Commission Delegated Regulation (EU) 2015/35 of 10 October 2014 supplementing Directive 2009/138/EC of the European Parliament and of the Council on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II) (Text with EEA relevance)

TITLE I

[X1VALUATION AND RISK-BASED CAPITAL REQUIREMENTS (PILLAR I), ENHANCED GOVERNANCE (PILLAR II) AND INCREASED TRANSPARENCY (PILLAR III)]

CHAPTER VI

SOLVENCY CAPITAL REQUIREMENT — FULL AND PARTIAL INTERNAL MODELS

SECTION 1

Definitions

Article 222

Materiality

For the purposes of this Chapter, a change or error in the outputs of the internal model, including the Solvency Capital Requirement, or in the data used in the internal model shall be considered material where it could influence the decision-making or the judgement of the users of that information, including the supervisory authorities.

SECTION 2

Use test

Article 223

Use of the internal model

Insurance and reinsurance undertakings shall explain upon request of the supervisory authorities the different uses of their internal model and how they ensure consistency between the different outputs where the internal model is used for different purposes. Where insurance and reinsurance undertakings decide not to use the internal model for a part of the system of governance, particularly in the coverage of any material risks, they shall explain that decision.

Article 224

Fit to the business

Insurance and reinsurance undertakings shall ensure that the design of the internal model is aligned with their activities in the following manner:

(a) the modelling approaches reflect the nature, scale and complexity of the risks inherent in the activities of the undertaking which are within the scope of the internal model;

(b) the outputs of the internal model and the content of the internal and external reporting of the undertaking are consistent;

(c) the internal model is capable of producing outputs that are sufficiently granular to play an important role in the relevant management decisions of the undertaking; as a minimum, the outputs of the internal model shall differentiate between lines of business, between risk categories and between major business units;

(d) the policy for changing the internal model provides that the internal model is to be adjusted for changes in the scope or nature of the activities of the undertaking.

Article 225

Understanding of the internal model

1 The administrative, management or supervisory body of the insurance or reinsurance undertaking and the other persons who effectively run the undertaking shall be able to demonstrate upon request of the supervisory authorities an overall understanding of the internal model which comprises knowledge about all of the following:

a the structure of the internal model and the way the model fits to the business and is integrated in the risk-management system of the insurance or reinsurance undertaking;
b the scope and purposes of the internal model and the risks that are or are not covered by the internal model;
c the general methodology applied in the internal model calculations;
d the limitations of the internal model;
e the diversification effects taken into account in the internal model.

2 The persons who effectively run the undertaking shall be able to demonstrate a sufficiently detailed understanding of the parts of the internal model used in the area for which they are responsible.

Article 226

Support of decision-making and integration with risk management

An internal model shall only be considered to be widely used in and to play an important role in the system of governance of an insurance or reinsurance undertaking where it meets all of the following conditions:

(a) the internal model supports the relevant decision-making processes in the undertaking, including the setting of the business strategy;

(b) the internal model and its results are regularly discussed and reviewed in the administrative, management or supervisory body of the insurance or reinsurance undertaking;

(c) all material quantifiable risks identified by the risk management system which are within the scope of the internal model are covered by the internal model;

(d) the undertaking uses the internal model to assess, where material, the impact on its risk profile of potential decisions, including the impact on expected profit or loss and the variability of the profit or loss resulting from those decisions;

(e) the outputs of the internal model, including the measurement of diversification effects, are taken into account in formulating risk strategies, including the development of risk tolerance limits and risk mitigation strategies;

(f) the relevant outputs of the internal model are covered by the internal reporting procedures of the risk management system;

(g) the quantifications of risks and the risk ranking produced by the internal model trigger risk management actions where relevant;

(h) the insurance or reinsurance undertaking is required to change the internal model in accordance with Article 115 of Directive 2009/138/EC as soon as possible where the results of the model validation process in accordance with Article 124 of that Directive show that the internal model does not comply with the requirements set out in Articles 101, 113, 120 to 125 of that Directive, to ensure compliance with those requirements;

(i) the policy for changing the internal model provides that the internal model is changed, where relevant, to reflect changes in the risk management system.

