutral model the undertaking has chosen for the valuation of its assets and liabilities typically includes a subset of factors that are most important and largely determine the values. One would expect that the real world model the undertaking has chosen to calculate the probability distribution forecast includes

				corresponding risk factors. If not, one would look into this as a potential source of inconsistencies In case that the methodologies used differ so much that such a link cannot be identified and the aspects of consistency provided in Guideline 25 are not relevant, undertakings can still check the results obtained from the two methodologies and test for material differences in results (with impact on decision-taking; cf. definition of materiality in para 1.7)
339.	German Insurance Association (GDV)	1.79.	It should be noted that it will be difficult to assess the impact of deviations. This will be especially true for cases where there do not exist consistent actuarial methods for valuation and risk measurement (For example valuation of best estimate provisions in nonlife-insurance using paid and incurred methods).	Please see answer to comments 323 and 333 Nevertheless, the undertaking should have a notion of the extent deviations identified may cause conflicting results
340.	Groupe Consultatif Actuariel Européen	1.79.	Comments as for 1.78.	Please see 1.78

341.	Insurance Europe	1.79.	It should be noted that it will be difficult to assess the impact of deviations. This will be especially true for cases where don't exist consistent actuarial methods for valuation and risk measurement (For example valuation of best estimate provisions in nonlife-insurance using paid and incurred methods).	Please see answer to comment 339
342.	Deloitte	1.80.	We agree that any inconsistencies should be justified. However additional guidance on how undertakings should justify inconsistencies should be provided. As the question is whether the correct SCR is calculated, inconsistencies might be acceptable as long as results are not materially misstated. We suggest adding at the end of this paragraph: "… that will lead to material misstatements of the final results".	Not agreed Misunderstanding. Undertakings should justify that the deviations do not result in an inconsistency between the calculation of the probability distribution forecast and the valuation of assets and liabilities As EIOPA understands "inconsistency" as a "deviation" that is material in the sense of para 1.15, i.e. a deviation causing conflicting results that may impair decision-taking, inconsistencies are not allowed for Moreover, it is not only a question of misstating the SCR
343.	Groupe Consultatif	1.80.	We agree that any inconsistencies should be justified, however additional guidance on how undertakings should justify inconsistencies should be	Please see answer to comment 342

	Actuariel Européen		provided.	
344.	Deloitte	Chapter 6. General Comments	The main concept in this chapter is the richness of the Probability Distribution Forecast, which has limited emphasis in the Statistical Quality standards outlined in Article 121 of the Solvency II directive and previous Consultation Papers. This appears to be a shift in focus relative to the Guidelines on other areas of Statistical Quality standards. An explicit definition of "richness" should be given, in a more detailed way than in paragraph 1.15, so as to avoid different interpretations.	Not agreed, there has been no shift in focus. In particular, no new requirements have been introduced Within Statistical Quality Standards, EIOPA selected three areas where – based on the experience gained in pre-application processes – it saw guidance helpful in the interim phase (see chapter 4, 5 and 6).In particular, some of firms' implementations have shown that more guidance (beyond the current Solvency II framework) is needed on what criteria a probability distribution forecast should fulfill It is not envisaged to provide a more "explicit definition of richness". This abstract concept has been deliberately chosen as it must be flexible enough to fit all possible

				risk models. The term "richness" is to be interpreted in the context of the model at hand. For explanations see introduction of chapter 6, the "definition" in para. 1.15 and the Explanatory Text of Guideline 28
345.	Groupe Consultatif Actuariel Européen	Chapter 6. General Comments	It is generally impossible to prove a distribution used is the perfect one. Sometimes this distribution is based on expert judgement or even pure pragmatism, this is because of the limited number of observations available in an often complex world. Sometimes distributions are chosen "on the safe side". In our opinion in these situations this pragmatic solution should not be rendered unworkable under too detailed requirements of a compliance nature. In addition, the main concept in this chapter is the richness of the Probability Distribution Forecast, which has limited emphasis in the Statistical quality standards outlined in Article 121 of Sol II directive and previous draft consultation papers. This appears to be a shift in focus relative to the Guidelines on other areas of Statistical quality standards, and at the very least an explicit definition of the term "richness of probability distribution forecast" should be given, so as to avoid differences of interpretation.	Disagree. The concepts mentioned are of limited suitability for the supervision of internal models: In practice, conservatism proves hard to justify; pure pragmatism is not a well-recognized modelling method The requirements are very much principles-based and as such do not serve a compliance exercise. The guidelines rather bring in realism as they recognize the challenges undertakings face in internal risk modelling. The Explanatory text several times refers to imperfections and challenges like the one

				mentioned in the comment (limited number of observations) In this sense the guidelines enable internal modelling, and that in a controlled way (minimum standards) Please see answer to comment 344
346.	Insurance and Reinsurance Stakeholder Group (IRSG)	Chapter 6. General Comments	The main concept of this chapter is around the richness of the PDF. The guideline leads to NAC's forming a view on how firm's avoid "over-richness" of the PDF whilst ensuring that it appropriately reflects the risk profile. It is unclear when a PDF is not rich enough or unduly rich and what measures (quantitative or qualitative) maybe used.	Please see answer to comment 364
347.	Deloitte	1.81.	We disagree with the word "exhaustive". It would not be possible to ensure exhaustiveness in principle. The use of the word "exhaustive" in this paragraph differs from the materiality approach outlined in article 121 paragraph 4 of the Solvency II directive. Additionally the ORSA should have a qualitative description of risks not covered in the SCR, which conflicts with the word "exhaustive". We suggest to reformulate the requirement and to state that the set of events of the probability distribution forecast should be fit for the identified risk profile. A proposed wording would be: ".... ensures that the set of events of the probability distribution forecast underlying the internal model is material and significant".	Not agreed. Cf. definition in Level 1 Text Art. 13 (38): "*probability distribution forecast" means a mathematical function that assigns to an exhaustive set of mutually exclusive future events a probability of realisation*) Guidelines 27 is intended to establish the link between the knowledge of the risk profile and the exhaustiveness of the

				event set underlying the probability distribution forecast Exhaustiveness should not be seen from a theoretical / technical perspective only. For the example of a risk factor model an explanation is given in the Explanatory Text in para 3.160 ff. It should not be seen as an absolute requirement. The event set should be exhaustive enough so that the probability distribution forecast can reflect all relevant characteristics of the risk profile Not agreed
348.	Groupe Consultatif Actuariel Européen	1.81.	Technically any finite number of simulations will not generate an exhaustive probability distribution forecast. Furthermore, the use of the word “exhaustive” in this paragraph differs from the material approach outlined in article 121 paragraphs 4 of Solvency II directive. Additionally the ORSA should have a qualitative description of risks not covered in the SCR, which conflicts with the word “exhaustive”. We propose that the word “exhaustive” be replaced with the word “material”.	Please see answer to comment 347

349.	Deloitte	1.83.	We would welcome clarification on the difference between "risk factors" and "variable underlying probability distribution". We suggest adding the requirement that all identified risk drivers that have material impact on the calculation should be properly reflected. The proposed wording would be: "In particular, national competent authorities should form a view on how the insurance or reinsurance undertaking aims to maintain the knowledge of all risk drivers and other factors that have material impact on the behavior of the probability distribution forecast, so that the probability distribution can reflect all relevant characteristics of its risk profile."	The term "variable underlying the probability distribution forecast" accounts for the fact that undertakings may use for the calculation of the Solvency Capital Requirement the variation of an underlying variable different from the basic own funds (see also Calibration Standards - Guideline 33: Use of another underlying variable) Not agreed. This is already covered as only relevant characteristics of the risk profile should be reflected
350.	Deloitte	1.84.	Could EIOPA clarify the following statement: "and on how it considers the capability of the techniques to process the knowledge of the risk profile as an important criterion"?	Please see Explanatory Text para 3.166. In this example for market risk a methodology making use of approximation techniques like the replicating portfolio is generally more capable (as circumventing nested stochastic simulation)

351.	Groupe Consultatif Actuariel Européen	1.84.	A probability distribution does not always need to be "rich", which suggests complicated. Sometimes, a "robust" probability distribution is more realistic.	Not agreed. Several shortcomings arise from a probability distribution forecast that is not rich enough. Examples are given in the Explanatory Text of Guideline 28 (especially restricted use in decision-taking). Moreover, "rich" needs to be differentiated from "complicated"; a complex model may possibly result in a probability distribution forecast of comparatively low richness Robustness is already covered in the Solvency II Framework where the conflicting objectives of model stability and sensitivity are addressed
352.	Institut des Actuaires	1.84.	A probability distribution does not always need to be "rich", which suggests complicated. Sometimes, a "robust" probability distribution is more realistic.	Please see answer to comment 351
353.	Deloitte	1.85.	We suggest that the formulation of this paragraph and paragraph 1.81 to be aligned in defining richness or exhaustiveness / materiality of the forecast.	Not agreed. Please see answer to comment 344
354.	Deloitte	1.87.	We suggest replacing the word "rich" with the phrase "sufficiently rich as specified in 1.85".	Not agreed. Para 1.85 is clear enough and no

				further complexity should be introduced into para 1.87
355.				
356.	ASSOCIATION OF FINANCIAL MUTUALS	1.88.	We don't understand the aim of this requirement as the internal model is supposed to represent the risk profile of the entity with its own characteristics, so not necessarily in line with market practices. This is inconsistent with the aim of the internal model. The assumptions should be verified depending on undertakings profile.	Agreed. Para 1.88 (b) revised to avoid misunderstanding. Please see also answer to comment 360
357.	Deloitte	1.88.	Section (c): in order to assess the level of probability distribution forecast richness, this section makes a reference to a broad set of requirements for an internal model. However, for example, it is not clear to what extent documentation standards (Article 125) have a direct impact on the level of probability distribution forecast richness. We suggest making this requirement more specific. Section (d): we understand that this section aims at the effect of risk aggregation on the richness of the probability distribution forecast. We suggest reformulating this section to make it more explicit. The proposed wording would be: "…the consistency of the probability distribution forecasts for all the risks in the scope of the internal model and the aggregation method as regards the level of the richness of the probability distribution forecast". Section (e) is a general statement that should apply to all formulated guidelines. This section can be specified once in the general section and be left out here in this specific Chapter.	Not agreed. Use Test, Statistical Quality Standards and Validations Standards seem to be most relevant. Documentation Standards, however, may also be relevant. For example, undertakings should document how to cope with shortcomings arising from a probability distribution forecast that is of comparatively low richness Para 1.88 (d) indeed covers the effects of aggregation Not agreed. The wording should be kept general in order to ensure that the

				Guideline can be widely applied (and not only in case of a modular approach) In fact, the proportionality principle could be left out here. However, the intention is to put particular emphasis on it in this context. A reference to a general guideline regarding the proportionality principle has been included
358.	DIMA (Dublin International Insurance & Management	1.88.	Remove (b) "as a necessary but not sufficient condition", since this would prevent new solutions being developed.	Agreed. The relevant part of the sentence has been deleted Please see also answer to comment 360
359.				
360.	German Insurance Association (GDV)	1.88.	The sentence could be interpreted such that the method for deriving the probability distribution must be aligned to generally accepted market practices. This should not be required as long as the method is sound and appropriate for the respective risks faced by the undertaking. We propose to delete: "as a necessary but not sufficient condition," in b).	Agreed. This is not required The Explanatory Text of Guideline 29 in para 3.189 states: "A generally accepted modelling practice [...] may serve national

				competent authorities as a reference. [...] By contrasting these methods to those chosen by the undertaking, national competent authorities may obtain an indication for the level of probability distribution forecast richness and the challenges faced by this undertaking. It is expected that this does not mislead the undertaking to simply adopt the market practice nor national competent authorities to urge the undertaking to use it. It is rather expected that the market practice [...] needs some sort of adaptation to the undertaking's specific risk profile In para 1.88 (b) "as a necessary but not sufficient condition," has been deleted in order to avoid misunderstanding
361.	Groupe Consultatif Actuariel	1.88.	The model should be fit for purpose and not fittest for purpose and so current actuarial science and market practice is a reference point, but not a minimum condition. By referencing market practice EIOPA and NCAs	Agreed Please see answer to

	Européen		should take care not to stifle innovation and increase systemic risk through encouraging herding. Finally, the practical implications in terms of cost and complexity/loss of understandability should be weighed against marginal technical improvements. We recommend dropping "as a necessary but not sufficient condition" in b)	comment 360
362.	Insurance Europe	1.88.	NCAs should consider as a necessary but not sufficient condition the current progress in actuarial science and the generally accepted market practice to assess the richness of the probability distribution forecast. We don't understand the aim of this requirement as the internal model is supposed to represent the risk profile of the entity with its own characteristics, so not necessarily in line with market practices. This is inconsistent with the aim of the internal model. The assumptions should be verified depending on undertakings profile.	Agreed Please see answer to comment 360
363.	Munich Re	1.88.	The sentence could be interpreted such that the method for deriving the probability distribution must be aligned to generally accepted market practices. This should not be required as long as the method is sound and appropriate for the respective risks faced by the undertaking. We suppose to cancel: "as a necessary but not sufficient condition," in b)	Agreed Please see answer to comment 360
364.	CRO Forum CFO Forum	1.89.	The main concept of this chapter is around the richness of the PDF. The guideline leads to NAC's forming a view on how firm's avoid "over-richness" of the PDF whilst ensuring that it appropriately reflects the risk profile. It is unclear when a PDF is not rich enough or unduly rich and what measures (quantitative or qualitative) maybe used.	Not agreed. Examples are given in Explanatory Text of Guideline 30. However, it must always be a case-by-case assessment.
365.	Deloitte	1.90.	There is a typo in the word "judgment" in the last line of this paragraph. Although almost all the tests and standards for internal model validation (CEIOPS Former CP 56) are mentioned in the CP-13/011 in specific corresponding chapters, the Statistical Quality Standard is only	Corrected Please see answer to comment 344

			mentioned as a part of the Chapter on Probability Distribution Forecast. Is this and explicit decision to highlight the importance of the Probability Distribution Forecast?	
366.				
367.	ASSOCIATION OF FINANCIAL MUTUALS	Chapter 7. General Comments	All models are only approximations of reality. Therefore the guidelines on calibration should be applied to the mathematical risk measure only (and the related time horizons). Other approximations used in internal models, e.g. certain limited number of risk factors should not be treated by the guidelines of chapter 7. This should be clarified.	Agreed. Clarification already embedded in the Appendixes §2.106 : "approximations" in the context of Article 122 only
368.	German Insurance Association (GDV)	Chapter 7. General Comments	It needs to be pointed out that all models are only approximations of reality. Therefore the guidelines on calibration should be applied to the mathematical risk measure only (and the related time horizons). Other approximations used in internal models, e.g. certain limited number of risk factors should not be treated by the guidelines of chapter 7. This should be clarified.	Agreed. Clarification already embedded in the Appendixes §2.106 : "approximations" in the context of Article 122 only
369.	Insurance Europe	Chapter 7. General Comments	It needs to be pointed out that all models are only approximations of reality. Therefore the guidelines on calibration should be applied to the mathematical risk measure only (and the related time horizons). Other approximations used in internal models, e.g. certain limited number of risk factors should not be treated by the guidelines of chapter 7. This should be clarified.	Agreed. Clarification already embedded in the Appendixes §2.106 : "approximations" in the context of Article 122 only
370.	Munich Re	Chapter 7. General Comments	It needs to be pointed out that all models are only approximations of reality. Therefore the guidelines on calibration should be applied to the mathematical risk measure only (and the related time horizons). Other approximations used in internal models, e.g. certain limited number of risk factors should not be treated by the guidelines of chapter 7. This should be clarified.	Agreed. Clarification already embedded in the Appendixes §2.106 : "approximations" in the context of Article 122 only
371.	ASSOCIATION OF FINANCIAL MUTUALS	1.91.	This aspect should only be applied to the mathematical risk measure, as all models are approximations of reality.	Agreed. Clarification already embedded in the Appendixes §2.106 :

