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# DRAFT CONTENTS OF APPLICATION DOCUMENT

# Foreword

In this Contents of Application document, DNB outlines the draft application requirements for internal model assessment. This document contains a list of documentation requirements. All documents should be available at the start of the application phase to show compliance with the Solvency II requirements for Internal Models. It does not mean that (re)insurance undertaking will not be asked to provide additional documents that are not listed in the 'contents of application' document.

The draft application requirements set out in this document are based on the Directive and the minimum documentation requirements proposed in CEIOPS' Advice for Level 2 Implementing Measures on Solvency II: the procedure to be followed for the approval of an internal model (former CP37). In most cases we have expanded the minimum documentation requirements into sub-sections based mainly on information in other relevant CEIOPS advice as well as the Directive.

The application requirements are still in draft because they can only be finalized after Level 2 has been finalized by the European Commission. This document may therefore change following publication of these final implementing measures. Accordingly, the material in this document does not purport to represent the final requirements which firms will need to meet in order to gain internal model approval.

DNB will provide a template in which firms can indicate what evidence will be available to meet the application requirements. During the pre-application process, firms which are participating in the pre-application on level 3, will be required to fill in this template. DNB will sent the template to the Group and expects to receive a draft version before 1 October 2011. DNB will then share the template with the other members of the College to start a dialogue between the firm and the supervisors involved regarding the documents that will be delivered at application.

The template has been designed for use at both solo entity and group level. DNB expects to receive one template for each Group, containing information of both group and solo level. Firms need to consider the relationship between model design, validation and use at solo level and at group level and how these meet the requirements. In case of local differences, DNB expects the firm to outline these differences in the documents or provide seperate documents for each solo entity.

The use of the template is required in case DNB is the lead supervisor. If DNB is the host supervisor it is allowed to deliver the information in the format of the lead supervisor as long as all required information is available. In case the format of the lead supervisor differs materially from DNB's template, a mapping is required.

Where a comparison between the internal model and the standardformula is required, firms can choose one of the following two options:

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- 1) A comparison based on 2011 year-end figures is delivered as part of the application package before 1 April 2012.
- 2) A comparison based on 2010 year-end figures is delivered as part of the application package before 1 April 2012. An update based on 2011 year-end figures is delivered subsequently together with the parallel run, which is required for all Dutch firms, before 31 August 2012.

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# **Draft Application requirements**

The requirements are labelled A to P in this document. At the start of most sections we have explained why we require the information.

# A. Cover letter

Following the successful completion of the pre-application phase, if the firm decides to submit its formal application to use an internal model, that application should include a cover letter requesting approval (with reference made to the submissions in section E below). Sections B and C may be incorporated into this letter.

# B. Written declaration from the Board of the firm

Following the successful completion of the pre-application phase, if the firm decides to submit its formal application to use an internal model, that application should include a declaration confirming that all clarifications and supporting documentation has been provided and also that no material facts and/or details relevant to the approval have been concealed. DNB expects this declaration to be supported by an opinion of Internal Audit. DNB has engaged in a dialogue with the internal audit departments of relevant firms to determine the scope and other requirements for this audit opinion. The outcome of this dialogue is reflected in the document provided together with this Contents of Application document.

# C. Copy of the Application Approval from the Board of the firm

Following the successful completion of the pre-application phase, if the firm decides to submit its formal application to use an internal model, that application should include a copy of the Application Approval from the Board of the firm, as set out in Article 116 of the Directive.

# D. Results of the latest ORSA and details of the firm's business and risk strategies

Please provide the results of the latest ORSA including details of the processes undertaken to reach the results and details of your business and risk mitigation strategies. This information will be used during the application process to assess whether the use test has been met and whether the internal model appropriately reflects the risk profile of the firm.

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# E. Scope of application for full and partial internal models and model coverage

The firm shall explain what elements, including material quantifiable risks, lines of business and entities will be covered by the internal model. The supervisory authority needs to understand explicitly what it will be asked to approve once the formal application is submitted. Therefore a firm needs to define (in specific as opposed to in general terms) what its internal model comprises, explain whether it is a full or partial model, and explain how it covers all material risks which it purports to cover.