Article 227

Simplified calculation

1 Insurance and reinsurance undertakings may use a simplified calculation of the Solvency Capital Requirement as set out in paragraph 2 of this Article to satisfy the requirement to calculate the Solvency Capital Requirement in accordance with the second paragraph of Article 120 of Directive 2009/138/EC.

2 In order to produce a simplified calculation of the Solvency Capital Requirement referred to in paragraph 1, insurance and reinsurance undertakings may carry out only a part of the calculations which are usually necessary to determine the Solvency Capital Requirement. For the remaining part of the calculation, the results from the previous calculation of the Solvency Capital Requirement shall be used.

3 Insurance and reinsurance undertakings may use the approach set out in paragraph 2 provided that they are able to demonstrate upon request of the supervisory authorities that the results taken from the previous calculation of the Solvency Capital Requirement would not be materially different from the results of a new calculation.

4 Insurance and reinsurance undertakings shall not use a simplified calculation of the Solvency Capital Requirement when calculating the Solvency Capital Requirement in accordance with Article 102 of Directive 2009/138/EC.

SECTION 3

Statistical quality standards

Article 228

Probability distribution forecast

1 The probability distribution forecast underlying the internal model shall assign probabilities to changes in either the amount of basic own funds of the insurance or reinsurance undertaking or to other monetary amounts, such as profit and loss, provided that those monetary amounts can be used to determine the changes in basic own funds. The exhaustive set of mutually exclusive future events, referred to in Article 13(38) of Directive 2009/138/EC, shall contain a sufficient number of events to reflect the risk profile of the undertaking.

2 Insurance and reinsurance undertakings shall calculate the probability distribution forecast of a partial internal model at the highest level of aggregation of the components of the partial internal model. If a partial internal model consists of different components which are separately calculated and not aggregated within the partial internal model, the probability distribution forecast shall be calculated for each component.

Article 229

Adequate, applicable and relevant actuarial techniques

Actuarial and statistical techniques shall only be considered adequate, applicable and relevant for the purposes of Article 121(2) of Directive 2009/138/EC where all of the following conditions are met:

(a) the techniques are based on up to date information and progress in actuarial science and generally accepted market practice are taken into account in the choice of the techniques;

(b) the insurance or reinsurance undertaking has a detailed understanding of the economic and actuarial theory and the assumptions underlying them.

(c) the outputs of the internal model indicate relevant changes in the risk profile of the insurance or reinsurance undertaking;

(d) the outputs of the internal model are stable in relation to changes in the input data that do not correspond to a relevant change of the risk profile of the insurance or reinsurance undertaking;

(e) the internal model captures all the relevant characteristics of the risk profile of the insurance or reinsurance undertaking;

(f) the techniques are adapted to the data used for the internal model;

(g) the outputs of the internal model do not include a material model error or estimation error; wherever possible, the probability distribution forecast shall be adjusted to account for model and estimation errors;

(h) the calculation of the outputs of the internal model can be set out in a transparent manner.

Article 230

Information and assumptions used for the calculation of the probability distribution forecast

1 Information shall only be considered credible for the purposes of Article 121(2) of Directive 2009/138/EC where insurance and reinsurance undertakings provide evidence of the consistency and objectivity of that information, the reliability of the source of information and the transparency of the method by which that information is generated and processed.

2 Assumptions shall only be considered realistic for the purposes of Article 121(2) of Directive 2009/138/EC where they meet all of the following conditions:

- a insurance and reinsurance undertakings are able to explain and justify each of the assumptions, taking into account the significance of the assumption, the uncertainty involved in the assumption and why the relevant alternative assumptions are not used;
- b the circumstances under which the assumptions would be considered false can be clearly identified;
- c insurance and reinsurance undertakings establish and maintain a written explanation of the methodology used to set those assumptions.

