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 1

General provisions for the solvency capital requirement using the standard formula or an internal model

Article 100

General provisions

Member States shall require that insurance and reinsurance undertakings hold eligible own funds covering the Solvency Capital Requirement.

The Solvency Capital Requirement shall be calculated, either in accordance with the standard formula in Subsection 2 or using an internal model, as set out in Subsection 3.

Article 101

Calculation of the Solvency Capital Requirement

1 The Solvency Capital Requirement shall be calculated in accordance with paragraphs 2 to 5.

2 The Solvency Capital Requirement shall be calculated on the presumption that the undertaking will pursue its business as a going concern.

3 The Solvency Capital Requirement shall be calibrated so as to ensure that all quantifiable risks to which an insurance or reinsurance undertaking is exposed are taken into account. It shall cover existing business, as well as the new business expected to be written over the following 12 months. With respect to existing business, it shall cover only unexpected losses.

It shall correspond to the Value-at-Risk of the basic own funds of an insurance or reinsurance undertaking subject to a confidence level of 99,5 % over a one-year period.

4 The Solvency Capital Requirement shall cover at least the following risks:

a non-life underwriting risk;
b life underwriting risk;
c health underwriting risk;
d market risk;
e credit risk;
f operational risk.

Operational risk as referred to in point (f) of the first subparagraph shall include legal risks, and exclude risks arising from strategic decisions, as well as reputation risks.

5 When calculating the Solvency Capital Requirement, insurance and reinsurance undertakings shall take account of the effect of risk-mitigation techniques, provided that credit risk and other risks arising from the use of such techniques are properly reflected in the Solvency Capital Requirement.

Article 102

Frequency of calculation

1 Insurance and reinsurance undertakings shall calculate the Solvency Capital Requirement at least once a year and report the result of that calculation to the supervisory authorities.

Insurance and reinsurance undertakings shall hold eligible own funds which cover the last reported Solvency Capital Requirement.

Insurance and reinsurance undertakings shall monitor the amount of eligible own funds and the Solvency Capital Requirement on an ongoing basis.

If the risk profile of an insurance or reinsurance undertaking deviates significantly from the assumptions underlying the last reported Solvency Capital Requirement, the undertaking concerned shall recalculate the Solvency Capital Requirement without delay and report it to the supervisory authorities.

2 Where there is evidence to suggest that the risk profile of the insurance or reinsurance undertaking has altered significantly since the date on which the Solvency Capital Requirement was last reported, the supervisory authorities may require the undertaking concerned to recalculate the Solvency Capital Requirement.

Subsection 2

Solvency capital requirement standard formula

Article 103

Structure of the standard formula

The Solvency Capital Requirement calculated on the basis of the standard formula shall be the sum of the following items:

(a) the Basic Solvency Capital Requirement, as laid down in Article 104;

(b) the capital requirement for operational risk, as laid down in Article 107;

(c) the adjustment for the loss-absorbing capacity of technical provisions and deferred taxes, as laid down in Article 108.

Article 104

Design of the Basic Solvency Capital Requirement

1 The Basic Solvency Capital Requirement shall comprise individual risk modules, which are aggregated in accordance with point (1) of Annex IV.

It shall consist of at least the following risk modules:

a non-life underwriting risk;
b life underwriting risk;
c health underwriting risk;
d market risk;
e counterparty default risk.

2 For the purposes of points (a), (b) and (c) of paragraph 1, insurance or reinsurance operations shall be allocated to the underwriting risk module that best reflects the technical nature of the underlying risks.

3 The correlation coefficients for the aggregation of the risk modules referred to in paragraph 1, as well as the calibration of the capital requirements for each risk module, shall result in an overall Solvency Capital Requirement which complies with the principles set out in Article 101.

4 Each of the risk modules referred to in paragraph 1 shall be calibrated using a Value-at-Risk measure, with a 99,5 % confidence level, over a one-year period.

Where appropriate, diversification effects shall be taken into account in the design of each risk module.

5 The same design and specifications for the risk modules shall be used for all insurance and reinsurance undertakings, both with respect to the Basic Solvency Capital Requirement and to any simplified calculations as laid down in Article 109.

