

AUGLÝSING

um afleidda reglugerð 2015/35/ESB, um stofnun og rekstur fyrirtækja á sviði váttrygginga og endurtrygginga.

1. gr.

Með reglugerð nr. 585/2017, um váttryggingastarfsemi, sem er birt í B-deild Stjórnartíðinda, öðlast eftirtaldir kaflar og viðaukar í framseldri reglugerð framkvæmdastjórnarinnar (ESB) 2015/35 frá 10. október 2014, um viðbætur við tilskipun Evrópuþingsins og ráðsins 2009/138/EB um stofnun og rekstur fyrirtækja á sviði váttrygginga og endurtrygginga (Gjaldþolsáætlun II), og reglugerð 2016/467/ESB frá 30. september 2015 sem breytti reglugerð 2015/35/ESB að því er varðar útreikning gjaldþolskröfu vegna tiltekinna eignaflokka, gildi hér á landi. Kaflarnir úr reglugerð 2015/35/ESB ásamt viðaukum eru birtir á ensku í fylgiskjali I með auglýsingu þessar:

Þáttur I:

I. kafli að undanskilinni 2. gr.
II. kafli
III. kafli
IV. kafli
V. kafli
VI. kafli
VII. kafli
VIII. kafli
X. kafli
XI. kafli
XV. kafli

Þáttur III:

I. kafli
II. kafli
III. kafli
IV. kafli

Viðaukar:

I, II, III,
IV og V
XI, XII
XIII, XIV,
XV, XVI,
XVII, XVIII,
og XIX.

Í 288. gr. reglugerðar 2015/35/ESB þýðir EIOPA (Evrópska váttrygginga- og lífeyrissjóðæftirlitsstofnunin): Eftirlitsstofnun EFTA.

Reglugerð 2016/467/ESB er birt á ensku í fylgiskjali II.

2. gr.

Auglýsing þessi er sett með stoð í 4. mgr. 30. gr., 12. mgr. 31. gr., 1. mgr. 50. gr., 3. mgr. 57. gr. laga nr. 100/2016, um váttryggingastarfsemi, sbr. heimild í 2. mgr. 4. gr., sbr. 2. mgr. 3. gr. laga nr. 15/2005, um Stjórnartíðindi og Lögbirtingablað, og öðlast þegar gildi.

Þetta er hér með gert almenningi kunnugt.

Fjármála- og efnahagsráðuneytinu, 16. júní 2017.

Benedikt Jóhannesson.

Sóley Ragnarsdóttir.

Fylgiskjal I.

II

(Non-legislative acts)

REGULATIONS

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

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

CHAPTER I

GENERAL PROVISIONS

SECTION 1

Definitions and general principles

Article 1

Definitions

For the purposes of this Regulation, the following definitions shall apply:

1. 'alternative valuation methods' means valuation methods that are consistent with Article 75 of Directive 2009/138/EC, other than those which solely use the quoted market prices for the same or similar assets or liabilities;
2. 'scenario analysis' means the analysis of the impact of a combination of adverse events;
3. 'health insurance obligation' means an insurance obligation that covers one or both of the following:
 - (i) the provision of medical treatment or care including preventive or curative medical treatment or care due to illness, accident, disability or infirmity, or financial compensation for such treatment or care,
 - (ii) financial compensation arising from illness, accident, disability or infirmity;
4. 'medical expense insurance obligation' means an insurance obligation that covers the provision or financial compensation referred to in point (3)(i);
5. 'income protection insurance obligation' means an insurance obligation that covers the financial compensation referred to in point (3)(ii) other than the financial compensation referred to in point (3)(i);
6. 'workers compensation insurance obligation' means an insurance obligation that covers the provision or financial compensation referred to in points (3)(i) and (ii) and which arises only from to accidents at work, industrial injury and occupational disease;
7. 'health reinsurance obligation' means a reinsurance obligation which arises from accepted reinsurance covering health insurance obligations;
8. 'medical expense reinsurance obligation' means a reinsurance obligation which arises from accepted reinsurance covering medical expense insurance obligations;

9. 'income protection reinsurance obligation' means a reinsurance obligation which arises from accepted reinsurance covering income protection insurance obligations;
10. 'workers' compensation reinsurance obligation' means a reinsurance obligation which arises from accepted reinsurance covering workers' compensation insurance obligations;
11. 'written premiums' means the premiums due to an insurance or reinsurance undertaking during a specified time period regardless of whether such premiums relate in whole or in part to insurance or reinsurance cover provided in a different time period;
12. 'earned premiums' means the premiums relating to the risk covered by the insurance or reinsurance undertaking during a specified time period;
13. 'surrender' means all possible ways to fully or partly terminate a policy, including the following:
 - (i) voluntary termination of the policy with or without the payment of a surrender value;
 - (ii) change of insurance or reinsurance undertaking by the policy holder;
 - (iii) termination of the policy resulting from the policy holder's refusal to pay the premium;
14. 'discontinuance' of an insurance policy means surrender, lapse without value, making a contract paid-up, automatic non-forfeiture provisions or exercising other discontinuity options or not exercising continuity options;
15. 'discontinuity options' mean all legal or contractual policyholder rights which allow that policyholder to fully or partly terminate, surrender, decrease, restrict or suspend insurance cover or permit the insurance policy to lapse;
16. 'continuity options' mean all legal or contractual policyholder rights which allow that policyholder to fully or partly establish, renew, increase, extend or resume insurance or reinsurance cover;
17. 'coverage of an internal model' means the risks that are reflected in the probability distribution forecast underlying the internal model;
18. 'scope of an internal model' means the risks that the internal model is approved to cover; the scope of an internal model may include both risks which are and which are not reflected in the standard formula for the Solvency Capital Requirement;
19. 'investment in a tradable security or another financial instrument based on repackaged loans' and 'securitisation position' means an exposure to a securitisation within the meaning of Article 4(1)(61) of Regulation (EU) No 575/2013 of the European Parliament and of the Council ⁽¹⁾;
20. 'resecuritisation position' means an exposure to a resecuritisation within the meaning of Article 4(1)(63) of Regulation (EU) No 575/2013;
21. 'originator' means an originator within the meaning of Article 4(1)(13) of Regulation (EU) No 575/2013;
22. 'sponsor' means sponsor within the meaning of Article 4(1)(14) of Regulation (EU) No 575/2013;
23. 'tranche' means tranche within the meaning of Article 4(1)(67) of Regulation (EU) No 575/2013;
24. 'central bank' means central bank within the meaning of Article 4(1)(46) of Regulation (EU) No 575/2013.
25. 'basis risk' means the risk resulting from the situation in which the exposure covered by the risk-mitigation technique does not correspond to the risk exposure of the insurance or reinsurance undertaking;
26. 'collateral arrangements' means arrangements under which collateral providers do one of the following:
 - (a) transfer full ownership of the collateral to the collateral taker for the purposes of securing or otherwise covering the performance of a relevant obligation;
 - (b) provide collateral by way of security in favour of, or to, a collateral taker, and the legal ownership of the collateral remains with the collateral provider or a custodian when the security right is established;
27. in relation to a set of items, 'all possible combinations of two' such items means all ordered pairs of items from that set;
28. 'pooling arrangement' means an arrangement whereby several insurance or reinsurance undertakings agree to share identified insurance risks in defined proportions. The parties insured by the members of the pooling arrangement are not themselves members of the pooling arrangement.
29. 'pool exposure of type A' means the risk ceded by an insurance or reinsurance undertaking to a pooling arrangement where the insurance or reinsurance undertaking is not a party to that pooling arrangement.

⁽¹⁾ Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012, (OJ L 176, 27.6.2013, p. 1).

30. 'pool exposure of type B' means the risk ceded by an insurance or reinsurance undertaking to another member of a pooling arrangement, where the insurance or reinsurance undertaking is a party to that pooling arrangement;
31. 'pool exposure of type C' means the risk ceded by an insurance or reinsurance undertaking which is a party to a pooling arrangement to another insurance or reinsurance undertaking which is not a member of that pooling arrangement.
32. 'deep market' means a market where transactions involving a large quantity of financial instruments can take place without significantly affecting the price of the instruments.
33. 'liquid market' means a market where financial instruments can readily be converted through an act of buying or selling without causing a significant movement in the price.
34. 'transparent market' means a market where current trade and price information is readily available to the public, in particular to the insurance or reinsurance undertakings.
35. 'future discretionary bonuses' and 'future discretionary benefits' mean future benefits other than index-linked or unit-linked benefits of insurance or reinsurance contracts which have one of the following characteristics:
 - (a) they are legally or contractually based on one or more of the following results:
 - (i) the performance of a specified group of contracts or a specified type of contract or a single contract;
 - (ii) the realised or unrealised investment return on a specified pool of assets held by the insurance or reinsurance undertaking;
 - (iii) the profit or loss of the insurance or reinsurance undertaking or fund corresponding to the contract;
 - (b) they are based on a declaration of the insurance or reinsurance undertaking and the timing or the amount of the benefits is at its full or partial discretion;
36. 'basic risk-free interest rate term structure' means a risk-free interest rate term structure which is derived in the same way as the relevant risk-free interest rate term structure to be used to calculate the best estimate referred to in Article 77(2) of Directive 2009/138/EC but without application of a matching adjustment or a volatility adjustment or a transitional adjustment to the relevant risk-free rate structure in accordance with Article 308c of that Directive;
37. 'matching adjustment portfolio' means a portfolio of insurance or reinsurance obligations to which the matching adjustment is applied and the assigned portfolio of assets as referred to in Article 77b(1)(a) of Directive 2009/138/EC.
38. 'SLT Health obligations' means health insurance obligations that are assigned to the lines of business for life insurance obligations in accordance with Article 55(1).
39. 'NSLT Health obligations' means health insurance obligations that are assigned to the lines of business for non-life insurance obligations in accordance with Article 55(1).
40. 'Collective investment undertaking' means an undertaking for collective investment in transferable securities (UCITS) as defined in Article 1(2) of Directive 2009/65/EC of the European Parliament and of the Council ⁽¹⁾ or an alternative investment fund (AIF) as defined in Article 4(1)(a) of Directive 2011/61/EU of the European Parliament and of the Council ⁽²⁾;
41. in relation to an insurance or reinsurance undertaking, 'major business unit' means a defined segment of the insurance and reinsurance undertaking that operates independently from other parts of the undertaking and has dedicated governance resources and procedures within the undertaking and which contains risks that are material in relation to the entire business of the undertaking;
42. in relation to an insurance or reinsurance group, 'major business unit' means a defined segment of the group that operates independently from other parts of the group and has dedicated governance resources and procedures within the group and which contains risks that are material in relation to the entire business of the group; any legal entity belonging to the group is a major business unit or consists of several major business units;

⁽¹⁾ Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS)(OJ L 302, 17.11.2009, p. 32).

⁽²⁾ Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on Alternative Investment Fund Managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010 (OJ L 174, 1.7.2011, p. 1).

43. 'administrative, management or supervisory body' shall mean, where a two-tier board system comprising of a management body and a supervisory body is provided for under national law, the management body or the supervisory body or both of those bodies as specified in the relevant national legislation or, where nobody is specified in the relevant national legislation, the management body;
44. 'aggregate maximum risk exposure' means the sum of the maximum payments, including expenses that the special purpose vehicles may incur, excluding expenses that meet all of the following criteria:
- (a) the special purpose vehicle has the right to require the insurance or reinsurance undertaking which has transferred risks to the special purpose vehicle to pay the expense;
 - (b) the special purpose vehicle is not required to pay the expense unless and until an amount equal to the expense has been received from the insurance or reinsurance undertaking which has transferred the risks to the special purpose vehicle;
 - (c) the insurance or reinsurance undertaking which has transferred risks to the special purpose vehicle does not include the expense as an amount recoverable from the special purpose vehicle in accordance with Article 41 of this Regulation.
45. 'existing insurance or reinsurance contract' means an insurance or reinsurance contract for which insurance or reinsurance obligations have been recognised;
46. 'the expected profit included in future premiums' means the expected present value of future cash flows which result from the inclusion in technical provisions of premiums relating to existing insurance and reinsurance contracts that are expected to be received in the future, but that may not be received for any reason, other than because the insured event has occurred, regardless of the legal or contractual rights of the policyholder to discontinue the policy.
47. 'mortgage insurance' means credit insurance that provides cover to lenders in case their mortgage loans default.
48. 'subsidiary undertaking' means any subsidiary undertaking within the meaning of Article 22(1) and (2) of Directive 2013/34/EU, including subsidiaries thereof;
49. 'related undertaking' either a subsidiary undertaking or other undertaking in which a participation is held, or an undertaking linked with another undertaking by a relationship as set out in Article 22(7) of Directive 2013/34/EU;
50. 'regulated undertaking' means 'regulated entity' within the meaning of Article 2(4) of Directive 2002/87/EC of the European Parliament and of the Council ⁽¹⁾;
51. 'non-regulated undertaking' means any undertaking other than those listed in Article 2(4) of Directive 2002/87/EC;
52. 'non-regulated undertaking carrying out financial activities' means a non-regulated undertaking which carries one or more of the activities referred to in Annex I of Directive 2013/36/EU of the European Parliament and of the Council ⁽²⁾ where those activities constitute a significant part of its overall activity;
53. 'ancillary services undertaking' means a non-regulated undertaking the principal activity of which consists of owning or managing property, managing data-processing services, health and care services or any other similar activity which is ancillary to the principal activity of one or more insurance or reinsurance undertakings.
54. 'UCITS management company' means a management company within the meaning of Article 2(1)(b) of Directive 2009/65/EC or an investment company authorised pursuant to Article 27 of that Directive provided that it has not designated a management company pursuant to that Directive;
55. 'alternative investment fund manager' means an alternative investment funds manager within the meaning of Article 4(1)(b) of Directive 2011/61/EU;
56. 'institutions for occupational retirement provision' means institutions within the meaning of Article 6(a) of Directive 2003/41/EC of the European Parliament and of the Council ⁽³⁾;
57. 'domestic insurance undertaking' means an undertaking authorised and supervised by third-country supervisory authorities which would require authorisation as an insurance undertaking in accordance with Article 14 of Directive 2009/138/EC if its head office were situated in the Union;

⁽¹⁾ Directive 2002/87/EC of the European Parliament and of the Council of 16 December 2002 on the supplementary supervision of credit institutions, insurance undertakings and investment firms in a financial conglomerate and amending Council Directives 73/239/EEC, 79/267/EEC, 92/49/EEC, 92/96/EEC, 93/6/EEC and 93/22/EEC, and Directives 98/78/EC and 2000/12/EC of the European Parliament and of the Council (OJ L 35, 11.2.2003, p. 1).

⁽²⁾ Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC (OJ L 176, 27.6.2013, p. 338).

⁽³⁾ Directive 2003/41/EC of the European Parliament and of the Council of 3 June 2003 on the activities and supervision of institutions for occupational retirement provision (OJ L 235, 23.9.2003, p. 10).

58. 'domestic reinsurance undertaking' means an undertaking authorised and supervised by third-country supervisory authorities which would require authorisation as a reinsurance undertaking in accordance with Article 14 of Directive 2009/138/EC if its head offices were situated in the Union.

Article 2

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SECTION 2

External credit assessments

Article 3

Association of credit assessments to credit quality steps

The scale of credit quality steps referred to in Article 109a(1) of Directive 2009/138/EC shall include credit quality steps 0 to 6.

Article 4

General requirements on the use of credit assessments

1. Insurance or reinsurance undertakings may use an external credit assessment for the calculation of the Solvency Capital Requirement in accordance with the standard formula only where it has been issued by an External Credit Assessment Institution (ECAI) or endorsed by an ECAI in accordance with Regulation (EC) No 1060/2009 of the European Parliament and of the Council ⁽¹⁾.
2. Insurance or reinsurance undertakings shall nominate one or more ECAI to be used for the calculation of the Solvency Capital Requirement according to the standard formula.
3. The use of credit assessments shall be consistent and such assessments shall not be used selectively
4. When using credit assessments, insurance and reinsurance undertakings shall comply with all of the following requirements:
 - (a) where an insurance or reinsurance undertaking decides to use the credit assessments produced by a nominated ECAI for a certain class of items, it shall use those credit assessments consistently for all items belonging to that class;
 - (b) where an insurance or reinsurance undertaking decides to use the credit assessments produced by a nominated ECAI, it shall use them in a continuous and consistent way over time;
 - (c) an insurance or reinsurance undertaking shall only use nominated ECAI credit assessments that take into account all amounts of principal and interest owed to it;
 - (d) where only one credit assessment is available from a nominated ECAI for a rated item, that credit assessment shall be used to determine the capital requirements for that item;
 - (e) where two credit assessments are available from nominated ECAs and they correspond to different parameters for a rated item, the assessment generating the higher capital requirement shall be used;
 - (f) where more than two credit assessments are available from nominated ECAs for a rated item, the two assessments generating the two lowest capital requirements shall be used. If the two lowest capital requirements are different, the assessment generating the higher capital requirement of those two credit assessments shall be used. If the two lowest capital requirements are the same, the assessment generating that capital requirement shall be used;
 - (g) where available, insurance and reinsurance undertakings shall use both solicited and unsolicited credit assessments.

⁽¹⁾ Regulation (EC) No 1060/2009 of the European Parliament and of the Council of 16 September 2009 on credit rating agencies (OJ L 302, 17.11.2009, p. 1).

5. Where an item is part of the larger or more complex exposures of the insurance or reinsurance undertaking, the undertaking shall produce its own internal credit assessment of the item and allocate it to one of the seven steps in a credit quality assessment scale. Where the own internal credit assessment generates a lower capital requirement than the one generated by the credit assessments available from nominated ECAIs, then the own internal credit assessment shall not be taken into account for the purposes of this Regulation.

6. For the purposes of paragraph 5, the larger or more complex exposures of an undertaking shall include type 2 securitisation positions as referred to in Article 177(3) and resecuritisation positions.

Article 5

Issuers and issue credit assessment

1. Where a credit assessment exists for a specific issuing program or facility to which the item constituting the exposure belongs, that credit assessment shall be used.

2. Where no directly applicable credit assessment exists for a certain item, but a credit assessment exists for a specific issuing program or facility to which the item constituting the exposure does not belong or a general credit assessment exists for the issuer, that credit assessment shall be used in either of the following cases:

- (a) it produces the same or higher capital requirement than would otherwise be the case and the exposure in question ranks *pari passu* or junior in all respects to the specific issuing program or facility or to senior unsecured exposures of that issuer, as relevant;
- (b) it produces the same or lower capital requirement than would otherwise be the case and the exposure in question ranks *pari passu* or senior in all respects to the specific issuing program or facility or to senior unsecured exposures of that issuer, as relevant.

In all other cases, insurance or reinsurance undertakings shall consider that there is no credit assessment by a nominated ECAI available for the exposure.

3. Credit assessments for issuers within a corporate group shall not be used as the credit assessment for another issuer within the same corporate group.

Article 6

Double credit rating for securitisation positions

By way of derogation from Article 4(4)(d), where only one credit assessment is available from a nominated ECAI for a securitisation position, that credit assessment shall not be used. The capital requirements for that item shall be derived as if no credit assessment by a nominated ECAI is available.

CHAPTER II

VALUATION OF ASSETS AND LIABILITIES

Article 7

Valuation assumptions

Insurance and reinsurance undertakings shall value assets and liabilities based on the assumption that the undertaking will pursue its business as a going concern.

Article 8

Scope

Articles 9 to 16 shall apply to the recognition and valuation of assets and liabilities, other than technical provisions.

*Article 9***Valuation methodology — general principles**

1. Insurance and reinsurance undertakings shall recognise assets and liabilities in conformity with the international accounting standards adopted by the Commission in accordance with Regulation (EC) No 1606/2002.
2. Insurance and reinsurance undertakings shall value assets and liabilities in accordance with international accounting standards adopted by the Commission pursuant to Regulation (EC) No 1606/2002 provided that those standards include valuation methods that are consistent with the valuation approach set out in Article 75 of Directive 2009/138/EC. Where those standards allow for the use of more than one valuation method, insurance and reinsurance undertakings shall only use valuation methods that are consistent with Article 75 of Directive 2009/138/EC.
3. Where the valuation methods included in international accounting standards adopted by the Commission in accordance with Regulation (EC) No 1606/2002 are not consistent either temporarily or permanently with the valuation approach set out in Article 75 of Directive 2009/138/EC, insurance and reinsurance undertakings shall use other valuation methods that are deemed to be consistent with Article 75 of Directive 2009/138/EC.
4. By way of derogation from paragraphs 1 and 2, and in particular by respecting the principle of proportionality laid down in paragraphs 3 and 4 of Article 29 of Directive 2009/138/EC, insurance and reinsurance undertakings may recognise and value an asset or a liability based on the valuation method it uses for preparing its annual or consolidated financial statements provided that:
 - (a) the valuation method is consistent with Article 75 of Directive 2009/138/EC;
 - (b) the valuation method is proportionate with respect to the nature, scale and complexity of the risks inherent in the business of the undertaking;
 - (c) the undertaking does not value that asset or liability using international accounting standards adopted by the Commission in accordance with Regulation (EC) No 1606/2002 in its financial statements;
 - (d) valuing assets and liabilities using international accounting standards would impose costs on the undertaking that would be disproportionate with respect to the total administrative expenses.
5. Insurance and reinsurance undertakings shall value individual assets separately.
6. Insurance and reinsurance undertakings shall value individual liabilities separately.