Article 231

Data used in the internal model

1 Data used in the internal model shall only be considered accurate for the purposes of Article 121(3) of Directive 2009/138/EC where all of the following conditions are met:

- a the data are free from material errors;
- b data from different time periods used for the same estimation are consistent;
- c the data are recorded in a timely manner and consistently over time.

2 Data used in the internal model shall only be considered complete for the purposes of Article 121(3) of Directive 2009/138/EC where all of the following conditions are met:

- a data include sufficient historical information to assess the characteristics of the underlying risk, in particular to identify trends in the risks;
- b data that comply with point (a) of this paragraph are available for all relevant model parameters and no such relevant data are excluded from the use in the internal model without justification.

3 Data used in the internal model shall only be considered appropriate for the purposes of Article 121(3) of Directive 2009/138/EC where all of the following conditions are met:

- a the data are consistent with the purposes for which it is to be used;
- b the amount and nature of the data ensure that the estimations made in the internal model on the basis of the data do not include a material estimation error;
- c the data are consistent with the assumptions underlying the actuarial and statistical techniques that are applied to them in the internal model;
- d the data reflect the relevant risks to which the insurance or reinsurance undertaking is exposed;
- e the data are collected, processed and applied in a transparent and structured manner, based on a specification of the following areas:

(i) the definition and assessment of the quality of data, including specific qualitative and quantitative standards for different data sets;

(ii) the use and setting of assumptions made in the collection, processing and application of data;

(iii) the process for carrying out data updates, including the frequency of regular updates and the circumstances that trigger additional updates.

Article 232

Ability to rank risk

1 For the purposes of the second subparagraph of Article 121(4) of Directive 2009/138/EC, the internal model shall be able to rank all material risks covered by the internal model.

2 The ability to rank risks shall be consistent with the classification of risks used in the internal model and the classification of risks used in the risk management system.

3 Similar risks shall be ranked consistently throughout the insurance or reinsurance undertaking and ranked consistently over time.

4 The ranking of risks shall be consistent with the capital allocation referred to in point (b) of the first paragraph of Article 120 of Directive 2009/138/EC.

Article 233

Coverage of all material risks

1 For the purposes of the third subparagraph of Article 121(4) of Directive 2009/138/EC, insurance and reinsurance undertakings shall assess, at least on a quarterly basis, whether the internal model covers all material quantifiable risks within its scope. The assessment shall take into account an appropriate set of qualitative and quantitative indicators.

2 The qualitative indicators referred to in paragraph 1 shall include the following:
a the identification in the own risk and solvency assessment of risks other than those that are covered by the internal model;
b the existence of a dedicated risk management process for risks other than those that are covered by the internal model;
c the existence of dedicated risk mitigation techniques for risks other than those that are covered by the internal model.

3 The quantitative indicators referred to in paragraph 1 of this Article shall include the following:
a the capital allocation in accordance with Article 120 of Directive 2009/138/EC;
b the amount of profits and losses which cannot be explained by the risks covered by the internal model;
c the results of stress testing and scenario analysis and any tool used in the model validation process.

Article 234

Diversification effects

The system used for measuring diversification effects referred to in Article 121(5) of Directive 2009/138/EC shall only be considered adequate where all of the following conditions are met:

(a) the system used for measuring diversification effects identifies the key variables driving dependencies;

(b) the system used for measuring diversification effects takes into account all of the following:

(i) any non-linear dependence and any lack of diversification under extreme scenarios;

(ii) any restrictions of diversification which arise from the existence of a ring-fenced fund or matching adjustment portfolio;

(iii) the characteristics of the risk measure used in the internal model;

(c) the assumptions underlying the system used for measuring diversification effects are justified on an empirical basis.