				"approximations" in the context of Article 122 only
372.	German Insurance Association (GDV)	1.91.	This aspect should only be applied to the mathematical risk measure, as all models are approximations of realities per se.	Agreed. Clarification already embedded in the Appendixes §2.106 : "approximations" in the context of Article 122 only
373.	Groupe Consultatif Actuariel Européen	1.91.	The requirement for a "detailed understanding" is open to interpretation and potentially abuse by NCAs.	Disagreed. The wroding is in line with current Solvency II famework
374.	Insurance Europe	1.91.	This aspect should only be applied to the mathematical risk measure, as all models are approximations of realities per se.	Agreed. Same than above, resolution in the introductive text
375.	Munich Re	1.91.	This aspect should only be applied to the mathematical risk measure, as all models are approximations of realities per se.	Agreed. Same than above, resolution in the introductive text
376.	ASSOCIATION OF FINANCIAL MUTUALS	1.92.	We would oppose any interpretation that requires undertakings to quantify the impact of the approximation (because if it is possible to quantify, it should also be possible to avoid it). We understand point a) as the possibility for the undertaking to evaluate with a qualitative statement the error introduced by the approximation, without having to necessarily measure it. We would also delete points b) and c) as we perceive them as far too detailed and containing a high risk of being interpreted by NCAs in quantitative terms.	Both quantitative or qualitative interpretations of the guidelines are possible, it will depend on the practical situation what will be relevant
377.	CRO Forum CFO Forum	1.92.	We would oppose any interpretation of the rule that requires undertakings to quantify the impact of the approximation, also because if it is possible to quantify, it should also be possible to avoid it. We understand the term "considers" in point a) as the possibility for the	Both quantitative or qualitative interpretations of the guidelines are possible, it will depend

			undertaking to evaluate with a qualitative statement the error introduced by the approximation, without having to necessarily measure it. We would also strongly support cancelling points b and c as we perceive them as far too detailed and containing a high risk that they be interpretated by regulators in quantitative terms.	on the practical situation what will be relevant
378.	Groupe Consultatif Actuariel Européen	1.92.	b) How can one demonstrate that approximations will not materially understate a result without performing the full calculation as a reference point? It would be useful to receive guidance on EIOPA's views as to whether demonstrable conservatism in approximations is an acceptable offset for a lack of detailed justification. It is also worth noting that the phrase „not materially understate" has a specific meaning to external auditors and it is unclear whether EIOPA intended this phrase to have that meaning.	On can think about a demonstration based on a "range" in which the full calculation is presumed to be, instead of computing the full calculation to have a reference point "Underestimate" and not "understate". No specific external auditor meaning
379.	Insurance Europe	1.92.	We would oppose any interpretation that requires undertakings to quantify the impact of the approximation (also because if it is possible to quantify, it should also be possible to avoid it). We understand the term "considers" in point a) as the possibility for the undertaking to evaluate with a qualitative statement the error introduced by the approximation, without having to necessarily measure it. We would also strongly support deleting points b) and c) as we perceive them as far too detailed and containing a high risk of being interpretated by NCAs in quantitative terms.	Both quantitative or qualitative interpretations of the guidelines are possible, it will depend on the practical situation what will be relevant
380.	Deloitte	1.94.	We think this guideline is ambiguous. The text does not follow the heading "Reference risk measure as an intermediate result" so either the heading should be changed or the paragraph should be reworded.	Agreed. Wording changed within the guideline to mimic the title wording

381.	Groupe Consultatif Actuariel Européen	1.94.	This guideline is very ambiguous. The text does not follow the heading “Reference risk measure as an intermediate result” so either the heading should be changed or the paragraph should be reworded. Furthermore, meeting the guideline may not be possible if the risk profile is expected to change over the year (different products being sold or even an anticipated asset switch or disposal of a business).	Agreed. Wording changed within the guideline to mimic the title wording “Over the next year” deleted because create confusion and no specific added value
382.	Deloitte	1.95.	The following statement is included in this paragraph “until t =1”, we would suggest that this is reworded to “up to and including t = 1”. We also suggest rewording “in any foreseeable situation” as the initial wording “any situation” is not practical and feasible. Section (b) states “there should be no significant variation of this material difference”. Additional clarification needs to be given in relation to what a “significant variation” is and if the variation is based on an absolute amount or a percentage amount.	Agreed Agreed Both absolute and percentage variations could be considered as relevant. It will depend on the context/practical situation at stake.
383.	German Insurance Association (GDV)	1.95.	For the purpose of calculating the SCR, the variation of the variable from which the SCR is derived should be controlled especially in scenarios that define the SCR.The main focus should thus lie on extreme losses. We propose to change “even under extreme losses” to “especially under extreme losses”.	Agreed
384.	Groupe Consultatif Actuariel	1.95.	Is it strictly true to say that the underlying variable used to calculate the SCR is basic own funds? Is it not possible that some components of basic own funds are not modelled as being stressed eg staff pension schemes?	Nothing in the directive excludes *per se* a basic own funds item from an

	Européen		The following statement is included in this paragraph "until t =1", we would suggest that this is reworded to "up to and including t = 1" In subsection (b) it states "there should be no significant variation of this material difference". Additional clarification needs to be given in relation to what a "significant variation" is and if the variation is based on an absolute amount or a percentage. For the purpose of calculating the SCR, the variation of the variable from which the SCR is derived should be controlled especially in scenarios that define the SCR.The main focus should thus lie with extreme losses.Replace "even under extreme losses" with "especially under extreme losses".	Internal Model SCR calculation, if risks linked to them are material and quantifiable. True in particular for Staff pension schemes All other comments Agreed
385.	Insurance Europe	1.95.	For the purpose of calculating the SCR, the variation of the variable from which the SCR is derived should be controlled especially in scenarios that define the SCR.The main focus should thus lie with extreme losses. We propose to amend "even under extreme losses" to "especially under extreme losses".	Agreed
386.	Munich Re	1.95.	For the purpose of calculating the SCR, the variation of the variable from which the SCR is derived should be controlled especially in scenarios that define the SCR.The main focus should thus lie with extreme losses. We propose to amend "even under extreme losses" in this way: "especially under extreme losses".	Agreed
387.	Deloitte	1.96.	The following statement is included in this paragraph "until t =1", we would suggest that this is reworded to "up to and including t = 1". We also suggest rewording "in any foreseeable situation" as the initial wording "any situation" is not practical and feasible.	Agreed
388.	Groupe Consultatif Actuariel	1.96.	The following statement is included in this paragraph "until t =1", we would suggest that this is reworded to "up to and including t = 1"	Agreed

	Européen			
389.	Insurance Europe	1.96.	The requirement in (b) to be able to understand the difference in any situation until t=1 is too extensive. It should be sufficient at t=1. At least this should not be expected during the pre-application phase. Further, this could be a problem as long as Pillar 1 is not agreed on.	"In any situation" is removed given the pre-application context and Pillar I uncertainties.
390.	Groupe Consultatif Actuariel Européen	1.99.	Firms that consider events that will occur over a period of many years, for example: the strengthening of longevity assumptions, are unlikely to have to provide a full response (through management actions) within the first twelve months. A strong example here is a reduction in bonus rates where a one year anomaly is unlikely to result in a reduction in the long-term expected bonus rates. It is inconsistent for firms to quantify all of the adverse consequences measured until runoff, but only allow for the management actions that would reasonably be expected over a twelve month period. The two time periods should be held consistently.	The guideline does not forbid the use of management actions after the first year. It only request that those management actions would have effect on an own funds computation
391.	Insurance Europe	1.99.	This seems to be a softer but more appropriate approach than previously expected. However, the explanatory text seems to provide a different understanding.	Discrepancies with explanatory text not obvious. Difficulty to take the comment into account
392.	Groupe Consultatif Actuariel Européen	1.100.	Whilst we agree with the sentiment of this statement, the reason for including this in the Management Actions section is unclear. If this guidance is issued with a specific intention in mind, the paragraph should be expanded to explain EIOPA's intent and required insight.	Agreed. Sentence added within the § to clarify EIOPA intentions
393.				
394.	ASSOCIATION OF FINANCIAL MUTUALS	Chapter 8. General Comments	The level at which the P&L Attribution is performed should follow its uses, i.e. risk and business steering, and not the legal structures. Major business units should follow their managed structure rather than legal structures, i.e. not every legal entity forms a major business unit	The capital requirement applies to legal entity, the internal model needs to calculate an appropriate SCR at the legal entity level

395.	ASSURALIA	Chapter 8. General Comments	The use of the P&L Attribution also indicates the level at which it should be performed. In certain cases risks are predominantly steered across legal structures, and is a further drill down into each legal entity not necessary. An example for such an overarching steering of risks relates, e.g., to accumulation risks such as natural catastrophes where the board of a group typically needs to have an overview of the overall exposure of the group. The drilling down into smaller entities is of less importance here. The level at which the P&L Attribution is performed should therefore follow "the use test", i.e. the practical application of risk and business steering, and not the legal structures. Major business units should thus follow steering objects rather than legal structures, i.e. not every legal entity forms a major business unit.	Please see answer to comment 394
396.	DIMA (Dublin International Insurance & Management	Chapter 8. General Comments	The guidelines should indicate that the level at which the P&L Attribution is performed should follow its uses, i.e. risk and business steering, and not the legal structures, because certain risks are predominantly steered across legal structures.	Please see answer to comment 394
397.	German Insurance Association (GDV)	Chapter 8. General Comments	The use of the P&L Attribution also indicates the level at which it should be performed. In case certain risks are predominantly steered across legal structures management will be interested in how these risks perform at this level. Therefore the P&L Attribution should also be performed at that level. It is not necessary to further drill it down into each legal entity. An example for such an overarching steering of risks are accumulation risks like natural catastrophes where the board of a group typically needs to have an overview on the overall exposure of the group. The drill down into smaller entities is of less importance. The level at which the P&L attribution is performed should therefore follow its uses, i.e. risk and business steering, and not the legal structures. Major business units should thus follow steering objects rather than legal structures, i.e. not every legal entity forms a major business unit.	Please see answer to comment 394

398.	Groupe Consultatif Actuariel Européen	Chapter 8. General Comments	- In the level 1 text, article 123, it says that the P&L attribution should be done for each major business unit. Some guidance and examples on what is considered a major business unit would be useful. - Overall there is little detail on what is expected in P&L attribution, for example the level of granularity.	Please see answer to comment 394 The level of granularity other than what is required by the legal text should be consistent with internal model, risk management and business management
399.	Insurance Europe	Chapter 8. General Comments	The use of the P&L Attribution also indicates the level at which it should be performed. In certain cases risks are predominantly steered across legal structures,as such it is not necessary to further drill it down into each legal entity. An example for such an overarching steering of risks is accumulation risks like natural catastrophes where the board of a group typically needs to have an overview of the overall exposure of the group. The drilling down into smaller entities is of less importance. The level at which the P&L Attribution is performed should therefore follow its use, i.e. risk and business steering, and not the legal structures. Major business units should thus follow steering objects rather than legal structures, i.e. not every legal entity forms a major business unit	Please see answer to comment 394
400.	International Underewriting Association of London	Chapter 8. General Comments	In our view, the P&L attribution should be used to focus on risks as they affect the company or group as a whole, rather than individual legal entities.	Please see answer to comment 394
401.	Munich Re	Chapter 8. General Comments	The use of the P&L Attribution also indicates the level at which it should be performed. In case certain risks are predominantly steered across legal structures management will be interested in how these risks	Please see answer to comment 394

			perform at this level. Therefore the P&L Attribution should also be performed at that level. It is not necessary to further drill it down into each legal entity. An example for such an overarching steering of risks are accumulation risks like natural catastrophes where the board of a group typically needs to have an overview on the overall exposure of the group. The drill down into smaller entities is of less importance. The level at which the P&L attribution is performed should therefore follow its uses, i.e. risk and business steering, and not the legal structures. Major business units should thus follow steering objects rather than legal structures, i.e. not every legal entity forms a major business unit.	
402.	Groupe Consultatif Actuariel Européen	1.102.	The definition of profit and loss here is not clear. A more detailed plain English definition would be helpful.	Noted. See updated guideline and explanatory text for examples of capital movements
403.	Deloitte	1.103.	Could EIOPA please clarify what is meant by this paragraph? This requirement is unclear.	Noted. See updated guideline
404.	Groupe Consultatif Actuariel Européen	1.103.	This requirement should only be required if the firm opts for 1.102 (b) but should not be a requirement if the firm opts to use basic own funds for the internal model. A proviso similar to that in paragraph 1.104 should be added.	See updated guidelines. 104 does say: “When an undertaking uses a variable other than the basic own funds”
405.	Deloitte	1.104.	We suggest adding “attribution” at the end of the sentence: “… uses this variable for the purposes of profit and loss attribution.”	Updated
406.	Groupe Consultatif Actuariel Européen	1.104.	We welcome the clarification that a wider range of definition of profit than just basic own funds can be used.	Noted
407.	ASSOCIATION OF FINANCIAL	1.105.	It is important to note that this predominantly applies to insurance risks where there is not, in many cases, market data but only undertaking	There is a difference between the market data