*Article 10***Valuation methodology — valuation hierarchy**

1. Insurance and reinsurance undertakings shall, when valuing assets and liabilities in accordance with Article 9 (1), (2) and (3), follow the valuation hierarchy set out in paragraphs 2 to 7, taking into account the characteristics of the asset or liability where market participants would take those characteristics into account when pricing the asset or liability at the valuation date, including the condition and location of the asset or liability and restrictions, if any, on the sale or use of the asset.
2. As the default valuation method insurance and reinsurance undertakings shall value assets and liabilities using quoted market prices in active markets for the same assets or liabilities.
3. Where the use of quoted market prices in active markets for the same assets or liabilities is not possible, insurance and reinsurance undertakings shall value assets and liabilities using quoted market prices in active markets for similar assets and liabilities with adjustments to reflect differences. Those adjustments shall reflect factors specific to the asset or liability including all of the following:
 - (a) the condition or location of the asset or liability;
 - (b) the extent to which inputs relate to items that are comparable to the asset or liability; and
 - (c) the volume or level of activity in the markets within which the inputs are observed.
4. Insurance and reinsurance undertakings' use of quoted market prices shall be based on the criteria for active markets, as defined in international accounting standards adopted by the Commission in accordance with Regulation (EC) No 1606/2002.
5. Where the criteria referred to in paragraph 4 are not satisfied, insurance and reinsurance undertakings shall, unless otherwise provided in this Chapter, use alternative valuation methods.

6. When using alternative valuation methods, insurance and reinsurance undertakings shall rely as little as possible on undertaking-specific inputs and make maximum use of relevant market inputs including the following:

- (a) quoted prices for identical or similar assets or liabilities in markets that are not active;
- (b) inputs other than quoted prices that are observable for the asset or liability, including interest rates and yield curves observable at commonly quoted intervals, implied volatilities and credit spreads;
- (c) market-corroborated inputs, which may not be directly observable, but are based on or supported by observable market data.

All those markets inputs shall be adjusted for the factors referred to in paragraph 3.

To the extent that relevant observable inputs are not available including in circumstances where there is little, if any, market activity for the asset or liability at the valuation date, undertakings shall use unobservable inputs reflecting the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk. Where unobservable inputs are used, undertakings shall adjust undertaking-specific data if reasonable available information indicates that other market participants would use different data or there is something particular to the undertaking that is not available to other market participants.

When assessing the assumptions about risk referred to in this paragraph undertakings shall take into account the risk inherent in the specific valuation technique used to measure fair value and the risk inherent in the inputs of that valuation technique.

7. Undertakings shall use valuation techniques that are consistent with one or more of the following approaches when using alternative valuation methods:

- (a) market approach, which uses prices and other relevant information generated by market transactions involving identical or similar assets, liabilities or group of assets and liabilities. Valuation techniques consistent with the market approach include matrix pricing.
- (b) income approach, which converts future amounts, such as cash flows or income or expenses, to a single current amount. The fair value shall reflect current market expectations about those future amounts. Valuation techniques consistent with the income approach include present value techniques, option pricing models and the multi-period excess earnings method;
- (c) cost approach or current replacement cost approach reflects the amount that would be required currently to replace the service capacity of an asset. From the perspective of a market participant seller, the price that would be received for the asset is based on the cost to a market participant buyer to acquire or construct a substitute asset of comparable quality adjusted for obsolescence.

Article 11

Recognition of contingent liabilities

1. Insurance and reinsurance undertakings shall recognise contingent liabilities, as defined in accordance with Article 9 of this Regulation, that are material, as liabilities.

2. Contingent liabilities shall be material where information about the current or potential size or nature of those liabilities could influence the decision-making or judgement of the intended user of that information, including the supervisory authorities.

Article 12

Valuation methods for goodwill and intangible assets

Insurance and reinsurance undertakings shall value the following assets at zero:

1. goodwill;
2. intangible assets other than goodwill, unless the intangible asset can be sold separately and the insurance and reinsurance undertaking can demonstrate that there is a value for the same or similar assets that has been derived in accordance with Article 10(2), in which case the asset shall be valued in accordance with Article 10.

*Article 13***Valuation methods for related undertakings**

1. For the purposes of valuing the assets of individual insurance and reinsurance undertakings, insurance and reinsurance undertakings shall value holdings in related undertakings, within the meaning of Article 212(1)(b) of Directive 2009/138/EC in accordance with the following hierarchy of methods:

- (a) using the default valuation method set out in Article 10(2) of this Regulation;
- (b) using the adjusted equity method referred to in paragraph 3 where valuation in accordance with point (a) is not possible;
- (c) using either the valuation method set out in Article 10(3) of this Regulation or alternative valuation methods in accordance with Article 10(5) of this Regulation provided that all of the following conditions are fulfilled:
 - (i) neither valuation in accordance with point (a) nor point (b) is possible;
 - (ii) the undertaking is not a subsidiary undertaking, as defined in Article 212(2) of Directive 2009/138/EC.

2. By way of derogation from paragraph 1, for the purposes of valuing the assets of individual insurance and reinsurance undertakings, insurance and reinsurance undertakings shall value holdings in the following undertakings at zero:

- (a) undertakings that are excluded from the scope of the group supervision under Article 214(2)(a) of Directive 2009/138/EC;
- (b) undertakings that are deducted from the own funds eligible for the group solvency in accordance with Article 229 of Directive 2009/138/EC.

3. The adjusted equity method referred to in point (b) of paragraph 1 shall require the participating undertaking to value its holdings in related undertakings based on the share of the excess of assets over liabilities of the related undertaking held by the participating undertaking.

4. When calculating the excess of assets over liabilities for related undertakings, the participating undertaking shall value the undertaking's individual assets and liabilities in accordance with Articles 75 of Directive 2009/138/EC and, where the related undertaking is an insurance or reinsurance undertaking or a special purpose vehicle referred to in Article 211 of that Directive, technical provisions in accordance Articles 76 to 85 of that Directive.

5. When calculating the excess of assets over liabilities for related undertakings other than insurance or reinsurance undertakings, the participating undertaking may consider the equity method as prescribed in international accounting standards adopted by the Commission in accordance with Regulation (EC) No 1606/2002 to be consistent with Articles 75 of Directive 2009/138/EC, where valuation of individual assets and liabilities in accordance with paragraph 4 is not practicable. In such cases, the participating undertaking shall deduct from the value of the related undertaking the value of goodwill and other intangible assets that would be valued at zero in accordance with Article 12(2) of this Regulation.

6. Where the criteria referred to in Article 9(4) of this Regulation are satisfied, and where the use of the valuation methods referred to in paragraphs (a) and (b) is not possible, holdings in related undertakings may be valued based on the valuation method the insurance or reinsurance undertakings uses for preparing its annual or consolidated financial statements. In such cases, the participating undertaking shall deduct from the value of the related undertaking the value of goodwill and other intangible assets that would be valued at zero in accordance with Article 12(2) of this Regulation.

*Article 14***Valuation methods for specific liabilities**

1. Insurance and reinsurance undertakings shall value financial liabilities, as referred to in international accounting standards adopted by the Commission in accordance with Regulation (EC) No 1606/2002, in accordance with Article 9 of this Regulation upon initial recognition. There shall be no subsequent adjustment to take account of the change in own credit standing of the insurance or reinsurance undertaking after initial recognition.

2. Insurance and reinsurance undertakings shall value contingent liabilities that have been recognised in accordance with Article 11. The value of contingent liabilities shall be equal to the expected present value of future cash flows required to settle the contingent liability over the lifetime of that contingent liability, using the basic risk-free interest rate term structure.

*Article 15***Deferred taxes**

1. Insurance and reinsurance undertakings shall recognise and value deferred taxes in relation to all assets and liabilities, including technical provisions, that are recognised for solvency or tax purposes in accordance with Article 9.
2. Notwithstanding paragraph 1, insurance and reinsurance undertakings shall value deferred taxes, other than deferred tax assets arising from the carryforward of unused tax credits and the carryforward of unused tax losses, on the basis of the difference between the values ascribed to assets and liabilities recognised and valued in accordance with Article 75 of Directive 2009/138/EC and in the case of technical provisions in accordance with Articles 76 to 85 of that Directive and the values ascribed to assets and liabilities as recognised and valued for tax purposes.
3. Insurance and reinsurance undertaking shall only ascribe a positive value to deferred tax assets where it is probable that future taxable profit will be available against which the deferred tax asset can be utilised, taking into account any legal or regulatory requirements on the time limits relating to the carryforward of unused tax losses or the carryforward of unused tax credits.

*Article 16***Exclusion of valuation methods**

1. Insurance and reinsurance undertakings shall not value financial assets or financial liabilities at cost or amortized cost.
2. Insurance and reinsurance undertakings shall not apply valuation models that value at the lower of the carrying amount and fair value less costs to sell.
3. Insurance and reinsurance undertakings shall not value property, investment property, plant and equipment with cost models where the asset value is determined as cost less depreciation and impairment.
4. Insurance and reinsurance undertakings which are lessees in a financial lease or lessors shall comply with all of the following when valuing assets and liabilities in a lease arrangement:
 - (a) lease assets shall be valued at fair value;
 - (b) for the purposes of determining the present value of the minimum lease payments market consistent inputs shall be used and no subsequent adjustments to take account of the own credit standing of the undertaking shall be made;
 - (c) valuation at depreciated cost shall not be applied.
5. Insurance and reinsurance undertakings shall adjust the net realisable value for inventories by the estimated cost of completion and the estimated costs necessary to make the sale where those costs are material. Those costs shall be considered to be material where their non-inclusion could influence the decision-making or the judgement of the users of the balance sheet, including the supervisory authorities. Valuation at cost shall not be applied.
6. Insurance and reinsurance undertakings shall not value non-monetary grants at a nominal amount.
7. When valuing biological assets, insurance and reinsurance undertakings shall adjust the value by adding the estimated costs to sell if the estimated costs to sell are material.

CHAPTER III

RULES RELATING TO TECHNICAL PROVISIONS

SECTION 1

General provisions*Article 17***Recognition and derecognition of insurance and reinsurance obligations**

For the calculation of the best estimate and the risk margin of technical provisions, insurance and reinsurance undertakings shall recognise an insurance or reinsurance obligation at the date the undertaking becomes a party to the contract that gives rise to the obligation or the date the insurance or reinsurance cover begins, whichever date occurs earlier. Insurance and reinsurance undertakings shall only recognise the obligations within the boundary of the contract.

Insurance and reinsurance undertakings shall derecognise an insurance or reinsurance obligation only when it is extinguished, discharged, cancelled or expires.

Article 18

Boundary of an insurance or reinsurance contract

1. The boundaries of an insurance or reinsurance contract shall be defined in accordance with paragraphs 2 to 7.
2. All obligations relating to the contract, including obligations relating to unilateral rights of the insurance or reinsurance undertaking to renew or extend the scope of the contract and obligations that relate to paid premiums, shall belong to the contract unless otherwise stated in paragraphs 3 to 6.
3. Obligations which relate to insurance or reinsurance cover provided by the undertaking after any of the following dates do not belong to the contract, unless the undertaking can compel the policyholder to pay the premium for those obligations:
 - (a) the future date where the insurance or reinsurance undertaking has a unilateral right to terminate the contract;
 - (b) the future date where the insurance or reinsurance undertaking has a unilateral right to reject premiums payable under the contract;
 - (c) the future date where the insurance or reinsurance undertaking has a unilateral right to amend the premiums or the benefits payable under the contract in such a way that the premiums fully reflect the risks.

Point (c) shall be deemed to apply where an insurance or reinsurance undertaking has a unilateral right to amend at a future date the premiums or benefits of a portfolio of insurance or reinsurance obligations in such a way that the premiums of the portfolio fully reflect the risks covered by the portfolio.

However, in the case of life insurance obligations where an individual risk assessment of the obligations relating to the insured person of the contract is carried out at the inception of the contract and that assessment cannot be repeated before amending the premiums or benefits, insurance and reinsurance undertakings shall assess at the level of the contract whether the premiums fully reflect the risk for the purposes of point (c).

Insurance and reinsurance undertakings shall not take into account restrictions of the unilateral right as referred to in points (a), (b) and (c) of this paragraph and limitations of the extent to which premiums or benefits can be amended that have no discernible effect on the economics of the contract.

4. Where the insurance or reinsurance undertaking has a unilateral right as referred to in paragraph 3 that only relates to a part of the contract, the same principles as defined in paragraph 3 shall apply to that part of the contract.
5. Obligations that do not relate to premiums which have already been paid do not belong to an insurance or reinsurance contract, unless the undertaking can compel the policyholder to pay the future premium, and where all of the following requirements are met:
 - (a) the contract does not provide compensation for a specified uncertain event that adversely affects the insured person;
 - (b) the contract does not include a financial guarantee of benefits.

For the purpose of points (a) and (b), insurance and reinsurance undertakings shall not take into account coverage of events and guarantees that have no discernible effect on the economics of the contract.

6. Where an insurance or reinsurance contract can be unbundled into two parts and where one of those parts meets the requirements set out in points (a) and (b) of paragraph 5, any obligations that do not relate to the premiums of that part and which have already been paid do not belong to the contract, unless the undertaking can compel the policyholder to pay the future premium of that part.
7. Insurance and reinsurance undertakings shall, for the purposes of paragraph 3, only consider that premiums fully reflect the risks covered by a portfolio of insurance or reinsurance obligations, where there is no circumstance under which the amount of the benefits and expenses payable under the portfolio exceeds the amount of the premiums payable under the portfolio.

SECTION 2

Data quality

Article 19

Data used in the calculation of technical provisions

1. Data used in the calculation of the technical provisions shall only be considered to be complete for the purpose of Article 82 of Directive 2009/138/EC where all of the following conditions are met:

- (a) the data include sufficient historical information to assess the characteristics of the underlying risks and to identify trends in the risks;
- (b) the data are available for each of the relevant homogeneous risk groups used in the calculation of the technical provisions and no relevant data is excluded from being used in the calculation of the technical provisions without justification.

2. Data used in the calculation of the technical provisions shall only be considered to be accurate for the purpose of Article 82 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.

3. Data used in the calculation of the technical provisions shall only be considered to be appropriate for the purpose of Article 82 of Directive 2009/138/EC where all of the following conditions are met:

- (a) the data are consistent with the purposes for which they will be used;
- (b) the amount and nature of the data ensure that the estimations made in the calculation of the technical provisions 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 calculation of the technical provisions;
- (d) the data appropriately reflect the risks to which the insurance or reinsurance undertaking is exposed with regard to its insurance and reinsurance obligations;
- (e) the data were collected, processed and applied in a transparent and structured manner, based on a documented process that comprises all of the following:
 - (i) the definition of criteria for the quality of data and an assessment of the quality of data, including specific qualitative and quantitative standards for different data sets;
 - (ii) the use of 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 updates and the circumstances that trigger additional updates;
- (f) Insurance or reinsurance undertakings shall ensure that their data are used consistently over time in the calculation of the technical provisions.

For the purposes of point (b), an estimation error in the calculation of the technical provisions shall be considered to be material where it could influence the decision-making or the judgement of the users of the calculation result, including the supervisory authorities.

4. Insurance and reinsurance undertakings may use data from an external source provided that, in addition to fulfilling the requirements set out in paragraphs 1 to 4, all of the following requirements are met:

- (a) insurance or reinsurance undertakings are able to demonstrate that the use of that data is more suitable than the use of data which are exclusively available from an internal source;
- (b) insurance or reinsurance undertakings know the origin of that data and the assumptions or methodologies used to process that data;

- (c) insurance or reinsurance undertakings identify any trends in that data and the variation, over time or across data, of the assumptions or methodologies in the use of that data;
- (d) insurance or reinsurance undertakings are able to demonstrate that the assumptions and methodologies referred to in points (b) and (c) reflect the characteristics of the insurance or reinsurance undertaking's portfolio of insurance and reinsurance obligations.

Article 20

Limitations of data

Where data does not comply with Article 19, insurance and reinsurance undertakings shall document appropriately the limitations of the data including a description of whether and how such limitations will be remedied and of the functions within the system of governance of the insurance or reinsurance undertaking responsible for that process. The data, before adjustments to remedy limitations are made to it, shall be recorded and stored appropriately.

Article 21

Appropriate use of approximations to calculate the best estimate

Where insurance and reinsurance undertakings have insufficient data of appropriate quality to apply a reliable actuarial method, they may use appropriate approximations to calculate the best estimate provided that all of the following requirements are met:

- (a) the insufficiency of data is not due to inadequate internal processes and procedures of collecting, storing or validating data used for the valuation of technical provisions;
- (b) the insufficiency of data cannot be remedied by the use of external data;
- (c) it would not be practicable for the undertaking to adjust the data to remedy the insufficiency.

SECTION 3

Methodologies to calculate technical provisions

Subsection 1

Assumptions underlying the calculation of technical provisions

Article 22

General provisions

1. Assumptions shall only be considered to be realistic for the purposes of Article 77(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 used, taking into account the significance of the assumption, the uncertainty involved in the assumption as well as relevant alternative assumptions;
- (b) the circumstances under which the assumptions would be considered false can be clearly identified;
- (c) unless otherwise provided in this Chapter, the assumptions are based on the characteristics of the portfolio of insurance and reinsurance obligations, where possible regardless of the insurance or reinsurance undertaking holding the portfolio;
- (d) insurance and reinsurance undertakings use the assumptions consistently over time and within homogeneous risk groups and lines of business, without arbitrary changes;
- (e) the assumptions adequately reflect any uncertainty underlying the cash flows.

For the purpose of point (c), insurance and reinsurance undertakings shall only use information specific to the undertaking, including information on claims management and expenses, where that information better reflects the characteristics of the portfolio of insurance or reinsurance obligations than information that is not limited to the specific undertaking or where the calculation of technical provisions in a prudent, reliable and objective manner without using that information is not possible.

2. Assumptions shall only be used for the purpose of Article 77(3) of Directive 2009/138/EC where they comply with paragraph 1 of this Article.

3. Insurance and reinsurance undertakings shall set assumptions on future financial market parameters or scenarios that are appropriate and consistent with Article 75 of Directive 2009/138/EC. Where insurance and reinsurance undertakings use a model to produce projections of future financial market parameters, it shall comply with all of the following requirements:

- (a) it generates asset prices that are consistent with asset prices observed in financial markets;
- (b) it assumes no arbitrage opportunity;
- (c) the calibration of the parameters and scenarios is consistent with the relevant risk-free interest rate term structure used to calculate the best estimate as referred to in Article 77(2) of Directive 2009/138/EC.

Article 23

Future management actions

1. Assumptions on future management actions shall only be considered to be realistic for the purposes of Article 77(2) of Directive 2009/138/EC where they meet all of the following conditions:

- (a) the assumptions on future management actions are determined in an objective manner;
- (b) assumed future management actions are consistent with the insurance or reinsurance undertaking's current business practice and business strategy, including the use of risk-mitigation techniques; where there is sufficient evidence that the undertaking will change its practices or strategy, the assumed future 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 requirements applicable to the undertaking;
- (e) assumed future management actions take account of any public indications by the insurance or reinsurance undertaking as to the actions that it would expect to take or not take.

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

- (i) a comparison of assumed future management actions with management actions taken previously by the insurance or reinsurance undertaking;
- (ii) a comparison of future management actions taken into account in the current and in the past calculations of the best estimate;
- (iii) an assessment of the impact of changes in the assumptions on future management actions on the value of the technical provisions.

Insurance and reinsurance undertakings shall be able to explain any relevant deviations in relation to points (i) and (ii) upon request of the supervisory authorities and, where changes in an assumption on future management actions have a significant impact on the technical provisions, the reasons for that sensitivity and how the sensitivity is taken into account in the decision-making process of the insurance or reinsurance undertaking.

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, which provides for all of the following:

- (a) the identification of future management actions that are relevant to the valuation of the technical provisions;
- (b) the identification of the specific circumstances in which the insurance or reinsurance undertaking would reasonably expect to carry out each respective future management action referred to in point (a);
- (c) the identification of the specific circumstances in which the insurance or reinsurance undertaking may not be able to carry out each respective future management action referred to in point (a), and a description of how those circumstances are considered in the calculation of technical provisions;
- (d) the order in which future management actions referred to in point (a) would be carried out and the governance requirements applicable to those future management actions;
- (e) a description of any on-going work required to ensure that the insurance or reinsurance undertaking is in a position to carry out each respective future management action referred to in point (a);

- (f) a description of how the future management actions referred to in point (a) have been reflected in the calculation of the best estimate;
 - (g) a description of the applicable internal reporting procedures that cover the future management actions referred to in point (a) included in the calculation of the best estimate;
4. Assumptions about future management actions shall take account of the time needed to implement the management actions and any expenses caused by them.
5. The system for ensuring the transmission of information shall only be considered to be effective for the purpose of Article 41(1) of Directive 2009/138/EC where the reporting procedures referred to in point (g) of paragraph 3 of this Article include at least an annual communication to the administrative, supervisory or management body.