Article 235

Risk-mitigation techniques

1 Risks that are properly reflected in the internal model, as referred to in Article 121(6) of Directive 2009/138/EC, shall not include risks arising from any of the following situations:

a the contractual arrangements relating to the risk-mitigation technique are, in any relevant jurisdiction, not legally effective and enforceable or does not ensure that the transfer of risk is clearly defined and incontrovertible;

b insurance and reinsurance undertakings do not have a direct claim on the counterparty in the event of the default, insolvency or bankruptcy of the counterparty or other credit event set out in the transaction documentation to the arrangements relating to the risk-mitigation technique;

c the legal arrangements underlying the risk-mitigation technique do not contain an explicit reference to a specific risk exposure clearly defining the extent of the cover provided by the risk-mitigation technique.

2 Where the risk-mitigation technique referred to in paragraph 1(c) does not cover the risk exposure of the insurance or reinsurance undertaking in all cases, the internal model shall not be considered to properly reflect the risk arising from the risk-mitigation technique in accordance with Article 121(6) of Directive 2009/138/EC unless it takes into account the reduced effectiveness of the risk-mitigation technique resulting from this deviation of risk exposures.

3 Where the risk-mitigation technique is subject to a condition, the fulfilment of which is outside the direct control of the insurance or reinsurance undertaking and which could undermine the effective transfer of risk, the internal model shall not be considered to properly reflect the risk arising from the risk-mitigation technique in accordance with Article 121(6)

of Directive 2009/138/EC unless it takes into account the effects of those conditions and any reduced effectiveness of that risk-mitigation technique.

Article 236

Future management actions

1 Future management actions shall only be considered to be reasonably expected to be carried out for the purposes of Article 121(8) of Directive 2009/138/EC where all of the following conditions are met:

a the assumptions on future management actions used in the calculations for the internal model are determined in an objective manner;
b assumed future management actions are realistic and consistent with the insurance or reinsurance undertaking's current business practice and business strategy, including the use of risk-mitigation techniques and, where there is sufficient evidence that the undertaking will change its practices or strategy, the assumed management actions are consistent with the changed practices or strategy;
c assumed future management actions are consistent with each other;
d assumed future management actions are not contrary to any obligations towards policy holders and beneficiaries or to legal provisions;
e assumed future management actions take account of any public information or communication by the insurance or reinsurance undertaking as to the actions that it would expect to take or not take.

2 Assumptions on future management actions shall be realistic and include all of the following:

a a comparison of assumed future management actions with management actions taken previously by the insurance or reinsurance undertaking;
b a comparison of future management actions taken into account in the current and past calculations of the internal model.

Insurance and reinsurance undertakings shall be able to explain any relevant deviations in relation to points (a) and (b).

3 For the purpose of paragraph 1, insurance and reinsurance undertakings shall establish a comprehensive future management actions plan, approved by the administrative, management or supervisory body of the insurance and reinsurance undertaking provides for all of the following:

a the identification of future management actions implemented in the internal model;
b the identification of the specific circumstances in which the insurance or reinsurance undertaking would reasonably expect to carry out the future management actions identified pursuant to point (a);
c the identification of the specific circumstances in which the insurance or reinsurance undertaking may not be able to carry out the future management actions identified pursuant to point (a), and a description of how those circumstances are reflected in the internal model;
d the order in which future management actions would be carried out and the governance requirements applicable to those future management actions;
e a description of any ongoing work required to ensure that the insurance or reinsurance undertaking is in a position to carry out the future management actions identified pursuant to point (a);

f a description of how future management actions have been reflected in the calculation of the probability distribution forecast;

g a description of the applicable internal reporting procedures, which shall include at least an annual communication to the administrative, supervisory or management body, that cover future management actions implemented in the internal model.

4 Assumptions on future management actions shall take account of the time needed to implement the management actions and any expenses caused by them.