	MUTUALS		specific data available to calibrate the internal model. For market risks it appears more important that the calibration of the internal model is tested against market data rather than the concrete profit and loss attribution of the undertaking, as this may be skewed due to trading activities throughout the one year risk horizon.	and investment portfolio/investment strategy an undertaking has. The market data will not capture the risk if you have an active investment strategy
408.	German Insurance Association (GDV)	1.105.	It is important to note that this predominantly applies to insurance risks where there is no market data available in many cases but only undertaking specific data to calibrate the internal model. For market risks it appears more important that the calibration of the internal model is tested against market data rather than the concrete profit and loss attribution of the undertaking, as this may be skewed due to trading activities throughout the one year risk horizon.	Please see answer to comment 407
409.	Insurance Europe	1.105.	It is important to note that this predominantly applies to insurance risks where there is not, in many cases, market data but only undertaking specific data available to calibrate the internal model. For market risks it appears more important that the calibration of the internal model is tested against market data rather than the concrete profit and loss attribution of the undertaking, as this may be skewed due to trading activities throughout the one year risk horizon.	Please see answer to comment 407
410.	Munich Re	1.105.	It is important to note that this predominantly applies to insurance risks where there is in many cases no market data but only undertaking specific data available to calibrate the internal model. For market risks it appears more important that the calibration of the internal model is tested against market data rather than the concrete profit and loss attribution of the undertaking, as this may be skewed due to trading activities throughout the one year risk horizon.	Please see answer to comment 407
411.	ASSOCIATION OF FINANCIAL MUTUALS	1.106.	The P&L Attribution should explain the causes and sources of profits and losses using a certain categorisation of risks. This categorisation should be consistent with the categorisation of risks as applied in the internal model in order to allow for a validation of e.g. the completeness of the	Undertakings need to find a balance between high level analysis missing underlying issues due to

			risks modelled. A drill down to a more granular level should only be performed in cases where the more aggregated P&L attribution exhibits unexpected behaviour of risks. Only consistency but not identity of risk drivers with the internal model should therefore be required in the context of the P&L attribution.	two different sources of risk moving in different directions and granular analysis.
412.	German Insurance Association (GDV)	1.106.	The P&L attribution should explain the causes and sources of profits and losses using a certain categorization of risks. This categorization should be consistent with the categorization of risks as applied in the internal model in order to allow for a validation of e.g. the completeness of the risks modelled. For this purpose it is, however, not necessary to perform the P&L attribution at the same level of granularity as the internal model specifies. A drill down to a more granular level should only be performed in cases where the more aggregated P&L attribution exhibits unexpected behaviour of risks. An example would be interest rate risk, where a drill down into sources of P&L from yield curve movements in different currencies might not be necessary in case only one currency is currently material for the portfolio. Only consistency but not identity of risk drivers with the internal model should therefore be required in the context of the P&L attribution.	Please see answer to comments 394 and 411
413.	Insurance Europe	1.106.	The P&L Attribution should explain the causes and sources of profits and losses using a certain categorization of risks. This categorization should be consistent with the categorization of risks as applied in the internal model in order to allow for a validation of e.g. the completeness of the risks modelled. For this purpose it is, however, not necessary to perform the P&L attribution at the same level of granularity as the internal model specifies. A drill down to a more granular level should only be performed in cases where the more aggregated P&L attribution exhibits unexpected behaviour of risks. An example would be the interest rate risk, where a drill down into sources of P&L from yield curve movements in different currencies might not be necessary in case only one currency is currently material for the portfolio. Only consistency but not identity of risk drivers with the internal model should therefore be required in the context of the P&L attribution.	Please see answer to comments 394 and 411

414.	International Underewriting Association of London	1.106.	The level of detail required for the proposed approach to ensuring consistency would be disproportionate. We suggest that appropriate comparisons could be made without analysis of detail which would in any case be likely to be misleading.	Please see answer to comments 394 and 411
415.	Munich Re	1.106.	The P&L attribution should explain the causes and sources of profits and losses using a certain categorization of risks. This categorization should be consistent with the categorization of risks as applied in the internal model in order to allow for a validation of e.g. the completeness of the risks modelled. For this purpose it is, however, not necessary to perform the P&L attribution at the same level of granularity as the internal model specifies. A drill down to a more granular level should only be performed in cases where the more aggregated P&L attribution exhibits unexpected behaviour of risks. An example would be interest rate risk, where a drill down into sources of P&L from yield curve movements in different currencies might not be necessary in case only one currency is currently material for the portfolio. Only consistency but not identity of risk drivers with the internal model should therefore be required in the context of the P&L attribution.	Please see answer to comments 394 and 411
416.	ASSOCIATION OF FINANCIAL MUTUALS	1.107.	It appears overly burdensome to document on an annual basis how the results of the profit and loss attribution are used in risk management and decision-making. The profit and loss attribution provides a retrospective view on the performance of the business. The decision-making contains a forward-looking element. Therefore it should not be requested that decisions need to take into account the outcome of the profit and loss attribution in each and every case.	Please see updated guidelines
417.	CRO Forum CFO Forum	1.107.	The Guidance is unclear in itself on what is required. The (supporting) explanatory text provides additional information on how P&L attribution should meet Use test (support Decision making, risk management etc). But it's unclear how this would directly relate to "model" approval process as the guideline relates to using the results of P&L attribution to meet Use Test. As stated by guideline 40, P&L attribution is a key validation tool and as such is part of the risk management system. Including P&L	Please see updated guidelines

			attribution in the use test introduces a loop and confusion.	
418.	Deloitte	1.107.	We suggest adding a definition for the expression "regular basis". We propose it be defined as "at a minimum annually or more frequently if required". Should this expression be used in several paragraphs in the final version of the guidelines, we suggest to add the definition in paragraph 1.15	Noted
419.	German Insurance Association (GDV)	1.107.	It appears overly burdensome to document on an annual basis how the results of the profit and loss attribution are used in risk management and decision-making. The profit and loss attribution provides a retrospective view on the performance of the business, decision-making contains forward-looking elements. Therefore it should not be required that decisions need to take into account the outcome of the profit and loss attribution in each and every case.	Please see updated guidelines
420.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.107.	Guidance 39 is unclear in itself on what is required. The (supporting) explanatory text provides additional information on how P&L attribution should meet Use test (support Decision making, risk management etc.). However, it is unclear how this would directly relate to "model" approval process as the guideline relates to using the results of P&L attribution to meet Use Test. As stated by guideline 40, P&L attribution is a key validation tool and as such is part of the risk management system. Including P&L attribution in the use test introduces a loop and confusion.	Please see updated guidelines
421.	Insurance Europe	1.107.	It appears overly burdensome to document on an annual basis how the results of the profit and loss attribution are used in risk management and decision-making. Also the profit and loss attribution provides a retrospective view on the performance of the business. The decision-	Please see updated guidelines

			making contains a forward-looking element. Therefore it should not be requested that decisions need to take into account the outcome of the profit and loss attribution in each and every case.	
422.	Munich Re	1.107.	It appears overly burdensome to document on an annual basis how the results of the profit and loss attribution Re: used in risk management and decision-making. Also the profit and loss attribution provides a retrospective view on the performance of the business, there is decision-making contains forward-looking element. Therefore it should not be requested that decisions need to take into account the outcome of the profit and loss attribution in each and every case.	Please see updated guidelines
423.	CRO Forum CFO Forum	1.108.	The guideline doesn't provide any more information than Level 1 text. The information in the explanatory text however does include some useful information that could be included in the Guidelines.	We consider the content of the Guideline useful
424.	Groupe Consultatif Actuariel Européen	1.108.	The interpretation in isolation of guidelines 39 and 40 is not clear. The explanatory text clarifies these guidelines. Therefore, we suggest that more of the explanatory text is included within these guidelines.	Please see answer to comment 423
425.	Groupe Consultatif Actuariel Européen	Chapter 9. General Comments	We believe that the EIOPA guidelines remain somewhat confused over validation and independent validation/review. In our view, good model building requires the builders to validate that the model being built meets the objectives set out and the Solvency II requirements i.e the majority of validation will not be independent of model build. An independent review of this validation has value in providing assurance, but this independent review should not need to re-perform all of the validation work, as this would add significant unnecessary cost. The form of and mechanisms for the feedback of the NCAs after the validation of the internal model also needs to be clarified (timetable, process,…)	The validation process has to be independent from the development and operation of the model. The validation is different from the justification and controls put in place by the model developers and is not aimed at duplicating this work
426.	Institut des Actuaires	Chapter 9. General Comments	The feedback of the NCAs after the validation of the internal model has to be clarified (timetable, process,…)	The validation is primarily designed for the firm benefit. In addition to the

				purpose of submission of applications, the interaction with NCAs regarding validation will take place as part of the supervisory review process
427.	MetLife	Chapter 9. General Comments	It should not be necessary to identify persons responsible for each validation task within a validation policy. It should be sufficient to identify each of the tasks and the department responsible for this activity.	The position or role could be used to identify the persons
428.	BMA	1.109.	With regard to persons responsible for each validation task, the Authority would expect the validation policy to be extended to include their qualification and reporting lines either within the main body of the policy or by way of an appendix. We appreciate that paragraph 1.137 requires the documentation of the level of knowledge expected of validators, but believe that the validation policy should also include evidence as to how persons charged with these roles comply with requirements.	This useful information might be available outside the policy
429.	CRO Forum CFO Forum	1.109.	Guideline 41 requests that the validation policy establishes "the frequency of regular validation for each part of the internal model". While we agree that model validation needs to look at the frequency of the validations, we do not think that this needs to be defined on a component basis in the policy, but rather as a requirement that model validation should comment on in their validations.	Different parts of the internal model might be subject to different frequency of validation
430.	Groupe Consultatif Actuariel Européen	1.109.	(a): It would be useful for the NCAs (National Competent Authorities) to give information on what the triggers for additional validation should be – e.g. a change in the SCR of 10%, a change in the SCR of 25%? (c): Is "persons" asking for names of individuals or role titles?	The triggers for additional validation are to be set by the undertaking. Roles and titles may allow identifying the persons
431.	Groupe	1.110.	"…resulting conclusions and consequences from the analysis of the	Consequences, as the

	Consultatif Actuariel Européen		validation." If the consequences referred to are potential actions taken as a result of the reported validation conclusions, there would not be any such consequences to report at the same time as the conclusion itself is reported. "Resulting conclusions" is therefore sufficient here. If the intention is that the validation report should cover also conclusions and potential consequences from earlier validations, such as model development in an area, it could be written more clearly.	example given, can be identified at the time of the report. It does not mean that they have to have been carried out at that given point in time
432.	Groupe Consultatif Actuariel Européen	1.111.	Does the sign-off-requirement refer to the data sets or to the validation report? If data sets, it should not be required specifically, as naturally the validating persons must have access to the data needed according to what is planned to be validated. If referring to the validation report, it should be written in a separate paragraph.	Both information relate to the validation process
433.	Groupe Consultatif Actuariel Européen	1.112.	"clearly sets out the specific purpose of the validation for each part of the internal model." It is not clear what is expected here, as presumably the overall goal with the validation is to secure that the model is fit for its purposes. Why should validation of any part have any other specific purpose? (However methods/tools, data and criteria will differ for model parts.)	Different validation activities may have different purpose. For example when validating a key assumptions, some activities may validate the choice of this assumption, some other activities may validate the sensitivity of the results of the model to changes in this assumption
434.				
435.	Groupe Consultatif Actuariel Européen	1.114.	The sentiment expressed in this point is very important, much more important than designing complicated tests and searching for data to test e.g. single parameters which isolated have nearly no relevance. However, the statement is somewhat vague and unclear. What does "validation in its entirity" mean?	Please refer to the explanatory text available from the EIOPA website

436.	German Insurance Association (GDV)	1.115.	No formal process should be required from undertakings in this regard.	If materiality is used to decide on the intensity of the validation activities, then NCAs should form a view
437.	Groupe Consultatif Actuariel Européen	1.115.	Also the NCA might focus its efforts by reference to materiality. Guidance on materiality thresholds would be helpful.	Noted
438.	Insurance Europe	1.115.	No formal process should be required in this regard from undertakings.	Please see answer to comment 436
439.	Munich Re	1.115.	No formal process should be required in this regard from undertakings.	Please see answer to comment 436
440.	German Insurance Association (GDV)	1.117.	See comment under 1.115.	Please see answer to comment 436
441.	Insurance Europe	1.117.	See comment under 1.115.	Please see answer to comment 436
442.	Munich Re	1.117.	See comment under 1.115.	Please see answer to comment 436
443.	Groupe Consultatif Actuariel Européen	1.118.	Not clear on the difference between this paragraph and the following, 1.119. Futher clarity required.	Please refer to the explanatory text available from the EIOPA website
444.	Groupe Consultatif Actuariel Européen	1.119.	See 1.118.	Please see answer to comment 444
445.	MetLife	1.119.	Insurers should assess the seriousness of the limitations and include	Agree

			plans to address these where the administrative, management or supervisory body believes it is appropriate to do so.	
446.	ASSOCIATION OF FINANCIAL MUTUALS	1.120.	This appears overly burdensome. Should only be asked that the validation (carried out by the risk management function) is regularly reviewed by the internal audit.	Please see answer to comment 451
447.	CRO Forum CFO Forum	1.120.	We are broadly in agreement with this requirement although we believe that it should specifically require all known circumstances under which the validation is ineffective rather than "the circumstances under which the validation is ineffective"	Please see answer to comment 449
448.	German Insurance Association (GDV)	1.120.	This appears overly burdensome. It is the validation of the validation itself. Undertaking should only be asked that the validation (carried out by the risk management function) is regularly reviewed by internal audit.	Please see answer to comment 451
449.	Groupe Consultatif Actuariel Européen	1.120.	We suggest that the word „known" be included as follows: "The validation process explicitly states known circumstances under which the validation is ineffective."	The drafting suggested could be read too restrictively
450.	Insurance Europe	1.120.	This appears overly burdensome. It is the validation of the validation itself. It should only be asked that the validation (carried out by the risk management function) is regularly reviewed by the internal audit.	Please see answer to comment 451
451.	Munich Re	1.120.	This appears overly burdensome. It is the validation of the validation itself. Undertaking should only be all asked that the validation (carried out by the risk management function) is regularly reviewed by internal audit.	Identifying circumstances under which the validation is ineffective is for instance useful to identify trigger for additional validation
452.				
453.	ASSOCIATION OF FINANCIAL MUTUALS	1.121.	We would delete this aspect.	Please see answer to comment 457