# E.1 Model coverage (legal entities, business units and risk categories covered)

Please explain which legal entities, business units and risk categories (Article 101 of the Directive) are included in your model. Please provide clear definitions for each of the business units and risk categories included within your internal model. Also explain how the model covers all the material risks such that it is able to be widely used in and play an important role in the system of governance, risk-management system and decision-making process.

#### E.2 Justification of your partial internal model (if applicable)

Please provide a detailed justification for the limited scope of your partial internal model, justifying why only some business units and/or risk categories have been modelled and detail any plans to increase the scope of your partial model in the future. Please explain why you consider the SCR produced using a partial internal model better reflects your risk profile than applying the standard formula for all risk categories. Please also explain why you consider the use of the standard formula for the remaining risks (i.e., those not falling within the scope of the partial internal model) to be appropriate. See also section H.3b.

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# F. Risk management process and risk profile

The firm shall demonstrate in the context of the internal model that it has in place an adequate and effective risk management system, including an agreed risk appetite, a procedure for recording risks and that its related results are adequately documented. Using an adequate process of analysis, the undertaking must be able to understand the nature of the risks it has identified, their origins, the possibility or need to control them and the effects that could arise, both in terms of losses and opportunities. The process of analysis includes a qualitative assessment and, for quantifiable risks, the adoption of methods to measure the exposure to risk.

# F.1 Integration of the internal model in the risk management function

Please explain and demonstrate that the internal model is adequately and effectively integrated into the risk management function. Also demonstrate the extent to which the risk management function has been and continues to be involved in designing, implementing, testing, analysing performance, validating and documenting the internal model.

# F.2 Use of the internal model to identify, measure, monitor, manage and report risks

Please explain and provide evidence that the internal model is adequately and effectively used to identify, measure, monitor, manage and report risks. This should include details of your risk management objectives, principles, risk appetite, risk limits set by risk type and assignment of risk management responsibilities across all of your activities, together with details of how this is consistent with your overall business strategy. Also explain you reporting and escalation processes including any risk committee structure and responsibilities.

#### F.3 Risk ranking

Please explain and provide evidence of your risk ranking process. Please explain how the ability of the internal model to rank risks is sufficient to ensure that it is widely used in and plays an important role in your system of governance, in particular your risk management system and decision making processes, and capital allocation in accordance with Article 120 of the Directive.

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# G. Requirements analysis (Self-assessment)

The requirements analysis shall identify strengths and weaknesses of the internal model and demonstrate compliance with the regulatory requirements, including provisions set out it Articles 100 and 112(3) of the Directive. The requirements analysis should contain all requirements that are relevant to Internal Models, including for example the relevant articles 41 to 50. We would expect an assessment of how well the criteria for model approval are met on a detailed level of granularity. So not just at level of articles 120 to 125 of the Directive, but on the level of former CP56 instead.

The requirements analysis shall be compiled or verified independently.

Please provide for each requirement a score on the following scale: Green - requirement met

Yellow - requirement not (fully) met, but no showstopper for approval of internal model for intended implementation date

Orange - requirement not met; needs to be resolved before internal model can be approved

Red - requirement not met; it is impossible or very unlikely that this can be resolved before the intended implementation date

Please note that the requirements analysis is also used during the pre-application phase to show the current compliance with the requirements. At final application, all orange and red gaps need to be resolved.

For each requirement, please provide a concise description of why the firm believes this is the correct score for this item, what actions are taken to close the gaps and when these actions will be finished.

The criteria for model approval apply to all parts of the internal model for all risk types and in all countries, lines of business and legal entities. Some requirements are suitable to be assessed at once for the entire firm, other requirements are more suitable to be assessed individually.

Since every firm is different, we do not provide a template for the requirements analysis.

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# H. Technical characteristics of the internal model

The technical characteristics of the internal model comprise 'overall' parts and 'component specific' parts. The application package shall contain all the 'overall' parts. The firm shall have available technical model documentation for each model component. After the receival of the draft application template, it will be discussed which parts of the model documentation should be included in the application package. The other documents shall be available promptly upon request of the supervisory authority. The technical model documentation will also be used during the pre-application phase.