Article 24

Future discretionary benefits

Where future discretionary benefits depend on the assets held by the insurance or reinsurance undertaking, undertakings shall base the calculation of the best estimate on the assets currently held by the undertakings and shall assume future changes of their asset allocation in accordance with Article 23. The assumptions on the future returns of the assets shall be consistent with the relevant risk-free interest rate term structure, including where applicable a matching adjustment, a volatility adjustment, or a transitional measure on the risk-free rate, and the valuation of the assets in accordance with Article 75 of Directive 2009/138/EC.

Article 25

Separate calculation of the future discretionary benefits

When calculating technical provisions, insurance and reinsurance undertakings shall determine separately the value of future discretionary benefits.

Article 26

Policyholder behaviour

When determining the likelihood that policy holders will exercise contractual options, including lapses and surrenders, insurance and reinsurance undertakings shall conduct an analysis of past policyholder behaviour and a prospective assessment of expected policyholder behaviour. That analysis shall take into account all of the following:

- (a) how beneficial the exercise of the options was and will be to the policy holders under circumstances at the time of exercising the option;
- (b) the influence of past and future economic conditions;
- (c) the impact of past and future management actions;
- (d) any other circumstances that are likely to influence decisions by policyholders on whether to exercise the option.

The likelihood shall only be considered to be independent of the elements referred to in points (a) to (d) where there is empirical evidence to support such an assumption.

Subsection 2

Information underlying the calculation of best estimates

Article 27

Credibility of information

Information shall only be considered to be credible for the purposes of Article 77(2) of Directive 2009/138/EC where insurance and reinsurance undertakings provide evidence of the credibility of the information taking into account the consistency and objectivity of that information, the reliability of the source of the information and the transparency of the way in which the information is generated and processed.

Subsection 3

Cash flow projections for the calculation of the best estimate*Article 28***Cash flows**

The cash flow projection used in the calculation of the best estimate shall include all of the following cash flows, to the extent that these cash flows relate to existing insurance and reinsurance contracts:

- (a) benefit payments to policy holders and beneficiaries;
- (b) payments that the insurance or reinsurance undertaking will incur in providing contractual benefits that are paid in kind;
- (c) payments of expenses as referred to in point (1) of Article 78 of Directive 2009/138/EC;
- (d) premium payments and any additional cash flows that result from those premiums;
- (e) payments between the insurance or reinsurance undertaking and intermediaries related to insurance or reinsurance obligations;
- (f) payments between the insurance or reinsurance undertaking and investment firms in relation to contracts with index-linked and unit-linked benefits;
- (g) payments for salvage and subrogation to the extent that they do not qualify as separate assets or liabilities in accordance with international accounting standards, as endorsed by the Commission in accordance with Regulation (EC) No 1606/2002;
- (h) taxation payments which are, or are expected to be, charged to policy holders or are required to settle the insurance or reinsurance obligations.

*Article 29***Expected future developments in the external environment**

The calculation of the best estimate shall take into account expected future developments that will have a material impact on the cash in- and out-flows required to settle the insurance and reinsurance obligations over the lifetime thereof. For that purpose future developments shall include demographic, legal, medical, technological, social, environmental and economic developments including inflation as referred to in point (2) of Article 78 of Directive 2009/138/EC.

*Article 30***Uncertainty of cash flows**

The cash flow projection used in the calculation of the best estimate shall, explicitly or implicitly, take account of all uncertainties in the cash flows, including all of the following characteristics:

- (a) uncertainty in the timing, frequency and severity of insured events;
- (b) uncertainty in claim amounts, including uncertainty in claims inflation, and in the period needed to settle and pay claims;
- (c) uncertainty in the amount of expenses referred to in point (1) of Article 78 of Directive 2009/138/EC;
- (d) uncertainty in expected future developments referred to in Article 29 to the extent that it is practicable;
- (e) uncertainty in policyholder behaviour;
- (f) dependency between two or more causes of uncertainty;
- (g) dependency of cash flows on circumstances prior to the date of the cash flow.

*Article 31***Expenses**

1. A cash flow projection used to calculate best estimates shall take into account all of the following expenses, which relate to recognised insurance and reinsurance obligations of insurance and reinsurance undertakings and which are referred to in point (1) of Article 78 of Directive 2009/138/EC:

- (a) administrative expenses;
- (b) investment management expenses;
- (c) claims management expenses;
- (d) acquisition expenses.

The expenses referred to in points (a) to (d) shall take into account overhead expenses incurred in servicing insurance and reinsurance obligations.

2. Overhead expenses shall be allocated in a realistic and objective manner and on a consistent basis over time to the parts of the best estimate to which they relate.

3. Expenses in respect of reinsurance contracts and special purpose vehicles shall be taken into account in the gross calculation of the best estimate.

4. Expenses shall be projected on the assumption that the undertaking will write new business in the future.

*Article 32***Contractual options and financial guarantees**

When calculating the best estimate, insurance and reinsurance undertakings shall take into account all of the following:

- (a) all financial guarantees and contractual options included in their insurance and reinsurance policies;
- (b) all factors which may affect the likelihood that policy holders will exercise contractual options or realise the value of financial guarantees.

*Article 33***Currency of the obligation**

The best estimate shall be calculated separately for cash flows in different currencies.

*Article 34***Calculation methods**

1. The best estimate shall be calculated in a transparent manner and in such a way as to ensure that the calculation method and the results that derive from it are capable of review by a qualified expert.

2. The choice of actuarial and statistical methods for the calculation of the best estimate shall be based on their appropriateness to reflect the risks which affect the underlying cash flows and the nature of the insurance and reinsurance obligations. The actuarial and statistical methods shall be consistent with and make use of all relevant data available for the calculation of the best estimate.

3. Where a calculation method is based on grouped policy data, insurance and reinsurance undertakings shall ensure that the grouping of policies creates homogeneous risk groups that appropriately reflect the risks of the individual policies included in those groups.

4. Insurance and reinsurance undertakings shall analyse the extent to which the present value of cash flows depend both on the expected outcome of future events and developments and on how the actual outcome in certain scenarios could deviate from the expected outcome.

5. Where the present value of cash flows depends on future events and developments as referred to in paragraph 4, insurance and reinsurance undertakings shall use a method to calculate the best estimate for cash flows which reflects such dependencies.

*Article 35***Homogeneous risk groups of life insurance obligations**

The cash flow projections used in the calculation of best estimates for life insurance obligations shall be made separately for each policy. Where the separate calculation for each policy would be an undue burden on the insurance or reinsurance undertaking, it may carry out the projection by grouping policies, provided that the grouping complies with all of the following requirements:

- (a) there are no significant differences in the nature and complexity of the risks underlying the policies that belong to the same group;
- (b) the grouping of policies does not misrepresent the risk underlying the policies and does not misstate their expenses;
- (c) the grouping of policies is likely to give approximately the same results for the best estimate calculation as a calculation on a per policy basis, in particular in relation to financial guarantees and contractual options included in the policies.

*Article 36***Non-life insurance obligations**

1. The best estimate for non-life insurance obligations shall be calculated separately for the premium provision and for the provision for claims outstanding.
2. The premium provision shall relate to future claim events covered by insurance and reinsurance obligations falling within the contract boundary referred to in Article 18. Cash flow projections for the calculation of the premium provision shall include benefits, expenses and premiums relating to these events.
3. The provision for claims outstanding shall relate to claim events that have already occurred, regardless of whether the claims arising from those events have been reported or not.
4. Cash flow projections for the calculation of the provision for claims outstanding shall include benefits, expenses and premiums relating to the events referred to in paragraph 3.

Subsection 4

Risk margin*Article 37***Calculation of the risk margin**

1. The risk margin for the whole portfolio of insurance and reinsurance obligations shall be calculated using the following formula:

$$RM = CoC \cdot \sum_{t \geq 0} \frac{SCR(t)}{(1 + r(t + 1))^{t+1}}$$

where:

- (a) CoC denotes the Cost-of-Capital rate;
- (b) the sum covers all integers including zero;
- (c) SCR(t) denotes the Solvency Capital Requirement referred to in Article 38(2) after t years;
- (d) r(t + 1) denotes the basic risk-free interest rate for the maturity of t + 1 years.

The basic risk-free interest rate r(t + 1) shall be chosen in accordance with the currency used for the financial statements of the insurance and reinsurance undertaking.

2. Where insurance and reinsurance undertakings calculate their Solvency Capital Requirement using an approved internal model and determine that the model is appropriate to calculate the Solvency Capital Requirement referred to in Article 38(2) for each point in time over the lifetime of the insurance and reinsurance obligations, the insurance and reinsurance undertakings shall use the internal model to calculate the amounts SCR(t) referred to in paragraph 1.

3. Insurance and reinsurance undertakings shall allocate the risk margin for the whole portfolio of insurance and reinsurance obligations to the lines of business referred to in Article 80 of Directive 2009/138/EC. The allocation shall adequately reflect the contributions of the lines of business to the Solvency Capital Requirement referred to in Article 38(2) over the lifetime of the whole portfolio of insurance and reinsurance obligations.

Article 38

Reference undertaking

1. The calculation of the risk margin shall be based on all of the following assumptions:
 - (a) the whole portfolio of insurance and reinsurance obligations of the insurance or reinsurance undertaking that calculates the risk margin (the original undertaking) is taken over by another insurance or reinsurance undertaking (the reference undertaking);
 - (b) notwithstanding point (a), where the original undertaking simultaneously pursues both life and non-life insurance activities according to Article 73(5) of Directive 2009/138/EC, the portfolio of insurance obligations relating to life insurance activities and life reinsurance obligations and the portfolio of insurance obligations relating to non-life insurance activities and non-life reinsurance obligations are taken over separately by two different reference undertakings;
 - (c) the transfer of insurance and reinsurance obligations includes any reinsurance contracts and arrangements with special purpose vehicles relating to these obligations;
 - (d) the reference undertaking does not have any insurance or reinsurance obligations or own funds before the transfer takes place;
 - (e) after the transfer, the reference undertaking does not assume any new insurance or reinsurance obligations;
 - (f) after the transfer, the reference undertaking raises eligible own funds equal to the Solvency Capital Requirement necessary to support the insurance and reinsurance obligations over the lifetime thereof;
 - (g) after the transfer, the reference undertaking has assets which amount to the sum of its Solvency Capital Requirement and of the technical provisions net of the amounts recoverable from reinsurance contracts and special purpose vehicles;
 - (h) the assets are selected in such a way that they minimise the Solvency Capital Requirement for market risk that the reference undertaking is exposed to;
 - (i) the Solvency Capital Requirement of the reference undertaking captures all of the following risks:
 - (i) underwriting risk with respect to the transferred business,
 - (ii) where it is material, the market risk referred to in point (h), other than interest rate risk,
 - (iii) credit risk with respect to reinsurance contracts, arrangements with special purpose vehicles, intermediaries, policyholders and any other material exposures which are closely related to the insurance and reinsurance obligations,
 - (iv) operational risk;
 - (j) the loss-absorbing capacity of technical provisions, referred to in Article 108 of Directive 2009/138/EC, in the reference undertaking corresponds for each risk to the loss-absorbing capacity of technical provisions in the original undertaking;
 - (k) there is no loss-absorbing capacity of deferred taxes as referred to in Article 108 of Directive 2009/138/EC for the reference undertaking;
 - (l) the reference undertaking will, subject to points (e) and (f), adopt future management actions that are consistent with the assumed future management actions, as referred to in Article 23, of the original undertaking.
2. Over the lifetime of the insurance and reinsurance obligations, the Solvency Capital Requirement necessary to support the insurance and reinsurance obligations referred to in the first subparagraph of Article 77(5) of Directive 2009/138/EC shall be assumed to be equal to the Solvency Capital Requirement of the reference undertaking under the assumptions set out in paragraph 1.
3. For the purposes of point (i) of paragraph 1, a risk shall be considered to be material where its impact on the calculation of the risk margin could influence the decision-making or the judgment of the users of that information, including supervisory authorities.

*Article 39***Cost-of-Capital rate**

The Cost-of-Capital rate referred to in Article 77(5) of Directive 2009/138/EC shall be assumed to be equal to 6 %.

Subsection 5

Calculation of technical provisions as a whole*Article 40***Circumstances in which technical provisions shall be calculated as a whole and the method to be used**

1. For the purposes of the second subparagraph of Article 77(4) of Directive 2009/138/EC, reliability shall be assessed pursuant to paragraphs 2 and 3 of this Article and technical provisions shall be valued pursuant to paragraph 4 of this Article.
2. The replication of cash flows shall be considered to be reliable where those cash flows are replicated in amount and timing in relation to the underlying risks of those cash flows and in all possible scenarios. The following cash flows associated with insurance or reinsurance obligations cannot be reliably replicated:
 - (a) cash flows associated with insurance or reinsurance obligations that depend on the likelihood that policy holders will exercise contractual options, including lapses and surrenders;
 - (b) cash flows associated with insurance or reinsurance obligations that depend on the level, trend, or volatility of mortality, disability, sickness and morbidity rates;
 - (c) all expenses that will be incurred in servicing insurance and reinsurance obligations.
3. Financial instruments shall be considered to be financial instruments for which a reliable market value is observable where those financial instruments are traded on an active, deep, liquid and transparent market. Active markets shall also comply with Article 10(4).
4. Insurance and reinsurance undertakings shall determine the value of technical provisions on the basis of the market price of the financial instruments used in the replication.

Subsection 6

Recoverables from reinsurance contracts and special purpose vehicles*Article 41***General provisions**

1. The amounts recoverable from reinsurance contracts and special purpose vehicles shall be calculated consistently with the boundaries of the insurance or reinsurance contracts to which those amounts relate.
2. The amounts recoverable from special purpose vehicles, the amounts recoverable from finite reinsurance contracts as referred to in Article 210 of Directive 2009/138/EC and the amounts recoverable from other reinsurance contracts shall each be calculated separately. The amounts recoverable from a special purpose vehicle shall not exceed the aggregate maximum risk exposure of that special purpose vehicle to the insurance or reinsurance undertaking.
3. For the purpose of calculating the amounts recoverable from reinsurance contracts and special purpose vehicles, cash flows shall only include payments in relation to compensation of insurance events and unsettled insurance claims. Payments in relation to other events or settled insurance claims shall be accounted for outside the amounts recoverable from reinsurance contracts and special purpose vehicles and other elements of the technical provisions. Where a deposit has been made for the cash flows, the amounts recoverable shall be adjusted accordingly to avoid a double counting of the assets and liabilities relating to the deposit.

4. The amounts recoverable from reinsurance contracts and special purpose vehicles for non-life insurance obligations shall be calculated separately for premium provisions and provisions for claims outstanding in the following manner:

- (a) the cash flows relating to provisions for claims outstanding shall include the compensation payments relating to the claims accounted for in the gross provisions for claims outstanding of the insurance or reinsurance undertaking ceding risks;
- (b) the cash flows relating to premium provisions shall include all other payments.

5. Where cash flows from the special purpose vehicles to the insurance or reinsurance undertaking do not directly depend on the claims against the insurance or reinsurance undertaking ceding risks, the amounts recoverable from those special purpose vehicles for future claims shall only be taken into account to the extent that it can be verified in a prudent, reliable and objective manner that the structural mismatch between claims and amounts recoverable is not material.

Article 42

Counterparty default adjustment

1. Adjustments to take account of expected losses due to default of a counterparty referred to in Article 81 of Directive 2009/138/EC shall be calculated separately from the rest of the amounts recoverable.

2. The adjustment to take account of expected losses due to default of a counterparty shall be calculated as the expected present value of the change in cash flows underlying the amounts recoverable from that counterparty, that would arise if the counterparty defaults, including as a result of insolvency or dispute, at a certain point in time. For that purpose, the change in cash flows shall not take into account the effect of any risk mitigating technique that mitigates the credit risk of the counterparty, other than risk mitigating techniques based on collateral holdings. The risk mitigating techniques that are not taken into account shall be separately recognised without increasing the amount recoverable from reinsurance contracts and special purpose vehicles.

3. The calculation referred to in paragraph 2 shall take into account possible default events over the lifetime of the reinsurance contract or arrangement with the special purpose vehicle and whether and how the probability of default varies over time. It shall be carried out separately by each counterparty and for each line of business. In non-life insurance, it shall also be carried out separately for premium provisions and provisions for claims outstanding.

4. The average loss resulting from a default of a counterparty, referred to in Article 81 of Directive 2009/138/EC, shall not be assessed at lower than 50 % of the amounts recoverable excluding the adjustment referred to in paragraph 1, unless there is a reliable basis for another assessment.

5. The probability of default of a special purpose vehicle shall be calculated on the basis of the credit risk inherent in the assets held by the special purpose vehicle.

SECTION 4

Relevant risk-free interest rate term structure

Subsection 1

General provisions

Article 43

General provisions

The rates of the basic risk-free interest rate term structure shall meet all of the following criteria:

- (a) insurance and reinsurance undertakings are able to earn the rates in a risk-free manner in practice;
- (b) the rates are reliably determined based on financial instruments traded in a deep, liquid and transparent financial market.

The rates of the relevant risk-free interest rate term structure shall be calculated separately for each currency and maturity, based on all information and data relevant for that currency and that maturity. They shall be determined in a transparent, prudent, reliable and objective manner that is consistent over time.

Subsection 2

Basic risk free interest rate term structure*Article 44***Relevant financial instruments to derive the basic risk-free interest rates**

1. For each currency and maturity, the basic risk-free interest rates shall be derived on the basis of interest rate swap rates for interest rates of that currency, adjusted to take account of credit risk.
2. For each currency, for maturities where interest rate swap rates are not available from deep, liquid and transparent financial markets the rates of government bonds issued in that currency, adjusted to take account of the credit risk of the government bonds, shall be used to derive the basic risk free-interest rates, provided that, such government bond rates are available from deep, liquid and transparent financial markets.

*Article 45***Adjustment to swap rates for credit risk**

The adjustment for credit risk referred to in Article 44(1) shall be determined in a transparent, prudent, reliable and objective manner that is consistent over time. The adjustment shall be determined on the basis of the difference between rates capturing the credit risk reflected in the floating rate of interest rate swaps and overnight indexed swap rates of the same maturity, where both rates are available from deep, liquid and transparent financial markets. The calculation of the adjustment shall be based on 50 percent of the average of that difference over a time period of one year. The adjustment shall not be lower than 10 basis points and not higher than 35 basis points.

*Article 46***Extrapolation**

1. The principles applied when extrapolating the relevant risk free interest rate term structure shall be the same for all currencies. This shall also apply as regards the determination of the longest maturities for which interest rates can be observed in a deep, liquid and transparent market and the mechanism to ensure a smooth convergence to the ultimate forward rate.
2. Where insurance and reinsurance undertakings apply Article 77d of Directive 2009/138/EC, the extrapolation shall be applied to the risk-free interest rates including the volatility adjustment referred to in that Article.
3. Where insurance and reinsurance undertakings apply Article 77b of Directive 2009/138/EC, the extrapolation shall be based on the risk-free interest rates without a matching adjustment. The matching adjustment referred to in that Article shall be applied to the extrapolated risk-free interest rates.

*Article 47***Ultimate forward rate**

1. For each currency, the ultimate forward rate referred to in paragraph 1 of Article 46 shall be stable over time and shall only change as a result of changes in long-term expectations. The methodology to derive the ultimate forward rate shall be clearly specified in order to ensure the performance of scenario calculations by insurance and reinsurance undertakings. It shall be determined in a transparent, prudent, reliable and objective manner that is consistent over time.
2. For each currency the ultimate forward rate shall take account of expectations of the long-term real interest rate and of expected inflation, provided those expectations can be determined for that currency in a reliable manner. The ultimate forward rate shall not include a term premium to reflect the additional risk of holding long-term investments.

*Article 48***Basic risk-free interest rate term structure of currencies pegged to the euro**

1. For a currency pegged to the euro, the basic risk-free interest rate term structure for the euro, adjusted for currency risk, may be used to calculate the best estimate with respect to insurance or reinsurance obligations denoted in that currency, provided that all of the following conditions are met:

- (a) the pegging ensures that the exchange rate between that currency and the euro stays within a range not wider than 20 % of the upper limit of the range;
- (b) the economic situation of the euro area and the area of that currency are sufficiently similar to ensure that interest rates for the euro and that currency develop in a similar way;
- (c) the pegging arrangement ensures that the relative changes in the exchange rate over a one-year-period do not exceed the range referred to in point (a) of this paragraph, in the event of extreme market events, that correspond to the confidence level set out in Article 101(3) of Directive 2009/138/EC;
- (d) one of the following criteria is complied with:
 - (i) participation of that currency in the European Exchange Rate Mechanism (ERM II);
 - (ii) existence of a decision from the Council which recognizes pegging arrangements between that currency and the euro;
 - (iii) establishment of the pegging arrangement by the law of the country establishing that country's currency.

