



FINANCIAL REGULATOR
Rialtóir Airgeadais

Pre-application Readiness
Assessment Process incl.
Questions from Workshops.

May 2010

Insurance Supervision Department

Overview of Document

In April 2010 the Financial Regulator released a questionnaire entitled "Pre Application Readiness Assessment Process" to those companies that had expressed a wish to enter the Pre Application Process. This questionnaire is intended as the first step in the Pre Application Process and as a consequence it is much more detailed than previous questionnaires issued.

In order to facilitate industry the Financial Regulator held a number of workshops to discuss the questionnaire with those companies that have expressed an interest in entering the Pre Application Process.

The workshops were held in the Financial Regulator's offices in Spencer Dock on the 4th 5th and 7th May 2010.

Over the course of the three days a number of questions were raised by industry attendees. We have listed these questions and comments within the relevant sections of the questionnaire and have detailed our responses thereunder.

Solvency II Team,
Financial Regulator

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Introduction

As you have returned two questionnaires indicating your intention to participate in the Solvency II internal model pre-application process, we now request that you complete this template as the first step in the pre-application process. We will then conduct an assessment of your undertaking's response and we will allocate resources to your pre-application accordingly. As this is an iterative process we will provide feedback on your undertaking's progress through pre-application and we will communicate with you on its preparedness for an internal model application. Please also note that we may request further information and interaction with your undertaking in order to make this assessment. This interaction may include on-site visits to examine issues relating to the internal model on a practical basis.

Process

An assessment team will be assigned to your pre-application. This team will include your usual contact in the Insurance Supervision Department, with input from our Actuarial team and from our Solvency II project team. The assessment team will review the responses to the questions below, which are based on CEIOPS' recommendations in Consultation Paper 80. Aspects of the model to be examined include the risk management framework, documentation, compliance with standards in the Directive and management involvement. Essentially, pre-application assessment looks at the scope, coverage, design, build, integrity and application of the undertaking's internal model.

At the end of the pre-application process we will come to a view and provide feedback on how prepared your undertaking is to apply for internal model approval. Please bear in mind that the process for approval to use an internal model to determine the Solvency Capital Requirement (SCR) under Solvency II involves two distinct stages. The first stage is pre-application culminating in an opinion on your firm's readiness to apply, and the second stage involves application, assessment and

approval or refusal. We wish to stress that participation in the pre-application process does not guarantee approval after the formal application is submitted; hence pre-application process is not a pre-approval process. The process will allow us to become familiar with your firm's preparations for internal model approval and it will help your firm understand the standards required and the process for obtaining that approval.

Level of detail

This pre-application readiness assessment template consists of fifty-three questions designed to help us determine the progress of your internal model development. The template is divided into categories including project planning, scope and design of the model and compliance with the standards outlined in the Directive. We ask that you create a separate document as a response to this template. In the response document please create corresponding categories and include your responses to each question, labelling your responses clearly. Please confine the length of your answers to the limits indicated for each section.

We are aware that some firms are currently developing their internal models and therefore that preparations for adherence to the requirements of the Directive are at varying stages of advancement. The quality of the responses will depend on the company's stage of development and will be considered in that context. If you wish to provide some context on this point, please do so in response to Question 10 below.

If we require further information on a particular aspect of the model or model planning we will contact you. Insofar as possible, your answers should cover the internal model on a legal-entity basis (and subsidiaries of an Irish-based parent group if applicable).

Timing

We request that you submit your responses by 31st May 2010. If you are unable to meet this deadline, please inform us when you expect to reply.

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| Comments / Questions on Introductory Paragraphs |
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Common Issues

Working with other regulators

The Financial Regulator will work closely with other relevant regulators throughout the Pre Application Process and for model approval itself. In many cases the Financial Regulator is already working with other supervisors on group model pre-application. The Financial Regulator does not want to repeat work already performed by other regulators, in particular the lead regulator. It is likely that the Use Test and Statistical Standards will be important areas locally.