An internal model consists of different components. It is impossible to give a strict definition of what a component is. For the purpose of the pre-application and application process, a component is a part of an internal model that is designed, implemented, validated and changed on a relatively independent basis. A component can be specific to a (sub)risk type, line of business or legal entity, but it could also be used across the firm and across risk types (e.g. an economic scenario generator or a risk aggregator).

The overall parts of the technical model documentation are:

- 1. Model structure
- 2. Solvency II balance sheet
- 3. Aggregation, dependencies and diversification
- 4. Calibration standards

The component specific parts of the technical model documentation are:

- a) Detailed outline of the theory, assumptions, and mathematical and empirical basis
- b) Variables/drivers
- c) Data
- d) Assumptions
- e) Expert judgement
- f) Risk mitigation techniques
- g) Future management actions
- h) Policyholder expectations
- i) Financial guarantees and contractual options
- j) Output of key drivers/variables
- k) Analysis of simulation outputs
- I) Sensitivity testing and testing against experience
- m) External models and data
- n) Model limitations

#### H.1 Model structure

The application package needs to contain an overview of the structure of the model. This overview shall consist of a list of all components of the internal model (needed to calculate the SCR, including all local models and projection and valuation models) as well as a diagram to facilitate the understanding of how the components work together to calculate the SCR. Furthermore, the application package shall contain information that enables the supervisory authorities to check whether the internal model is complete vis-à-vis the balance sheet.

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a) Please provide a list of all components of the internal model. For each component, the following information shall be provided:

- Name of the component
- For which (sub)risk type it is used
- In which countries it is used
- In which lines of business or business units it is used
- In which legal entities it is used
- Impact on the SCR (low, medium, high)
- Date of initial validation
- Date of formal approval
- Date of implementation
- Date of most recent periodic validation

b) Please provide a diagram or set of diagrams showing how the components on the list work together to calculate the SCR.

c) Please explain and provide evidence of how your internal model is structured and aligned to your business model and risk-management framework. For group models, please describe the extent to which the structure, methodologies, assumptions, data, calculations, technology and data management processes at group level are consistent across all the legal entities that are within the scope of the internal model, highlighting and providing an explanation where there are inconsistencies.

#### H.2 Solvency II balance sheet

a) Please describe how the value of all assets and liabilities (including technical provisions) are calculated for the purposes of determining the Solvency II balance sheet and own funds.

b) Please describe how your internal model allows for expenses that will be incurred in servicing (re)insurance obligations; inflation; all payments to policyholders and beneficiaries and the values of financial guarantees and contractual options (as referred to in Articles 78 to 79 of the Directive).

c) Please provide links between line items on the asset side of the Solvency II balance sheet and components of the internal model, showing that they match. Please provide details of any assets on the Solvency II balance sheet which are not included in your internal model or conversely any assets that are included in the internal model but do not appear on the Solvency II balance sheet.

d) Please provide links between line items on the liability side of the Solvency II balance sheet and components of the internal model, showing that they match. Please provide details of any liabilities on the Solvency II balance sheet which are not included in your internal model or conversely any liabilities that are included in the internal model but do not appear on the Solvency II balance sheet.

e) Please describe any differences in the way your internal model calculates the value of assets compared to that for the Solvency II balance sheet and the determination of own funds.

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f) Please describe any differences in the way your internal model calculates the value of liabilities compared to that for the Solvency II balance sheet and the determination of own funds.

g) Please explain, to the extent that it is relevant, how you have explicitly modelled or otherwise appropriately considered the impact of fungibility and transferability of capital within the group in your internal model.

#### H.3 Aggregation, dependencies and diversification

a) Please explain how the results of the individual legal entities have been aggregated to derive the results of the group SCR. Please also provide a measure of the total diversification present within the calculated SCR for each legal entity as well as for the group SCR (i.e. the difference between the undiversified and the diversified SCRs). Please also provide an overview of the diversification present in your internal model compared to the diversification present in the calculated SCR according to the standardformula, including an analysis and explanation of any differences.

b) Where you have used a partial internal model, please explain how your partial internal model results will be fully integrated with the standard formula in order to calculate the SCR, as per the requirements of Article 113(1) of the Directive. Please provide justifications for the feasibility and the appropriateness of your integration technique.

c) Please explain and provide evidence that you understand the impact of the dependency structures and assumptions used in your internal model and that the implied dependencies (i.e., output dependencies within and between risks) are consistent with the input dependencies across the entire range of the distribution.