For the purpose of point (c), the financial resources of the parties that guarantee the pegging shall be taken into account.

2. The adjustment for currency risk shall be negative and shall correspond to the cost of hedging against the risk that the value in the pegged currency of an investment denominated in euro decreases as a result of changes in the level of the exchange rate between the euro and the pegged currency. The adjustment shall be the same for all insurance and reinsurance undertakings.

*Subsection 3***Volatility adjustment***Article 49***Reference portfolios**

1. The reference portfolios referred to in Article 77d(2) and (4) of Directive 2009/138/EC shall be determined in a transparent, prudent, reliable and objective manner that is consistent over time. The methods applied when determining the reference portfolios shall be the same for all currencies and countries.

2. For each currency and each country, the assets of the reference portfolio shall be valued in accordance with Article 10(1) and shall be traded in markets that, except in periods of stressed liquidity, comply with Article 40(3). Financial instruments traded in markets that temporarily cease to comply with Article 40(3) may only be included in the portfolio where that market is expected to comply with the criteria again within a reasonable period.

3. For each currency and each country, the reference portfolio of assets shall meet all of the following requirements:

- (a) for each currency, the assets are representative of the investments made by insurance and reinsurance undertakings in that currency to cover the best estimate for insurance and reinsurance obligations denominated in that currency; for each country, the assets are representative of the investments made by insurance and reinsurance undertakings in that country to cover the best estimate for insurance and reinsurance obligations sold in the insurance market of that country and denominated in the currency of that country;
- (b) where available the portfolio is based on relevant indices which are readily available to the public and published criteria exist for when and how the constituents of those indices will be changed;
- (c) the portfolio of assets includes all of the following assets:
 - bonds, securitisations and loans, including mortgage loans
 - equity
 - property

For the purposes of points (a) and (b), investments of insurance and reinsurance undertakings in collective investment undertakings and other investments packaged as funds shall be treated as investments in the underlying assets.

Article 50

Formula to calculate the spread underlying the volatility adjustment

For each currency and each country the spread referred to in Article 77d(2) and (4) of Directive 2009/138/EC shall be equal to the following:

$$S = w_{gov} \cdot \max(S_{gov}, 0) + w_{corp} \cdot \max(S_{corp}, 0)$$

where:

- (a) w_{gov} denotes the ratio of the value of government bonds included in the reference portfolio of assets for that currency or country and the value of all the assets included in that reference portfolio;
- (b) S_{gov} denotes the average currency spread on government bonds included in the reference portfolio of assets for that currency or country;
- (c) w_{corp} denotes the ratio of the value of bonds other than government bonds, loans and securitisations included in the reference portfolio of assets for that currency or country and the value of all the assets included in that reference portfolio;
- (d) S_{corp} denotes the average currency spread on bonds other than government bonds, loans and securitisations included in the reference portfolio of assets for that currency or country.

For the purposes of this Article, 'government bonds' means exposures to central governments and central banks.

Article 51

Risk-corrected spread

The portion of the average currency spread that is attributable to a realistic assessment of expected losses, unexpected credit risk or any other risk referred to in Article 77d(3) and (4) of Directive 2009/138/EC shall be calculated in the same manner as the fundamental spread referred to in Article 77c (2) of Directive 2009/138/EC and Article 54 of this Regulation.

Subsection 4

Matching adjustment

Article 52

Mortality risk stress

1. The mortality risk stress referred to in Article 77b(1)(f) of Directive 2009/138/EC shall be the more adverse of the following two scenarios in terms of its impact on basic own funds:

- (a) an instantaneous permanent increase of 15 % in the mortality rates used for the calculation of the best estimate;
- (b) an instantaneous increase of 0.15 percentage points in the mortality rates (expressed as percentages) which are used in the calculation of technical provisions to reflect the mortality experience in the following 12 months.

2. For the purpose of paragraph 1 the increase in mortality rates shall only apply to those insurance policies for which the increase in mortality rates leads to an increase in technical provisions taking into account all of the following:

- (a) multiple insurance policies in respect of the same insured person may be treated as if they were one insurance policy;
- (b) where the calculation of technical provisions is based on groups of policies as referred to in Article 35, the identification of the policies for which technical provisions increase under an increase of mortality rates may also be based on those groups of policies instead of single policies, provided that it yields a result which is not materially different.

3. With regard to reinsurance obligations, the identification of the policies for which technical provisions increase under an increase of mortality rates shall apply to the underlying insurance policies only and shall be carried out in accordance with paragraph 2.

*Article 53***Calculation of the matching adjustment**

1. For the purpose of the calculation referred to in Article 77c(1)(a) of Directive 2009/138/EC insurance and reinsurance undertakings shall only consider the assigned assets whose expected cash flows are required to replicate the cash flows of the portfolio of insurance and reinsurance obligations, excluding any assets in excess of that. The 'expected cash flow' of an asset means the cash flow of the asset adjusted to allow for the probability of default of the asset that corresponds to the element of the fundamental spread set out in Article 77c(2)(a)(i) of Directive 2009/138/EC or, where no reliable credit spread can be derived from the default statistics, the portion of the long term average of the spread over the risk-free interest rate set out in Article 77c(2)(b) and (c) of that Directive.

2. The deduction of the fundamental spread, referred to in Article 77c(1)(b) of Directive 2009/138/EC, from the result of the calculation set out in Article 77c(1)(a) of that Directive, shall include only the portion of the fundamental spread that has not already been reflected in the adjustment to the cash flows of the assigned portfolio of assets, as set out in paragraph 1 of this Article.

*Article 54***Calculation of the fundamental spread**

1. The fundamental spread referred to in Article 77c(2) shall be calculated in a transparent, prudent, reliable and objective manner that is consistent over time, based on relevant indices where available. The methods to derive fundamental spread of a bond shall be the same for each currency and each country and may be different for government bonds and for other bonds.

2. The calculation of the credit spread referred to in Article 77c(2)(a)(i) of Directive 2009/138/EC shall be based on the assumption that in case of default 30 % of the market value can be recovered.

3. The long-term average referred to in Article 77c(2)(b) and (c) of Directive 2009/138/EC shall be based on data relating to the last 30 years. Where a part of that data is not available, it shall be replaced by constructed data. The constructed data shall be based on the available and reliable data relating to the last 30 years. Data that is not reliable shall be replaced by constructed data using that methodology. The constructed data shall be based on prudent assumptions.

4. The expected loss referred to in Article 77c(2)(a)(ii) of Directive 2009/138/EC shall correspond to the probability-weighted loss the insurance or reinsurance undertaking incurs where the asset is downgraded to a lower credit quality step and is replaced immediately afterwards. The calculation of the expected loss shall be based on the assumption that the replacing asset meets all of the following criteria:

- (a) the replacing asset has the same cash flow pattern as the replaced asset before downgrade;
- (b) the replacing asset belongs to the same asset class as the replaced asset;
- (c) the replacing asset has the same credit quality step as the replaced asset before downgrade or a higher one.

*SECTION 5****Lines of business****Article 55***Lines of business**

1. The lines of business referred to in Article 80 of Directive 2009/138/EC shall be those set out in Annex I to this Regulation.

2. The assignment of an insurance or reinsurance obligation to a line of business shall reflect the nature of the risks relating to the obligation. The legal form of the obligation shall not necessarily be determinative of the nature of the risk.

3. Provided that the technical basis is consistent with the nature of the risks relating to the obligation, obligations of health insurance pursued on a similar technical basis to that of life insurance shall be assigned to the lines of business for life insurance and obligations of health insurance pursued on a similar technical basis to that of non-life insurance shall be assigned to the lines of business for non-life insurance.

4. Where the insurance obligations arising from the operations referred to in Article 2(3)(b) of Directive 2009/138/EC cannot clearly be assigned to the lines of business set out in Annex I to this Regulation on the basis of their nature, they shall be included in line of business 32 as set out in that Annex.
5. Where an insurance or reinsurance contract covers risks across life and non-life insurance, the insurance or reinsurance obligations shall be unbundled into their life and non-life parts.
6. Where an insurance or reinsurance contract covers risks across the lines of business as set out in Annex I to this Regulation, the insurance or reinsurance obligations shall, where possible, be unbundled into the appropriate lines of business.
7. Where an insurance or reinsurance contract includes health insurance or reinsurance obligations and other insurance or reinsurance obligations, those obligations shall, where possible, be unbundled.

SECTION 6

Proportionality and simplifications

Article 56

Proportionality

1. Insurance and reinsurance undertakings shall use methods to calculate technical provisions which are proportionate to the nature, scale and complexity of the risks underlying their insurance and reinsurance obligations.
2. In determining whether a method of calculating technical provisions is proportionate, insurance and reinsurance undertakings shall carry out an assessment which includes:
 - (a) an assessment of the nature, scale and complexity of the risks underlying their insurance and reinsurance obligations;
 - (b) an evaluation in qualitative or quantitative terms of the error introduced in the results of the method due to any deviation between the following:
 - (i) the assumptions underlying the method in relation to the risks;
 - (ii) the results of the assessment referred to in point (a).
3. The assessment referred to in point (a) of paragraph 2 shall include all risks which affect the amount, timing or value of the cash in- and out-flows required to settle the insurance and reinsurance obligations over their lifetime. For the purpose of the calculation of the risk margin, the assessment shall include all risks referred to in Article 38(1)(i) over the lifetime of the underlying insurance and reinsurance obligations. The assessment shall be restricted to the risks that are relevant to that part of the calculation of technical provisions to which the method is applied.
4. A method shall be considered to be disproportionate to the nature, scale and complexity of the risks if the error referred to in point (b) of paragraph 2 leads to a misstatement of technical provisions or their components that could influence the decisions-making or judgment of the intended user of the information relating to the value of technical provisions, unless one of the following conditions are met:
 - (a) no other method with a smaller error is available and the method is not likely to result in an underestimation of the amount of technical provisions;
 - (b) the method leads to an amount of technical provisions of the insurance or reinsurance undertaking that is higher than the amount that would result from using a proportionate method and the method does not lead to an underestimation of the risk inherent in the insurance and reinsurance obligations that it is applied to.

Article 57

Simplified calculation of recoverables from reinsurance contracts and special purpose vehicles

1. Without prejudice to Article 56 of this Regulation, insurance and reinsurance undertakings may calculate the amounts recoverable from reinsurance contracts and special purpose vehicles before adjusting those amounts to take account of the expected loss due to default of the counterparty as the difference between the following estimates:
 - (a) the best estimate calculated gross as referred to in Article 77(2) of Directive 2009/138/EC;
 - (b) the best estimate, after taking into account the amounts recoverable from reinsurance contracts and special purpose vehicles and without an adjustment for the expected loss due to default of the counterparty (unadjusted net best estimate) calculated in accordance with paragraph 2.

2. Insurance and reinsurance undertakings may use methods to derive the unadjusted net best estimate from the gross best estimate without an explicit projection of the cash flows underlying the amounts recoverable from reinsurance contracts and special purpose vehicles. Insurance and reinsurance undertakings shall calculate the unadjusted net best estimate based on homogeneous risk groups. Each of those homogeneous risk groups shall cover not more than one reinsurance contract or special purpose vehicles unless those reinsurance contracts or special purpose vehicles provide a transfer of homogeneous risks.

Article 58

Simplified calculation of the risk margin

Without prejudice to Article 56, insurance and reinsurance undertakings may use simplified methods when they calculate the risk margin, including one or more of the following:

- (a) methods which use approximations of the amounts denoted by the terms $SCR(t)$ referred to in Article 37(1);
- (b) methods which approximate the discounted sum of the amounts denoted by the terms $SCR(t)$ as referred to in Article 37(1) without calculating each of those amounts separately.

Article 59

Calculations of the risk margin during the financial year

Without prejudice to Article 56, insurance and reinsurance undertakings may derive the risk margin for calculations that need to be performed quarterly from the result of an earlier calculation of the risk margin without an explicit calculation of the formula referred to in Article 37(1).

Article 60

Simplified calculation of the best estimate for insurance obligations with premium adjustment mechanism

Without prejudice to Article 56, insurance and reinsurance undertakings may calculate the best estimate of life insurance obligations with an arrangement by which the insurance undertaking has the right or the obligation to adjust the future premiums of an insurance contract to reflect material changes in the expected level of claims and expenses (premium adjustment mechanism) using cash flow projections which assume that changes in the level of claims and expenses occur simultaneously with premium adjustments and which result in a net cash flow that is equal to zero, provided that all of the following conditions are met:

- (a) the premium adjustment mechanism fully compensates the insurance undertaking for any increase in the level of claims and expenses in a timely manner;
- (b) the calculation does not result in an underestimation of the best estimate;
- (c) the calculation does not result in an underestimation of the risk inherent in those insurance obligations.

Article 61

Simplified calculation of the counterparty default adjustment

Without prejudice to Article 56 of this Regulation, insurance and reinsurance undertakings may calculate the adjustment for expected losses due to default of the counterparty, referred to in Article 81 of Directive 2009/138/EC, for a specific counterparty and homogeneous risk group to be equal as follows:

$$Adj_{CD} = -\max\left(0,5 \cdot \frac{PD}{1-PD} \cdot Dur_{mod} \cdot BE_{rec}; 0\right)$$

where:

- (a) PD denotes the probability of default of that counterparty during the following 12 months;
- (b) Dur_{mod} denotes the modified duration of the amounts recoverable from reinsurance contracts with that counterparty in relation to that homogeneous risk group;
- (c) BE_{rec} denotes the amounts recoverable from reinsurance contracts with that counterparty in relation to that homogeneous risk group.

CHAPTER IV

OWN FUNDS

SECTION 1

Determination of own funds

Subsection 1

Supervisory approval of ancillary own funds*Article 62***Assessment of the application**

1. Supervisory authorities shall take all of the following into account for the purposes of the assessment referred to in Article 90 (4) of Directive 2009/138/EC:

- (a) the legal effectiveness and enforceability of the terms of the commitment in all relevant jurisdictions;
- (b) the contractual terms of the arrangement that the insurance or reinsurance undertaking has entered into, or will enter into, with the counterparties to provide funds;
- (c) where relevant, the insurance or reinsurance undertaking's memorandum and articles of association or statutes;
- (d) whether the insurance or reinsurance undertaking has processes in place to inform the supervisory authorities of any future changes, which may have the effect of reducing the loss-absorbency of the ancillary own-fund item, to any of the following:
 - (i) the structure or contractual terms of the arrangement;
 - (ii) the status of the counterparties concerned;
 - (iii) the recoverability of the ancillary own funds item.

2. Supervisory authorities shall also assess whether Article 90 of Directive 2009/138/EC is complied with taking into account the range of circumstances under which the item can be called up to absorb losses.

3. Where the insurance or reinsurance undertaking is seeking approval of a method by which to determine the amount of each ancillary own-fund item, the supervisory authorities shall assess whether the undertaking's process for regularly validating the method is appropriate to ensure that the results of the method reflect the loss-absorbency of the item on an ongoing basis.

4. In addition to the requirements set out in paragraphs 1 to 3, supervisory authorities shall assess the application for approval of ancillary own funds on the basis of the criteria set out in Articles 63, 64 and 65.

*Article 63***Assessment of the application — Status of the counterparties**

1. Supervisory authorities shall take all of the following into account for the purposes of the assessment of the counterparties' ability to pay referred to in Article 90(4)(a) of Directive 2009/138/EC:

- (a) the risk of default of the counterparties;
- (b) the risk that default arises from a delay in the counterparties satisfying their commitments under the ancillary own funds item.

2. In relation to paragraph 1(a), the supervisory authorities shall assess the risk of default of the counterparties by examining the probability of default of the counterparties and the loss given default, taking into account all of the following criteria:

- (a) the credit standing of the counterparties, provided that this appropriately reflects the counterparties' ability to satisfy their commitments under the ancillary own funds item;
- (b) whether there are any current or foreseeable practical or legal impediments to the counterparties' satisfaction of their commitments under the ancillary own funds item;
- (c) whether the counterparties are subject to legal or regulatory requirements that reduce the counterparties' ability to satisfy their commitments under the ancillary own funds item;

- (d) whether the legal form of the counterparties prejudice the counterparties' satisfaction of their commitments under the ancillary own funds item;
- (e) whether the counterparties are subject to other exposures which reduce the counterparties' ability to satisfy their commitments under the ancillary own funds item;
- (f) whether, in relation to their commitment under the ancillary own fund item, the contractual terms of the arrangement under any applicable law are such that the counterparties have rights to set-off amounts they owe against any amounts owed to them by the insurance or reinsurance undertaking.

3. In relation to paragraph 1(b), the supervisory authorities shall assess the liquidity position of the counterparties, taking into account all of the following:

- (a) whether there are any current or foreseeable practical or legal impediments to the counterparties' ability to promptly satisfy their commitments under the ancillary own funds item;
- (b) whether the counterparties are subject to legal or regulatory requirements that may reduce the counterparties' ability to promptly satisfy their commitments under the ancillary own funds item;
- (c) whether the legal form of the counterparties prejudices the counterparties' prompt satisfaction of their commitments under the ancillary own funds item.

4. Supervisory authorities shall take all of the following into account for the purposes of the assessment of the counterparties' willingness to pay referred to in Article 90(4)(a) of Directive 2009/138/EC:

- (a) the range of circumstances under which the ancillary own funds item can be called up to absorb losses;
- (b) whether incentives or disincentives exist which may affect the counterparties' willingness to satisfy their commitments under the ancillary own funds item;
- (c) whether previous transactions between the counterparties and the insurance or reinsurance undertaking, including the counterparties' previous satisfaction of their commitments under ancillary own funds items, give an indication as to the counterparties' willingness to satisfy their current commitments under the ancillary own funds item.

5. The supervisory authorities shall, in assessing the counterparties' ability and willingness to pay, consider any other factors relevant to the status of the counterparties including, where relevant, the insurance or reinsurance undertaking's business model.

6. Where an ancillary own-fund item concerns a group of counterparties, supervisory authorities and insurance and reinsurance undertakings may assess the status of the group of counterparties as though it were a single counterparty provided that all of the following conditions are fulfilled:

- (a) the counterparties are individually non-material;
- (b) the counterparties included in that group are sufficiently homogeneous;
- (c) the assessment of a group of counterparties does not overestimate the ability and willingness to pay of the counterparties included in that group.

7. A counterparty shall be considered as material where the status of that single counterparty is likely to have a significant effect on the assessment of the group of counterparties' ability and willingness to pay.

Article 64

Assessment of the application — Recoverability of the funds

Supervisory authorities shall take all of the following into account for the purposes of the assessment of the recoverability of the funds referred to in Article 90(4)(b) of Directive 2009/138/EC:

- (a) whether the recoverability of the funds is increased as a result of the availability of collateral or an analogous arrangement that complies with Articles 209 to 214;
- (b) whether there is any current or foreseeable practical or legal impediment to the recoverability of the funds;
- (c) whether the recoverability of the funds is subject to legal or regulatory requirements;
- (d) the ability of the insurance or reinsurance undertaking to take action to enforce the counterparties' satisfaction of their commitments under the ancillary own funds item.

*Article 65***Assessment of the application — Information on the outcome of past calls**

Supervisory authorities shall take all of the following into account for the purposes of the assessment of the information on the outcome of past calls referred to in Article 90(4)(c) of Directive 2009/138/EC:

- (a) whether the insurance or reinsurance undertaking has made past calls from the same or similar counterparties under the same or similar circumstances;
- (b) whether that information is relevant and reliable as regards the expected outcome of future calls.

*Article 66***Specification of amount relating to an unlimited amount of ancillary own funds**

1. The supervisory authorities shall not approve an unlimited amount of ancillary own funds.
2. Where the supervisory authorities approve an amount of ancillary own funds, the decision of the supervisory authorities shall specify whether the amount that has been approved is the amount for which the insurance or reinsurance undertaking has applied or a lower amount.

*Article 67***Specification of amount and timing relating to the approval of a method**

Where the supervisory authorities approve a method to determine the amount of each ancillary own fund item, the supervisory authorities' decision shall set out all of the following:

- (a) the initial amount of the ancillary own funds item that has been calculated using that method at the date the approval is granted;
- (b) the minimum frequency of recalculation of the amount of ancillary own funds item using that method where it is more frequent than annual, and the reasons for that frequency;
- (c) the time period for which the calculation of the ancillary own funds item using that method is granted.