6 With regard to risks arising from catastrophes, geographical specifications may, where appropriate, be used for the calculation of the life, non-life and health underwriting risk modules.

7 Subject to approval by the supervisory authorities, insurance and reinsurance undertakings may, within the design of the standard formula, replace a subset of its parameters by parameters specific to the undertaking concerned when calculating the life, non-life and health underwriting risk modules.

Such parameters shall be calibrated on the basis of the internal data of the undertaking concerned, or of data which is directly relevant for the operations of that undertaking using standardised methods.

When granting supervisory approval, supervisory authorities shall verify the completeness, accuracy and appropriateness of the data used.

Article 105

Calculation of the Basic Solvency Capital Requirement

1 The Basic Solvency Capital Requirement shall be calculated in accordance with paragraphs 2 to 6.

2 The non-life underwriting risk module shall reflect the risk arising from non-life insurance obligations, in relation to the perils covered and the processes used in the conduct of business.

It shall take account of the uncertainty in the results of insurance and reinsurance undertakings related to the existing insurance and reinsurance obligations as well as to the new business expected to be written over the following 12 months.

It shall be calculated, in accordance with point (2) of Annex IV, as a combination of the capital requirements for at least the following sub-modules:

- a the risk of loss, or of adverse change in the value of insurance liabilities, resulting from fluctuations in the timing, frequency and severity of insured events, and in the timing and amount of claim settlements (non-life premium and reserve risk);
- b the risk of loss, or of adverse change in the value of insurance liabilities, resulting from significant uncertainty of pricing and provisioning assumptions related to extreme or exceptional events (non-life catastrophe risk).

3 The life underwriting risk module shall reflect the risk arising from life insurance obligations, in relation to the perils covered and the processes used in the conduct of business.

It shall be calculated, in accordance with point (3) of Annex IV, as a combination of the capital requirements for at least the following sub-modules:

- a the risk of loss, or of adverse change in the value of insurance liabilities, resulting from changes in the level, trend, or volatility of mortality rates, where an increase in the mortality rate leads to an increase in the value of insurance liabilities (mortality risk);
- b the risk of loss, or of adverse change in the value of insurance liabilities, resulting from changes in the level, trend, or volatility of mortality rates, where a decrease in the mortality rate leads to an increase in the value of insurance liabilities (longevity risk);
- c the risk of loss, or of adverse change in the value of insurance liabilities, resulting from changes in the level, trend or volatility of disability, sickness and morbidity rates (disability – morbidity risk);
- d the risk of loss, or of adverse change in the value of insurance liabilities, resulting from changes in the level, trend, or volatility of the expenses incurred in servicing insurance or reinsurance contracts (life-expense risk);
- e the risk of loss, or of adverse change in the value of insurance liabilities, resulting from fluctuations in the level, trend, or volatility of the revision rates applied to annuities, due to changes in the legal environment or in the state of health of the person insured (revision risk);
- f the risk of loss, or of adverse change in the value of insurance liabilities, resulting from changes in the level or volatility of the rates of policy lapses, terminations, renewals and surrenders (lapse risk);
- g the risk of loss, or of adverse change in the value of insurance liabilities, resulting from the significant uncertainty of pricing and provisioning assumptions related to extreme or irregular events (life-catastrophe risk).

4 The health underwriting risk module shall reflect the risk arising from the underwriting of health insurance obligations, whether it is pursued on a similar technical basis to that of life insurance or not, following from both the perils covered and the processes used in the conduct of business.

It shall cover at least the following risks:

a the risk of loss, or of adverse change in the value of insurance liabilities, resulting from changes in the level, trend, or volatility of the expenses incurred in servicing insurance or reinsurance contracts;

b the risk of loss, or of adverse change in the value of insurance liabilities, resulting from fluctuations in the timing, frequency and severity of insured events, and in the timing and amount of claim settlements at the time of provisioning;

c the risk of loss, or of adverse change in the value of insurance liabilities, resulting from the significant uncertainty of pricing and provisioning assumptions related to outbreaks of major epidemics, as well as the unusual accumulation of risks under such extreme circumstances.