# H.4 Calibration standards (use of a different risk measure and/or inability to derive the SCR directly from the probability distribution forecast generated by the internal model)

Where your risk measure is different from that set out in Article 101(3), please explain and provide evidence of how the outputs of your internal model can be used to calculate the SCR in a manner that provides policyholders and beneficiaries with a level of protection equivalent to that set out in Article 101 of the Directive. Where the SCR cannot be calculated directly from the probability distribution forecast, please explain how you rescale the risks, how you adjust for different time horizons and justify the key assumptions and simplifications used. In particular, please explain any adjustments made as a result of differences in the recognition or valuation of assets and liabilities in the internal model compared with the Solvency II balance sheet.

#### H.5 Model documentation for each component of the internal model

Please provide technical model documentation for each component of your internal model, containing at least the following subjects (if applicable). The model documentation should address both the shock derivation and the shock application.

a) Detailed outline of the theory, assumptions, and mathematical and empirical basis

Please describe the calculations performed within your internal model component. Please provide a description and rationale for selecting a specific method and an

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elaboration on the techniques used to meet the nature and complexity of the items under consideration. It should be sufficiently detailed and complete such that an independent and knowledgeable third party would be able to understand the model framework, its methodology, the underlying assumptions, and the limits of applicability of the model and in principle reproduce the model outputs if all the parameters and exposure data were available. The documentation should also include details of the algorithms related to the mathematical models, including the rationale supporting the selection of the algorithms and known drawbacks or weaknesses.

#### b) Variables/drivers

For each component, please explain and provide evidence of the underlying variables/drivers that determine the risk characteristics for your business. To what extent have these variables/drivers been captured within your internal model framework? Please detail any differences between these variables/drivers and those used to value assets and liabilities for the purposes of determining the Solvency II balance sheet and own funds.

#### c) Data

For each component, please explain and provide evidence that the data used are accurate, complete and appropriate. This should include for example an explanation of the data chosen, the handling of data issues (like outliers and limited available data) and the choice of the data frequency and the sample period.

#### d) Assumptions

For each of the risk variables/drivers modelled, please explain and provide evidence of the key assumptions used. This should include details of how the assumptions were selected; underlying source data; the significance of the assumptions; the sensitivity of the results to changes to the assumptions and possible alternative assumptions and their implications.

#### e) Expert judgement

For each component, please explain if and how expert judgement was applied in your assumptions, data, and parameters for this component and provide evidence of applying your policy on expert judgement.

#### f) Risk mitigation techniques

Please explain and provide evidence that where you have taken full account of the effect of risk-mitigation techniques in the internal model component, the credit risk and secondary risks arising from the use of these risk-mitigation techniques are also properly reflected in the internal model component.

#### g) Future management actions

Future management actions fall into two categories, depending on whether conditions beyond a firm's control must be met for the action to be exercised or not (e.g. the liquidity of financial or reinsurance markets, the willingness of the counterparties to carry out the transaction, etc). Please state the specific circumstances in which you have assumed that future management actions will be applied in your internal model component. Describe the management actions

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assumed and highlight the allowance you have made for the time necessary to implement such actions. What, if any, are the secondary risks arising from the assumptions made as to these future management actions? Please indicate whether it is possible to calculate the impact of the individual future management actions on a standalone basis. Please also provide evidence that only those management actions where the intent to undertake the action has been signed off by the board have been reflected in the model.

#### h) Policyholder expectations

Please explain and provide evidence of how you have taken account of all expected payments to policyholders and beneficiaries, whether or not those payments are contractually guaranteed.

#### i) Financial guarantees and contractual options

Please state the financial guarantees and contractual options you have provided which affect your risk profile. Please explain and provide evidence of how you have allowed for the risks associated with these financial guarantees and contractual options in the internal model, where material, by taking into account the impact that future changes in financial and non-financial conditions may have on the exercise and value of those options and guarantees.

#### j) Output of key drivers/variables

Please explain and provide a summary of the outputs for the key variables / drivers modelled. This should include some percentiles in order to give an indication of the distribution of the outputs.