Group Responses

Local companies that are part of groups may rely heavily upon group functions during the Solvency II project, including the response to this questionnaire. Responses from Group will be satisfactory as long as there is sufficient detail about the locally regulated entity for the Financial Regulator to assess how ready the company is to enter the Pre Application Process

Pre Application Process

The Pre Application Process is not an approval process. The Pre Application Process provides the Financial Regulator and relevant companies more time to understand internal models and the requirements for their approval.

CEIOPS' Level 3 Guidance

CEIOPS has identified areas of priority for Level 3 guidance in relation to Internal Models. These include Use Test (including Use Test for Groups), Calibration Standards, Validation, P&L Attribution, Documentation,

Statistical Quality Standards, Aggregation Methodologies for Partial Internal Models and Governance. It is intended that Level 3 Guidance on all of the above will be published before the end of 2010.

Questions

Q – Is it too late to wait until completion of QIS 5 before deciding on whether to use an internal model or standard formula approach?

A – No it is not too late. If you do not intend to reply by 31st May then inform the Financial Regulator of the date that you will reply by. Note that the sooner a company decides on an internal model approach and submits a reply the sooner the Financial Regulator can allocate resources to that company.

Q – What happens if the questionnaire is completed by the parent company and to a timetable agreed with the lead regulator of the parent company?

A - If you do not intend to reply by 31st May then inform the Financial Regulator of the date that you will reply by. A response prepared by Group is satisfactory as long as the involvement from the locally (Irish) regulated entity is clear. Note that the sooner a company decides on an internal model approach and submits a reply the sooner the Financial Regulator can allocate resources to that company.

Q – Should the response be set out in a separate document?

A – Yes, a separate document with the same headings as set out in the questionnaire and kept within the limits specified.

Q – What will the review process involve?

A – Each response will be allocated to a review team. There will be an initial screening of all responses with a high level decision taken that a company is ready to progress to the next stage, close to being ready with a bit more work or requires significant extra work to be ready. Due to the nature of the review feedback will be negative; it is unlikely that the

Financial Regulator will give positive feedback. The review process may involve on-site visits.

Q – When will the process start?

A – As soon as the response to the questionnaire has been received.

Q –Does the questionnaire have to be completed for a branch?

A – No.

Section 1 – General Information

(Please limit your response to 1 page)

1. Please indicate who is responsible for the preparation of the responses to this document and what their role is within the firm.
2. Please indicate which other departments within the firm have been involved in the preparation of the responses.

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| <i>Comments / Questions on Section 1 – General Information</i> |
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Q – (2) If departments within other parts of the Group have helped prepare the response should that be described here?

A – Yes.

Section 2 – Overview

(5 pages)

3. Please describe the self assessment (if any) that your firm has carried out in relation to its requirements and readiness for internal model approval.
4. Please describe why your firm has chosen to use an internal model rather than the standard formula.
5. Please explain how the internal model will provide an appropriate fit for the business model.
6. If the firm is a subsidiary within a Group, and it intends using the Group's model, please indicate where the firm fits within the overall Group Ownership structure.
7. If the firm is a subsidiary within a Group and it intends using a model separate/distinct from the Group's, please indicate the extent (if any) of Group's involvement in the model design, and the intentions around the Group's involvement in meeting the requirements for model approval.

8. If the firm is the parent undertaking of a Group, please provide an organisation chart of the Group, noting the names of all the companies within the Group and their supervisors. Please indicate which firms are within the scope of the model.
9. Please provide the current organisational structure (staffing) for the firm and indicate which functions you expect will use output from the model.

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| <i>Comments / Questions on Section 2 – Overview</i> |
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Q – (3) What is required for Q3, is it a gap analysis?

A – A gap analysis against CP56. That is compare the requirements set out in CP56 against where the internal model is currently.

Q – (3) Does the gap analysis compare where the internal model is now or where it will be in the future?

A – Where the internal model is now.

Q – (5) How much explanation is required?

A – A full explanation within the limits set out for this section.

Q – (8) What companies does this question apply to?