5 The market risk module shall reflect the risk arising from the level or volatility of market prices of financial instruments which have an impact upon the value of the assets and liabilities of the undertaking. It shall properly reflect the structural mismatch between assets and liabilities, in particular with respect to the duration thereof.

It shall be calculated, in accordance with point (4) of Annex IV, as a combination of the capital requirements for at least the following sub-modules:

a the sensitivity of the values of assets, liabilities and financial instruments to changes in the term structure of interest rates, or in the volatility of interest rates (interest rate risk);

b the sensitivity of the values of assets, liabilities and financial instruments to changes in the level or in the volatility of market prices of equities (equity risk);

c the sensitivity of the values of assets, liabilities and financial instruments to changes in the level or in the volatility of market prices of real estate (property risk);

d the sensitivity of the values of assets, liabilities and financial instruments to changes in the level or in the volatility of credit spreads over the risk-free interest rate term structure (spread risk);

e the sensitivity of the values of assets, liabilities and financial instruments to changes in the level or in the volatility of currency exchange rates (currency risk);

f additional risks to an insurance or reinsurance undertaking stemming either from lack of diversification in the asset portfolio or from large exposure to default risk by a single issuer of securities or a group of related issuers (market risk concentrations).

6 The counterparty default risk module shall reflect possible losses due to unexpected default, or deterioration in the credit standing, of the counterparties and debtors of insurance and reinsurance undertakings over the following 12 months. The counterparty default risk module shall cover risk-mitigating contracts, such as reinsurance arrangements, securitisations and derivatives, and receivables from intermediaries, as well as any other credit exposures which are not covered in the spread risk sub-module. It shall take appropriate account of collateral or other security held by or for the account of the insurance or reinsurance undertaking and the risks associated therewith.

For each counterparty, the counterparty default risk module shall take account of the overall counterparty risk exposure of the insurance or reinsurance undertaking concerned to that counterparty, irrespective of the legal form of its contractual obligations to that undertaking.

Article 106

Calculation of the equity risk sub-module: symmetric adjustment mechanism

1 The equity risk sub-module calculated in accordance with the standard formula shall include a symmetric adjustment to the equity capital charge applied to cover the risk arising from changes in the level of equity prices.

2 The symmetric adjustment made to the standard equity capital charge, calibrated in accordance with Article 104(4), covering the risk arising from changes in the level of equity prices shall be based on a function of the current level of an appropriate equity index and a weighted average level of that index. The weighted average shall be calculated over an appropriate period of time which shall be the same for all insurance and reinsurance undertakings.

3 The symmetric adjustment made to the standard equity capital charge covering the risk arising from changes in the level of equity prices shall not result in an equity capital charge being applied that is more than 10 percentage points lower or 10 percentage points higher than the standard equity capital charge.

Article 107

Capital requirement for operational risk

1 The capital requirement for operational risk shall reflect operational risks to the extent they are not already reflected in the risk modules referred to in Article 104. That requirement shall be calibrated in accordance with Article 101(3).

2 With respect to life insurance contracts where the investment risk is borne by the policy holders, the calculation of the capital requirement for operational risk shall take account of the amount of annual expenses incurred in respect of those insurance obligations.

3 With respect to insurance and reinsurance operations other than those referred to in paragraph 2, the calculation of the capital requirement for operational risk shall take account of the volume of those operations, in terms of earned premiums and technical provisions which are held in respect of those insurance and reinsurance obligations. In this case, the capital requirement for operational risks shall not exceed 30 % of the Basic Solvency Capital Requirement relating to those insurance and reinsurance operations.

Article 108

Adjustment for the loss-absorbing capacity of technical provisions and deferred taxes

The adjustment referred to in Article 103(c) for the loss-absorbing capacity of technical provisions and deferred taxes shall reflect potential compensation of unexpected losses through a simultaneous decrease in technical provisions or deferred taxes or a combination of the two.