454.				
455.	German Insurance Association (GDV)	1.121.	This appears overly burdensome. It is unclear how such a quantification could look like and and what conclusions should be drawn from it. We suggest to delete this aspect.	Please see answer to comment 457
456.	Insurance Europe	1.121.	This appears overly burdensome. It is unclear how such a quantification could look like and what conclusions should be drawn from it. We would suggest to delete this aspect.	Please see answer to comment 457
457.	Munich Re	1.121.	This appears overly burdensome. It is unclear how such a quantification could look like and what conclusions should be drawn from it. We suggest to delete this aspect.	Drafting to be amended
458.	Groupe Consultatif Actuariel Européen	1.123.	Guideline 45 explicitly mentioned internal communication. No explict mention is made of external communication requirements linked to validation. We recommend that if internal communication is mentioned that reference is also made to external communication.	The guideline addresses to the governance of the validation process, hence the reference to the internal communication is relevant
459.	Groupe Consultatif Actuariel Européen	1.125.	Refer to our general comments above about the differences between validation and independent validation.	Please see response above
460.				
461.	Groupe Consultatif Actuariel Européen	1.126.	We suggest that the following text “undertaking establishes sets out how the results” be rewitten as „undertaking establishes how the results”.	‘establishes’ is meant to refer to the validation policy that the undertaking establishes
462.	Groupe Consultatif Actuariel	1.127.	If Best Estimate Liabilites and Risk Margin are in scope for the internal model, then should this be the responsibility of the Actuarial Function? Should everything in terms of validation fall under the responsibility of	Art 44(5) of the Directive gives responsibility to the risk management

	Européen		the Risk Management Function? We would welcome additional guidance in this area and would be happy to work with EIOPA in developing any such guidance.	function to test and validate the internal model
463.	ASSOCIATION OF FINANCIAL MUTUALS	1.129.	The validation policy should only specify how the allocation of tasks is governed.	Please see answer to comment 464
464.	German Insurance Association (GDV)	1.129.	It should not be requested that the validation policy covers also the allocation of tasks with specific persons. The validation policy should only specify how the allocation of tasks is governed.	A clear allocation of tasks is important for a robust process. We appreciate that in the policy might not describe the allocation of tasks to the lower level
465.	Insurance Europe	1.129.	It should not be requested that the validation policy covers also the allocation of tasks. The validation policy should only specify how the allocation of tasks is governed.	Please see answer to comment 464
466.	Munich Re	1.129.	It took not be requested that the validation policy covers also the allocation of tasks. The validation policy should only specify how the allocation of tasks is governed.	Please see answer to comment 464
467.	German Insurance Association (GDV)	1.130.	Paragraph 3.325 is strongly supported.	Thanks
468.	Groupe Consultatif Actuariel Européen	1.130.	Refer to our general comments above about the differences between validation and independent validation. Moreover, the definition and requirement for independence seems to vary widely across Europe. A clear definition on independence would be welcome, including how this varies between a group and an entity within a group.	As for most of the aspects of the internal model, the implementation of the independence validation must be tailored to a specific undertaking or group and a specific

				model
469.	Insurance Europe	1.130.	The independence of the validation process within risk management does not require an incorporation of any additional organisational structure. We very much agree with the point made in para 3.325: "A degree of independence can also be maintained by separating out tasks by different employees within the risk management function."	Thanks
470.	Munich Re	1.130.	The independence of the validation process within risk management department does not require an incorporation of any additional organisational structures. We very much agree with the point made in para 3.325: "A degree of independence can also be maintained by separating out tasks by different employees within the risk management function."	Please see answer to comment 469
471.				
472.	CRO Forum CFO Forum	1.132.	Assumptions and expert judgement are part of the internal model and its validation. Existing assumptions / expert judgements are subject to the reporting requirements to senior management (which might include the direct reporting to management board level). Changes to the internal model due to a reassessment of assumptions/ expert judgements are part of the model change process (which again might include the direct involvement on management board level). Additional senior management involvement should not be required and is also not covered by the requirements envisaged in the draft Implementing Measures. We propose to cancel para 1.59.	Related to chapter 4, guideline 20 para 1.59. Please refer to related response
473.				
474.	German Insurance Association (GDV)	1.132.	Thisguideline describes the process for group internal model under Article 231, and does not apply to an internal model that is only used for the consolidated group (Article 230). As the situation of NCAs involved (but not concerned) is similar in both situation, this guidline should only direct to NCAs concerned. We propose to change "national competent authorities involved" to "national competent authorities concerned".	NCAs 'involved' will play a part in the assessment of the application

475.	Insurance Europe	1.132.	This Guideline describes the process for the group internal model under Article 231, and does not apply to an internal model that is only used for the consolidated group (Article 230). As such, the Guideline should only refer to NCAs concerned. Could be helpful if EIOPA would clearly differentiate in the future Guidelines for applications under art 231 and for applications under art 230.	Please see answer to comment 474
476.	Munich Re	1.132.	This Guideline describes the process for group internal model under Article 231, and does not apply to an internal model that is only used for the consolidated group (Article 230). As the situation of NCAs involved (but not concerned) is similar in both situation, this guidline should only direct to NCAs concerned. We propose to amend "national competent authorities involved" in this way: "national competent authorities concerned".	Please see answer to comment 474
477.	Groupe Consultatif Actuariel Européen	1.133.	Does such a single validation policy need to be approved by the administrative, management and supervisory bodies of the related undertakings as well as that of the group?	We expect the governance to applies for undertaking using the model to calculate its SCR
478.	ASSOCIATION OF FINANCIAL MUTUALS	1.137.	Independence is not a quality of the validation tool. It should therefore be deleted in this context. Guideline 47 already deals with independence.	The selection of tool might be influence by the need to ensure the independence of the validation
479.	German Insurance Association (GDV)	1.137.	Independence is not a quality of the validation tool. It should therefore be deleted in this context. Guideline 47 already deals with independence.	Please see answer to comment 478
480.	Groupe Consultatif Actuariel Européen	1.137.	As a general observation, it is unclear why validation tools are being identified as something distinct and separate from other aspects of validation. It is not clear to us that this is a helpful distinction.	It is not the intention to limit the innovativeness. The paragraph sets some considerations that we

			The requirement of "documenting the process to choose appropriate set of validation tools" should be written and understood as requiring that the process to select tools is visible afterwards, e.g. through reading the validating report and its references it can be seen what tools have been applied, and the analysis can be fully accessed if needed. The details should not be prescribed beforehand, due to limiting the innovativeness and dynamics/agility of the validation process. Some tools should potentially be prescribed as compulsory each year, but room should be given for new tailored/trial tests. a) It is completely unnecessary to document whether a tool is simple or complex. b) It is unnecessary to write whether a tool is qualitative or quantitative (which tool does not include a qualitative element considering that conclusions have to be drawn?) c) Knowledge required is unnecessary to specify per tool. d) Independence is unnecessary to specify per tool. e) How does the information required relate to internal vs. external validation (aren't the requirements the same either way)? f) It should not be required that validation tools vary depending on the state of model development – this may or may not be true and can only be assessed on a case by case basis. Also, "Every key assumption" – we would welcome guidelines on what qualifies as "key".	believe are important in the selection of tools
481.	Insurance Europe	1.137.	Independence is not a quality of the validation tool. It should therefore be deleted in this context. Guideline 47 already deals with independence.	Please see answer to comment 478
482.	Munich Re	1.137.	Independence is not a quality of the validation tool. It should therefore be deleted in this context. 47 already deals with independence.	Please see answer to comment 478
483.	PZU	1.137.	In our opinion it is unclear what is considered to be "robust validation	Although we will be open

			process". We would like to emphasise the importance of providing perspicuous definitions. It is desired to avoid using misleading or ambiguous words as "robust" in the Consultation Papers.	to consider alternative, we believe 'robust' is useful to describe the intention
484.	Deloitte	1.138.	We suggest that EIOPA does not single out "stress tests and scenario analysis". Other validation tools could also be considered by national authorities, such as: benchmarking, back-testing…? We suggest at least rewording the paragraph as: "…undertaking uses at least stress tests and scenario analysis as part of…"	The paragraph includes "as part of", which makes the 'at least' not strictly necessary
485.	Groupe Consultatif Actuariel Européen	1.138.	Stress and scenario testing may be useful in applying a "smell" or "sniff" test to the stochastically generated results of a model by illustrating the type of scenario giving rise to an SCR-sized loss. However, stress and scenario tests are typically performed on the same models as are used to generate the SCR and this will naturally limit the extent of the validation which can be achieved through stress and scenario testing.	We don't agree
486.	Deloitte	1.139.	Same as in 1.138.	Please see above
487.	ASSOCIATION OF FINANCIAL MUTUALS	1.140.	We fear that this results in very onerous documentation requirements. Guideline 51 should rather be assessed during on-site visits throughout the pre-application phase rather than by requirements to document all of those aspects listed from a) to d).	The guideline requires the ability to explain
488.				
489.	German Insurance Association (GDV)	1.140.	We fear that this results in very onerous documentation requirements. Guideline 51 should rather be assessed during on-site visits throughout the pre-application phase than by requirements to document all of those aspects listed in a to d.	Please see answer to comment 487
490.	Insurance Europe	1.140.	We fear that this results in very onerous documentation requirements. Guideline 51 should rather be assessed during on-site visits throughout the pre-application phase than by requirements to document all of those aspects listed from a) to d).	Please see answer to comment 487

491.	Munich Re	1.140.	We fear that this results in very onerous documentation requirements. Guideline51 should rather be assessed during on-site visits throughout the pre-application phase than by requirements to document all of those aspects listed from a to d.	Please see answer to comment 487
492.	ASSOCIATION OF FINANCIAL MUTUALS	1.141.	This could result in very extensive calculations. Its application should therefore be limited to very few selected cases.	The relevant 'wide range of circumstances' should be assessed with regards of the specific internal model and specific undertaking's risk profile
493.				
494.	German Insurance Association (GDV)	1.141.	This could result in very extensive "as-if" calculations. It's application should therefore be limited to very few selected cases.	Please see answer to comment 492
495.	Groupe Consultatif Actuariel Européen	1.141.	"allows it to validate the model under a wide range of circumstances that have occurred or could potentially occur in the future" could be misread to mean that the firm must show that data sets chosen for validation can be used to verify that the model works correctly under all circumstances. Choosing any historical dataset for validating the model does not in itself make the model better, even though it can facilitate discussions about it. It is often not possible to draw a specific conclusion based on discussion about rare events. However it can be shown what kind of events the model does or does not cover, which must be allowed without subsequent requirements to cover all events. It can never be ensured that a data set covers circumstances that could potentially occur in the future. It is excessive to require the firm to write out what choices of data and methods etc. are based on expert judgement in the validation. Basically the whole validation process is based on expert judgement.	The guideline mentions 'a wide range of circumstances'. It is important the validation is not restricted to a too narrow set of possible circumstances

			That the firm explains the process to the NCA does not mean that every detail should be documented – it is much too restricting for a dynamic, effective and innovative validation process to prescribe exactly what data (or method) is to be used for validation of each part. It must be allowed to evolve over time, even yearly, as long the trace of the process can be followed (what data was used each year, how was it applied, ..).	
496.	Insurance Europe	1.141.	This could result in very extensive as-if calculations. Its application should therefore be limited to very few selected cases.	Please see answer to comment 487
497.	Munich Re	1.141.	This could result in very extensive as-if calculations. It's application should therefore be limited to very few selected cases.	Please see answer to comment 487
498.	CRO Forum CFO Forum	Chapter 10. General Comments	This section relates to requirements for documentation. Whilst documentation is one of the tests and standards that will need to be met to support model approval and sufficient documentation will need to be available to support pre-application review of the model, we would suggest a pragmatic approach needs to be taken in this area. In particular, the guidelines in this section are drafted as if all documentation is already complete and meeting the Solvency II standard. Prior to formal model application, documentation is likely to still be under development and we would suggest that these guidelines should not lead to an acceleration of this development process being required. Further to this, a pragmatic approach is needed as to the volume of documentation that will be required to support pre-application process reviews. The supporting explanatory notes to these guidelines propose that ancillary documentation may be required in addition to core Internal Model documentation to support these reviews. Whilst sufficient documentation will be needed to support the NCAs in developing their understanding of the model and, in particular, supplement management discussion during the pre-application process, this should avoid creating an unnecessary documentation burden whilst the model is still under development.	EIOPA has developed guidelines on documentation which aim helping undertakings to prepare for meeting the documentation requirements when they will be able to submit an application. It is not expected to fulfil all the documentation requirements at this stage See also answer to comment 5 EIOPA considers the documentation of the model as crucial for undertakings. If documentation is not kept timely and up to

				date, the undertaking is not protected from key-person risk, which is one of the main reasons that documentation is held Further documentation can serve as evidence of compliance with other requirements Under Solvency II the documentation of the internal models needs to be sufficient to ensure that any independent knowledgeable third party would be able to understand the design and operational details of the internal model and form a sound judgement as to its compliancewith requirements The proportionality principle is in particular applicable for documentation: for simpler internal models this might result in smaller amounts of documentation. However this should be a consequence of the level

				of complexity of the model, and not of the thoroughness of its documentation
499.	Groupe Consultatif Actuariel Européen	Chapter 10. General Comments	The requirements in terms of documentation or validation continue to appear demanding and we do not feel that a proportionate balance (of effort to benefit) has been struck. A pragmatic balance must be found between high standards and feasibility. Risk management is key; the choice of the approach should be driven by the risk profile of the company and not by the ability to bear costs. It would be helpful to receive more guidance on the scope of the internal model requiring documentation meeting the standards set out on this draft consultation paper. We recommend careful analysis of the level or requirements. If they are too high, it would discourage companies from developing an internal model. It is important to remember that one of the main goals of companies who want to develop an internal model is to better manage their risks. If the requirements are too high, on one hand, companies would lose the competitive advantage that the investment in an internal model should provide due to the high level of costs and loss of agility, on the other hand, they could decide not to apply for an approval which could lead to a gap between the way the company is managed (reflected in its internal model) and the approach used in submissions to the supervisor and external disclosures.	Please see answer to comment 498
500.	Insurance Europe	Chapter 10. General Comments	See general comments on documentation.	See answers to these comments