A – This question is only applicable to companies where the parent undertaking is regulated in Ireland.

Section 3 – Planning

(10 pages)

10. Please describe your internal model implementation plan including:
 - (a) A detailed timetable of tasks;
 - (b) Documentation surrounding the project plan;
 - (c) Interdependencies and assumptions;

- (d) Risk factors and risk mitigation plans, and
 - (e) Resources allocated to the internal model project and overall budget for Solvency II implementation.
11. Did the firm complete a QIS4 spreadsheet on behalf of the local entity?
12. Describe how you are planning to complete QIS5 including:
- (a) Time expected to complete;
 - (b) Resources required, and
 - (c) Potential risks that would prevent completion.
13. Please provide details of the governance structure of your internal model implementation plan including:
- (a) Key personnel involved in the internal model development and implementation;
 - (b) Co-ordination with group parent (if applicable);
 - (c) Details on reporting, and
 - (d) Senior management involvement and level at which the implementation plan and budget has been signed off.

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| <i>Comments / Questions on Section 3 – Planning</i> |
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Q – (10) What level of detail is required for the project plan?

A – A fairly detailed plan within the limits set out for this section.

Q – (10) Is a "Group Level" plan allowed?

A – Yes, as long as the requirements for the locally (Irish) regulated entity are clear.

Q – (10) What is the meaning of "interdependencies", "assumptions", "risk factors" and "risk mitigation" referred to in this question?

A – These terms refer to normal project planning and project governance. In this context the terms should not be confused with requirements for an internal model.

Q – (10) What is the Financial Regulator trying to achieve from this section?

A – To be able to assess how ready a company is for pre application, how far into the internal model project the company is.

Q – (12) Is there an expectation that companies will complete QIS 5.

A – There is an expectation that all companies will complete QIS 5, not just companies who plan to use an internal model. For companies that intend to use an internal model there is an expectation that all parts of QIS 5 will be completed, which will include the sections covering the internal model and the Standard Formula.

Q – (13) Does "Details on reporting" (part (c)) refer to reporting progress of the internal model project to senior management?

A – Yes

Q – (13) Is a Group budget sufficient to answer this question (part (d))?

A – A "signed off" Group budget is fine as long as expenditure for the locally (Irish) regulated entity can be identified. Note that formal sign off of the project budget is an important indication of how ready a company is to enter pre application.

Q – (13) Will the Financial Regulator be benchmarking budgets?

A – No, as each company and their requirements are unique.

Q – (13) Should the budget be the total budget for the model or the incremental budget for Solvency II readiness?

A – Either, but it should be made clear which in the reply.

Section 4 – Scope and Design (Art. 112)

(5 pages)

14. Please provide an overview of the model (including a diagram) to include:
- (a) The process that will be used to calculate the SCR;
 - (b) The inputs to the model;
 - (c) The calculation kernel(s) for calculating the SCR for each of the risk modules, risks, and adjustments as set out in Arts 104-108 of the Directive, and
 - (d) A description of the information technology used in the internal model.
15. Please provide details of any internal model currently being used to determine capital requirements.
16. Please explain why your risk profile is better captured by the planned internal model than by the standard formula.
17. What risks (if any) are taken account of in the standard formula but are not captured by the internal model?
18. If using a partial internal model, what are the justifications for the limited scope of the model?
19. What are the key internal model risks that have been identified? Please consider areas such as documentation, IT, model governance and security in your response.

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| <i>Comments / Questions on Section 4 – Scope and Design</i> |
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Q – (14) Words or diagrams?

A – Mainly diagrams supported with commentary.

Q – (14) What is meant by "a description of the information technology" referred to in part (d)?

A – This refers to the software that a company will use in its internal model, for example modelling software provided by a consultancy. When relevant, hardware details may also be provided.

Q – (14) Will this question distinguish what is performed at group / parent level and what is performed locally?

A – Yes distinguish between group and local.

Q – (15) Does this question refer to the model that will be used under Solvency II?