That adjustment shall take account of the risk mitigating effect provided by future discretionary benefits of insurance contracts, to the extent insurance and reinsurance undertakings can establish that a reduction in such benefits may be used to cover unexpected losses when they arise. The risk mitigating effect provided by future discretionary benefits shall be no higher than the sum of technical provisions and deferred taxes relating to those future discretionary benefits.

For the purpose of the second paragraph, the value of future discretionary benefits under adverse circumstances shall be compared to the value of such benefits under the underlying assumptions of the best-estimate calculation.

Article 109

Simplifications in the standard formula

Insurance and reinsurance undertakings may use a simplified calculation for a specific sub-module or risk module where the nature, scale and complexity of the risks they face justifies it and where it would be disproportionate to require all insurance and reinsurance undertakings to apply the standardised calculation.

Simplified calculations shall be calibrated in accordance with Article 101(3).

Article 110

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 replace a subset of the parameters used in the standard formula calculation by parameters specific to that undertaking when calculating the life, non-life and health underwriting risk modules, as set out in Article 104(7). Those specific parameters shall be calculated in such a way to ensure that the undertaking complies with Article 101(3).

Article 111

Implementing measures

1 In order to ensure that the same treatment is applied to all insurance and reinsurance undertakings calculating the Solvency Capital Requirement on the basis of the standard formula, or to take account of market developments, the Commission shall adopt implementing measures providing for the following:

a a standard formula in accordance with the provisions of Articles 101 and 103 to 109;

b any sub-modules necessary or covering more precisely the risks which fall under the respective risk modules referred to in Article 104 as well as any subsequent updates;

c the methods, assumptions and standard parameters to be used when calculating each of the risk modules or sub-modules of the Basic Solvency Capital Requirement laid down in Articles 104, 105 and 304, the symmetric adjustment mechanism and the appropriate period of time, expressed in the number of months, as referred to in Article 106, and the appropriate approach for integrating the method referred to in Article 304 in the Solvency Capital Requirement as calculated in accordance with the standard formula;

d the correlation parameters, including, if necessary, those set out in Annex IV, and the procedures for the updating of those parameters;

e where insurance and reinsurance undertakings use risk-mitigation techniques, the methods and assumptions to be used to assess the changes in the risk profile of the undertaking concerned and to adjust the calculation of the Solvency Capital Requirement;

f the qualitative criteria that the risk-mitigation techniques referred to in point (e) must fulfil in order to ensure that the risk has been effectively transferred to a third party;

g the methods and parameters to be used when assessing the capital requirement for operational risk set out in Article 107, including the percentage referred to in paragraph 3 of Article 107;

h the methods and adjustments to be used to reflect the reduced scope for risk diversification of insurance and reinsurance undertakings related to ring-fenced funds;

i the method to be used when calculating the adjustment for the loss-absorbing capacity of technical provisions or deferred taxes, as laid down in Article 108;

j the subset of standard parameters in the life, non-life and health underwriting risk modules that may be replaced by undertaking-specific parameters as set out in Article 104(7);

k the standardised methods to be used by the insurance or reinsurance undertaking to calculate the undertaking-specific parameters referred to in point (j), and any criteria with respect to the completeness, accuracy, and appropriateness of the data used that must be met before supervisory approval is given;

l the simplified calculations provided for specific sub-modules and risk modules, as well as the criteria that insurance and reinsurance undertakings, including captive insurance and reinsurance undertakings, shall be required to fulfil in order to be entitled to use each of those simplifications, as set out in Article 109;

m the approach to be used with respect to related undertakings within the meaning of Article 212 in the calculation of the Solvency Capital Requirement, in particular the calculation of the equity risk sub-module referred to in Article 105(5), taking into account the likely reduction in the volatility of the value of those related undertakings arising from the strategic nature of those investments and the influence exercised by the participating undertaking on those related undertakings.

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).

2 The Commission may adopt implementing measures laying down quantitative limits and asset eligibility criteria in order to address risks which are not adequately covered by a sub-module. Such implementing measures shall apply to assets covering technical provisions, excluding assets held in respect of life insurance contracts where the investment risk is borne by the policy holders. Those measures shall be reviewed by the Commission in the light of developments in the standard formula and financial markets.

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).

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.

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.

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 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.

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.

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.

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).