501.	MetLife	Chapter 10. General Comments	In general the documentation requirements for internal models can be considered to be burdensome. The need for detailed and in-depth documentation should be balanced with the need to produce concise documentation that is not overly lengthy such that the intended audience is able to follow and comprehend the, sometimes very technical, subject matter. Accordingly more focus should be given on ensuring proportionality in assessing the documentation requirements.	Please see answer to comment 498
502.	Deloitte	1.142.	We suggest to reword "…regularly reviewed" as "…regularly reviewed and at least yearly".	We prefer keeping some flexibility on this
503.	MetLife	1.142.	(See 1.45) - The documentation should be appropriate for the purpose of supporting decision taking. It is important that documentation is proportionate and is carried out at a level that is of value to the business to help understand why decisions have been taken. It should not be carried out at a level of detail that is fulfilling an academic purpose that is of little value to the business.	Please see answer to comment 498
504.				
505.	Groupe Consultatif Actuariel Européen	1.144.	Typo: We suggest that "produces a documentation" be rewritten as „produces documentation".	Agreed. Changes will be made
506.	Groupe Consultatif Actuariel Européen	1.145.	1.145 states that "National competent authorities should form this view also in case a methodology or any other technique used by the insurance or reinsurance undertaking in the internal model is documented by an external party." The wording in bold is somewhat unclear. It appears to be a typo. We suggest re-phrasing for clarity.	Agreed. Changes will be made
507.	ASSOCIATION OF FINANCIAL	1.146.	The history of the development of the methodology is part of the documentation of model changes.	Please see updated Guideline

	MUTUALS		A documentation of all methodologies which were considered but not subsequently used is excessive and virtually impossible in the long run. We would delete this section.	Material steps of the development of the mothodogy is required Please see in the explanatroy text why we consider this useful in the explanatory text
508.	ASSURALIA	1.146.	See general comments. A documentation of all methodologies which were considered but not subsequently used is very resource intensive and virtually impossible in the long run.	Please see answer to comment 507
509.	CRO Forum CFO Forum	1.146.	This guideline suggests that when documenting the methodologies used in the Internal Model, firms should document the history of the methodology including "any other methodologies that were considered but not subsequently used". We would suggest that this requirement is excessive and will add little value to the firm in managing the business.	Please see answer to comment 507
510.	Deloitte	1.146.	The guideline says that the documentation shall include "if available, the history of the development of the methodology, as well as any other methodologies which were considered but not subsequently used…" We believe this requirement will considerably expand the documentation, and would not add much valuable information to the understanding of an undertaking's chosen methodology. Since we expect that the discussion of "any other methodology" will be part of the validation anyway, we believe it is more effective to motivate the methodology used and not put the whole discussion process for a new methodology as part of the documentation.	Please see answer to comment 507
511.	DIMA (Dublin International Insurance & Management	1.146.	The model development history is part of the model change documentation. The documentation of all methodologies which were considered by groups or undertakings but subsequently not used is excessive, thus this should be excluded..	Please see answer to comment 507
512.	German	1.146.	The history of the development of the methodology is part of the	Please see answer to

	Insurance Association (GDV)		documentation of model changes (compare Article 125, Artticle 234 TSIM23). A documentation of all methodologies which were considered but not subsequently used is excessive and virtually impossible in the long run. We suggest to delete paragraph 1.146.	comment 507
513.	Groupe Consultatif Actuariel Européen	1.146.	We do not see the need for explicitly keeping track of the entire history of the methodology nor the methodologies considered but not used. In our view, the respective documentation should mirror the status at the time. Implicitly the history of developments can then be gained from the subsequent documents. Moreover, the developments can be tracked using the documented model changes and control procedures required for those.	Please see answer to comment 507
514.	Insurance Europe	1.146.	The history of the development of the methodology is part of the documentation of model changes (compare Article 125, Article 234 TSIM23). A documentation of all methodologies which were considered but not subsequently used is excessive and virtually impossible in the long run. We suggest to delete para 1.146.	Please see answer to comment 507
515.	International Underewriting Association of London	1.146.	The scope of the proposed requirement is vast, with a potential for infinite expansion. We suggest that firms will not be able to comply with it in a meaningful way.	Please see answer to comment 507
516.	Munich Re	1.146.	The history of the development of the methodology is part of the documentation of model changes (compare Article 125, Article 234 TSIM23). A documentation of all methodologies which were considered but not subsequently used is excessive and virtually impossible in the long run. We suggest to cancel para 1.146.	Please see answer to comment 507
517.	CRO Forum CFO Forum	1.147.	This guideline introduces a new requirement for documentation. We acknowledge that it is important to document shortcomings of the	We consider that this Guideline is useful for the

			internal model but the detail required under guideline 55 is not consistent with the purpose of having "an overall summary". Summary is provided in the ORSA report. The guideline is too prescriptive.	users of the documentation in the undertaking at the different levels Guideline has however been slightly redrafted in order to require only material shortcomings to be included in the overall summary
518.	Deloitte	1.147.	Section (f) refers to "limitations of information technology used in the internal model". It is unclear whether "information technology" is referring to hardware and/or software. We suggest rewording as: "hardware or software".	We consider it covers both
519.	Groupe Consultatif Actuariel Européen	1.147.	The documentation should not contain judgements of the quality of model components but rather describe the methods used. However, the assessment of model strengths and weaknesses should be part of the model validation and documented therein. Guideline 55- Circumstances under which the Internal Model does not work effectively: We can provide under which assumptions (not clear what is meant by circumstances) the model is not appropriate. But even in the case there should be a materiality level before starting to change the model. Further the requirement to document the risks not covered by the model must surely be limited to those risks to which the insurer is exposed or is likely to be exposed over the following 12 months. For such a single document to be a summary, it is clear that only the most material items under each of a)-g) can be covered. Bullet (f) refers to "limitations of information technology used in the internal model".	See answer to comment 518

			Is "information technology" referring to hardware and/or software?	
520.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.147.	This guideline introduces a new requirement for documentation. We acknowledged it is important to document shortcomings of the internal model but the detail required under guideline 55 is not consistent with the purpose of having "an overall summary". Summary is provided in the ORSA report. The guideline is too prescriptive.	Please see answer to comment 517
521.	BMA	1.148.	Although the Authority notes the requirement to detail plans for model improvements, we believe it also necessary that the undertaking describes how it currently mitigates those instances where the model does not work effectively to ensure that the current SCR quantification remains appropriate.	This is already covered in the Solvency II framework
522.	Groupe Consultatif Actuariel Européen	1.148.	It should not be required that the internal model development plan is in the same document as the summary of shortcomings; this is such a detail which the company should be allowed to structure as they see fit. Furthermore, it seems impractical and potentially at odds with both proportionality and transparency to require that all shortcomings are described in a single document – we would suggest that the requirements be altered to cover the most material shortcomings.	Please see answer to comment 517
523.	ASSOCIATION OF FINANCIAL MUTUALS	1.149.	We strongly oppose any interpretation that requires undertakings to document differently according to the different levels of stakeholders under all circumstances as we would find this requirement unreasonable and an extension of the original text. Further clarification of this point would be welcome.	EIOPA considers useful for undertakings this guideline as tailored documentation for key bodies and key personnel facilitates more effective implementation and control of the internal model Further this helps the undertaking to meet use

				test requirements for the different levels of this undertaking Note that it is up to the undertaking to consider that, so this may not apply in all circumstances
524.	CRO Forum CFO Forum	1.149.	We interpret "the undertaking considers having documentation (…) that consists of more than one level" as the requirement to demonstrate that the undertaking has considered (in a policy or otherwise) the circumstances under which it might be necessary to adapt documentation to the needs of the different stakeholders in such a way as to better inform them, or that internal practice naturally leads the undertaking to do so. We would strongly oppose any interpretation that requires undertakings to document differently according to the different levels of stakeholders under all circumstances as we would find this requirement unreasonable and an extension to the original text. Further clarification of this point would be welcome.	Please see answer to comment 523
525.				
526.	Groupe Consultatif Actuariel Européen	1.149.	We agree that it is essential that descriptions of the internal model, and of results produced using the model, are presented in a manner appropriate for the audience. Firms should not, however, be expected to maintain multiple levels of documentation subject to specific documentation standards. If EIOPA persists with this prescription then we would welcome further guidance on what is required in terms of different levels of documentation for different target audiences.	Please see answer to comment 523

527.	Insurance Europe	1.149.	We interpret "the undertaking considers having documentation (…) that consists of more than one level" as the need to demonstrate that the undertaking has considered (in a policy or otherwise) the circumstances of being necessary to adapt documentation to the needs of the different stakeholders in such a way as to better inform them, or if internal practice naturally leads the undertaking to do so. We would strongly oppose any interpretation that requires undertakings to document differently according to the different levels of stakeholders under all circumstances as we would find this requirement unreasonable and an extension of the original text.	Please see answer to comment 523
528.	International Underewriting Association of London	1.149.	In our view, the number of relevant audiences should be limited to no more than a few. Otherwise, the entailing workload will be disproportionate.	It is up to the undertaking to consider this number
529.	ASSOCIATION OF FINANCIAL MUTUALS	1.150.	We would amend "a user manual" to "user manuals or process descriptions"	Agreed. Changes will be made
530.	ASSURALIA	1.150.	See general comments. Moreover, for a complex model multiple user manuals will be required for its operation, especially for group internal models. This can't be the intention of the guidelines.	Proportionality principle can apply here
531.	CRO Forum CFO Forum	1.150.	We consider that the format of detailed user instructions for operation of the internal model should not be subject to specific standards and requirements. The requirement for a user manual for operation of the internal model seems to be excessive. The text should state that the operational working of the internal model should be sufficiently documented. This does not need to be one single user manual.	No single user manual is required User manuals for operation of the internal model is an important mitigant to key person risk, which exists both at

				model design level and model operation level
532.	German Insurance Association (GDV)	1.150.	Based on a complex model multiple user manuals will be required for its operation, especially for group internal models. We propose to change “a user manual” to: “user manuals or process descriptions”	Please see answer to comment 528. Agreed to add user manuals or process descriptions
533.	Groupe Consultatif Actuariel Européen	1.150.	While there is no explicit mention that the user manual needs to be a single document, it would help to clarify and confirm that this is not the case. Depending on the scope of the internal model and the production process followed, various user manuals for distinct steps may be more appropriate and less burdensome to maintain than a single consolidate user manual (provided all sub-user manuals are adequately indexed). It should be the responsibility of the undertaking to define the optimal structure of the user manual set-up. More generally, we feel that the format of detailed user instructions for operation of the internal model should not be subject to specific standards and requirements.	No single user manual is required The format is not prescribed
534.	Insurance and Reinsurance Stakeholder Group (IRSG)	1.150.	This guideline introduces a new requirement for documentation. An internal model is made of several components, which have their own methodology, architecture and governance. The existence of documentation ensuring the capacity for a knowledgeable party to operate and run the components is important. But the concept of a user manual is not adequate. We suggest amending the text “ …the insurance or reinsurance undertaking puts in place user manuals for operation of the different components of the internal model.”	Please see answer to comment 528
535.	Insurance Europe	1.150.	We consider that the format of detailed user instructions for operation of the internal model should not be subject to specific standards and requirements. The requirement for a user manuel for operation of the internal model is	Please see answer to comment 533

			too excessive. . We propose to amend "a user manual" with "process descriptions"	
536.	MetLife	1.150.	Guideline is unclear if a separate user manual is required or whether other pieces of documentation can be used as part of the manual.	Please see answer to comment 531
537.	Munich Re	1.150.	For a complex model multiple user manuals will be required for its operation, especially for group internal models. We propose to amend "a user manual" in this way: "user manuals or process descriptions"	Please see answer to comment 529
538.				
539.	RSA Insurance Group	1.150.	This guideline introduces a criterion for internal model documentation which is inconsistent with the principle in the draft Level 2 text that the documentation should be sufficient to enable any independent knowledgeable third party to be able to understand the design and operational details off the internal model and form a sound judgement as to its compliance with Solvency II rules. Documentation to enable the third party to "operate and run" the internal model is clearly more extensive than that required to enable the third party to "understand" and "form a sound judgement" of its compliance. The guideline represents an unwarranted extension of the Level 2 requirements and should be deleted.	Disagreed
540.	Groupe Consultatif Actuariel Européen	1.151.	Recording historic model outputs in a robust way is a relatively new challenge for companies currently (e.g. backed up data bases, locked down access) there is potentially a significant amount of data to be stored. Further guidance on what the NCAs would be assessing would be valuable.	More explanation about this issue is provided in the explanatory text
541.	Aon Ltd	1.152.	What is the nature and granularity of information that EIOPA is expecting undertaking's to make available for national competent authorities in relation to the software, modelling platforms and hardware systems?	As set out in the Guideline, the undertaking needs to provide in the

			This requirement appears to be less onerours than the requirement to demonstrate an appropriate level of understanding for external models (guideline 61) , therefore, are simply details of the versions of software/modelling platform/hardware systems used in the internal model sufficient?	documentation sufficient information to be able to assess and justify their use, and enable national competent authorities to assess their appropriateness
542.	ASSOCIATION OF FINANCIAL MUTUALS	1.152.	We would delete "hardware systems".	Disagreed. We consider this information is useful both for undertakings to be able to assess and justify the use in the model, and national competent authorities to enable them to assess its appropriateness Proportionality principle also applies here
543.	German Insurance Association (GDV)	1.152.	Often the internal model will not be restricted to specific hardware platforms. The assessment should be restricted to the requirements of Artcile 232 TSIM21(1)(d). We suggest to delete "hardware systems".	Please see answer to comment 542
544.	Groupe Consultatif Actuariel Européen	1.152.	Often the internal model will not be restricted to specific hardware platforms. The assessment should be restricted to the requirements of Artcile 232 TSIM21(1)(d) Drop "hardware systems"	Please see answer to comment 542
545.	Insurance Europe	1.152.	Often the internal model will not be restricted to specific hardware platforms. The assessment should be restricted to the requirements of Artcile 232 TSIM21(1)(d) We suggest to delete "hardware systems".	Please see answer to comment 542

