

Directive 2009/138/EC of the European Parliament and of the Council
of 25 November 2009 on the taking-up and pursuit of the business of
Insurance and Reinsurance (Solvency II) (recast) (Text with EEA relevance)

TITLE I

**GENERAL RULES ON THE TAKING-UP AND PURSUIT OF
DIRECT INSURANCE AND REINSURANCE ACTIVITIES**

CHAPTER VI

**Rules relating to the valuation of assets and liabilities, technical provisions, own funds,
Solvency Capital Requirement, Minimum Capital Requirement and investment rules**

Section 4

Solvency capital requirement

Subsection 3

Solvency capital requirement full and partial internal models

Article 112

General provisions for the approval of full and partial internal models

1 Member States shall ensure that insurance or reinsurance undertakings may calculate the Solvency Capital Requirement using a full or partial internal model as approved by the supervisory authorities.

2 Insurance and reinsurance undertakings may use partial internal models for the calculation of one or more of the following:

- a one or more risk modules, or sub-modules, of the Basic Solvency Capital Requirement, as set out in Articles 104 and 105;
- b the capital requirement for operational risk as set out in Article 107;
- c the adjustment referred to in Article 108.

In addition, partial modelling may be applied to the whole business of insurance and reinsurance undertakings, or only to one or more major business units.

3 In any application for approval, insurance and reinsurance undertakings shall submit, as a minimum, documentary evidence that the internal model fulfils the requirements set out in Articles 120 to 125.

Where the application for that approval relates to a partial internal model, the requirements set out in Articles 120 to 125 shall be adapted to take account of the limited scope of the application of the model.

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4 The supervisory authorities shall decide on the application within six months from the receipt of the complete application.

5 Supervisory authorities shall give approval to the application only if they are satisfied that the systems of the insurance or reinsurance undertaking for identifying, measuring, monitoring, managing and reporting risk are adequate and in particular, that the internal model fulfils the requirements referred to in paragraph 3.

6 A decision by the supervisory authorities to reject the application for the use of an internal model shall state the reasons on which it is based.

7 After having received approval from supervisory authorities to use an internal model, insurance and reinsurance undertakings may, by means of a decision stating the reasons, be required to provide supervisory authorities with an estimate of the Solvency Capital Requirement determined in accordance with the standard formula, as set out in Subsection 2.

Article 113

Specific provisions for the approval of partial internal models

1 In the case of a partial internal model, supervisory approval shall be given only where that model fulfils the requirements set out in Article 112 and the following additional conditions:

- a the reason for the limited scope of application of the model is properly justified by the undertaking;
- b the resulting Solvency Capital Requirement reflects more appropriately the risk profile of the undertaking and in particular complies with the principles set out in Subsection 1;
- c its design is consistent with the principles set out in Subsection 1 so as to allow the partial internal model to be fully integrated into the Solvency Capital Requirement standard formula.

2 When assessing an application for the use of a partial internal model which only covers certain sub-modules of a specific risk module, or some of the business units of an insurance or reinsurance undertaking with respect to a specific risk module, or parts of both, supervisory authorities may require the insurance and reinsurance undertakings concerned to submit a realistic transitional plan to extend the scope of the model.

The transitional plan shall set out the manner in which insurance and reinsurance undertakings plan to extend the scope of the model to other sub-modules or business units, in order to ensure that the model covers a predominant part of their insurance operations with respect to that specific risk module.

Article 114

Implementing measures

The Commission shall adopt implementing measures setting out the following:

- (1) the procedure to be followed for the approval of an internal model;
- (2) the adaptations to be made to the standards set out in Articles 120 to 125 in order to take account of the limited scope of the application of the partial internal model.

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Those measures, designed to amend non-essential elements of this Directive by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 301(3).

Article 115

Policy for changing the full and partial internal models

As part of the initial approval process of an internal model, the supervisory authorities shall approve the policy for changing the model of the insurance or reinsurance undertaking. Insurance and reinsurance undertakings may change their internal model in accordance with that policy.

The policy shall include a specification of minor and major changes to the internal model.

Major changes to the internal model, as well as changes to that policy, shall always be subject to prior supervisory approval, as laid down in Article 112.