Subsection 2

Own funds treatment of participations*Article 68***Treatment of participations in the determination of basic own funds**

1. For the purpose of determining the basic own funds of insurance and reinsurance undertakings, basic own funds as referred to in Article 88 of Directive 2009/138/EC shall be reduced by the full value of participations, as referred to in Article 92(2) of that Directive, in a financial and credit institution that exceeds 10 % of items included in points (a) (i), (ii), (iv) and (vi) of Article 69.
2. For the purpose of determining the basic own funds of insurance and reinsurance undertakings, basic own funds as referred to in Article 88 of Directive 2009/138/EC shall be reduced by the part of the value of all participations, as referred to in Article 92(2) of that Directive, in financial and credit institutions, other than participations referred to in paragraph 1, that exceeds 10 % of items included in points (a) (i), (ii), (iv) and (vi) of Article 69.
3. Notwithstanding paragraphs 1 and 2, insurance and reinsurance undertakings shall not deduct strategic participations as referred to in Article 171 which are included in the calculation of the group solvency on the basis of method 1 as set out in Annex I to Directive 2002/87/EC.
4. The deductions set out in paragraph 2 shall be applied on a pro-rata basis to all participations referred to in that paragraph.
5. The deductions set out in paragraphs 1 and 2 shall be made from the corresponding tier in which the participation has increased the own funds of the related undertaking as follows:
 - (a) holdings of Common Equity Tier 1 items of financial and credit institutions shall be deducted from the items included in points (a) (i), (ii), (iv) and (vi) of Article 69;
 - (b) holdings of Additional Tier 1 instruments of financial and credit institutions shall be deducted from the items included in points (a)(iii) and (v) and point (b) of Article 69;
 - (c) holdings of Tier 2 instruments of financial and credit institutions shall be deducted from the basic own-fund items included in Article 72.

SECTION 2

Classification of own funds

Article 69

Tier 1 — List of own-fund items

The following basic own-fund items shall be deemed to substantially possess the characteristics set out in Article 93(1)(a) and (b) of Directive 2009/138/EC, taking into consideration the features set out in Article 93(2) of that Directive, and shall be classified as Tier 1, where those items display all of the features set out in Article 71:

- (a) the part of excess of assets over liabilities, valued in accordance with Article 75 and Section 2 of Chapter VI of Directive 2009/138/EC, comprising the following items:
 - (i) paid-in ordinary share capital and the related share premium account;
 - (ii) paid-in initial funds, members' contributions or the equivalent basic own-fund item for mutual and mutual-type undertakings;
 - (iii) paid-in subordinated mutual member accounts;
 - (iv) surplus funds that are not considered as insurance and reinsurance liabilities in accordance with Article 91(2) of Directive 2009/138/EC;
 - (v) paid-in preference shares and the related share premium account;
 - (vi) a reconciliation reserve;
- (b) paid-in subordinated liabilities valued in accordance with Article 75 of Directive 2009/138/EC.

Article 70

Reconciliation Reserve

1. The reconciliation reserve referred to in point (a)(vi) of Article 69 equals the total excess of assets over liabilities reduced by all of the following:

- (a) the amount of own shares held by the insurance and reinsurance undertaking;
- (b) foreseeable dividends, distributions and charges;
- (c) the basic own-fund items included in points (a)(i) to (v) of Article 69, Article 72(a) and Article 76(a);
- (d) the basic own-fund items not included in points (a)(i) to (v) of Article 69, point (a) of Article 72 and point (a) of Article 76, which have been approved by the supervisory authority in accordance with Article 79;
- (e) the restricted own-fund items that meet one of the following requirements:
 - (i) exceed the notional Solvency Capital Requirement in the case of matching adjustment portfolios and ring-fenced funds determined in accordance with Article 81(1);
 - (ii) that are excluded in accordance with Article 81(2);
- (f) the amount of participations held in financial and credit institutions as referred to in Article 92(2) of Directive 2009/138/EC deducted in accordance with Article 68, to the extent that this is not already included in points (a) to (e).

2. The excess of assets over liabilities referred to in paragraph 1 includes the amount that corresponds to the expected profit included in future premiums set out in paragraph 2 of Article 260.

3. The determination of whether, and to what extent, the reconciliation reserve displays the features set out in Article 71 shall not amount to an assessment of the features of the assets and liabilities that are included in computing the excess of assets over liabilities or the underlying items in the undertakings' financial statements.

Article 71

Tier 1 — Features determining classification

1. The features referred to in Article 69 shall be the following:
 - (a) the basic own fund item:
 - (i) in the case of items referred to in points (a) (i) and (ii) of Article 69, ranks after all other claims in the event of winding-up proceedings regarding the insurance or reinsurance undertaking;
 - (ii) in the case of items referred to in points (a)(iii) and (v) and point (b) of Article 69, ranks to the same degree as, or ahead of, the items referred to in points (a)(i) and (ii) of Article 69, but after items listed in Articles 72 and 76 that display the features set out in Article 73 and 77 respectively and after the claims of all policy holders and beneficiaries and non-subordinated creditors;
 - (b) the basic own-fund item does not include features which may cause the insolvency of the insurance or reinsurance undertaking or may accelerate the process of the undertaking becoming insolvent;
 - (c) the basic own fund item is immediately available to absorb losses;
 - (d) the basic own-fund item absorbs losses at least once there is non-compliance with the Solvency Capital Requirement and does not hinder the recapitalisation of the insurance or reinsurance undertaking;
 - (e) the basic own-fund item, in the case of items referred to in points (a)(iii) and (v) and point (b) of Article 69, possesses one of the following principal loss absorbency mechanisms to be triggered at the trigger event specified in paragraph 8:
 - (i) the nominal or principal amount of the basic own-fund item is written down as set out in paragraph 5;
 - (ii) the basic own-fund item automatically converts into a basic own-fund item listed in point (a)(i) or (ii) of Article 69 as set out in paragraph 6;
 - (iii) a principal loss absorbency mechanism that achieves an equivalent outcome to the principal loss absorbency mechanisms set out in points (i) or (ii);
 - (f) the basic own-fund item meets one of the following criteria:
 - (i) in the case of items referred to in points (a)(i) and (ii) of Article 69, the item is undated or, where the insurance or reinsurance undertaking has a fixed maturity, is of the same maturity as the undertaking;
 - (ii) in the case of items referred to in points (a)(iii) and (v) and point (b) of Article 69, the item is undated; the first contractual opportunity to repay or redeem the basic own-fund item does not occur before 5 years from the date of issuance;
 - (g) the basic own-fund item referred to in points (a)(iii) and (v) and point (b) of Article 69 may only allow for repayment or redemption of that item between 5 and 10 years after the date of issuance where the undertaking's Solvency Capital Requirement is exceeded by an appropriate margin taking into account the solvency position of the undertaking including the undertaking's medium-term capital management plan;
 - (h) the basic own-fund item, in the case of items referred to in points (a)(i), (ii), (iii) and (v) and point (b) of Article 69, is only repayable or redeemable at the option of the insurance or reinsurance undertaking and the repayment or redemption of the basic own-fund item is subject to prior supervisory approval;
 - (i) the basic own-fund item, in the case of items referred to in points (a)(i), (ii), (iii) and (v) and point (b) of Article 69, does not include any incentives to repay or redeem that item that increase the likelihood that an insurance or reinsurance undertaking will repay or redeem that basic own-fund item where it has the option to do so;

- (j) the basic own-fund item, in the case of items referred to in points (a)(i), (ii), (iii) and (v) and point (b) of Article 69, provides for the suspension of repayment or redemption of that item where there is non-compliance with the Solvency Capital Requirement or repayment or redemption would lead to such non-compliance until the undertaking complies with the Solvency Capital Requirement and the repayment or redemption would not lead to non-compliance with the Solvency Capital Requirement;
 - (k) notwithstanding point (j), the basic own-fund item may only allow for repayment or redemption of that item where there is non-compliance with the Solvency Capital Requirement or repayment or redemption would lead to such non-compliance, where all of the following conditions are met:
 - (i) the supervisory authority has exceptionally waived the suspension of repayment or redemption of that item;
 - (ii) the item is exchanged for or converted into another Tier 1 own-fund item of at least the same quality;
 - (iii) the Minimum Capital Requirement is complied with after the repayment or redemption.
 - (l) the basic own-fund item meets one of the following criteria:
 - (i) in the case of items referred to in points (a)(i) and (ii) of Article 69(1), either the legal or contractual arrangements governing the basic own-fund item or national legislation allow for the cancellation of distributions in relation to that item where there is non-compliance with the Solvency Capital Requirement or the distribution would lead to such non-compliance until the undertaking complies with the Solvency Capital Requirement and the distribution would not lead to non-compliance with the Solvency Capital Requirement;
 - (ii) in the case of items referred to in points (a)(iii) and (v) and point (b) of Article 69 the terms of the contractual arrangement governing the basic own-fund item provide for the cancellation of distributions in relation to that item where there is non-compliance with the Solvency Capital Requirement or the distribution would lead to such non-compliance until the undertaking complies with the Solvency Capital Requirement and the distribution would not lead to non-compliance with the Solvency Capital Requirement;
 - (m) the basic own-fund item may only allow for a distribution to be made where there is non-compliance with the Solvency Capital Requirement or the distribution on a basic-own fund item would lead to such non-compliance, where all of the following conditions are met:
 - (i) the supervisory authority has exceptionally waived the cancellation of distributions;
 - (ii) the distribution does not further weaken the solvency position of the insurance or reinsurance undertaking;
 - (iii) the Minimum Capital Requirement is complied with after the distribution is made.
 - (n) the basic own fund item, in the case of items referred to in points (a)(i), (ii), (iii) and (v) and point (b) of Article 69, provides the insurance or reinsurance undertaking with full flexibility over the distributions on the basic own-fund item;
 - (o) the basic own-fund item is free from encumbrances and is not connected with any other transaction, which when considered with the basic own-fund item, could result in that basic own-fund item not complying with Article 94(1) of Directive 2009/138/EC.
2. For the purposes of this Article, the exchange or conversion of a basic own-fund item into another Tier 1 basic own-fund item or the repayment or redemption of a Tier 1 own-fund item out of the proceeds of a new basic own-fund item of at least the same quality shall not be deemed to be a repayment or redemption, provided that the exchange, conversion, repayment or redemption is subject to the approval of the supervisory authority.
3. For the purposes of point (n) of paragraph 1, in the case of basic own-fund items referred to in points (a)(i) and (ii) of Article 69, full flexibility over the distributions is provided where all of the following conditions are met:
- (a) there is no preferential distribution treatment regarding the order of distribution payments and the terms of the contractual arrangement governing the own-fund item do not provide preferential rights to the payment of distributions;
 - (b) distributions are paid out of distributable items;
 - (c) the level of distributions is not determined on the basis of the amount for which the own-fund item was purchased at issuance and there is no cap or other restriction on the maximum level of distribution;
 - (d) notwithstanding point (c), in the case of instruments issued by mutual and mutual-type undertakings, a cap or other restriction on the maximum level of distribution may be set, provided that cap or other restriction is not an event linked to distributions being made, or not made, on other own fund items;

- (e) there is no obligation for an insurance or reinsurance undertaking to make distributions;
 - (f) non-payment of distributions does not constitute an event of default of the insurance or reinsurance undertaking;
 - (g) the cancellation of distributions imposes no restrictions on the insurance or reinsurance undertaking.
4. For the purposes of point (n) of paragraph 1, in the case of basic own-fund items referred to in points (a)(iii) and (a)(v) and point (b) of Article 69 full flexibility over the distributions is provided where all of the following conditions are met:
- (a) distributions are paid out of distributable items;
 - (b) insurance and reinsurance undertakings have full discretion at all times to cancel distributions in relation to the own-fund item for an unlimited period and on a non-cumulative basis and the undertakings may use the cancelled payments without restriction to meet its obligations as they fall due;
 - (c) there is no obligation to substitute the distribution by a payment in any other form;
 - (d) there is no obligation to make distributions in the event of a distribution being made on another own fund item;
 - (e) non-payment of distributions does not constitute an event of default of the insurance or reinsurance undertaking;
 - (f) the cancellation of distributions imposes no restrictions on the insurance or reinsurance undertaking.
5. For the purposes of paragraph (1)(e)(i), the nominal or principal amount of the basic own-fund item shall be written down in such a way that all of the following are reduced:
- (a) the claim of the holder of that item in the event of winding-up proceedings;
 - (b) the amount required to be paid on repayment or redemption of that item;
 - (c) the distributions paid on that item.
6. For the purposes of paragraph (1)(e)(ii), the provisions governing the conversion into basic own-fund items listed in points (a) (i) or (ii) of Article 69 shall specify either of the following:
- (a) the rate of conversion and a limit on the permitted amount of conversion;
 - (b) a range within which the instruments will convert into the basic own funds item listed in points (a)(i) or (ii) of Article 69.
7. The nominal or principal amount of the basic own-fund item shall absorb losses at the trigger event. Loss absorbency resulting from the cancellation of, or a reduction in, distributions shall not be deemed to be sufficient to be considered to be a principal loss absorbency mechanism in accordance with paragraph (1)(e).
8. The trigger event referred to in paragraph (1)(e) shall be significant non-compliance with the Solvency Capital Requirement.
- For the purposes of this paragraph, non-compliance with the Solvency Capital Requirement shall be considered significant where any of the following conditions is met:
- (a) the amount of own-fund items eligible to cover the Solvency Capital Requirement is equal to or less than the 75 % of the Solvency Capital Requirement;
 - (b) the amount of own-fund items eligible to cover the Minimum Capital Requirement is equal to or less than Minimum Capital Requirement;
 - (c) compliance with the Solvency Capital Requirement is not re-established within a period of three months of the date when non-compliance with the Solvency Capital Requirement was first observed.
- Insurance and reinsurance undertakings may specify, in the provisions governing the instrument, one or more trigger events in addition to the events referred to in points (a) to (c).
9. For the purposes of points (d), (j) and (l) of paragraph 1, references to the Solvency Capital Requirement shall be read as references to the Minimum Capital Requirement where non-compliance with the Minimum Capital Requirement occurs before non-compliance with the Solvency Capital Requirement.

*Article 72***Tier 2 Basic own-funds — List of own-fund items**

The following basic own-fund items shall be deemed to substantially possess the characteristics set out in Article 93(1)(b) of Directive 2009/138/EC, taking into consideration the features set out in Article 93(2) of that Directive, and shall be classified as Tier 2 where the following items display all of the features set out in Article 73:

- (a) the part excess of assets over liabilities, valued in accordance with Article 75 and Section 2 of Chapter VI of Directive 2009/138/EC, comprising the following items:
 - (i) ordinary share capital and the related share premium account;
 - (ii) initial funds, members' contributions or the equivalent basic own-fund item for mutual and mutual-type undertakings;
 - (iii) subordinated mutual member accounts;
 - (iv) preference shares and the related share premium account;
- (b) subordinated liabilities valued in accordance with Article 75 of Directive 2009/138/EC.

*Article 73***Tier 2 Basic own-funds — Features determining classification**

1. The features referred to in Article 72 shall be the following:
 - (a) the basic own-fund item ranks after the claims of all policy holders and beneficiaries and non-subordinated creditors;
 - (b) the basic own-fund item does not include features which may cause the insolvency of the insurance or reinsurance undertaking or may accelerate the process of the undertaking becoming insolvent;
 - (c) the basic own-fund item is undated or has an original maturity of at least 10 years; the first contractual opportunity to repay or redeem the basic own-fund item does not occur before 5 years from the date of issuance;
 - (d) the basic own-fund item is only repayable or redeemable at the option of the insurance or reinsurance undertaking and the repayment or redemption of the basic own-fund item is subject to prior supervisory approval;
 - (e) the basic own-fund item may include limited incentives to repay or redeem that basic own-fund item, provided that these do not occur before 10 years from the date of issuance;
 - (f) the basic own-fund item provides for the suspension of repayment or redemption of that item where there is non-compliance with the Solvency Capital Requirement or repayment or redemption would lead to such non-compliance until the undertaking complies with the Solvency Capital Requirement and the repayment or redemption would not lead to non-compliance with the Solvency Capital Requirement;
 - (g) the basic own-fund item meets one of the following criteria:
 - (i) in the case of items referred to in points (a)(i) and (ii) of Article 72, either the legal or contractual arrangements governing the basic own-fund item or national legislation allow for the distributions in relation to that item to be deferred where there is non-compliance with the Solvency Capital Requirement or the distribution would lead to such non-compliance until the undertaking complies with the Solvency Capital Requirement and the distribution would not lead to non-compliance with the Solvency Capital Requirement;
 - (ii) in the case of items referred to in points (a)(iii) and (iv) and point (b) of Article 72 the terms of the contractual arrangement governing the basic own-fund item provide for the distributions in relation to that item to be deferred where there is non-compliance with the Solvency Capital Requirement or the distribution would lead to such non-compliance until the undertaking complies with the Solvency Capital Requirement and the distribution would not lead to non-compliance with the Solvency Capital Requirement;
 - (h) the basic own-fund item may only allow for a distribution to be made where there is non-compliance with the Solvency Capital Requirement or the distribution on a basic-own fund item would lead to such non-compliance, where all of the following conditions are met:
 - (i) the supervisory authority has exceptionally waived the deferral of distributions;
 - (ii) the payment does not further weaken the solvency position of the insurance or reinsurance undertaking;
 - (iii) the Minimum Capital Requirement is complied with after the distribution is made.

- (i) the basic own-fund item is free from encumbrances and is not connected with any other transaction, which when considered with the basic own-fund item, could result in that basic own-fund item not complying with the first subparagraph of Article 94(2) of Directive 2009/138/EC.
- (j) the basic own-fund item displays the features set out in Article 71 that are relevant for basic own-fund items referred to in points (a)(iii), (v) and (b) of Article 69, but exceeds the limit set out in Article 82(3).

Notwithstanding point (f), the basic own-fund item may only allow for the repayment or redemption of that item where there is non-compliance with the Solvency Capital Requirement or repayment or redemption would lead to such non-compliance, where all of the following conditions are met:

- (i) the supervisory authority has exceptionally waived the suspension of repayment or redemption of that item;
- (ii) the item is exchanged for or converted into another Tier 1 or Tier 2 basic own-fund item of at least the same quality;
- (iii) the Minimum Capital Requirement is complied with after the repayment or redemption.

2. For the purposes of this Article, the exchange or conversion of a basic own-fund item into another Tier 1 or Tier 2 basic own-fund item or the repayment or redemption of a Tier 2 basic own-fund item out of the proceeds of a new basic own-fund item of at least the same quality shall not be deemed to be a repayment or redemption, provided that the exchange, conversion, repayment or redemption is subject to the approval of the supervisory authority.

3. For the purposes of points (f) and (g) of paragraph 1, references to the Solvency Capital Requirement shall be read as references to the Minimum Capital Requirement where non-compliance with the Minimum Capital Requirement occurs before non-compliance with the Solvency Capital Requirement.

4. For the purposes of point (e) of paragraph 1, undertakings shall consider incentives to redeem in the form of an interest rate step-up associated with a call option as limited where the step-up takes the form of a single increase in the coupon rate and results in an increase in the initial rate that is no greater than the higher of the following amounts:

- (a) 100 basis points, less the swap spread between the initial index basis and the stepped-up index basis;
- (b) 50 % of the initial credit spread, less the swap spread between the initial index basis and the stepped-up index basis.

Article 74

Tier 2 Ancillary own-funds — List of own-fund items

Without prejudice to Article 96 of Directive 2009/138/EC, the following ancillary own-fund items shall be deemed to substantially possess the characteristics set out in Article 93(1)(b) of Directive 2009/138/EC, taking into consideration the features set out in Article 93(2) of that Directive, and shall be classified as Tier 2, where the following items display all of the features set out in Article 75:

- (a) unpaid and uncalled ordinary share capital callable on demand;
- (b) unpaid and uncalled initial funds, members' contributions or the equivalent basic own-fund item for mutual and mutual-type undertakings, callable on demand;
- (c) unpaid and uncalled preference shares callable on demand;
- (d) a legally binding commitment to subscribe and pay for subordinated liabilities on demand;
- (e) letters of credit and guarantees which are held in trust for the benefit of insurance creditors by an independent trustee and provided by credit institutions authorised in accordance with Article 8 of Directive 2013/36/EU;
- (f) letters of credit and guarantees provided that the items can be called up on demand and are clear of encumbrances;
- (g) any future claims which mutual or mutual-type associations of shipowners with variable contributions solely insuring risks listed in classes 6, 12 and 17 in Part A of Annex 1 of Directive 2009/138/EC may have against their members by way of a call for supplementary contributions, within the following 12 months;

- (h) any future claims which mutual or mutual-type associations may have against their members by way of a call for supplementary contributions, within the following 12 months, provided that a call can be made on demand and is clear of encumbrances;
- (i) other legally binding commitments received by the insurance or reinsurance undertaking, provided that the item can be called up on demand and is clear of encumbrances.

Article 75

Tier 2 Ancillary own-funds — Features determining classification

In order to be classified as Tier 2, the ancillary own-fund items listed in Article 74 shall display the features of a basic own fund item classified in Tier 1 in accordance with Articles 69 and 71 once that item has been called up and paid in.