546.	Munich Re	1.152.	Often the internal model will not be restricted to specific hardware platforms. The assessment should be restricted to the requirements of Article 232 TSIM21(1)(d) We suggest to cancel "hardware systems".	Please see answer to comment 542
547.	ASSOCIATION OF FINANCIAL MUTUALS	1.153.	We would delete "hardware systems".	Please see answer to comment 542
548.				
549.	German Insurance Association (GDV)	1.153.	See 1.152 We suggest to delete "hardware systems".	Please see answer to comment 542
550.	Groupe Consultatif Actuariel Européen	1.153.	Drop "hardware systems"	Please see answer to comment 542
551.	Insurance Europe	1.153.	See 1.152 We suggest to delete "hardware systems".	Please see answer to comment 542
552.	Munich Re	1.153.	Cf. 1.152 We suggest to cancel "hardware systems".	Please see answer to comment 542
553.	Groupe Consultatif Actuariel Européen	Chapter 11. General Comments	Generally the requirements for external models are the same as for the internal model (proprietary). External reviews could be used and incorporated in own validation process but not replace it. The same with other standards (documentation). It is worth noting that external models and data do not need to be complicated (for instance they are not always academic models that few people would understand). When specific data need to be adjusted and when the insurer cannot assess its own parameters on too small portfolios, insurers should be	External models and data can be used as part of the internal model, and are subject to the similar requirements from Articles 120 to 125 of the Directive

			authorised to use external assumptions computed in a process validated by Intitutes of Actuaries, for example in respect of mortality tables. Models designed specifically to fit particular risks or situations should be welcomed, and to promote innovation, these models need to be developed beyond the existing models recognised by the market. On the other hand, a minimum of consistency between insurers should facilitate an homogeneous supervision.	
554.	Institut des Actuaires	Chapter 11. General Comments	External models and data do not need to be complicated (for instance academic models that few people would understand). When specific datas have to be adjusted and when the insurer can not assess its own parameters on too small portfolios, insurers should be authorised to use external assumptions computed in a process validated by Intitutes of Actuaries like for mortality tables for instance. Models designed specifically to fit particular risks or situations are welcome, and to authorise innovation, these models shall be developed beyond the existing models recognised by the market. On the other hand, a minimum of consistency between insurers should facilitate an homogeneous supervision.	Please see answer to comment 553
555.	MetLife	Chapter 11. General Comments	Compliance with the requirements (e.g. firms are required to have an understanding of the various aspects of the external models may be very difficult to achieve due to vendor's confidentiality of their external model methodologies.	This was acknowledge and addressed by EIOPA opinion dated 2nd May 2012
556.	ASSURALIA	1.154.	We are concerned that if expectations regarding the understanding of an external model get excessive, SMEs will get virtually excluded from the internal models application process.	This guideline refers to external data, understanding of external model are addressed in guideline 61
557.	German Insurance Association	1.154.	We are concerned that if expectations regarding the understanding of an external model get excessive, SMEs, especially regional insurers on the field of HOI will get virtually excluded from the IMAP.	Please see answer to comment 556

	(GDV)			
558.	Insurance Europe	1.154.	We are concerned that if expectations regarding the understanding of an external model get excessive, SMEs will get virtually excluded from the internal models application process.	Please see answer to comment 556
559.	ASSURALIA	1.155.	See general comments. Very burdensome for both undertakings and NCAs to fulfil the requirements.	External data should comply with the data requirements
560.	CRO Forum CFO Forum	1.155.	We suggest to change point d) in the following manner "…timely consistency checks including, if possible and considered appropriate by the undertaking, comparaisons with other relevant sources." Although we agree that it should be up to the undertaking to demonstrate the quality of the external data used and how well it understands and mitigates the limits and pitfalls of the data, we consider it to be unreasonable to additionally require that consistency checks be necessarily conducted with other sources. It should be made possible for the undertaking to define under what circumstances this might be necessary also considering how onerous it could be to do so.	Wording clarified to: 'develops processes to run timely consistency checks including comparisons with other relevant sources *to the extent that data are reasonably available*.'
561.	Deloitte	1.155.	Section d): "develops processes to run timely consistency checks including comparisons with other relevant sources". This should be expanded to reflect what other relevant sources EIOPA expect undertakings to use. For example, the following wording could be added: "internal if available or external otherwise" as other sources may be difficult to locate or obtain, such as for asset holding data.	Please see answer to comment 560
562.	Groupe Consultatif Actuariel Européen	1.155.	"Missing external data" is open to interpretation and so will it possible to gain a clarfiying definition?	'Missing data' could be assessed in relation with the intended use
563.	Insurance Europe	1.155.	To establish formalised processes as proposed, in addition to the ordinary validation process, is excessive. Wealso suggest to change point d) in the following manner "…timely	Please see answer to comment 560

			consistency checks including, if possible and considered appropriate by the undertaking, comparisons with other relevant sources." Although we agree that it should be up to the undertaking to demonstrate the quality of the external data used and how well it understands and mitigates the limits and pitfalls of the data, we consider it to be unreasonable to additionally require that consistency checks be necessarily conducted with other sources. It should be made possible for the undertaking to define under what circumstances this might be necessary also considering how onerous it could be to do so.	
564.	PZU	1.155.	In our understanding external data should be distinguished between externally provided data (by third party company) and market data provided by national competent authorities. Data provided by a third party are usually appropriately prepared for the recipient. The processing of data is not transparent for the purchaser and it is provider's responsibility to ensure all the requirements inherent in this point of Consultation Paper. In accordance to market data we believe that only if they are modified by the insurance or reinsurance undertaking described requirements should be met.	Please refer to Article 126 of the Directive
565.	German Insurance Association (GDV)	1.156.	It should be clarified to what extent "IT platforms" should be classified as external models. We suggest a very narrow interpretation, i.e. an external model is an implemented risk modelling methodology rather than a software platform. The explanatory text (3.426) is not helpful as a guidance.	We believe explanatory text 3.426 could be useful as depending on the specific characteristics of the IT systems and the use by the undertaking, the systems may or may not have a significant impact on the calculation of the SCR

566.	Groupe Consultatif Actuariel Européen	1.156.	It is unclear if the group internal model used for solo entities would be seen as an external model. If it is then this may add undue burden and duplication of effort or result in sole calculations being performed on a standard formula basis. It is not clear from the guideline what is expected so that the undertaking "demonstrates that all parties involved in the use of the external model have a sufficiently detailed understanding of parts of the external model relevant to them"? Guidance should be focused on demonstrating suitable processes to ensure all parties have sufficient information and training available on parts of the external model relevant to them. What is extent of "parties" being referred to i.e. risk function, boards at local/group level?	Guideline 18 (paragraph 1.52(c) in particular) provides some guidance. Article 231(1) of the Directive also identifies the undertakings parties in the application Explanatory text 3.431 provides some explanation of what is expected in relation to the parties involved in the use of the external model
567.	Insurance Europe	1.156.	It should be clarified to what extent "IT platforms" should be classified as external models. We suggest a very narrow interpretation, i.e. an external model is an implemented risk modelling methodology rather than a software platform. The explanatory text (3.426) is not helpful as a guidance.	Please see answer to comment 565
568.	MetLife	1.156.	Firms should have a detailed understanding of how external model works and how changes to core assumptions in both stress and scenario testing will impact the firm's business. However the detailed knowledge should not need to extend to requiring line by line code or forcing the external model provider to relinquish its commercial secrets.	The internal model Articles 120 to 126 of the Directive apply
569.	Deloitte	1.157.	By tying the attention an undertaking should pay to their known risk profile, there is a risk of them missing out on secondary factors that may become material during the period under concern. A more comprehensive view should also be formed. We suggest the rewording : "…and	The standards for external model are not different than for internal solutions

			sensitivity testing to ensure that the external model continues to be the correct option" (as opposed to alternative models - internal or external)	
570.	German Insurance Association (GDV)	1.158.	It is not clear what information a "periodical review" of the justification for selecting a particular model should generate. Instead, an external model should be scrutinized in a strict validation process. As long as the validation process indicates that the external model is valid and appropriate there is no need for an additional periodical review.	Please refer to the explanatory related to this guideline and in particular paragraphs 3.432 and 3.436. External models are subject to the same validation standard as internal solutions
571.	Groupe Consultatif Actuariel Européen	1.158.	It would be helpful if EIOPA could comment on how Guideline 62 is applied when an entity uses input from elsewhere in the group in its own internal model. This may be significant where the substantial parts of the group are non EEA.	This issue will be further considered by EIOPA
572.	Insurance Europe	1.158.	It is not clear what information a "periodical review" of the justification for selecting a particular model should generate. An external model should instead be scrutinized in a strict validation process. As long as the validation process indicates that the external model is valid and appropriate there is no need for an additional periodical review.	Please see answer to comment 570
573.	Munich Re	1.158.	If there are too excessive expectations regarding the understanding of an external model, SMEs, especially regional insurers on the field of HOI will be virtually excluded from the IMAP.	The use of external model is not a justification for exemption from the requirements set out in Articles 120 to 125
574.	ASSOCIATION OF FINANCIAL MUTUALS	1.159.	It should be made clear that this does not mean that insurance undertakings cannot choose one single provider.	The guideline addresses over reliance and the need for a mitigation plan against failure
575.	CRO Forum	1.159.	This guideline indicates that national competent authorities should form a	Please see answer to

	CFO Forum		view on whether the insurance or reinsurance undertaking is not overly reliant on one provider. The example provided is using the multi model approach. It's unclear in what circumstances this approach should be used in. The Guideline also includes a requirement "undertaking puts in place plans to mitigate against any failures of the providers." It's unclear as to what an acceptable plan would be and the depth of what the plan needs to include.	comment 574. A mitigation plan should address the specific circumstances
576.	Deloitte	1.159.	The guideline says "…undertaking is not overly reliant on one provider". We believe most undertakings are going to be heavily reliant on one model if they use it. The explanatory text point 3.437 says that "the undertaking may decide on the use of multiple models, as a way to mitigate the risk of over reliance on a particular model". This could result in an inefficient use of resources. It would be useful if EIOPA could give examples (as they do for some of the other guidelines in this chapter) where they think this might happen.	The use of multiple models is provided as an example
577.	German Insurance Association (GDV)	1.159.	The suggested "multi-model approach" (see explanatory text 3.437, 3.438) is neither practical from an operational point of view, nor it is necessary when validation shows that a model is appropriate.	The use of multiple models is provided as an example
578.	Groupe Consultatif Actuariel Européen	1.159.	When a model of an external provider is used, it is inevitable that this model is the key to the risk calculation process. Therefore the calculation is by definition very reliant on the external provider of the model. We feel it therefore more appropriate that the undertaking makes sure that the continuity of the provider is well established. This is quite something else than not being overly reliant on the one provider. If EIOPA retains this requirement then it would be helpful to have more guidance on what is expected to be documented in respect of "how the undertaking puts in place plans to mitigate against any failures of the	This paragraph considers the risk created by the reliance on external provider and how the undertaking addresses this risk

			provider."? Would this issue be better considered under an undertakings risk register?	
579.	Insurance Europe	1.159.	It should be made clear that this does not mean that insurance undertakings cannot choose one single provider. The suggested "multi-model approach" (cf. explanatory text 3.437, 3.438) is neither practical from an operational point of view, nor it is necessary when validation shows that a model is appropriate.	The guideline addresses over reliance and the need for a mitigation plan against failure The use of multiple models is provided as an example
580.	MetLife	1.163.	Requirement to assess features/models for non-selection is onerous and potentially impractical. There may be lack of appetite across firms to evaluate all possible solutions in existence if there a large number of alternatives available in the marketplace due to resource and cost constraints.	The guideline considers options and features available as part of the selected external model
581.				
582.	Groupe Consultatif Actuariel Européen	1.164.	Would external peer review processes be allowed as part of the validation process in full? (see Role of service providers GL67 – 1.172).	Peer reviews performed at the initiative of the provider could be considered and inform the undertaking validation of the external model
583.	MetLife	1.165.	In documenting external models and data there may be significant obstacles in obtaining required information from vendors (who may just be protecting "trade secrets"). (See 1.45 and 1.142) - The documentation should be appropriate for the purpose of supporting decision taking. It is important that documentation	Please refer to EIOPA opinion on external models and data published 2nd May 2012

			is proportionate and is carried out at a level that is of value to the business to help understand why decisions have been taken.	
584.	Groupe Consultatif Actuariel Européen	1.166.	Why was the word "materially" in a) was deleted compared to earlier draft guidance? a) The aspects of the external model and external data that are [materially] relevant for its risk profile.	The change was made for consistency with the Directive. For the purpose of this process please refer to guideline 3
585.				
586.				
587.	Deloitte	1.171.	NCAs should harmonize their expectation (e.g. in the college of supervisors) regarding the specific information for the assessment of an external model. External model providers may be based in different jurisdictions from the undertaking. The information provided may be sufficient for an NCA while not being sufficient by another NCA involved / concerned. The provider may not be willing to provide some information under existing contractual terms and may try to align on the least demanding NCA ; this would be detrimental to insurers overseen by more demanding NCAs	EIOPA mitigated this risk by clarifying the expectations through the publication of an opinion on external models and data (2^{nd} May 2012)
588.				
589.	Groupe Consultatif Actuariel Européen	1.172.	Would external peer review processes be allowed as part of the validation process in full? (also in Validation 1.164?). Is there a distinction between as external 3rd party provider and an internal group provider?	Please see answer to comments 571 and 582
590.	ASSURALIA	Chapter 12. General Comments	It would be helpful for both undertakings and NCAs to have more clarity on the envisaged cooperation between the group supervisor, the other NCAs concerned, involved and identified by the college of supervisors, as well as their respective roles for the applications.	This is expected to be covered in Level 2 Implementing Measures still to be published
591.	Insurance Europe	Chapter 12. General	Guidelines on the functioning of colleges do not differentiate applications under article 230 and 231. It would be helpful for both undertakings and	These guidelines cover both application under

		Comments	NCAs to have more clarity on the envisaged cooperation between the group supervisor, the other NCAs concerned, NCAs involved and other NCAs identified by the college of supervisors as well as their respective roles for applications under art 230 and applications under art 231	Articles 230 and 231, following the logic of the process foreseen in the Solvency II framework on internal models for groups The NCAs involved but not concerned should have to play an important role in the process, even in the case of group internal models under Article 231: they have to assess the appropriateness of not using the internal model for the group for the solo SCR calculation and the contribution of the local related undertaking to the group SCR Wording of Guideline 69 will be amended to explicitly recognise the specific role for NCAs concerned in the work plan in the case of group internal models Note that a paper is also being produced in relation to joint decision for GIMs,