A – This question refers to an economic capital model that the company may adapt for Solvency II. It can also refer to a model that is currently used to calculate MCEV figures as long as this model will form part of the future internal model.

Q – (17) If a risk module is not material and the standard formula is used, is the internal model than considered as partial.

A – Yes it will be considered as a partial internal model, but it will not make any difference.

Q – (18) Can "lack of resources" be given as a justification.

A – A better way to answer this question is to explain why your company has decided to measure certain risks using an internal model while leaving other risks to be measured by the Standard Formula.

Q – (19) Clarify what is required for this question?

A – This question refers to the control around development and maintenance of the internal model, for example protection against errors, version control etc.

Section 5 – Governance and the Use Test (Art. 120)

(5 pages)

20. Do Senior Management and the Board (including Non-executive Directors) understand the model?¹ Please support your answer with an explanation as to how this understanding has been achieved.
21. How are Senior Management and Directors expected to use the model?
22. Have clear reporting lines been established relating to the use of the internal model?
23. Describe the reporting lines that have been/will be established for the running and maintenance of the model.
24. Will the outputs of the internal model be included in regular reporting for:
 - (a) The Board of Directors:
 - (b) Senior Management, and
 - (c) Other personnel responsible for key functions.

Please explain your responses with the aid of examples.

25. Outline how the internal model is or will be used in:²
 - a) Risk limit setting
 - b) Risk Strategy
 - c) Capital allocation
 - d) Strategic business decisions
 - e) Budgeting

¹ If not, please provide a plan as to how this understanding will be achieved.

² This does not imply that use in all of the areas listed is required to satisfy the use test.

- f) Product development
- g) Pricing
- h) Performance analysis
- i) Asset Liability Modelling
- j) Reinsurance
- k) Bonus setting
- l) Investment policy
- m) Dividend payments
- n) Market consistent technical provision
- o) Cost of Capital risk margin
- p) Assessment of uncertainty in technical provisions
- q) Asset allocation
- r) Management compensation
- s) Other

26. Are future management actions taken into account (yes / partly / no)?

27. If yes or partly, please summarise how the internal model allows for future management actions, e.g.

- Changes in future bonus rates
- Reductions in surrender values
- Changes in asset dispositions
- Changes in expense charges
- Changes in risk premium charges
- Changes in or use of dynamic option and guarantee charge mechanisms
- Restrictions in the ability to surrender
- Other – please specify.

28. Give examples of how the internal model is incorporated in the risk-management system and decision making process in such a way that there are continuous incentives to improve the quality of the model.
29. Are you already disclosing the results of the internal model in the annual accounts?

Comments / Questions on Section 5 – Governance and the Use Test

General Comment

This is an important section, especially for companies that will rely upon a Group model. Locally regulated companies must prove that the internal model is understood and used within the company.

The Financial Regulator does not expect companies to meet the requirements of the Use Test now or in the short term. Most of the questions are expressed in the future tense and the responses can be phrased in terms of what companies plan to do.

Q – (20) How can a company demonstrate that board members understand the model?

A – It is recognised that this is a difficult question to answer. Describe what actions have been taken and / or what actions are planned to increase the boards' understanding of the internal model. A good indication of how serious a company is taking this topic is a plan that has been agreed and signed off by the board itself. The Financial Regulator may interview board members. CEIOPS has identified this as a priority for Level 3 guidance to both firms and supervisors.

Q – (20) Is every member of the board required to understand the model?

A – The requirement in the latest draft of the Commission’s Level 2 wording is that each member of the Board has an “overall understanding” of the Internal Model.

Q – (25) Does internal model refer to an economic capital model?

A – Yes if your company is currently using an economic capital model that will be adapted into the Solvency II internal model.

Q – (25) Is this an exhaustive list?

A – No it is not an exhaustive list. It is not a check list either. It is a list of possible uses that an internal model may be used for to help companies answer this question.

Q – (26) How much detail is required to answer this question?