Article 237

Understanding of external models and data

Parts of the internal model obtained from a third party shall be subject to all of the same tests and standards as the parts developed by the undertaking. In addition, the parts obtained from a third part shall not be considered to be adequate unless the insurance or reinsurance undertaking is able to demonstrate a detailed understanding of those parts, including their limitations.

Data used in the internal model obtained from a third party shall not be considered to be appropriate unless the insurance or reinsurance undertaking is able to demonstrate a detailed understanding of those data, including their limitations.

SECTION 4

Calibration standards

Article 238

1 The option referred to in Article 122 of Directive 2009/138/EC to use a different time period or risk measure than that set out in Article 101(3) of that Directive shall apply both to the internal model as a whole and to different risk categories or major business units within that internal model.

2 The requirement to demonstrate the protection provision for policy holders referred to in Article 122(3) of Directive 2009/138/EC shall include evidence that the approximations referred to in that Article do not introduce a material error in the Solvency Capital Requirement or do not lead to a lower Solvency Capital Requirement than that which is calculated in accordance with the requirements set out in Article 101(1) of that Directive.

Where the approximations are based on the rescaling of modelled risks, the undertakings referred to in Article 122(3) of Directive 2009/138/EC shall demonstrate that the rescaling does not impair the outcome of the approximations.

Where the time period of the risk measure used is different from the one provided in Article 101(3) of Directive 2009/138/EC, the undertakings referred to in Article 122(3) of that Directive shall take into account all of the following:

a whether events are equally distributed over time and if not, how it is reflected in the approximations;

b whether all significant risks over a one year period are properly managed;

c where the time period used is longer than that provided in Article 101(3) of Directive 2009/138/EC, whether due consideration to the solvency position during that time period has been given by the undertaking;

d whether the time period used is appropriate taking into account the average duration of the liabilities of the insurance or reinsurance undertaking, the business of the undertaking and, where relevant, the uncertainties associated with long time periods;

e any assumptions made in the approximations about the dependencies between risks over consecutive periods of time.

3 Insurance and reinsurance undertakings shall demonstrate the level of protection required by Article 122(3) of Directive 2009/138/EC once a year and each time the risk profile of the insurance or reinsurance undertaking changes significantly.

4 The approximations referred to in Article 122(3) of Directive 2009/138/EC shall be considered to be part of the internal model.

SECTION 5

Integration of partial internal models

Article 239

1 In order to fully integrate a partial internal model into the Solvency Capital Requirement standard formula, insurance and reinsurance undertakings shall use as a default integration technique the correlation matrices and formulas of the standard formula set out in Annex IV of Directive 2009/138/EC and Title I, Chapter V of this Regulation.

2 Where the insurance or reinsurance undertaking demonstrates to the supervisory authorities that it would not be appropriate to use the default integration technique referred to in paragraph 1 for any of the reasons referred to in paragraph 5, insurance and reinsurance undertakings shall use the most appropriate integration technique set out in Annex XVIII. The insurance or reinsurance undertakings shall demonstrate the appropriateness of the integration technique proposed.

3 Where the insurance or reinsurance undertaking further demonstrates to the supervisory authorities that it would not be appropriate to use any of the integration techniques set out in Annex XVIII for any of the reasons referred to in paragraph 5, the insurance and reinsurance undertaking may use an alternative integration technique. The insurance or reinsurance undertaking shall demonstrate the appropriateness of the integration technique proposed.

4 The alternative integration technique used shall result in a Solvency Capital Requirement that complies with the principles set out in Title I, Chapter VI, Section 4, subsections 1 and 3 of Directive 2009/138/EC and which more appropriately reflects the risk profile of the insurance or reinsurance undertaking.

5 An integration technique shall not be appropriate where any of the following conditions is met:

a the resulting Solvency Capital Requirement would not comply with Article 101 of Directive 2009/138/EC;

b the resulting Solvency Capital Requirement would not appropriately reflect the risk profile of the insurance or reinsurance undertaking;

c the design of the partial internal model is consistent with the principles set out in Articles 101 and 102 of Directive 2009/138/EC but would not allow its integration into the solvency capital requirement standard formula.