Article 76

Tier 3 Basic own-funds– List of own-fund items

The following basic own-fund items shall be deemed to possess the characteristics set out in Article 93(1)(b) of Directive 2009/138/EC, taking into consideration the features set out in Article 93(2) of that Directive, and shall be classified as Tier 3 where the following items display all of the features set out in Article 77:

- (a) the part excess of assets over liabilities, valued in accordance with Sections 1 and 2 of Chapter VI of Directive 2009/138/EC, comprising the following items:
 - (i) subordinated mutual member accounts;
 - (ii) preference shares and the related share premium account;
 - (iii) an amount equal to the value of net deferred tax assets;
- (b) subordinated liabilities valued in accordance with Article 75 of Directive 2009/138/EC.

Article 77

Tier 3 Basic own-funds– Features determining classification

1. The features referred to in Article 76 shall be the following:
 - (a) the basic own-fund item, in the case of items referred to in points (a)(i) and (ii) and point (b) of Article 76, ranks after the claims of all policy holders and beneficiaries and non-subordinated creditors;
 - (b) the basic own-fund item does not include features which may cause the insolvency of the insurance or reinsurance undertaking or may accelerate the process of the undertaking becoming insolvent;
 - (c) the basic own-fund item, in the case of items referred to in points (a)(i) and (ii) and point (b) of Article 76, is undated or has an original maturity of at least 5 years, where the maturity date is the first contractual opportunity to repay or redeem the basic own-fund item;
 - (d) the basic own-fund item, in the case of items referred to in points (a)(i) and (ii) and point (b) of Article 76, is only repayable or redeemable at the option of the insurance or reinsurance undertaking and the repayment or redemption of the basic own-fund item is subject to prior supervisory approval;
 - (e) the basic own-fund item, in the case of items referred to in points (a)(i) and (ii) and point (b) of Article 76, may include limited incentives to repay or redeem that basic own-fund item;
 - (f) the basic own-fund item, in the case of items referred to in points (a)(i) and (ii) and point (b) of Article 76, provides for the suspension of repayment or redemption where there is non-compliance with the Solvency Capital Requirement or repayment or redemption would lead to such non-compliance until the undertaking complies with the Solvency Capital Requirement and the repayment or redemption would not lead to non-compliance with the Solvency Capital Requirement;

- (g) the basic own-fund item, in the case of items referred to in points (a)(i) and (ii) and point (b) of Article 76, provides for the deferral of distributions where there is non-compliance with the Minimum Capital Requirement or the distribution would lead to such non-compliance until the undertaking complies with the Minimum Capital Requirement and the distribution would not lead to non-compliance with the Minimum Capital Requirement;
- (h) the basic own-fund item is free from encumbrances and is not connected with any other transaction, which could undermine the features that the item is required to possess in accordance with this Article.

Notwithstanding point (f), the basic own-fund item may only allow for the repayment or redemption of that item where there is non-compliance with the Solvency Capital Requirement or repayment or redemption would lead to such non-compliance, where all the following conditions are met:

- (i) the supervisory authority has exceptionally waived the suspension of repayment or redemption of that item;
- (ii) the item is exchanged for or converted into another Tier 1, Tier 2 basic own-fund item or Tier 3 basic own-fund item of at least the same quality;
- (iii) the Minimum Capital Requirement is complied with after the repayment or redemption.

2. For the purposes of this Article, the exchange or conversion of a basic own-fund item into another Tier 1, Tier 2 basic own-fund item or Tier 3 basic own-fund item or the repayment or redemption of a Tier 3 basic own-fund item out of the proceeds of a new basic own-fund item of at least the same quality shall not be deemed to be a repayment or redemption, provided that the exchange, conversion, repayment or redemption is subject to the approval of the supervisory authority.

3. For the purposes of point (f) of paragraph 1, references to the Solvency Capital Requirement shall be read as references to the Minimum Capital Requirement where non-compliance with the Minimum Capital Requirement occurs before non-compliance with the Solvency Capital Requirement.

4. For the purposes of point (e) of paragraph 1, undertakings shall consider incentives to redeem in the form of an interest rate step-up associated with a call option as limited where the step-up takes the form of a single increase in the coupon rate and results in an increase in the initial rate that is no greater than the higher of the following amounts:

- (a) 100 basis points, less the swap spread between the initial index basis and the stepped-up index basis;
- (b) 50 % of the initial credit spread, less the swap spread between the initial index basis and the stepped-up index basis.

Article 78

Tier 3 Ancillary own-funds– List of own-funds items

Ancillary own-fund items that have been approved by the supervisory authority in accordance with Article 90 of Directive 2009/138/EC, and which do not display all of the features set out in Article 75 shall be classified as Tier 3 ancillary own funds.

Article 79

Supervisory Authorities approval of the assessment and classification of own-fund items

1. Without prejudice to Article 90 of Directive 2009/138/EC, where an own-fund item is not included in the list of own-funds items set out in Articles 69, 72, 74, 76 and 78, insurance or reinsurance undertakings shall only consider that item as own funds where an approval of the item's assessment and classification has been received from the supervisory authority.

2. The supervisory authority shall assess the following, on the basis of documents submitted by the insurance or reinsurance undertaking, when approving the assessment and classification of own-fund items not included in the list of own-fund items set out in Articles 69, 72, 74, 76 and 78:

- (a) where the undertaking is applying for approval for classification as Tier 1, whether the basic own-fund item substantially possesses the characteristics set out in Article 93(1)(a) and (b) of Directive 2009/138/EC, taking into consideration the features set out in Article 93(2) of that Directive;
- (b) where the undertaking is applying for classification as Tier 2 basic own funds, whether the basic own-fund item substantially possesses the characteristics set out in Article 93(1)(b) of Directive 2009/138/EC, taking into consideration the features set out in Article 93(2) of that Directive;

- (c) where the undertaking is applying for classification as Tier 2 ancillary own funds, whether the ancillary own-fund item substantially possesses the characteristics in Article 93(1)(a) and (b) of Directive 2009/138/EC, taking into consideration the features set out in Article 93(2) of that Directive;
 - (d) where the undertaking is applying for classification as Tier 3 basic own funds, whether the basic own-fund item possesses the characteristics set out in Article 93(1)(b) of Directive 2009/138/EC, taking into consideration the features set out in Article 93(2) of that Directive;
 - (e) the legal enforceability of the contractual terms of the own-fund item in all relevant jurisdictions;
 - (f) whether the own-fund item has been fully paid-in.
3. Basic own-fund items not included in the list of own-fund items set out in Articles 69, 72 and 76 shall only be classified as Tier 1 basic own funds where they are fully paid-in.
4. The inclusion of own-fund items approved by the supervisory authority in accordance with this Article shall be subject to quantitative limits set out in Article 82.

SECTION 3

Eligibility of own funds

Subsection 1

Ring-fenced funds

Article 80

Ring-fenced funds requiring adjustments

1. A reduction of the reconciliation reserve referred to in Article 70(1)(e) shall be required where own-fund items within a ring-fenced fund have a reduced capacity to fully absorb losses on a going-concern basis due to their lack of transferability within the insurance or reinsurance undertaking for any of the following reasons:
- (a) the items can only be used to cover losses on a defined portion of the insurance or reinsurance undertaking's insurance or reinsurance contracts;
 - (b) the items can only be used to cover losses in respect of certain policy holders or beneficiaries;
 - (c) the items can only be used to cover losses arising from particular risks or liabilities.
2. The own-fund items referred to in paragraph 1, (hereinafter referred to as 'restricted own-fund items'), shall not include the value of future transfers attributable to shareholders.

Article 81

Adjustment for ring-fenced funds and matching adjustment portfolios

1. For the purposes of calculating the reconciliation reserve, insurance and reinsurance undertakings shall reduce the excess of assets over liabilities referred to in Article 70 by comparing the following amounts:
- (a) the restricted own-fund items within the ring-fenced fund or matching adjustment portfolio;
 - (b) the notional Solvency Capital Requirement for the ring-fenced fund or matching adjustment portfolio.

Where the insurance or reinsurance undertaking calculates the Solvency Capital Requirement using the standard formula, the notional Solvency Capital Requirement shall be calculated in accordance with Article 217.

Where the undertaking calculates the Solvency Capital Requirement using an internal model, the notional Solvency Capital Requirement shall be calculated using that internal model, as if the undertaking pursued only the business included in the ring-fenced fund or matching adjustment portfolio.

2. By way of derogation from paragraph 1, where the assets, the liabilities and the risk within a ring-fenced fund are not material, insurance and reinsurance undertakings may reduce the reconciliation reserve by the total amount of restricted own-fund items.

Subsection 2

Quantitative limits

Article 82

Eligibility and limits applicable to Tiers 1, 2 and 3

1. As far as compliance with the Solvency Capital Requirement is concerned, the eligible amounts of Tier 2 and Tier 3 items shall be subject to all of the following quantitative limits:

- (a) the eligible amount of Tier 1 items shall be at least one half of the Solvency Capital Requirement;
- (b) the eligible amount of Tier 3 items shall be less than 15 % of the Solvency Capital Requirement;
- (c) the sum of the eligible amounts of Tier 2 and Tier 3 items shall not exceed 50 % of the Solvency Capital Requirement.

2. As far as compliance with the Minimum Capital Requirements is concerned, the eligible amounts of Tier 2 items shall be subject to all of the following quantitative limits:

- (a) the eligible amount of Tier 1 items shall be at least 80 % of the Minimum Capital Requirement;
- (b) the eligible amounts of Tier 2 items shall not exceed 20 % of the Minimum Capital Requirement.

3. Within the limit referred to in point (a) of paragraph 1 and point (a) of paragraph 2, the sum of the following basic own-fund items shall make up less than 20 % of the total amount of Tier 1 items:

- (a) items referred to in point (a)(iii) of Article 69;
- (b) items referred to in point (a)(v) of Article 69;
- (c) items referred to in point (b) of Article 69;
- (d) items that are included in Tier 1 basic own funds under the transitional arrangement set out in Article 308b(9) of Directive 2009/138/EC.

CHAPTER V

SOLVENCY CAPITAL REQUIREMENT STANDARD FORMULA

SECTION 1

General provisions

Subsection 1

Scenario based calculations

Article 83

1. Where the calculation of a module or sub-module of the Basic Solvency Capital Requirement is based on the impact of a scenario on the basic own funds of insurance and reinsurance undertakings, all of the following assumptions shall be made in that calculation:

- (a) the scenario does not change the amount of the risk margin included in technical provisions;
- (b) the scenario does not change the value of deferred tax assets and liabilities;
- (c) the scenario does not change the value of future discretionary benefits included in technical provisions;
- (d) no management actions are taken by the undertaking during the scenario.

2. The calculation of technical provisions arising as a result of determining the impact of a scenario on the basic own funds of insurance and reinsurance undertakings as referred to in paragraph 1 shall not change the value of future discretionary benefits, and shall take account of all of the following:

- (a) without prejudice to point (d) of paragraph 1, future management actions following the scenario, provided they comply with Article 23;
- (b) any material adverse impact of the scenario or the management actions referred to in point (a) on the likelihood that policy holders will exercise contractual options.

3. Insurance and reinsurance undertakings may use simplified methods to calculate the technical provisions arising as a result of determining the impact of a scenario as referred to in paragraph 1, provided that the simplified method does not lead to a misstatement of the Solvency Capital Requirement that could influence the decision-making or the judgement of the user of the information relating to the Solvency Capital Requirement, unless the simplified calculation leads to a Solvency Capital Requirement which exceeds the Solvency Capital Requirement that results from the calculation according to the standard formula.

4. The calculation of assets and liabilities arising as a result of determining the impact of a scenario as referred to in paragraph 1 shall take account of the impact of the scenario on the value of any relevant risk mitigation instruments held by the undertaking which comply with Articles 209 to 215.

5. Where the scenario would result in an increase in the basic own funds of insurance and reinsurance undertakings, the calculation of the module or sub-module shall be based on the assumption that the scenario has no impact on the basic own funds.

Subsection 2

Look-through approach

Article 84

1. The Solvency Capital Requirement shall be calculated on the basis of each of the underlying assets of collective investment undertakings and other investments packaged as funds (look-through approach).

2. The look-through approach referred to in paragraph 1 shall also apply to the following:

- (a) indirect exposures to market risk other than collective investment undertakings and investments packaged as funds;
- (b) indirect exposures to underwriting risk;
- (c) indirect exposures to counterparty risk.

3. Where the look-through approach cannot be applied to collective investment undertakings or investments packaged as funds, the Solvency Capital Requirement may be calculated on the basis of the target underlying asset allocation of the collective investment undertaking or fund, provided such a target allocation is available to the undertaking at the level of granularity necessary for calculating all relevant sub-modules and scenarios of the standard formula, and the underlying assets are managed strictly according to this target allocation. For the purposes of that calculation, data groupings may be used, provided they are applied in a prudent manner, and that they do not apply to more than 20 % of the total value of the assets of the insurance or reinsurance undertaking.

4. Paragraph 2 shall not apply to investments in related undertakings within the meaning of Article 212(1)(b) and (2) of Directive 2009/138/EC.

Subsection 3

Regional governments and local authorities

Article 85

The conditions for a categorisation of regional governments and local authorities shall be that there is no difference in risk between exposures to these and exposures to the central government, because of the specific revenue-raising power of the former, and specific institutional arrangements exist, the effect of which is to reduce the risk of default.

Subsection 4

Material basis risk

Article 86

Notwithstanding Article 210(2), where insurance or reinsurance undertakings transfer underwriting risk using reinsurance contracts or special purpose vehicles that are subject to material basis risk from a currency mismatch between underwriting risk and the risk-mitigation technique, insurance or reinsurance undertakings may take into account the risk-mitigation technique in the calculation of the Solvency Capital Requirement according to the standard

formula, provided that the risk-mitigation technique complies with Article 209, Article 210(1), (3) and (4) and Article 211, and the calculation is carried out as follows:

- (a) the basis risk stemming from a currency mismatch between underwriting risk and the risk-mitigation technique shall be taken into account in the relevant underwriting risk module, sub-module or scenario of the standard formula at the most granular level by adding 25 % of the difference between the following to the capital requirement calculated in accordance with the relevant module, sub-module or scenario:
 - (i) the hypothetical capital requirement for the relevant underwriting risk module, sub-module or scenario that would result from a simultaneous occurrence of the scenario set out in Article 188;
 - (ii) the capital requirement for the relevant underwriting risk module, sub-module or scenario.
- (b) where the risk-mitigation technique covers more than one module, sub-module or scenario, the calculation referred to in point (a) shall be carried out for each of those modules, sub-modules and scenarios. The capital requirement resulting from those calculations shall not exceed 25 % of the capacity of the non-proportional reinsurance contract or special purpose vehicle.

Subsection 5

Calculation of the basic solvency capital requirement

Article 87

The Basic Solvency Capital Requirement shall include a risk module for intangible asset risk, and shall be equal to the following:

$$\text{BasicSCR} = \sqrt{\sum_{i,j} \text{Corr}_{i,j} \cdot \text{SCR}_i \cdot \text{SCR}_j + \text{SCR}_{\text{intangibles}}}$$

where:

- (a) the summation, $\text{Corr}_{i,j}$, SCR_i and SCR_j are specified as set out in point (1) of Annex IV to Directive 2009/138/EC;
- (b) $\text{SCR}_{\text{intangibles}}$ denotes the capital requirement for intangible asset risk referred to in Article 203.

Subsection 6

Proportionality and simplifications

Article 88

Proportionality

1. For the purposes of Article 109, insurance and reinsurance undertakings shall determine whether the simplified calculation is proportionate to the nature, scale and complexity of the risks by carrying out an assessment which shall include all of the following:

- (a) an assessment of the nature, scale and complexity of the risks of the undertaking falling within the relevant module or sub-module;
- (b) an evaluation in qualitative or quantitative terms, as appropriate, of the error introduced in the results of the simplified calculation due to any deviation between the following:
 - (i) the assumptions underlying the simplified calculation in relation to the risk;
 - (ii) the results of the assessment referred to in point (a).

2. A simplified calculation shall not be considered to be proportionate to the nature, scale and complexity of the risks where the error referred to in point (b) of paragraph 2 leads to a misstatement of the Solvency Capital Requirement that could influence the decision-making or the judgement of the user of the information relating to the Solvency Capital Requirement, unless the simplified calculation leads to a Solvency Capital Requirement which exceeds the Solvency Capital Requirement that results from the standard calculation.

Article 89

General provisions for simplifications for captives

Captive insurance undertakings and captive reinsurance undertakings as defined in points (2) and (5) of Article 13 of Directive 2009/138/EC may use the simplified calculations set out in Articles 90, 103, 105 and 106 of this Regulation where Article 88 of this Regulation is complied with and all of the following requirements are met:

- (a) in relation to the insurance obligations of the captive insurance undertaking or captive reinsurance undertaking, all insured persons and beneficiaries are legal entities of the group of which the captive insurance or captive reinsurance undertaking is part;
- (b) in relation to the reinsurance obligations of the captive insurance or captive reinsurance undertaking, all insured persons and beneficiaries of the insurance contracts underlying the reinsurance obligations are legal entities of the group of which the captive insurance or captive reinsurance undertaking is part;
- (c) the insurance obligations and the insurance contracts underlying the reinsurance obligations of the captive insurance or captive reinsurance undertaking do not relate to any compulsory third party liability insurance.

Article 90

Simplified calculation for captive insurance and reinsurance undertakings of the capital requirement for non-life premium and reserve risk

1. Where Articles 88 and 89 are complied with, captive insurance and captive reinsurance undertakings may calculate the capital requirement for non-life premium and reserve risk as follows:

$$SCR_{nl\text{pre}m\text{res}} = \sqrt{0,65 \cdot \sum_s NL_{(pr,s)}^2 + 0,35 \cdot (\sum_s NL_{(pr,s)})^2},$$

where the s covers all segments set out in Annex II.

2. For the purposes of paragraph 1, the capital requirement for non-life premium and reserve risk of a particular segment s set out in Annex II shall be equal to the following:

$$NL_{pr,s} = 0,6 \cdot \sqrt{V_{(pre,m,s)}^2 + V_{(pre,m,s)} \cdot V_{(res,s)} + V_{(res,s)}^2}$$

where:

- (a) $V_{(pre,m,s)}$ denotes the volume measure for premium risk of segment s calculated in accordance with paragraph 3 of Article 116;
- (b) $V_{(res,s)}$ denotes the volume measure for reserve risk of a segment calculated in accordance with paragraph 6 of Article 116.

Article 91

Simplified calculation of the capital requirement for life mortality risk

Where Article 88 is complied with, insurance and reinsurance undertakings may calculate the capital requirement for life mortality risk as follows:

$$SCR_{mortality} = 0,15 \cdot CAR \cdot q \cdot \sum_{k=1-0,5}^{n-0,5} \left(\frac{1-q}{1-i_k}\right)^k$$

where, with respect to insurance and reinsurance policies with a positive capital at risk:

- (a) CAR denotes the total capital at risk, meaning the sum over all contracts of the higher of zero and the difference between the following amounts:
 - (i) the sum of:
 - the amount that the insurance or reinsurance undertaking would currently pay in the event of the death of the persons insured under the contract after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;

- the expected present value of amounts not covered in the previous indent that the undertaking would pay in the future in the event of the immediate death of the persons insured under the contract after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
- (ii) the best estimate of the corresponding obligations after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
- (b) q denotes the expected average mortality rate of the insured persons during the following 12 months weighted by the sum insured;
- (c) n denotes the modified duration in years of payments payable on death included in the best estimate;
- (d) i_k denotes the annualized spot rate for maturity k of the relevant risk-free term structure as referred to in Article 43.

Article 92

Simplified calculation of the capital requirement for life longevity risk

Where Article 88 is complied with, insurance and reinsurance undertakings may calculate the capital requirement for life longevity risk calculated as follows:

$$SCR_{\text{longevity}} = 0,2 \cdot q \cdot n \cdot 1,1^{(n-1)/2} \cdot BE_{\text{long}}$$

where, with respect to the policies referred to in Article 138(2):

- (a) q denotes the expected average mortality rate of the insured persons during the following 12 months weighted by the sum insured;
- (b) n denotes the modified duration in years of the payments to beneficiaries included in the best estimate;
- (c) BE_{long} denotes the best estimate of the obligations subject to longevity risk.