A – This is a simple one word answer (Yes / No / Partly), the detail is provided in Q 27 (note that Q27 is not a “tick box” exercise).

Q – (27) What does “changes in asset disposition mean”?

A – This refers to dynamic asset decisions that may be included in the internal model.

Q – (29) What is meant by annual accounts?

A – All results that are published by the company, this covers notes to the accounts and can include MCEV results if the model used to determine MCEV figures will form part of the internal model.

Section 6 – Statistical Quality Standards (Art. 121)

(5 pages)

30. Describe the process that will be used to derive the assumptions that are input into your internal model.
31. Does your firm have a written Data Policy? What checks will be performed to ensure that the data that will be used to support assumptions is accurate and credible?

32. What sensitivity analysis will you perform on the assumptions input into your internal model?
33. Describe how you will ensure that the assumptions and probability distributions used in the internal model are consistent with the methods used for the valuation of assets and liabilities.
34. How will you ensure that the internal model is consistent with the Company's budget / plan?
35. How are/ (will) risk mitigation techniques (be) reflected in the choice of assumptions used in the internal model?
36. What correlation factors are/will be used in the internal model?
37. Which correlation factors is the internal model most sensitive to?
38. Describe the process used to determine the correlation factors.
39. To what extent is there reliance on Expert Judgement in the assumptions and parameterisation of your model? Where Expert Judgement is used, is this justified, documented and validated?

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| <i>Comments / Questions on Section 6 – Statistical Quality Standards</i> |
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General Comment

This is an important section, especially for companies that will rely upon a Group model. Assumptions and parameters must be set appropriately for risks that the locally regulated entity is exposed to.

It is not the intention of the Financial Regulator to create more work during the assessment and approval of internal models. When it is appropriate to allow the approval of a section of the model to be performed by the lead regulator then this will be done. For example, an ESG may be approved by the local regulator and that ESG may be an

appropriate fit for the local company. In this case the Financial Regulator will not "reapprove" the ESG.

Q – (30) Will the data going into an ESG require approval?

A – Yes the data used to parameterise an ESG is an important part of the approval process. Note the comment made above, if the ESG is part of a group model and is approved by the lead regulator, then the Financial Regulator will not reapprove it as long as it is appropriate to the locally regulated company.

Q – (33) Explain question 33.

A – This question is relevant to the Use Test.

Q – (35) Explain question 35.

A – Certain assumptions parameters may be based upon data after applying risk mitigation techniques, such as reinsurance. If this applies then make it clear, if not then the question is not applicable.

Q – (36-38) Does these questions just refer to correlations or do they cover wider aggregation methods?

A – Questions 36 – 38 cover aggregation methodologies, including the use of correlations, copulas or other methodologies.

Q – (39) Does this question just relate to aggregation methodologies (i.e. questions 36-38)?

A – No, this relates to wherever Expert Judgement is used in the Internal Model, but including in aggregation methodologies.

Q- (39) What is meant by Expert Judgement?

A – Refer to CP 56 paragraph 5.184 for a definition that is likely to be incorporated into CEIOPS' guidance

Section 7 – Calibration Standards (Art. 122)

(1 page)

40. Describe how you will derive the SCR from the probability distribution forecast. Can you demonstrate how this will be at least

equivalent to the Value-at-Risk of the basic own funds of the firm subject to a confidence level of 99.5% over a one-year period?

41. What time periods, risk measures and probability will you use in the internal model to set the SCR?

42. To what extent do you use approximations to calculate the SCR?

Comments / Questions on Section 7 – Calibration Standards

General Comment

This section relates mainly to models where the chosen risk measure is not VAR (99.5) over 1 year.

Section 8 – Profit and Loss Attribution (Art. 123)

(2 pages)

43. How will the internal model analyse the SCR in terms of the different risks? Use list below if appropriate:

- (a) Non-life underwriting risk
- (b) Life underwriting risk
- (c) Health underwriting risk
- (d) Market risk
- (e) Credit risk
- (f) Operational risk

44. How will you analyse the impact on the profit and losses of the company using the risk drivers modelled?

Comments / Questions on Section 8 – Profit and Loss Attribution

Q – (43 & 44) Provide more clarity for these questions.