SECTION 6

Profit and loss attribution

Article 240

1 For the purpose of profit and loss attribution in accordance with Article 123 of Directive 2009/138/EC, insurance and reinsurance undertakings shall specify all of the following:

a the profit and loss;
b the major business units of the undertaking;
c the categorisation of risks chosen in the internal model;
d the attribution of the overall profit or loss to the risk categories and major business units.

2 The specification of profit and loss shall be consistent with the increase and decrease of the monetary amount underlying the probability distribution forecast referred to in Article 228(1).

3 The categorisation of risks chosen in the internal model shall be adequate, and sufficiently granular, for the purpose of risk-management and decision-making in accordance with Article 120 of Directive 2009/138/EC. The categorisation of risk shall distinguish between risks covered by the internal model and risks not covered by the internal model.

4 The attribution of profit and loss shall be made in an objective and transparent manner and be consistent over time.

SECTION 7

Validation standards

Article 241

Model validation process

1 The model validation process shall apply to all parts of the internal model and shall cover all requirements set out in Articles 101, Article 112(5), Articles 120 to 123 and Article 125 of Directive 2009/138/EC. In the case of a partial internal model the validation process shall in addition cover the requirements set out in Article 113 of that Directive.

2 In order to ensure independence of the model validation process from the development and operation of the internal model, the persons or organisational unit shall, when carrying out the model validation process, be free from influence from those responsible for the development and operation of the internal model. This assessment shall be in accordance with paragraph 4.

3 For the purpose of the model validation process insurance and reinsurance undertakings shall specify all of the following:

a the processes and methods used to validate the internal model and their purposes;
b for each part of the internal model, the frequency of regular validations and the circumstances which trigger additional validation;
c the persons who are responsible for each validation task;

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 problems.

4 As part of the model validation process insurance and reinsurance undertakings shall assess the quality and independence of the validation. In the assessment of independence, undertakings shall take all of the following into account:

a in case of an internal validation process, the responsibilities and reporting structure of the persons involved in the process,

b in case of an external validation process, the remuneration structure of the persons, including where applicable their employees or other persons acting on their behalf, who are involved in the process and any other mandates of these persons relating to the insurance or reinsurance undertaking.

Article 242

Validation tools

1 Insurance and reinsurance undertakings shall test the results and the key assumptions of the internal model at least annually against experience and other appropriate data to the extent that data are reasonably available. These tests shall be applied at the level of single outputs as well as at the level of aggregated results. Insurance and reinsurance undertakings shall identify the reason for any significant divergence between assumptions and data and between results and data.

2 As part of the testing of the internal model results against experience insurance and reinsurance undertakings shall compare the results of the profit and loss attribution referred to in Article 123 of Directive 2009/138/EC with the risks modelled in the internal model.

3 The statistical process for validating the internal model, referred to in the second paragraph of Article 124 of Directive 2009/138/EC, shall be based on all of the following:

a current information, taking into account, where it is relevant and appropriate, developments in actuarial techniques and the generally accepted market practice;

b a detailed understanding of the economic and actuarial theory and the assumptions underlying the methods to calculate the probability distribution forecast of the internal model.

4 Where insurance or reinsurance undertakings observe in accordance with the fourth paragraph of Article 124 of Directive 2009/138/EC that changes in a key underlying assumption have a significant impact on the Solvency Capital Requirement, they shall be able to explain the reasons for this sensitivity and how the sensitivity is taken into account in their decision-making process. For the purposes of the fourth subparagraph of Article 124 of Directive 2009/138/EC the key assumptions shall include assumptions on future management actions.

5 The model validation process shall include an analysis of the stability of the outputs of the internal model for different calculations of the internal model using the same input data.