Article 93

Simplified calculation of the capital requirement for life disability-morbidity risk

Where 88 is complied with, insurance and reinsurance undertakings may calculate the capital requirement for life disability-morbidity risk as follows:

$$SCR_{\text{disability-morbidity}} = \begin{cases} 0,35 \cdot CAR_1 \cdot d_1 \\ + 0,25 \cdot 1,1^{(n-3)/2} \cdot (n-1) \cdot CAR_2 \cdot d_2 \\ + 0,2 \cdot 1,1^{(n-1)/2} \cdot t \cdot n \cdot BE_{\text{dis}} \end{cases}$$

where with respect to insurance and reinsurance policies with a positive capital at risk:

- (a) CAR_1 denotes the total capital at risk, meaning the sum over all contracts of the higher of zero and the difference between the following amounts:
 - (i) the sum of:
 - the amount that the insurance or reinsurance undertaking would currently pay in the event of the death or disability of the persons insured under the contract after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
 - the expected present value of amounts not covered in the previous indent that the insurance or reinsurance undertaking would pay in the future in the event of the immediate death or disability of the persons insured under the contract after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
 - (ii) the best estimate of the corresponding obligations after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
- (b) CAR_2 denotes the total capital at risk as defined in point (a) after 12 months;
- (c) d_1 denotes the expected average disability-morbidity rate during the following 12 months weighted by the sum insured;

- (d) d_2 denotes the expected average disability-morbidity rate in the 12 months after the following 12 months weighted by the sum insured;
- (e) n denotes the modified duration of the payments on disability-morbidity included in the best estimate;
- (f) t denotes the expected termination rates during the following 12 months;
- (g) BE_{dis} denotes the best estimate of obligations subject to disability-morbidity risk.

Article 94

Simplified calculation of the capital requirement for life-expense risk

Where Article 88 is complied with, insurance and reinsurance undertakings may calculate the capital requirement for life-expense risk as follows:

$$SCR_{\text{expenses}} = 0,1 \cdot EI \cdot n + EI \cdot \left(\frac{1}{i + 0,01} \right) \cdot ((1 + i + 0,01)^n - 1) - \frac{1}{i} ((1 + i)^n - 1)$$

where:

- (a) EI denotes the amount of expenses incurred in servicing life insurance or reinsurance obligations other than health insurance and reinsurance obligations during the last year;
- (b) n denotes the modified duration in years of the cash flows included in the best estimate of those obligations;
- (c) i denotes the weighted average inflation rate included in the calculation of the best estimate of those obligations, where the weights are based on the present value of expenses included in the calculation of the best estimate for servicing existing life obligations.

Article 95

Simplified calculation of the capital requirement for permanent changes in lapse rates

1. Where Article 88 is complied with, insurance and reinsurance undertakings may calculate the capital requirement for the risk of a permanent increase in lapse rates as follows:

$$Lapse_{up} = 0,5 \cdot l_{up} \cdot n_{up} \cdot S_{up}$$

where:

- (a) l_{up} denotes the higher of the average lapse rate of the policies with positive surrender strains and 67 %;
- (b) n_{up} denotes the average period in years over which the policies with a positive surrender strains run off;
- (c) S_{up} denotes the sum of positive surrender strains.

2. Where Article 88 is complied with, insurance and reinsurance undertakings may calculate the capital requirement for the risk of a permanent decrease in lapse rates as follows:

$$Lapse_{down} = 0,5 \cdot l_{down} \cdot n_{down} \cdot S_{down}$$

where:

- (a) l_{down} denotes the higher of the average lapse rate of the policies with negative surrender strains and 40 %;
- (b) n_{down} denotes the average period in years over which the policies with a negative surrender strains runs off;
- (c) S_{down} denotes the sum of negative surrender strains.

3. The surrender strain of an insurance policy referred to in paragraphs 1 and 2 is the difference between the following:

- (a) the amount currently payable by the insurance undertaking on discontinuance by the policy holder, net of any amounts recoverable from policy holders or intermediaries;
- (b) the amount of technical provisions without the risk margin.

Article 96

Simplified calculation of the capital requirement for life-catastrophe risk

Where Article 88 is complied with, insurance and reinsurance undertakings may calculate the capital requirement for life-catastrophe risk calculated as follows:

$$SCR_{\text{life-catastrophe}} = \sum_i 0,0015 \cdot CAR_i$$

where:

- (a) the sum includes all policies with a positive capital at risk;
- (b) CAR_i denotes the capital at risk of the policy i , meaning the higher of zero and the difference between the following amounts:
 - (i) the sum of:
 - the amount that the insurance or reinsurance undertaking would currently pay in the event of the death of the persons insured under the contract after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
 - the expected present value of amounts not covered in the previous indent that the insurance or reinsurance undertaking would pay in the future in the event of the immediate death of the persons insured under the contract after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
 - (ii) the best estimate of the corresponding obligations after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles.

Article 97

Simplified calculation of the capital requirement for health mortality risk

Where Article 88 is complied with, insurance and reinsurance undertakings may calculate the capital requirement for health mortality risk as follows:

$$SCR_{\text{health-mortality}} = 0,15 \cdot CAR \cdot q \cdot \sum_{k=1-0,5}^{n-0,5} \left(\frac{1-q}{1+i_k} \right)^k$$

where with respect to insurance and reinsurance policies with a positive capital at risk:

- (a) CAR denotes the total capital at risk, meaning the sum, in relation to each contract, of the higher of zero and the difference between the following amounts:
 - (i) the sum of:
 - the amount that the insurance or reinsurance undertaking would currently pay in the event of the death of the persons insured under the contract after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
 - the expected present value of amounts not covered in the previous indent that the insurance and reinsurance undertaking would pay in the future in the event of the immediate death of the persons insured under the contract after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
 - (ii) the best estimate of the corresponding obligations after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
- (b) q denotes the expected average mortality rate of the insured persons over the following 12 months weighted by the sum insured;
- (c) n denotes the modified duration in years of payments payable on death included in the best estimate;
- (d) i_k denotes the annualized spot rate for maturity k of the relevant risk-free term structure as referred to in Article 43.

Article 98

Simplified calculation of the capital requirement for health longevity risk

Where Article 88 is complied with, insurance and reinsurance undertakings may calculate the capital requirement for health longevity risk as follows:

$$SCR_{\text{health-longevity}} = 0,2 \cdot q \cdot n \cdot 1,1^{(n-1)/2} \cdot BE_{\text{long}}$$

where, with respect to the policies referred to in Article 138(2):

- (a) q denotes the expected average mortality rate of the insured persons during the following 12 months weighted by the sum insured;
- (b) n denotes the modified duration in years of the payments to beneficiaries included in the best estimate;
- (c) BE_{long} denotes the best estimate of the obligations subject to longevity risk.

Article 99

Simplified calculation of the capital requirement for medical expense disability-morbidity risk

Where Article 88 is complied with, insurance and reinsurance undertakings may calculate the capital requirement for medical expense disability-morbidity risk as follows:

$$SCR_{\text{medicalexpenditure}} = 0,05 \cdot MP \cdot n + MP \times \left(\frac{1}{i+0,01} \right) \left((1+i+0,01)^n - 1 \right) - \frac{1}{i} \left((1+i)^n - 1 \right)$$

where:

- (a) MP denotes the amount of medical payments during the last year on medical expense insurance or reinsurance obligations during the last year;
- (b) n denotes the modified duration in years of the cash flows included in the best estimate of those obligations;
- (c) i denotes the average rate of inflation on medical payments included in the calculation of the best estimate of those obligations, where the weights are based on the present value of medical payments included in the calculation of the best estimate of those obligations.

Article 100

Simplified calculation of the capital requirement for income protection disability-morbidity risk

Where Article 88 is complied with, insurance and reinsurance undertakings may calculate the capital requirement for income protection disability-morbidity risk as follows:

$$SCR_{\text{income-protection-disability-morbidity}} = \left\{ \begin{array}{l} 0,35 \cdot CAR_1 \cdot d_1 \\ + 0,25 \cdot 1,1^{(n-3)/2} \cdot (n-1) \cdot CAR_2 \cdot d_2 \\ + 0,2 \cdot 1,1^{(n-1)/2} \cdot t \cdot n \cdot BE_{\text{dis}} \end{array} \right.$$

where with respect to insurance and reinsurance policies with a positive capital at risk:

- (a) CAR_1 denotes the total capital at risk, meaning the sum over all contracts of the higher of zero and the difference between the following amounts:
 - (i) the sum of:
 - the amount that the insurance or reinsurance undertaking would currently pay in the event of the death or disability of the persons insured under the contract after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
 - the expected present value of amounts not covered in the previous indent that the undertaking would pay in the future in the event of the immediate death or disability of the persons insured under the contract after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;

- (ii) the best estimate of the corresponding obligations after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
- (b) CAR_2 denotes the total capital at risk as defined in point (a) after 12 months;
- (c) d_1 denotes the expected average disability-morbidity rate during the following 12 months weighted by the sum insured;
- (d) d_2 denotes the expected average disability-morbidity rate in the 12 months after the following 12 months weighted by the sum insured;
- (e) n denotes the modified duration of the payments on disability-morbidity included in the best estimate;
- (f) t denotes the expected termination rates during the following 12 months;
- (g) BE_{dis} denotes the best estimate of obligations subject to disability-morbidity risk.

Article 101

Simplified calculation of the capital requirement for health expense risk

Where Article 88 is complied with, insurance and reinsurance undertakings may calculate the capital requirement for health expense risk as follows:

$$SCR_{\text{health-expense}} = 0,1 \cdot EI \cdot n + EI \cdot \left(\frac{1}{i + 0,01} \right) \cdot ((1 + i + 0,01)^n - 1) - \frac{1}{i} ((1 + i)^n - 1))$$

where:

- (1) EI denotes the amount of expenses incurred in servicing health insurance and reinsurance obligations during the last year;
- (2) n denotes the modified duration in years of the cash flows included in the best estimate of those obligations;
- (3) i denotes the weighted average inflation rate included in the calculation of the best estimate of these obligations, weighted by the present value of expenses included in the calculation of the best estimate for servicing existing health obligations.

Article 102

Simplified calculation of the capital requirement for SLT health lapse risk

1. Where Article 88 is complied with, insurance and reinsurance undertakings may calculate the capital requirement for the risk of a permanent increase in lapse rates referred to in Article 159(1)(a) as follows:

$$Lapse_{up} = 0,5 \cdot l_{up} \cdot n_{up} \cdot S_{up}$$

where:

- (a) l_{up} denotes the higher of the average lapse rate of the policies with positive surrender strains and 83 %;
- (b) n_{up} denotes the average period in years over which the policies with a positive surrender strains run off;
- (c) S_{up} denotes the sum of positive surrender strains.

2. Where Article 88 is complied with, insurance and reinsurance undertakings may calculate the capital requirement for the risk of a permanent decrease in lapse rates referred to in 159(1)(b) as follows:

$$Lapse_{down} = 0,5 \cdot l_{down} \cdot n_{down} \cdot S_{down}$$

where:

- (a) l_{down} denotes the average lapse rate of the policies with negative surrender strains;
- (b) n_{down} denotes the average period in years over which the policies with a negative surrender strains runs off;
- (c) S_{down} denotes the sum of negative surrender strains.

3. The surrender strain of an insurance policy referred to in paragraphs (1) and (2) is the difference between the following:

- (a) the amount currently payable by the insurance undertaking on discontinuance by the policy holder, net of any amounts recoverable from policy holders or intermediaries;
- (b) the amount of technical provisions without the risk margin.

Article 103

Simplified calculation of the capital requirement for interest rate risk for captive insurance or reinsurance undertakings

1. Where Articles 88 and 89 are complied with, captive insurance or captive reinsurance undertakings may calculate the capital requirement for interest rate risk referred to in Article 165 as follows:

- (a) the sum, for each currency, of the capital requirements for the risk of an increase in the term structure of interest rates as set out in paragraph 2 of this Article;
- (b) the sum, for each currency, of the capital requirements for the risk of a decrease in the term structure of interest rates as set out in paragraph 3 of this Article.

2. For the purposes of point (a) of paragraph 1 of this Article, the capital requirement for the risk of an increase in the term structure of interest rates for a given currency shall be equal to the following:

$$IR_{up} = \sum_i MVAL_i \cdot dur_i \cdot rate_i \cdot stress_{(i,up)} - \sum_{lob} BE_{lob} \cdot dur_{lob} \cdot rate_{lob} \cdot stress_{(lob,up)}$$

where:

- (a) the first sum covers all maturity intervals i set out in paragraph 4 of this Article;
- (b) $MVAL_i$ denotes the value in accordance with Article 75 of Directive 2009/138/EC of assets less liabilities other than technical provisions for maturity interval i ;
- (c) dur_i denotes the simplified duration of maturity interval i ;
- (d) $rate_i$ denotes the relevant risk-free rate for the simplified duration of maturity interval i ;
- (e) $stress_{(i,up)}$ denotes the relative upward stress of interest rate for simplified duration of maturity interval i ;
- (f) the second sum covers all lines of business set out in Annex I of this Regulation;
- (g) BE_{lob} denotes the best estimate for line of business lob ;
- (h) dur_{lob} denotes the modified duration of the best estimate in line of business lob ;
- (i) $rate_{lob}$ denotes the relevant risk-free rate for modified duration in line of business lob ;
- (j) $stress_{(lob,up)}$ denotes the relative upward stress of interest rate for the modified duration dur_{lob} .

3. For the purposes of point (b) of paragraph 1 of this Article, the capital requirement for the risk of a decrease in the term structure of interest rates for a given currency shall be equal to the following:

$$IR_{down} = \sum_i MVAL_i \cdot dur_i \cdot rate_i \cdot stress_{(i,down)} - \sum_{lob} BE_{lob} \cdot dur_{lob} \cdot rate_{lob} \cdot stress_{(lob,down)}$$

where:

- (a) the first sum covers all maturity intervals i set out in paragraph 4;
- (b) $MVAL_i$ denotes the value in accordance with Article 75 of Directive 2009/138/EC of assets less liabilities other than technical provisions for maturity interval i ;
- (c) dur_i denotes the simplified duration of maturity interval i ;
- (d) $rate_i$ denotes the relevant risk-free rate for the simplified duration of maturity interval i ;
- (e) $stress_{(i,down)}$ denotes the relative downward stress of interest rate for simplified duration of maturity interval i ;
- (f) the second sum covers all lines of business set out in Annex I of this Regulation;
- (g) BE_{lob} denotes the best estimate for line of business lob ;
- (h) dur_{lob} denotes the modified duration of the best estimate in line of business lob ;

- (i) $rate_{lob}$ denotes the relevant risk-free rate for modified duration in line of business lob ;
- (j) $stress_{(lob, down)}$ denote the relative downward stress of interest rate for modified duration dur_{lob} .

4. The maturity intervals i and the simplified duration dur_i referred to in points (a) and (c) of paragraph 2 and in point (a) and (c) of paragraph 3 shall be as follows:

- (a) up to the maturity of one year, the simplified duration shall be 0.5 years;
- (b) between maturities of 1 and 3 years, the simplified duration shall be 2 years;
- (c) between maturities of 3 and 5 years, the simplified duration shall be 4 years;
- (d) between maturities of 5 and 10 years, the simplified duration shall be 7 years;
- (e) from the maturity of 10 years onwards, the simplified duration shall be 12 years.

Article 104

Simplified calculation for spread risk on bonds and loans

1. Where Article 88 is complied with, insurance or reinsurance undertakings may calculate the capital requirement for spread risk referred to in Article 176 of this Regulation as follows:

$$SCR_{bonds} = MV^{bonds} \cdot \left(\sum_i \%MV_i^{bonds} \cdot stress_i + \%MV_{norating}^{bonds} \cdot \min[dur_{norating} \cdot 0,03; 1] \right) + \Delta Liab_{ul}$$

where:

- (a) SCR_{bonds} denotes the capital requirement for spread risk on bonds and loans;
- (b) MV^{bonds} denotes the value in accordance with Article 75 of Directive 2009/138/EC of the assets subject to capital requirements for spread risk on bonds and loans;
- (c) $\%MV_i^{bonds}$ denotes the proportion of the portfolio of the assets subject to a capital requirement for spread risk on bonds and loans with credit quality step i , where a credit assessment by a nominated ECAI is available for those assets;
- (d) $\%MV_{norating}^{bonds}$ denotes the proportion of the portfolio of the assets subject to a capital requirement for spread risk on bonds and loans for which no credit assessment by a nominated ECAI is available;
- (e) dur_i and $dur_{norating}$ denote the modified duration denominated in years of the assets subject to a capital requirement for spread risk on bonds and loans where no credit assessment by a nominated ECAI is available;
- (f) $stress_i$ denotes a function of the credit quality step i and of the modified duration denominated in years of the assets subject to a capital requirement for spread risk on bonds and loans with credit quality step i , set out in paragraph 2;
- (g) $\Delta Liab_{ul}$ denotes the increase in the technical provisions less risk margin for policies where the policyholders bear the investment risk with embedded options and guarantees that would result from an instantaneous decrease in the value of the assets subject to the capital requirement for spread risk on bonds of: $MV^{bonds} \cdot \left(\sum_i \%MV_i^{bonds} \cdot stress_i + \%MV_{norating}^{bonds} \cdot \min[dur_{norating} \cdot 0,03; 1] \right)$.

2. $stress_i$ referred to in point (f) of paragraph 1, for each credit quality step i , shall be equal to: $dur_i \cdot b_i$, where dur_i is the modified duration denominated in years of the assets subject to a capital requirement for spread risk on bonds and loans with credit quality step i , and b_i is determined in accordance with the following table:

Credit quality step i	0	1	2	3	4	5	6
b_i	0,9 %	1,1 %	1,4 %	2,5 %	4,5 %	7,5 %	7,5 %

3. $dur_{norating}$ referred to in point (e) of paragraph 1 and dur_i referred to in paragraph 2 shall not be lower than 1 year.

Article 105

Simplified calculation for captive insurance or reinsurance undertakings of the capital requirement for spread risk on bonds and loans

Where Articles 88 and 89 are complied with, captive insurance or captive reinsurance undertakings may base the calculation of the capital requirement for spread risk to in Article 176 on the assumption that all assets are assigned to credit quality step 3.

Article 106

Simplified calculation of the capital requirement for market risk concentration for captive insurance or reinsurance undertakings

Where Articles 88 and 89 are complied with, captive insurance or captive reinsurance undertakings may use all of the following assumptions for the calculation of the capital requirement for concentration risk:

- (1) intra-group asset pooling arrangements of captive insurance or reinsurance undertakings may be exempted from the calculation base referred to in Article 184(2) to the extent that there exist legally enforceable contractual terms which ensure that the liabilities of the captive insurance or reinsurance undertaking will be offset by the intra-group exposures it holds against other entities of the group.
- (2) the relative excess exposure threshold referred to in Article 184(1)(c) shall be equal to 15 % for the following single name exposures:
 - (a) exposures to credit institutions that do not belong to the same group and that have been assigned to the credit quality step 2;
 - (b) exposures to entities of the group that manages the cash of the captive insurance or reinsurance undertaking that have been assigned to the credit quality step 2.

Article 107

Simplified calculation of the risk mitigating effect for reinsurance arrangements or securitisation

1. Where Article 88 is complied with, insurance or reinsurance undertakings may calculate the risk-mitigating effect on underwriting risk of a reinsurance arrangement or securitisation referred to in Article 196 as follows:

$$RM_{re,all} \cdot \frac{Recoverables_i}{Recoverables_{all}}$$

where

- (a) $RM_{re,all}$ denotes the risk mitigating effect on underwriting risk of the reinsurance arrangements and securitisations for all counterparties calculated in accordance with paragraph 2;
 - (b) $Recoverables_i$ denotes the best estimate of amounts recoverable from the reinsurance arrangement or securitisation and the corresponding debtors for counterparty i and $Recoverables_{all}$ denotes the best estimate of amounts recoverable from the reinsurance arrangements and securitisations and the corresponding debtors for all counterparties.
2. The risk mitigating effect on underwriting risk of the reinsurance arrangements and securitisations for all counterparties referred to in paragraph 1 is the difference between the following capital requirements:
- (a) the hypothetical capital requirement for underwriting risk of the insurance or reinsurance undertaking if none of the reinsurance arrangements and securitisations exist;
 - (b) the capital requirements for underwriting risk of the insurance or reinsurance undertaking.

Article 108

Simplified calculation of the risk mitigating effect for proportional reinsurance arrangements

Where Article 88 is complied with, insurance or reinsurance undertakings may calculate the risk-mitigating effect on underwriting risk j of a proportional reinsurance arrangement for counterparty i referred to Article 196 as follows:

$$\frac{Recoverables_i}{BE - Recoverables_{all}} \cdot SCR_j$$

where

- (a) BE denotes the best estimate of obligations gross of the amounts recoverable,
- (b) $Recoverables_i$ denotes the best estimate of amounts recoverable from the proportional reinsurance arrangement and the corresponding debtors for counterparty i ,
- (c) $Recoverables_{all}$ denotes the best estimate of amounts recoverable from the proportional reinsurance arrangements and the corresponding debtors for all counterparties
- (d) SCR_j denotes the capital requirements for underwriting risk j of the insurance or reinsurance undertaking.