Minor changes to the internal model shall not be subject to prior supervisory approval, insofar as they are developed in accordance with that policy.

Article 116

Responsibilities of the administrative, management or supervisory bodies

The administrative, management or supervisory bodies of the insurance and reinsurance undertakings shall approve the application to the supervisory authorities for approval of the internal model referred to in Article 112, as well as the application for approval of any subsequent major changes made to that model.

The administrative, management or supervisory body shall have responsibility for putting in place systems which ensure that the internal model operates properly on a continuous basis.

Article 117

Reversion to the standard formula

After having received approval in accordance with Article 112, insurance and reinsurance undertakings shall not revert to calculating the whole or any part of the Solvency Capital Requirement in accordance with the standard formula, as set out in Subsection 2, except in duly justified circumstances and subject to the approval of the supervisory authorities.

Article 118

Non-compliance of the internal model

1 If, after having received approval from the supervisory authorities to use an internal model, insurance and reinsurance undertakings cease to comply with the requirements set out in Articles 120 to 125, they shall, without delay, either present to the supervisory authorities a

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plan to restore compliance within a reasonable period of time, or demonstrate that the effect of non-compliance is immaterial.

2 In the event that insurance and reinsurance undertakings fail to implement the plan referred to in paragraph 1, the supervisory authorities may require insurance and reinsurance undertakings to revert to calculating the Solvency Capital Requirement in accordance with the standard formula, as set out in Subsection 2.

Article 119

Significant deviations from the assumptions underlying the standard formula calculation

Where it is inappropriate to calculate the Solvency Capital Requirement in accordance with the standard formula, as set out in Subsection 2, because the risk profile of the insurance or reinsurance undertaking concerned deviates significantly from the assumptions underlying the standard formula calculation, the supervisory authorities may, by means of a decision stating the reasons, require the undertaking concerned to use an internal model to calculate the Solvency Capital Requirement, or the relevant risk modules thereof.

Article 120

Use test

Insurance and reinsurance undertakings shall demonstrate that the internal model is widely used in and plays an important role in their system of governance, referred to in Articles 41 to 50, in particular:

- (a) their risk-management system as laid down in Article 44 and their decision-making processes;
- (b) their economic and solvency capital assessment and allocation processes, including the assessment referred to in Article 45.

In addition, insurance and reinsurance undertakings shall demonstrate that the frequency of calculation of the Solvency Capital Requirement using the internal model is consistent with the frequency with which they use their internal model for the other purposes covered by the first paragraph.

The administrative, management or supervisory body shall be responsible for ensuring the ongoing appropriateness of the design and operations of the internal model, and that the internal model continues to appropriately reflect the risk profile of the insurance and reinsurance undertakings concerned.

Article 121

Statistical quality standards

1 The internal model, and in particular the calculation of the probability distribution forecast underlying it, shall comply with the criteria set out in paragraphs 2 to 9.

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2 The methods used to calculate the probability distribution forecast shall be based on adequate, applicable and relevant actuarial and statistical techniques and shall be consistent with the methods used to calculate technical provisions.

The methods used to calculate the probability distribution forecast shall be based upon current and credible information and realistic assumptions.

Insurance and reinsurance undertakings shall be able to justify the assumptions underlying their internal model to the supervisory authorities.

3 Data used for the internal model shall be accurate, complete and appropriate.

Insurance and reinsurance undertakings shall update the data sets used in the calculation of the probability distribution forecast at least annually.

4 No particular method for the calculation of the probability distribution forecast shall be prescribed.

Regardless of the calculation method chosen, the ability of the internal model to rank risk shall be sufficient to ensure that it is widely used in and plays an important role in the system of governance of insurance and reinsurance undertakings, in particular their risk-management system and decision-making processes, and capital allocation in accordance with Article 120.

The internal model shall cover all of the material risks to which insurance and reinsurance undertakings are exposed. Internal models shall cover at least the risks set out in Article 101(4).

5 As regards diversification effects, insurance and reinsurance undertakings may take account in their internal model of dependencies within and across risk categories, provided that supervisory authorities are satisfied that the system used for measuring those diversification effects is adequate.