6 As part of the demonstration that the capital requirements resulting from the internal model are appropriate, insurance and reinsurance undertakings shall compare the coverage and the scope of the internal model. For this purpose, the statistical process for validating the internal model shall include a reverse stress test, identifying the most probable stresses that would threaten the viability of the insurance or reinsurance undertaking.

SECTION 8

Documentation standards

Article 243

General provisions

1 The documentation of the design and operational details of the internal model as required by Article 125 of Directive 2009/138/EC shall 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 compliance with Article 101 and Articles 120 to 124 of Directive.

2 In the case of a partial internal model, the documentation referred to in paragraph 1 of this Article shall additionally cover compliance with Article 113 of Directive 2009/138/EC, in particular in relation to the justification of the limited scope of the model and the integration technique used to integrate the partial internal model into the standard formula.

3 The documentation referred to in paragraphs 1 and 2 shall be appropriately structured, detailed and complete and shall be kept up to date. Outputs of the internal model shall be capable of being reproduced using the internal model documentation and all of the inputs into the internal model.

Article 244

Minimum content of the documentation

The documentation of the internal model shall include all of the following information:

(a) an inventory of all the documents which form part of the documentation;

(b) the policy for changing the internal model as referred to in Article 115 of Directive 2009/138/EC;

(c) a description of the policies, controls and procedures for the management of the internal model, including responsibilities assigned to staff members of the insurance or reinsurance undertaking;

(d) a description of the information technology used in the internal model, including any contingency plans relating to the information technology used;

(e) all relevant assumptions on which the internal model is based and their justification in accordance with Article 230(2);

(f) the explanation of the methodology used to set assumptions referred to in point (c) of Article 230(2) which shall cover the following:

   (i) the inputs on which the choice of assumptions is based;

   (ii) the objectives of the choice of assumptions and the criteria used for determining the appropriateness of the choice;

   (iii) any limitations in the choice of assumptions made;

(g) a directory of the data used in the internal model, specifying their source, characteristics and usage;

(h) the specification for the collection, processing and application of data referred to in Article 231(3)(e);

(i) where data are not used consistently over time in the internal model, a description of the inconsistent use and its justification;

(j) the specification of the qualitative and quantitative indicators for the coverage of risks referred to in Article 233;

(k) a description of the risk-mitigation techniques that are taken into account in the internal model as referred to in Article 235 and an explanation of how the risks arising from the use of risk-mitigation techniques are reflected in that internal model;

(l) a description of the future management actions taken into account in the internal model as referred to in Article 236 and a description of the relevant deviations referred to in Article 236(2);

(m) the specifications for the profit and loss attribution referred to in Article 240(1);

(n) the specifications for the model validation process referred to in Article 241(3);

(o) the results of the validation in relation to compliance with Article 101 of Directive 2009/138/EC;

(p) in relation to external models and data:

  (i) the role of external models and data in the internal model;

  (ii) the reasons for preferring external models to internally developed models and external data to internal data;

  (iii) the alternatives to the use of external models and data considered by the insurance or reinsurance undertaking and an explanation of the decision in favour of a particular external model or a set of external data.

Article 245

Circumstances under which the internal model does not work effectively

When assessing and documenting circumstances under which the internal model does not work effectively, insurance and reinsurance undertakings shall take all of the following into account:

(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.

Article 246

Changes to the internal model

The documentation of the internal model shall include a record of minor and major changes to the internal model, including all of the following:

(a) a description of the rationale for the minor and major changes;

(b) a description of the implications of the major changes for the design and operations of the internal model;

(c) where a major change or a combination of minor changes has a material impact on the outputs of the internal model, a quantitative and qualitative comparison of the outputs before and after the change relating to the same valuation date.

SECTION 9

External models and data

Article 247

Insurance and reinsurance undertakings shall monitor any potential limitations arising from the use of external models or external data in the internal model to the ongoing fulfilment of the requirements set out in Articles 101 and Articles 120 to 125 of Directive 2009/138/EC, and also in Article 113 of that Directive for partial internal models.