592.				
593.	German Insurance Association (GDV)	1.177.	We would like to point out, that only (re-)insurance undertakings are subject to an individual Solvency Capital Requirement. As related insurance undertakings that are not subsidiary undertakings shall be excluded from consolidated model [see Implementing Measures 323 ter SCG3(1)(a) and (c)] we propose to focus on subsidiary (re-)insurance undertakings. Albeit not falling under the scope of this consultation we would like to point out, that the final version of the Implementing Measures should consequently consider this reasoning as well [Article 327 IMG1 (6)(a)(iv)]. We suggest to replace "related undertaking" with "subsidiary insurance or reinsurance undertaking" in (d) and (e). Moreover it is not clear, whether the scope of the model refers to the scope as used for the calculation of the SCR of the consolidated group or the application of the internal model for the purpose of calculating the SCR of individual solo undertakings.	Disagree, the consolidation method (under method 1) is not restricted to subsidiaries. It refers to the scope of the model in general for the two calculations referred to in the comment Please see answer to comment 591

			Following our argument in 1.32, we propose to change “national competent authorities involved” to “national competent authorities concerned”.	
594.	Groupe Consultatif Actuariel Européen	1.177.	It is not quite clear, whether the scope of the model refers to the scope as used for the calculation of the SCR of the consolidated group, or the application of the internal model for the purpose of calculating the SCR of individual solo undertakings. Furthermore, it is not clear what are differences between bullets (a) and (b): (a) the significance of related undertakings within the group with respect to the risk profile of the group; (b) the risk profile of related undertakings within the group compared to the overall group risk profile; Bullet (d) Wording somewhat unclear. Suggest re-phrasing for clarity?	Please see answer to comment 593 (a) Refers to the materiality of the related undertaking (quantitative criteria) (b) Refers to the risk profile of the related undertaking (qualitative criteria) Last part of bullet (d) has been deleted to make it clear
595.	Insurance Europe	1.177.	We would like to point out, that only (re-)insurance undertakings are subject to an individual Solvency Capital Requirement. As related insurance undertakings, that are not subsidiary undertakings shall be excluded from consolidated model [cf. 323 ter SCG3(1)(a) and (c)] we propose to focus on subsidiary (re)insurance undertakings. Albeit not part of this consultation we would like to point out, that final version of the implementing measures should consider this reasoning as well [Article 327 IMG1 (6)(a)(iv)].	Please see answer to comment 593

			We suggest to replace "related undertaking" with "subsidiary insurance or reinsurance undertaking" in (d) and (e). Moreover it is not clear whether the scope of the model refers to the scope as used for the calculation of the SCR of the consolidated group, or the application of the internal model for the purpose of calculating the SCR of individual solo undertakings. The Guideline seems to mix applications under art 230 and 231. It would be helpful to distinguish the different roles of the NCAs concerned, NCAs involved and other NCAs identified by the college of supervisors, for applications under art 230 and applications under art 231	
596.	Munich Re	1.177.	We would like to point out, that only (re-)insurance undertakings are subject to an individual Solvency Capital Requirement. As related insurance undertakings, that are not subsidiary undertakings shall be excluded from consolidated model [cf. 323 ter SCG3(1)(a) and (c)] we propose to focus on subsidiary (re-)insurance undertakings. Albeit not part of this consultation we would like to point out, that final version of the implementing measures should consider this reasoning as well [Article 327 IMG1 (6)(a)(iv)]. We suggest to replace "related undertaking" with "subsidiary insurance or reinsurance undertaking" in (d) and (e) Moreover it is not clear, whether the scope of the model refers to the scope as used for the calculation of the SCR of the consolidated group, or the application of the internal model for the purpose of calculating the SCR of individual solo undertakings.	Please see answer to comment 593
597.				
598.	German Insurance Association (GDV)	1.178.	See 1.177: We suggest to replace "related undertaking" with "subsidiary insurance or reinsurance undertaking" in (a) and (b)	Disagree. Please see answer to comment 593
599.	Groupe	1.178.	a) It is unclear what role and authority the group supervisor and	The group and NCAs

	Consultatif Actuariel Européen		other NCAs involved have in determining how a group allocates its own funds. Counterbalancing a)-d) is the need to consider the practicalities and costs of meeting the Solvency II standards for a larger number of entities within a group and the possible reduced quality of the modelling within the original in-scope entities as a result of the diluted focus.	involved should cooperate to assess that as the solo SCRs may impact the allocation of group own funds This Guideline identifies risks that EIOPA considers essential to assess the appropriateness of an internal model for a group, and of the group in general
600.	Insurance Europe	1.178.	See comments above	Please see answers to previous comments
601.	Munich Re	1.178.	Cf. 1.177 We suggest to replace “related undertaking” with “subsidiary insurance or reinsurance undertaking” in (a) and (b)	Disagree. Please see answer to comment 593
602.	ASSOCIATION OF BERMUDA INSURERS AND REINSURERS (ABIR)	1.179.	Refers to the tasks of group supervisors and other national competent authorities involved and participating in the application process for internal model approvals for groups. Whilst currently several national competent authorities have involved third country group supervisors in this process already, the absence of any guidance applicable to the recognition of third country group supervisors, national competent authorities can decide to not recognize the participation of a third country group supervisor and this could be detrimental to the national competent authorities review of the internal model application and significantly costly to the Bermuda group.	NCAs “involved” referred to the guidelines are from EU Member States. Nevertheless third country competent authorities could participate as provided in Guideline 72

603.				
604.	German Insurance Association (GDV)	1.179.	Following our argument in 1.32, we propose to change “national competent authorities involved” to “national competent authorities concerned”.	Please see answer to comment 591
605.	Groupe Consultatif Actuariel Européen	1.179.	Allocation of tasks should allow for appropriate knowledge and ensure consistency in approaches of checking a particular area. In particular the work plan should include consistent approach to be agreed for on-site and off-site activities. It would be inefficient that supervisors do not follow the same approach when verifying the pre-application documentation in different countries. E.g. the same part of the documentation could meet the standards of the supervisor in one country and not in another country (or validation or any other standard).	The consistency of approaches in tackled in Guideline 71
606.	Insurance Europe	1.179.	Is unclear if refers to an application under art 230 or 231 Allocation of tasks should allow for appropriate knowledge and ensure consistency in approaches of checking a particular area. In particular the work plan should include consistent approaches to be agreed for on-site and off-site activities. It would be inefficient that supervisors do not follow the same approach when verifying the pre-application documentation in different countries. E.g. the same part of the documentation could meet the standards of the supervisor in one country and not in another country (or validation or any other standard).	It refers to both Please see answer to comment 605
607.	International Underewriting Association of London	1.179.	We agree that the effective and efficient allocation of tasks amongn supervisors and with group supervisors is vital. If it is not achieved, significant costs and inefficiencies will arise. We would also suggest that dialogue with the group should be maintained permanently, so that it is kept informed of all significant findings and decisions and can respond to	The Guideline 3 on on-going feedback to undertaking applies also for groups

			new requirements quickly and effectively with solutions and appropriate actions.	
608.	Polish Chamber of Insurance	1.179.	Allocation of tasks should allow for appropriate knowledge and ensure consistency in approaches of checking a particular area. In particular the work plan should include consistent approach to be agreed for on-site and off-site activities. It would be inefficient that supervisors do not follow the same approach when verifying the pre-application documentation in different countries. E.g. the same part of the documentation could meet the standards of the supervisor in one country and not in another country (or validation or any other standard). Consistency on a group level is as important as consistency at the level of the different NCAs	Please see answer to comment 605
609.				
610.	German Insurance Association (GDV)	1.180.	Following our argument in 1.32, we propose to change "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 591
611.	Groupe Consultatif Actuariel Européen	1.180.	We feel that this work plan should also be communicated to the supervised insurance undertaking.	When possible. We allow the colleges and supervisors the flexibility
612.	Insurance Europe	1.180.	See 1.179 It is important to set up an appropriate monitoring of the agreed work plan among the supervisors in order to ensure that each authority follows the agreed allocation of taks and work plan. In case an authority does not follow the allocation of tasks and / or work plan, the group supervisor should have authority to impact the respective authority actions and if	Please see answers to this comment The Guidelines aim to encourage dialogue, discussion and agreements within all the NCAs involved

			appropriate override its decisions.	
613.	Polish Chamber of Insurance	1.180.	It is important to set up an appropriate monitoring of agreed work plan among the supervisors in order to ensure that each authority follows the agreed allocation of taks and work plan. In case an authority does not follow the allocation of tasks and / or work plan, the group supervisor should have authority to impact the respective authority actions and if needed override its decisions. We think that for a specific country the local NCA should be the final authority to make a decision in case of different opinions issued by the supervisors. The local NCA is the NCA who knows much more about the risks involved in the country they are responsible for.	Please see answer to comment 612 The joint decision process will be addressed in a different paper
614.	German Insurance Association (GDV)	1.181.	Following our argument in 1.32, we propose to change "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 591
615.	Insurance Europe	1.181.	See 1.179	Please see answer to this comment
616.	German Insurance Association (GDV)	1.182.	As far as possible, the work plan should be made available to the undertakings that intend to use the group internal model to calculate their individual Solvency Capital Requirement and the ultimate parent undertaking.	Please see answer to comment 611
617.	Insurance Europe	1.182.	See 1.179 As far as possible, the work plan should be made available to the undertakings that intend to use the group internal model to calculate their individual Solvency Capital Requirement and the ultimate parent undertaking.	Please see answer to this comment Please see answer to comment 611

618.	Munich Re	1.182.	As far as possible, the work plan should be made available to the undertakings that intend to use the group internal model to calculate their individual Solvency Capital Requirement and the ultimate parent undertaking.	Please see answer to comment 611
619.	BMA	1.183.	The Authority is of the view that, where a group wishes to use an approved internal model to set statutory capital in countries other than that in which the group is domiciled, the Group Supervisor should be strongly encouraged to invite all of the competent authorities of these countries, both member states and third countries, to be involved in the model approval process. Failure to do so is likely to lead to unnecessary cost for both the group and the competent authorities.	Please see Guideline 72
620.	German Insurance Association (GDV)	1.183.	Following our argument in 1.32, we propose to change "national competent authorities involved" to "national competent authorities concerned". Following our argument in 1.177 we suggest to restrict the last sentence to subsidiary undertakings in (b) and to change "insurance or reinsurance" with "subsidiary insurance or reinsurance" in last sentence of (b).	Please see answer to comment 591 Please see answer to comment 593
621.	Insurance Europe	1.183.	See 1.179 Following our argument of 1.177 we suggest to restrict the last sentence to subsidiary undertakings in (b) and to change "insurance or reinsurance" with "subsidiary insurance or reinsurance" in last sentence of (b).	Please see answer to this comment Please see answer to comment 593
622.	Munich Re	1.183.	Following our argument of 1.177 we suggest to restrict the last sentence to subsidiary undertakings in (b) and to change "insurance or	Please see answer to comment 593

			reinsurance" with "subsidiary insurance or reinsurance" in last sentence of (b).	
623.	German Insurance Association (GDV)	1.184.	Following our argument in 1.32, we propose to change "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 591
624.	Insurance Europe	1.184.	See 1.179	Please see answer to this comment
625.	German Insurance Association (GDV)	1.185.	Following our argument in 1.32, we propose to change "national competent authorities involved" to "national competent authorities concerned". As - in line with the explanatory text (see 3.503) - on-site visits of the NCA concerned are of special importance, one important focus should be on on-site visits of the different NCAs concerned also in the guideline. We suggest to add "One important focus should be joint on-site visits of NCAs concerned, especially in relation to specifities of the group internal model designed at group level".	Please see answer to comment 591 The wording of Guideline 69 will be amended to cover that
626.	Insurance Europe	1.185.	See 1.179 In line with the explanatory text (cf. 3.503), on-site visits of the NCAs concerned are of special importance. As suh we suggest to add in the Guideline the following:"One important focus should be joint on-site visits of NCAs concerned, especially in relation to the specifities of the group internal model designed at group level"	Please see answer to this comment Please see answer to comment 625
627.	Munich Re	1.185.	As - in line with the explanatory text (cf. 3.503) - on-site visits of the NCA concerned are of special importance. Thus one important focus should be on on-site visits of the different NCAs concerned also in the	Please see answer to comment 625

			guideline. We suggest to add "One important focus should be joint on-site visits of NCAs concerned, especially in relation to specifities of the group internal model designed at group level"	
628.	German Insurance Association (GDV)	1.186.	Following our argument in 1.32, we propose to change "national competent authorities involved" to "national competent authorities concerned". The same rules (see 1.185) should apply for on-site visits proposed by the group supervisors. We propose to add: "Similarly the group supervisor can propose on-site examinations"	Please see answer to comment 593 The Guideline does not exempt that
629.	Groupe Consultatif Actuariel Européen	1.186.	We feel that this plan should also be communicated to the supervised insurance undertaking.	Please see answer to comment 611
630.	Insurance Europe	1.186.	See 1.179 The same rules (cf. 1.185) should apply for on-site visits proposed by the group supervisor. As such we would propose to add: "Similarly the group supervisor can propose on-site examinations"	Plase see answer to this comment Please see answer to comment 628
631.	Munich Re	1.186.	The same rules (cf. 1.185) should apply for on-site visits proposed by the group supervisors. We propose to add: "Similarly the group supervisor can propose on-site examinations"	Please see answer to comment 628
632.				
633.	German Insurance Association (GDV)	1.187.	Following our argument in 1.32, we propose to change "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 591
634.	Insurance	1.187.	See 1.179	Please see answer to this

	Europe			comment
635.	PZU	1.188.	In our opinion on-site examinations carried out in the undertakings being under supervision of the particular NCA shall be carried out by authorized employees of this NCA. For example in case of Poland by authorized emploees of the PFSA. The matter of who is leading the review should not be subject to additional colleges' deliberations and decisions. Even taking into account that the Internal Model pre-application process is voluntary and provisions of the local Insurance Activity Act concerning members of the inspection team do not apply, the guideline does not define what happens if the participants of the joint on-site examination are unable to reach a common view. Such ambiguity could lead to practices that group supervisor conducts examinations in the subsidiaries that do not work as a branch and are outside of its jurisdiction and impose the agenda of the joint on-site examination. As a result, it is possible to narrow the originally determined scope of the examination which is in contradiction to the principle that the local supervisory authority is ultimately responsible for the subsidiary. All above could lead to the situation, that particular undertaking will have to face diarchy. In our opinion it is important to regulate this issue and precise that in case of joint on-site examinations carried out in the undertakings being under supervision of the particular NCA, in case of disagreement, group supervisor and the other NCAs involved should follow the opinion of the local supervisory authority, who is the most competent to make decisions in this regard. Therefore we propose to change the text along the lines specified below:	Disagree The Guidelines try to express the high importance of having good cooperation and communication in colleges. They try to stimulate NCAs involved to discuss and agree on various aspect related to the process for the review of the group model, including how to carry out joint on-site examinations and how to solve potential disagreements that may emerge between NCAs involved This is particularly important in the case of group internal models, where the ultimate goal is to reach a joint decision between NCAs concerned about the internal model