#### k) Analysis of simulation outputs

For parts of the model where stochastic simulation is used, please explain and provide evidence of how you have identified and interrogated the range of outputs that lead to capital requirements at and around the critical percentiles, the results of this analysis and how these results have been used.

#### I) Sensitivity testing and testing against experience

Please explain and provide evidence of the sensitivity tests you have carried out to ascertain the impacts from the key (more sensitive) assumptions. Also explain and provide evidence of the testing against experience you have carried out. How often are the results of the tests reviewed? Please describe how the results of your tests are used (for example, have the results been used to establish or refine decisions on model architecture, structure, formulaic definition, operational procedures or parameters, risk and capital strategy?).

#### m) External models and data

If the component is external or uses external data, please indicate this clearly in the technical model documentation and explain how the external model or data is used. How material is the role of the external models/data in each instance? Explain the reasons why external models/data are preferred over internal models/data. Please also indicate the reasons for the particular external models/data selected and provide evidence of the criteria satisfied by the external models/data when assessing its appropriateness for use. Also list any alternative

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options considered. Please also indicate how the external model and/or data is integrated into the firm's overall internal model and explain how you have ensured that the use of the external model and/or data still satisfies Articles 120 to 125 of the Directive.

#### n) Model limitations

Please indicate and explain the circumstances under which your internal model component deviates from your firm's existing risk profile. This could include any specific features of your internal model or circumstances or limitations that present potential concerns or would significantly increase the uncertainty of the results beyond what would be reasonably expected. It also includes insufficiencies in IT systems, governance and related controls surrounding your internal model. In each case, please indicate how you have allowed for these limitations when calculating the SCR.

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# J. Model governance and Use Test

The firm shall demonstrate an appropriate organisation and an adequate system of internal controls, proportionate to the size and operational characteristics of the firm and the nature and complexity of its risks. Moreover, the firm shall demonstrate adequate resources, skills and objectivity of the people responsible for the development and review of the internal model.

The following are examples of the sort of information we would expect to see under model governance, systems and controls, including organisational charts. As background to the internal model we would expect to see copies of the organisational charts to understand the firm's group structure and understand whether it enables the appropriate people to be involved in the internal model.

In case of outsourcing of certain key functions the firm shall pay special attention to this in all relevant subsections below.

#### J.1 Quality of resources

Please provide evidence that the people (including external consultants used) responsible for the development and review of your internal model have the appropriate skills and professional qualifications, knowledge and experience in the relevant areas of the business necessary for the proper discharge of their responsibilities. This should include written and agreed responsibilities and accountabilities to individuals and/or functions in the organisation.

#### J.2 Controls around model development

Please explain and provide evidence of the existence of clear and well defined internal controls relating to the management, development and operation of the internal model (e.g. internal approval of changes, escalations paths, internal communication, documentation and validation of changes).

#### J.3 Policy for on-going model compliance

Please explain and provide evidence of how you ensure ongoing compliance with the requirements for internal model approval. Please include the procedures that are in place to inform regulators if your model does not comply with the approval requirements.

#### J.4 Overall responsibility of the Board

Please explain and provide evidence that the group and local Board(s) have assumed overall responsibility for model approval, model oversight and model strategy and have aligned the risk, capital and business strategies accordingly. This should include sign off of roles & responsibilities related to internal model governance and relevant terms of reference documents.

#### J.5 Level of understanding of the Board

Please explain and provide evidence that the Board has an appropriate understanding of the model and its results, demonstrating how it has reached a level of comfort from the model results and how it uses these results. Please also provide evidence that the Board understands the limitations of the internal model. Please describe the process that is in place for regular independent review of the governance and challenge process for the internal model.

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#### J.6 Process around the development of future management actions

Please explain and provide evidence of the governance process around the development of future management action strategies. Please include an explanation of Board involvement in the development and sign-off of the future management actions assumed in your internal model.

# J.7 Role of internal audit

Please explain and provide evidence of how your internal audit function has been involved in evaluating the adequacy and effectiveness of the internal control system around your internal model. Please include the main findings and recommendations from internal audit and indicate how have these recommendations been acted on.

#### J.8 Organisational chart

Please provide an organisational chart showing the various functions within the firm that have contributed towards internal model design, implementation, testing, validation, embedding (i.e. use test) and approval. Please include their role and responsibilities in the model development process.