6 Insurance and reinsurance undertakings may take full account of the effect of risk-mitigation techniques in their internal model, as long as credit risk and other risks arising from the use of risk-mitigation techniques are properly reflected in the internal model.

7 Insurance and reinsurance undertakings shall accurately assess the particular risks associated with financial guarantees and any contractual options in their internal model, where material. They shall also assess the risks associated with both policy holder options and contractual options for insurance and reinsurance undertakings. For that purpose, they shall take account of the impact that future changes in financial and non-financial conditions may have on the exercise of those options.

8 In their internal model, insurance and reinsurance undertakings may take account of future management actions that they would reasonably expect to carry out in specific circumstances.

In the case set out in the first subparagraph, the undertaking concerned shall make allowance for the time necessary to implement such actions.

9 In their internal model, insurance and reinsurance undertakings shall take account of all payments to policy holders and beneficiaries which they expect to make, whether or not those payments are contractually guaranteed.

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Article 122

Calibration standards

1 Insurance and reinsurance undertakings may use a different time period or risk measure than that set out in Article 101(3) for internal modelling purposes as long as the outputs of the internal model can be used by those undertakings to calculate the Solvency Capital Requirement in a manner that provides policy holders and beneficiaries with a level of protection equivalent to that set out in Article 101.

2 Where practicable, insurance and reinsurance undertakings shall derive the Solvency Capital Requirement directly from the probability distribution forecast generated by the internal model of those undertakings, using the Value-at-Risk measure set out in Article 101(3).

3 Where insurance and reinsurance undertakings cannot derive the Solvency Capital Requirement directly from the probability distribution forecast generated by the internal model, the supervisory authorities may allow approximations to be used in the process to calculate the Solvency Capital Requirement, as long as those undertakings can demonstrate to the supervisory authorities that policy holders are provided with a level of protection equivalent to that provided for in Article 101.

4 Supervisory authorities may require insurance and reinsurance undertakings to run their internal model on relevant benchmark portfolios and using assumptions based on external rather than internal data in order to verify the calibration of the internal model and to check that its specification is in line with generally accepted market practice.

Article 123

Profit and loss attribution

Insurance and reinsurance undertakings shall review, at least annually, the causes and sources of profits and losses for each major business unit.

They shall demonstrate how the categorisation of risk chosen in the internal model explains the causes and sources of profits and losses. The categorisation of risk and attribution of profits and losses shall reflect the risk profile of the insurance and reinsurance undertakings.

Article 124

Validation standards

Insurance and reinsurance undertakings shall have a regular cycle of model validation which includes monitoring the performance of the internal model, reviewing the ongoing appropriateness of its specification, and testing its results against experience.

The model validation process shall include an effective statistical process for validating the internal model which enables the insurance and reinsurance undertakings to demonstrate to their supervisory authorities that the resulting capital requirements are appropriate.

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The statistical methods applied shall test the appropriateness of the probability distribution forecast compared not only to loss experience but also to all material new data and information relating thereto.

The model validation process shall include an analysis of the stability of the internal model and in particular the testing of the sensitivity of the results of the internal model to changes in key underlying assumptions. It shall also include an assessment of the accuracy, completeness and appropriateness of the data used by the internal model.

Article 125

Documentation standards

Insurance and reinsurance undertakings shall document the design and operational details of their internal model.

The documentation shall demonstrate compliance with Articles 120 to 124.

The documentation shall provide a detailed outline of the theory, assumptions, and mathematical and empirical bases underlying the internal model.

The documentation shall indicate any circumstances under which the internal model does not work effectively.

Insurance and reinsurance undertakings shall document all major changes to their internal model, as set out in Article 115.

Article 126

External models and data

The use of a model or data obtained from a third party shall not be considered to be a justification for exemption from any of the requirements for the internal model set out in Articles 120 to 125.

Article 127

Implementing measures

The Commission shall, in order to ensure a harmonised approach to the use of internal models throughout the Community and to enhance the better assessment of the risk profile and management of the business of insurance and reinsurance undertakings, adopt implementing measures with respect to Articles 120 to 126.

Those measures, designed to amend non-essential elements of this Directive by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 301(3).