A – Two approaches can be taken here

- (1) For Q43 produce an analysis of change of the capital requirement (SCR) using the risk drivers that are modelled. Then for Q44 explain the company's profit and loss account using the modelled risk drivers.*
- (2) For Q43 produce an analysis of change of the realistic balance sheet (including solvency capital requirement) using the risk drivers modelled. This approach will cover Q 44 as well.*

Section 9 – Validation Standards (Art. 124)

(5 pages)

45. Please describe with the aid of example(s), how the following areas of the internal model are/will be validated?

- Data
- Methods
- Assumptions
- Expert judgement
- Calculation
- Results

(Possible methods include sensitivity & scenario analysis and back testing)

46. How often will the results of the internal model be tested against experience and any other available appropriate data?

47. Is your model validation independent from the model development?

48. Please provide a description of the internal model limitations or shortcomings identified during the validation process and the steps taken to address these (if applicable).

49. Has the internal model been created in-house or has the internal model (or a part of it) been licensed from an external software supplier?
50. Explain the role in your internal model of any parts of the internal model obtained from a third-party (external models) and data used in the internal model obtained from a third-party (external data) and the reasons for preferring external models to internally developed models.

Comments / Questions on Section 9 –Validation Standards

Q – (45) Is this question related to Q20 about senior management and the board understanding the model.

A – It is not appropriate for the board to validate the model.

Q – (47) What is meant by "validation independent from the model development".

A – This is an important criterion. Models must be checked by people who were not involved in building the model. This does not have to be checked from people outside the company, it could be a separate team, it could be a group function that oversees model development.

Q – (50) What does "third party" mean in this question.

A – In the context of this question "third party" refers to people outside the group organisation, such as consultants.

Section 10 – Documentation Standards (Art. 125)

(2 pages)

51. Please explain how your internal model documentation will demonstrate compliance with:

- (a) The use test
- (b) Statistical quality standards

- (c) Calibration standards
- (d) Profit and loss attribution
- (e) Validation standards.

52. Does the internal model documentation include an outline of the theory, assumptions, and mathematical and empirical bases underlying the internal model?

53. What steps have you taken to ensure that an independent knowledgeable third party, on reviewing this documentation, would be able to understand the design and operational details of the internal model? Does the documentation clearly explain the outputs of the internal model?

Comments / Questions on Section 10 –Documentation Standards

Q – (51) Clarify the requirements of this question.

A – Only two pages have been allocated to this section of the questionnaire, therefore, the Financial Regulator does not expect the actual documentation. Neither does the Financial Regulator expect companies to have achieved the required standard of documentation at this stage of the process. A possible way of answering this question is to provide an index of the documentation that is currently in place and a plan that covers documentation to be created.

Sign-Off

To demonstrate senior management involvement in your undertaking’s internal model development, this document must be signed by the CEO of the undertaking or a board member with specific responsibility for the Solvency II implementation plan. Please be advised that information provided to us in this document may be shared with other EU supervisory authorities for co-ordination purposes. We may request further

information and conduct on-site visits to assess the internal model during the pre-application process.

I, the undersigned, confirm that the information contained in this template is accurate to the best of my knowledge and I will be responsible for advising the Financial Regulator should any of this information change during this phase of the pre-application assessment.

Name _____

Signature _____

Date _____

Position

Reference Material

The following documents may prove helpful for relevant personnel during the pre-application process:

Level 1 Directive

Articles 110-125 of the directive

CEIOPS Consultation Papers (Level II Implementing Measures)

Consultation Paper 37 (The Procedure to be followed for the Approval of Internal Models)

Consultation Paper 56 (Tests and Standards for Internal Model Approval)

Consultation Paper 65 (Partial Internal Models)

Level 3 Guidance

Consultation Paper 80 (Pre-application Process for Internal Models)

Ciarán Nugent