#### J.9 World-wide group structure

Please disclose all of your regulated and unregulated legal entities and branches (including the supervisory body/bodies that oversees the entities concerned). Within this group structure, please indicate whether the legal entity's sectoral SCRs and the Group SCRs is being calculated and the method (accounting consolidation-based, deduction and aggregation or a combination of the two) being used.

#### J.10 Role of internal model in system of governance and decision making

Please explain and provide evidence of how your internal model is widely used and plays an important role in your system of governance (Articles 41 to 49 of the Directive), in particular the decision-making processes (including the setting of the business and risk management strategy), the economic and solvency capital assessment and capital allocation process, and the ORSA.

#### J.11 Period of use prior to the application

Please confirm the period of time prior to submitting your application during which your internal model has been appropriately used as part of your risk management system and decision making processes.

#### J.12 Documentation policy

Please explain and provide evidence of your model documentation policy and governance framework around it.

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# K. Independent review/validation

#### K.1 Validation policy

Please provide the validation policy and set out the way in which you validate your internal model and explain why this approach is appropriate. The validation policy should cover the purpose and scope of the validation; the approach you take to gain comfort that your internal model is appropriate and reliable; the frequency of the validation process; the approach you take to ensure that both the inputs and outputs of your internal model are appropriate, accurate and complete; how you monitor the performance of your internal model; how you review the ongoing appropriateness of its specification; how you test the results of your internal model against experience (not only to loss experience but also to all material new data and information relating thereto); the analysis you perform to ensure the stability of the internal model; the range of sensitivity testing you perform on the results to changes in key underlying assumptions; how the results of external models are regularly reviewed and how the integrity of the external data has been independently verified.

#### K.2 Expert judgement policy

Please explain and provide your policy on expert judgement including how expert judgement forms part of your validation policy.

#### K.3 Independence of the review process

Please explain and provide evidence of how you have ensured the independence of the review process from the people involved in the normal business operations and the preparation of the annual financial statements of the firm. How have you ensured that those in the review process have not been significantly involved in the development and calibration of the internal model? Please explain how the Board are involved in the process. Please indicate clear responsibilities for the validation tasks, how the results are reported and a clear escalation path (i.e. specifically defined pre-set criteria which will determine whether results need to be escalated).

#### K.4 Validation report for each component of the internal model

For each component of the internal model, the firm shall provide documentation of the most recent independent review/validation report of that component. This validation report should provide a complete overview of the current status of the component, not only of the most recent changes. It is also allowed to provide an initial validation report together with ongoing validations reports of the same component. Validation should both address the shock derivation and the shock application.

The firm shall also provide a validation report of the internal model as a whole. This report should contain at least a review of the following subjects:

- the justification for the limited scope in case of a partial internal model (E2)
- the overall model architecture (H1)
- the consistency between all model components
- the Solveny II balance sheet and the consistency between the Solvency II balance sheet and the internal model (H2)
- the aggregation and diversification in the internal model (H3)

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- the method used for the calculation of the Group SCR (accounting consolidationbased, deduction and aggregation or a combination of the two) (J9)

All validations must have been carried out in accordance to the firm's validation policy. The reports should include the scope of the review (i.e. what the review covers and specifically what it did not cover), what recommendations were made and how the recommendations were acted upon.

#### K.5 Profit and loss attribution

Please provide a detailed description and the results of the latest profit and loss attribution you have performed. Please provide evidence that you review the causes and sources of profits and losses for each major business unit at least annually; demonstrate how the categorisation of risk chosen in the internal model explains the causes and sources of profits and losses; demonstrate how the categorisation of risk and attribution of profits and losses reflects your risk profile. Please provide evidence that the results of the results of the profit and loss attribution are analysed as part of the validation process and describe how the results of your profit and loss attribution are used (for example, have the results been used to establish or refine decisions on model architecture, structure, formulaic definition, operational procedures or parameters, risk and capital strategy?).

#### K.6 Stress and scenario testing

Please provide a detailed description and the results of the latest stress and scenario tests you have performed to validate the SCR. This should include justification of the appropriateness of the stresses and scenarios being tested based on the characteristics of your business and risk profile. Please describe how the results to your stress/scenario tests are used (for example, have the results been used to establish or refine decisions on model architecture, structure, formulaic definition, operational procedures or parameters, risk and capital strategy?).