			Once the national competent authorities participating in the joint on-site examination have been identified, they should discuss and agree the final scope, purpose, structure and allocation of tasks of the examination. If as a result of this discussion the national competent authorities participating identify differences in their opinions they should follow the opinion of the national competent authority organizing the on-site examination.	
636.	German Insurance Association (GDV)	1.190.	Following our argument in 1.32, we propose to change "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 591
637.	Insurance Europe	1.190.	See 1.179	Plase see answer to this comment
638.	German Insurance Association (GDV)	1.191.	Following our argument in 1.32, we propose to change "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 591
639.	Groupe Consultatif Actuariel Européen	1.191.	We feel that it should also be mentioned that the conclusion of relevant NCA should be communicated as soon as possible to the insurance undertaking.	We consider this is already covered in the feedback review is in Guideline 3
640.	Insurance Europe	1.191.	See 1.179	Please see answer to this comment
641.	Insurance Europe	1.192.	It should be clear that no supervisory action could be triggered by on-site examinations until Solvency II becomes fully applicable.	We consider that there is no need to specify that as this principle is embedded in all the preparatory guidelines

642.	Groupe Consultatif Actuariel Européen	1.193.	"When they consider appropriate, the group supervisor or the national competent authority organising the onsite examination should also inform the undertaking of the outcome of the joint onsite examination." What are the circumstances which will be considered "appropriate"? The explanatory text refers to the form of the communication but not the circumstances under which this would occur. Additional guidance would be helpful otherwise there is potential for difference in approaches.	Appropriate here is about the timing, will be redrafted to clarify
643.	Insurance Europe	1.193.	The undertaking should be informed about the outcome of the joint on-site inspection	This is the intention
644.	German Insurance Association (GDV)	1.194.	Following our argument in 1.32, we propose to change "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 591
645.	Groupe Consultatif Actuariel Européen	1.194.	We believe the approaches in off-site activities should be agreed between the supervisors in advance not ex post or during the actual process as this involved the risk of significant inefficiency when some tasks are done unnecessarily or done with delays.	It is expected that the work plan cover relevant aspects of off-site activities also
646.	Insurance Europe	1.194.	See 1.179	Please see answer to this comment
647.	German Insurance Association (GDV)	1.195.	Following our argument in 1.32, we propose to change "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 591
648.	Insurance	1.195.	See 1.179	Please see answer to this

	Europe			comment
649.	German Insurance Association (GDV)	1.196.	Following our argument in 1.32, we propose to change “national competent authorities involved” to “national competent authorities concerned”.	Please see answer to comment 591
650.	Groupe Consultatif Actuariel Européen	1.196.	It is unclear how such agreement will be reached. Is this something that the group supervisor can dictate to the other national competent authorities (if compromise or consensus cannot be achieved)? For development of Internal Models, there should be a reporting requirement whereby material differences in approach are reported to / collated by EIOPA. EIOPA could then use the data to: identify potentially systemic issues; identify if any best practice approaches to resolving a complexity exist which could then be suggested as solutions to member states; and to also consider if further guidance is required to facilitate sufficient harmonisation across the member states.	The Guidelines aim to encourage dialogue and agreements between all NCAs involved, with a clear role of the group supervisor Thank you for the suggestion. EIOPA is actively working to increase convergence of supervisory practices in the field of internal models, through regular meetings with EEA members and the EIOPA Centre of Expertise on internal models
651.	Insurance Europe	1.196.	See 1.179	Please see answer to this comment
652.	PZU	1.196.	In our opinion the supervisory activities performed by particular NCAs should be primarily consistent between the undertakings operating on each market, in such a way that none of them could gain an artificial	Although consistency at national level is relevant, also consistency among

			competitive advantage simply because of affiliation to an international insurance group. Different NCAs approach certain issues in different way, what could lead to applicaction of different requirements, different treatment of the undertakings operating on a single market and as a result to gaining artificial competitive advantage by some of them. Therefore we propose to change the text along the lines specified below: […]If, as a result of this sharing, the national competent authorities involved identify substantial differences in the approaches followed, they should discuss and they should agree on a process to develop consistent approaches when they consider appropriate to have this alignment. This process should enhance the cooperation among the supervisory authorities in these areas of the internal model in which the model does not satisfy requirements. Each competent authority involved should be given credibility with respect to the assessment of whether all risks of the insurance or reinsurance undertaking subject to its supervision are adequately reflected in the internal model.	NCAs approaches in colleges is extremely important This is particularly important in the case of group internal models, where a joint decision must be reached EIOPA does not think that a competitive advantage can happen as indicated in the comments, as the requirements for internal models are the same for every undertaking of every Member State
653.	Deloitte	1.197.	This paragraph could include a stronger statement in relation to sharing tools and techniques. We propose that instead of using "NCAs involved should consider sharing the tools and techniques" the guidelines should state "NCAs involved should share the tools and techniques".	We preferred keeping some flexibility
654.	German Insurance Association (GDV)	1.197.	Following our argument in 1.32, we propose to change "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 591
655.	Groupe Consultatif Actuariel Européen	1.197.	NCAs should share their approach but consider sharing tools/techniques. Suggest wording for tools/techniques be changed from consider sharing to should share to both enhance consistency and improve quality of NCA review	Please see answer to comment 653

656.	Insurance Europe	1.197.	See 1.179	Please see answer to this comment
657.	ASSOCIATION OF BERMUDA INSURERS AND REINSURERS (ABIR)	1.198.	On forming a view whether to involve a third country national competent authority is based solely on size, i.e. the "contribution of the third country undertaking to the group's risk exposure is material". The involvement of third country group supervisor is imperative to the process for reasons stated in Guidelines 69 and 70. This guideline ignores the consideration of a third country group supervisor completely.	NCAs "involved" referred to the guidelines are from EU Member States. Nevertheless third country competent authorities could participate as provided in Guideline 72
658.	BMA	1.198.	As described under 1.183 above, the Authority believes that the decision to involve third country national competent authorities should also be influenced by whether the Group intends to use an approved internal model to set regulatory capital within a third country. Where a third country has an equivalent regime, the Authority believes that Group Supervisors should be strongly encouraged to invite the third country supervisor to be involved in the model approval process. Likewise, the Authority expects to invite the competent authorites of member states to be involved in the scoping and implementation of a model review where the BMA is the Group Supervisor.	Noted, we prefer keeping flexibility in the Guideline, this possibility can be considered when relevant Please note that these Guidelines are not subject to equivalence analysis nor do they pre-empt any decision taken in past or future by the European Commission regarding equivalence
659.	German Insurance Association (GDV)	1.198.	Following our argument in 1.32, we propose to change "national competent authorities involved" to "national competent authorities concerned". The possibility to consult third country NCAs can be useful when the respective third country undertakings use the group internal model	Please see answer to comment 591

			(possibly with small alterations) to calculate the local regulatory capital requirement. We thus propose to add a corresponding statement.	
660.	Groupe Consultatif Actuariel Européen	1.198.	In addition, the possibility to consult third country NCAs can be useful when the respective third country undertakings uses the group internal model (possibly with small alterations) to calculate the local regulatory capital requirement. We thus suggest adding a corresponding statement.	Noted, we prefer keeping flexibility in the Guideline, this possibility can be considered when relevant
661.	Insurance Europe	1.198.	See 1.179 The possibility to consult third country NCAs can be useful when the third country undertakings uses the group internal model (possibly with small alterations) to calculate the local regulatory capital requirement. We thus suggest to add a corresponding statement.	Please see answer to this comment
662.	Munich Re	1.198.	The possibility to consult third country NCAs can be useful when the respective third country undertakings uses the group internal model (possibly with small alterations) to calculate the local regulatory capital requirement. We thus suggest to add a corresponding statement.	Please see answer to comment 660
663.	FEE	1.199.	Because there are provisions for different national competent authorities to work more closely together during a group's internal model pre-application process, we consider that these (national competent authorities) will harmonise their views.	This is the intention of these Guidelines
664.	German Insurance Association (GDV)	1.199.	Following our argument in 1.32, we propose to change "national competent authorities involved" to "national competent authorities concerned".	Please see answer to comment 591
665.	Insurance Europe	1.202.	The same comment as in 1.20 applies in this context: Whereas we understand that national competent authorities cannot be	Pelase see answer to comment 75 and Feedback Statement in

			expected to publicly disclose their respective progress report, an undertakings should be informed about cases where the national legal framework is currently in contradiction to the Guidelines. We therefore would propose to add the following: "EIOPA will disclose case, where the current binding national legal framework hinders compliance to specific Guidelines"	the Report of the preparatory Guidelines
666.	International Underewriting Association of London	1.202.	We believe that regulated firms need to be aware of any inconsistencies in the regulatory framework in which they operate at home and abroad. We suggest, therefore, that they should be informed about any differences between national regulatory frameworks and the European standard.	Please see answer to comment 665
667.	Munich Re	1.202.	The same comment as in 1.20 applies in this context: Whereas we understand, that national competent authorities cannot be expected to publicly disclose their respective progress report, an undertakings should be informed about cases where the national legal framework is currently in contradiction to the guidelines. We therefore propose a supplement: "EIOPA will diclosue cases, where the current binding national legal framework hinders compliance to specific guidelines"	Please see answer to comment 665
668.				
669.				
670.				
671.				
672.				
673.				
674.	ASSOCIATION OF FINANCIAL MUTUALS	2.27.	The most important parts of the information are typically part of the Own Risk and Solvency Assessment.	This refers to the specific requirement of a validation report

675.				
676.	German Insurance Association (GDV)	2.27.	The last sentence in 2.27(c) should be dropped, as in fact a direct endorsement by the management board is not required (see 3.315 of the explanatory text) and can be left to the discretion of the undertaking. In addition the most important parts of information mentioned is typically part of the Own Risk and Solvency Assessment.	Agreed Please see answer to comment 674
677.	Groupe Consultatif Actuariel Européen	2.27.	The last sentence in 2.27(c) should be dropped, as in fact a direct endorsement by the management board is not required (compare 3.315 of the explanatory text) and can be left to the discretion of the undertaking. In addition the most important parts of above information are typically part of the ORSA.	Please see answer to comment 676
678.	Insurance Europe	2.27.	The last sentence in 2.27(c) should be dropped, as in fact a direct endorsement by the management board is not required (cf. 3.315 of the explanatory text) and can be left to the discretion of the undertaking. In addition the most important parts of the above information are typically part of the Own Risk and Solvency Assessment.	Please see answer to comment 676
679.	Munich Re	2.27.	The last sentence in 2.27(c) should be dropped, as in fact a direct endorsement by the management board is not required (cf. 3.315 of the explanatory text) and can be left to the discretion of the undertaking. In addition the most important parts of above information are typically part of the Own Risk and Solvency Assessment.	Please see answer to comment 676
680.				
681.				
682.				
683.				
684.				
685.	German Insurance	2.46.	Following our argument in 1.150 we propose to change “user manual” to “user manuals or process descriptions”.	Agreed

	Association (GDV)			
686.	German Insurance Association (GDV)	2.48.	See 2.46.	Please see answer to this comment
687.	German Insurance Association (GDV)	2.50.	See 2.46.	Please see answer to this comment
688.				
689.	German Insurance Association (GDV)	2.55.	See 2.46.	Please see answer to this comment
690.				
691.	German Insurance Association (GDV)	2.61.	See 2.46.	Please see answer to this comment comment
692.				
693.	German Insurance Association (GDV)	2.67.	We suggest to add: "and shared with the group as far as possible" (see 1.182).	Please see answer to comment 611
694.	Groupe Consultatif Actuariel Européen	2.67.	Add "and shared with the group as far as possible", compare 1.182	Please see answer to comment 611

695.	Insurance Europe	2.67.	We would suggest to add: "and shared with the group as far as possible" (cf. 1.182)	Please see answer to comment 611
696.	Munich Re	2.67.	We suggest to add: "and shared with the group as far as possible" (cf. 1.182)	Please see answer to comment 611
697.	ASSOCIATION OF FINANCIAL MUTUALS	2.73.	We consider the costs/ benefits to consumers as rather indirect and would state: "No direct costs / benefits […]"	Agreed. Changes made
698.	German Insurance Association (GDV)	2.73.	We consider the costs/ benefits to consumers as rather indirect and would thus rather state: "No direct costs / benefits […]".	Please see answer to comment 697
699.	Groupe Consultatif Actuariel Européen	2.73.	We consider the costs/ benefits to consumers as rather indirect and would thus rather state "No direct costs/ benefits"	Please see answer to comment 697
700.	Insurance Europe	2.73.	We consider the costs/ benefits to consumers as rather indirect and would thus rather state: "No direct costs / benefits […]"	Please see answer to comment 697
701.	Munich Re	2.73.	We consider the costs/ benefits to consumers as rather indirect and would thus rather state: "No direct costs / benefits […]"	Please see answer to comment 697
702.	ASSOCIATION OF FINANCIAL MUTUALS	2.78.	We consider the costs/ benefits to consumers as rather indirect and propose to change the paragraph accordingly.	Please see answer to comment 697
703.	German Insurance Association (GDV)	2.78.	We consider the costs/ benefits to consumers as rather indirect and propose to change the paragraph accordingly.	Please see answer to comment 697
704.	Groupe Consultatif Actuariel	2.78.	We consider the costs/ benefits to consumers as rather indirect and would thus rather state "No direct costs /benefits"	Please see answer to comment 697

	Européen			
705.	Insurance Europe	2.78.	We consider the costs/ benefits to consumers as rather indirect and propose to change the paragraph accordingly.	Please see answer to comment 697
706.	Munich Re	2.78.	We consider the costs/ benefits to consumers as rather indirect and propose to change the para accordingly.	Please see answer to comment 697
707.				
708.				
709.	FEE	2.130.	We consider that there is still scope for the emergence of different national standards and approaches. The requirement that national competent authorities should only "form a view" on a company's modelling approaches, processes, documentation and validation does not preclude the possibility that some of these (national competent authorities) take a different direction (softer or harder).	The aim of pre-application process is NCAs to be able to form a view about how ready the undertaking is to submit an application. The pre-application process is not pre-approval EIOPA is actively working to increase convergence of supervisory practices in the field of internal models, through regular meetings with EEA members and the EIOPA Centre of Expertise on internal models