#### K.7 Reverse stress testing

Please provide a detailed description and the results of the latest reverse stress test you have performed. Please describe how the results to your reverse stress test are used (for example, have the results been used to establish or refine decisions on model architecture, structure, formulaic definition, operational procedures or parameters, risk and capital strategy?).

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# L. Model changes

# L.1 Model change policy

Please provide your policy for changing the full or partial internal model as mentioned in Article 115 of the Directive. This policy should contain a definition of minor and major changes.

# L.2 Documented evidence of model change process

Please provide evidence that you have documented all major changes to your internal model and that there is a process in place to ensure all changes will be properly considered and documented in the future in accordance with the change policy.

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# M. Future model improvements

The firm shall explain any plans it has for the future development and improvement of the model. This shall include plans to address any identified weaknesses of the internal model as well as plans to extend or develop the model.

#### M.1 Overview of model limitations and weaknesses

Please provide an overview of the most important limitations and weaknesses of your internal model as a whole.

#### M.2 Planned model improvements

Please provide an overview of planned improvements to your internal model. In particular, where you have used a partial internal model, Article 113(2) states that the supervisory authorities *may* require the (re)insurance entity concerned to submit a realistic transition plan to extend the scope of the model. In case this is required by the supervisory authority, please provide a realistic transition plan describing how you intend to extend the coverage of your partial internal model to ensure it includes all material insurance operations. The transitional plan should consider each business unit and/or risk module as necessary.

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# **N.** Capital requirement

The firm shall provide its assessments of economic capital and the SCR from the internal model. The firm shall also demonstrate that the internal model is used in the firm's economic and solvency capital assessment and allocation process as required by Article 120 (b) of the Directive, to the most granular level used. The firm shall also provide an estimate of the SCR calculated in accordance with the standard formula. In the case of a partial internal model this estimate shall not only encompass the overall SCR, but also at least all risk modules or sub risk modules or risks, or business units (depending on the case) modelled by the internal model.

#### N.1 Result of the SCR

Please provide the SCR result as calculated by the internal model (split by (sub) risk types) for each legal entity for which an SCR is required and at the Group level. Please provide the capital requirement at the level of granularity used in your own business planning and management.

#### N.2 Own funds

Please provide an overview of the own funds for each legal entity for which an SCR is required and at the Group level.

#### N.3 Internal model comparison against standard formula

Please provide a comparison of the SCR produced by the full or partial internal model to the SCR produced by the standard formula including reasons for the differences for the Group and each legal entity separately.

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# P. Data/ICT

The requirements in this section apply to all data used to develop, operate and validate the internal model.

#### P.1 Data quality policy and data update policy

Please provide your data policy including how you have ensured that the data used for the internal model is accurate, complete and appropriate. Please provide evidence of an effective data quality and data update policy as it refers to your internal model. The policy should cover as a minimum the following areas: definition of data quality and how this is implemented; detailed processes that are in place for reconciling and validating data quality; documentation of methodology followed to validate the use of expert judgement in relation to data in the event that the quality is compromised or poor; detailed processes that are in place for updating data with a focus on the data that is used for the probability distribution forecast; details of standards regarding the frequency of regular data updates, circumstances that trigger unscheduled data updates and which prompt recalculations of the SCR.

#### P.2 Directory of data used

Please provide a high level overview of all data used in the internal model, specifying their source, characteristics and usage.

#### P.3 Data management processes

Please explain and provide evidence of the data management processes used within your internal model. Please include details of data items; databases, internal and external data interfaces; processes used to obtain and load data; processes to ensure data is complete, accurate and appropriate (including any reconciliation points); details of data flows through your internal model and data security processes undertaken.

# $\mathsf{P.4}$ Process to safeguard the confidentiality, integrity and availability of information

Please explain and provide evidence of the processes that are in place to safeguard the confidentiality, integrity and availability of information in all IT components of your internal model. Please provide details of your business continuity planning and/or disaster recovery for your internal model and any relevant data feeds into the model.

# P.5 Technology and software tools ('system landscape')

Please describe the technology and software tools used to implement your internal model, and state to what extent they are internal or external solutions.