Article 109

Simplified calculations for pooling arrangements

Where Article 88 is complied with, insurance or reinsurance undertakings may use the following simplified calculations for the purposes of Articles 193, 194 and 195:

- (a) The best estimate referred to in Article 194(1)(d) may be calculated as follows:

$$BE_C = \frac{P_C}{P_U} \cdot BE_U$$

where BE_U denotes the best estimate of the liability ceded to the pooling arrangement by the undertaking to the pooling arrangement, net of any amounts reinsured with counterparties external to the pooling arrangement.

- (b) The best estimate referred to in Article 195(c) may be calculated as follows:

$$BE_{CE} = \frac{1}{P_U} \cdot BE_{CEP}$$

where BE_{CEP} denotes the best estimate of the liability ceded to the external counterparty by the pool, in relation to risk ceded to the pool by the undertaking.

- (c) The risk mitigating effect referred to in Article 195(d) may be calculated as follows:

$$\Delta RM_{CE} = \frac{BE_{CE}}{\sum_{CE} BE_{CE}} \cdot \Delta RM_{CEP}$$

where:

- (i) BE_{CE} denotes the best estimate of the liability ceded to the external counterparty by the pooling arrangement as a whole;
- (ii) ΔRM_{CEP} denotes the contribution of all external counterparties to the risk mitigating effect of the pooling arrangement on the underwriting risk of the undertaking;
- (d) The counterparty pool members and the counterparties external to the pool may be grouped according to the credit assessment by a nominated ECAI, provided there are separate groupings for pooling exposures of type A, type B and type C.

Article 110

Simplified calculation — grouping of single name exposures

Where Article 88 is complied with, insurance or reinsurance undertakings may calculate the loss-given-default set out in Article 192 for a group of single name exposures. In that case, the group of single name exposures shall be assigned the highest probability of default assigned to single name exposures included in the group in accordance with Article 199.

*Article 111***Simplified calculation of the risk mitigating effect**

Where Article 88 is complied with, insurance or reinsurance undertakings may calculate the risk-mitigating effect on underwriting and market risk of a reinsurance arrangement, securitisation or derivative referred to in Article 196 as the difference between the following capital requirements:

- (a) the sum of the hypothetical capital requirement for the sub-modules of the underwriting and market risk modules of the insurance or reinsurance undertaking affected by the risk-mitigating technique, as if the reinsurance arrangement, securitisation or derivative did not exist;
- (b) the sum of the capital requirements for the sub-modules of the underwriting and market risk modules of the insurance or reinsurance undertaking affected by the risk-mitigating technique.

*Article 112***Simplified calculation of the risk adjusted value of collateral to take into account the economic effect of the collateral**

1. Where Article 88 of this Regulation is complied with, and where the counterparty requirement and the third party requirement referred to in Article 197(1) are both met, insurance or reinsurance undertakings may, for the purposes of Article 197, calculate the risk-adjusted value of a collateral provided by way of security as referred to in Article 1(26)(b), as 85 % of the value of the assets held as collateral, valued in accordance with Article 75 of Directive 2009/138/EC.

2. Where Articles 88 and 214 of this Regulation are complied with, and where the counterparty requirement referred to in Article 197(1) is met and the third party requirement referred to in Article 197(1) is not met, insurance or reinsurance undertakings may, for the purposes of Article 197, calculate the risk-adjusted value of a collateral provided by way of security as referred to in Article 1(26)(b), as 75 % of the value of the assets held as collateral, valued in accordance with Article 75 of Directive 2009/138/EC.

Subsection 7

Scope of the underwriting risk modules*Article 113*

For the calculation of the capital requirements for non-life underwriting risk, life underwriting risk and health underwriting risk, insurance and reinsurance undertakings shall apply:

- (a) the non-life underwriting risk module to non-life insurance and reinsurance obligations other than health insurance and reinsurance obligations;
- (b) the life underwriting risk module to life insurance and reinsurance obligations other than health insurance and reinsurance obligations;
- (c) the health underwriting risk module to health insurance and reinsurance obligations.

SECTION 2

Non-life underwriting risk module*Article 114***Non-life underwriting risk module**

1. The non-life underwriting risk module shall consist of all of the following sub-modules:

- (a) the non-life premium and reserve risk sub-module referred to in point (a) of the third subparagraph of Article 105(2) of Directive 2009/138/EC;
- (b) the non-life catastrophe risk sub-module referred to in point (b) of the third subparagraph of Article 105(2) of Directive 2009/138/EC;
- (c) the non-life lapse risk sub-module.

2. The capital requirement for non-life underwriting risk shall be equal to the following:

$$SCR_{non-life} = \sqrt{\sum_{ij} CorrNL_{(ij)} \cdot SCR_i \cdot SCR_j}$$

where:

- (a) the sum covers all possible combinations (i,j) of the sub-modules set out in paragraph 1;
 - (b) $CorrNL_{(i,j)}$ denotes the correlation parameter for non-life underwriting risk for sub-modules i and j ;
 - (c) SCR_i and SCR_j denote the capital requirements for risk sub-module i and j respectively.
3. The correlation parameter $CorrNL_{(i,j)}$ referred to in paragraph 2 denotes the item set out in row i and in column j of the following correlation matrix:

$i \backslash j$	Non-life premium and reserve	Non-life catastrophe	Non-life lapse
Non-life premium and reserve	1	0,25	0
Non-life catastrophe	0,25	1	0
Non-life lapse	0	0	1

Article 115

Non-life premium and reserve risk sub-module

The capital requirement for non-life premium and reserve risk shall be equal to the following:

$$SCR_{nl\text{ prem res}} = 3 \cdot \sigma_{nl} \cdot V_{nl}$$

where:

- (a) σ_{nl} denotes the standard deviation for non-life premium and reserve risk determined in accordance with Article 117;
- (b) V_{nl} denotes the volume measure for non-life premium and reserve risk determined in accordance with Article 116.

Article 116

Volume measure for non-life premium and reserve risk

1. The volume measure for non-life premium and reserve risk shall be equal to the sum of the volume measures for premium and reserve risk of the segments set out in Annex II.

2. For all segments set out in Annex II, the volume measure of a particular segment s shall be equal to the following:

$$V_s = (V_{(prem,s)} + V_{(res,s)}) \cdot (0,75 + 0,25 \cdot DIV_s)$$

where:

- (a) $V_{(prem,s)}$ denotes the volume measure for premium risk of segment s ;
- (b) $V_{(res,s)}$ denotes the volume measure for reserve risk of segment s ;
- (c) DIV_s denotes the factor for geographical diversification of segment s .

3. For all segments set out in Annex II, the volume measure for premium risk of a particular segment s shall be equal to the following:

$$V_{(prem,s)} = \max[P_s; P_{(last,s)}] + FP_{(existing,s)} + FP_{(future,s)}$$

where:

- (a) P_s denotes an estimate of the premiums to be earned by the insurance or reinsurance undertaking in the segment s during the following 12 months;
- (b) $P_{(last,s)}$ denotes the premiums earned by the insurance or reinsurance undertaking in the segment s during the last 12 months;

- (c) $FP_{(existing,s)}$ denotes the expected present value of premiums to be earned by the insurance or reinsurance undertaking in the segment s after the following 12 months for existing contracts;
- (d) $FP_{(future,s)}$ denotes the expected present value of premiums to be earned by the insurance and reinsurance undertaking in the segment s for contracts where the initial recognition date falls in the following 12 months but excluding the premiums to be earned during the 12 months after the initial recognition date.

4. For all segments set out in Annex II, insurance and reinsurance undertakings may, as an alternative to the calculation set out in paragraph 3 of this Article, choose to calculate the volume measure for premium risk of a particular segment s in accordance with the following formula:

$$V_{(prem,s)} = P_s + FP_{(existing,s)} + FP_{(future,s)}$$

provided that the all of following conditions are met:

- (a) the administrative, management or supervisory body of the insurance or reinsurance undertaking has decided that its earned premiums in the segment s during the following 12 months will not exceed P_s ;
- (b) the insurance or reinsurance undertaking has established effective control mechanisms to ensure that the limits on earned premiums referred to in point (a) will be met;
- (c) the insurance or reinsurance undertaking has informed its supervisory authority about the decision referred to in point (a) and the reasons for it.

For the purposes of this calculation, the terms P_s , $FP_{(existing,s)}$ and $FP_{(future,s)}$ shall be denoted in accordance with points (a), (c) and (d) of paragraph 3.

5. For the purposes of the calculations set out in paragraphs 3 and 4, premiums shall be net, after deduction of premiums for reinsurance contracts. The following premiums for reinsurance contracts shall not be deducted:

- (a) premiums in relation to non-insurance events or settled insurance claims that are not accounted for in the cash-flows referred to in Article 41(3);
- (b) premiums for reinsurance contracts that do not comply with Articles 209, 210, 211 and 213.

6. For all segments set out in Annex II, the volume measure for reserve risk of a particular segment shall be equal to the best estimate of the provisions for claims outstanding for the segment, after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, provided that the reinsurance contracts or special purpose vehicles comply with Articles 209, 210, 211 and 213. The volume measure shall not be a negative amount.

7. For all segments set out in Annex II, the default factor for geographical diversification of a particular segment shall be either 1 or calculated in accordance with Annex III.

Article 117

Standard deviation for non-life premium and reserve risk

1. The standard deviation for non-life premium and reserve risk shall be equal to the following:

$$\sigma_{nl} = \frac{1}{V_{nl}} \cdot \sqrt{\sum_{s,t} CorrS_{(s,t)} \cdot \sigma_s \cdot V_s \cdot \sigma_t \cdot V_t}$$

where:

- (a) V_{nl} denotes the volume measure for non-life premium and reserve risk;
- (b) the sum covers all possible combinations (s,t) of the segments set out in Annex II;
- (c) $CorrS_{(s,t)}$ denotes the correlation parameter for non-life premium and reserve risk for segment s and segment t set out in Annex IV;
- (d) σ_s and σ_t denote standard deviations for non-life premium and reserve risk of segments s and t respectively;
- (e) V_s and V_t denote volume measures for premium and reserve risk of segments s and t , referred to in Article 116, respectively.

2. For all segments set out in Annex II, the standard deviation for non-life premium and reserve risk of a particular segment s shall be equal to the following:

$$\sigma_s = \frac{\sqrt{\sigma_{(prem,s)}^2 \cdot V_{(prem,s)}^2 + \sigma_{(res,s)}^2 \cdot V_{(res,s)}^2 + \sigma_{(prem,s)} \cdot V_{(prem,s)} \cdot \sigma_{(res,s)} \cdot V_{(res,s)}}}{V_{(prem,s)} + V_{(res,s)}}$$

where:

- (a) $\sigma_{(prem,s)}$ denotes the standard deviation for non-life premium risk of segment s determined in accordance with paragraph 3;
- (b) $\sigma_{(res,s)}$ denotes the standard deviation for non-life reserve risk of segment s as set out in Annex II;
- (c) $V_{(prem,s)}$ denotes the volume measure for premium risk of segment s referred to in Article 116;
- (d) $V_{(res,s)}$ denotes the volume measure for reserve risk of segment s referred to in Article 116.

3. For all segments set out in Annex II, the standard deviation for non-life premium risk of a particular segment shall be equal to the product of the standard deviation for non-life gross premium risk of the segment set out in Annex II and the adjustment factor for non-proportional reinsurance. For segments 1, 4 and 5 set out in Annex II the adjustment factor for non-proportional reinsurance shall be equal to 80 %. For all other segments set out in Annex the adjustment factor for non-proportional reinsurance shall be equal to 100 %.

Article 118

Non-life lapse risk sub-module

1. The capital requirement for the non-life lapse risk sub-module referred to in 114(1)(c) shall be equal to the loss in basic own funds of the insurance or reinsurance undertaking resulting from a combination of the following instantaneous events:

- (a) the discontinuance of 40 % of the insurance policies for which discontinuance would result in an increase of technical provisions without the risk margin;
- (b) where reinsurance contracts cover insurance or reinsurance contracts that will be written in the future, the decrease of 40 % of the number of those future insurance or reinsurance contracts used in the calculation of technical provisions.

2. The events referred to in paragraph 1 shall apply uniformly to all insurance and reinsurance contracts concerned. In relation to reinsurance contracts the event referred to in point (a) of paragraph 1 shall apply to the underlying insurance contracts.

3. For the purposes of determining the loss in basic own funds of the insurance or reinsurance undertaking under the event referred to in point (a) of paragraph 1, the undertaking shall base the calculation on the type of discontinuance which most negatively affects the basic own funds of the undertaking on a per policy basis.

Article 119

Non-life catastrophe risk sub-module

1. The non-life catastrophe risk sub-module shall consist of all of the following sub-modules:

- (a) the natural catastrophe risk sub-module;
- (b) the sub-module for catastrophe risk of non-proportional property reinsurance;
- (c) the man-made catastrophe risk sub-module;
- (d) the sub-module for other non-life catastrophe risk.

2. The capital requirement for the non-life catastrophe underwriting risk module shall be equal to the following:

$$SCR_{nlCAT} = \sqrt{(SCR_{natCAT} + SCR_{npproperty})^2 + SCR_{nmCAT}^2 + SCR_{CATOther}^2}$$

where:

- (a) SCR_{natCAT} denotes the capital requirement for natural catastrophe risk;
- (b) $SCR_{npproperty}$ denotes the capital requirement for the catastrophe risk of non-proportional property reinsurance;

- (c) SCR_{mmCAT} denotes the capital requirement for man-made catastrophe risk;
- (d) $SCR_{CATother}$ denotes the capital requirement for other non-life catastrophe risk.

Article 120

Natural catastrophe risk sub-module

1. The natural catastrophe risk sub-module shall consist of all of the following sub-modules:
 - (a) the windstorm risk sub-module;
 - (b) the earthquake risk sub-module;
 - (c) the flood risk sub-module;
 - (d) the hail risk sub-module;
 - (e) the subsidence risk sub-module.
2. The capital requirement for natural catastrophe risk shall be equal to the following:

$$SCR_{natCAT} = \sqrt{\sum_i SCR_i^2}$$

where:

- (a) the sum includes all possible combinations of the sub-modules i set out in paragraph 1;
- (b) SCR_i denotes the capital requirement for sub-module i .

Article 121

Windstorm risk sub-module

1. The capital requirement for windstorm risk shall be equal to the following:

$$SCR_{windstorm} = \sqrt{\left(\sum_{(r,s)} CorrWS_{(r,s)} \cdot SCR_{(windstorm,r)} \cdot SCR_{(windstorm,s)}\right) + SCR_{(windstorm,other)}^2}$$

where:

- (a) the sum includes all possible combinations (r,s) of the regions set out in Annex V;
 - (b) $CorrWS_{(r,s)}$ denotes the correlation coefficient for windstorm risk for region r and region s as set out in Annex V;
 - (c) $SCR_{(windstorm,r)}$ and $SCR_{(windstorm,s)}$ denote the capital requirements for windstorm risk in region r and s respectively;
 - (d) $SCR_{(windstorm,other)}$ denotes the capital requirement for windstorm risk in regions other than those set out in Annex XIII.
2. For all regions set out in Annex V the capital requirement for windstorm risk in a particular region r shall be the larger of the following two capital requirements:
 - (a) the capital requirement for windstorm risk in region r according to scenario A as set out in paragraph 3;
 - (b) the capital requirement for windstorm risk in region r according to scenario B as set out in paragraph 4.
 3. For all regions set out in Annex V the capital requirement for windstorm risk in a particular region r according to scenario A shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from the following sequence of events:
 - (a) an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to 80 % of the specified windstorm loss in region r ;
 - (b) a loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to 40 % of the specified windstorm loss in region r .

4. For all regions set out in Annex V the capital requirement for windstorm risk in a particular region r according to scenario B shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from the following sequence of events:

- (a) an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to 100 % of the specified windstorm loss in region r ;
- (b) a loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to 20 % of the specified windstorm loss in region r .

5. For all regions set out in Annex V, the specified windstorm loss in a particular region r shall be equal to the following amount:

$$L_{(windstorm,r)} = Q_{(windstorm,r)} \cdot \sqrt{\sum_{(i,j)} Corr_{(windstorm,r,i,j)} \cdot WSI_{(windstorm,r,i)} \cdot WSI_{(windstorm,r,j)}}$$

where:

- (a) $Q_{(windstorm,r)}$ denotes the windstorm risk factor for region r as set out in Annex V;
- (b) the sum includes all possible combinations of risk zones (i,j) of region r set out in Annex IX;
- (c) $Corr_{(windstorm,r,i,j)}$ denotes the correlation coefficient for windstorm risk in risk zones i and j of region r set out in Annex XXII;
- (d) $WSI_{(windstorm,r,i)}$ and $WSI_{(windstorm,r,j)}$ denote the weighted sums insured for windstorm risk in risk zones i and j of region r set out in Annex IX.

6. For all regions set out in Annex V and all risk zones of those regions set out in Annex IX the weighted sum insured for windstorm risk in a particular windstorm zone i of a particular region r shall be equal to the following:

$$WSI_{(windstorm,r,i)} = W_{(windstorm,r,i)} \cdot SI_{(windstorm,r,i)}$$

where:

- (a) $W_{(windstorm,r,i)}$ denotes the risk weight for windstorm risk in risk zone i of region r set out in Annex X;
- (b) $SI_{(windstorm,r,i)}$ denotes the sum insured for windstorm risk in windstorm zone i of region r .

7. For all regions set out in Annex V and all risk zones of those regions set out in Annex IX, the sum insured for windstorm risk in a particular windstorm zone i of a particular region r shall be equal to the following:

$$SI_{(windstorm,r,i)} = SI_{(property,r,i)} + SI_{(onshore\ property,r,i)}$$

where:

- (a) $SI_{(property,r,i)}$ denotes the sum insured by the insurance or reinsurance undertaking for lines of business 7 and 19 set out in Annex I in relation to contracts that cover windstorm risk and where the risk is situated in risk zone i of region r ;
- (b) $SI_{(onshore-property,r,i)}$ denotes the sum insured by the insurance or reinsurance undertaking for lines of business 6 and 18 set out in Annex I in relation to contracts that cover onshore property damage by windstorm and where the risk is situated in risk zone i of region r .

8. The capital requirement for windstorm risk in regions other than those set out in Annex XIII shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss in relation to each insurance and reinsurance contract that covers any of the following insurance or reinsurance obligations:

- (a) obligations of lines of business 7 or 19 set out in Annex I that cover windstorm risk and where the risk is not situated in one of the regions set out in Annex XIII;
- (b) obligations of lines of business 6 or 18 set out in Annex I in relation to onshore property damage by windstorm and where the risk is not situated in one of the regions set out in Annex XIII.

9. The amount of the instantaneous loss, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, referred to in paragraph 8 shall be equal to the following amount:

$$L_{(windstorm,other)} = 1,75 \cdot (0,5 \cdot DIV_{windstorm} + 0,5) \cdot P_{windstorm}$$

where:

- $DIV_{windstorm}$ is calculated in accordance with Annex III, but based on the premiums in relation to the obligations referred to in paragraph 8 and restricted to the regions 5 to 18 set out in point (8) of Annex III;
- $P_{windstorm}$ is an estimate of the premiums to be earned by insurance and reinsurance undertakings for each contract that covers the obligations referred to in paragraph 8 during the following 12 months: for this purpose premiums shall be gross, without deduction of premiums for reinsurance contracts.

Article 122

Earthquake risk sub-module

- The capital requirement for earthquake risk shall be equal to the following:

$$SCR_{earthquake} = \sqrt{\left(\sum_{(r,s)} CorrEQ_{(r,s)} \cdot SCR_{(earthquake,r)} \cdot SCR_{(earthquake,s)}\right) + SCR_{(earthquake,other)}^2}$$

where:

- the sum includes all possible combinations (r,s) of the regions set out in Annex VI;
 - $CorrEQ_{(r,s)}$ denotes the correlation coefficient for earthquake risk for region r and region s as set out in Annex VI;
 - $SCR_{(earthquake,r)}$ and $SCR_{(earthquake,s)}$ denote the capital requirements for earthquake risk in region r and s respectively;
 - $SCR_{(earthquake,other)}$ denotes the capital requirement for earthquake risk in regions other than those set out in Annex XIII.
- For all regions set out in Annex VII, the capital requirement for earthquake risk in a particular region r shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to the following amount:

$$L_{(earthquake,r)} = Q_{(earthquake,r)} \cdot \sqrt{\sum_{(i,j)} Corr_{(earthquake,r,i,j)} \cdot WSI_{(earthquake,r,i)} \cdot WSI_{(earthquake,r,j)}}$$

where:

- $Q_{(earthquake,r)}$ denotes the earthquake risk factor for region r as set out in Annex VI;
 - the sum includes all possible combinations of risk zones (i,j) of region r set out in Annex IX;
 - $Corr_{(earthquake,r,i,j)}$ denotes the correlation coefficient for earthquake risk in risk zones i and j of region r set out in Annex XXIII;
 - $WSI_{(earthquake,r,i)}$ and $WSI_{(earthquake,r,j)}$ denote the weighted sums insured for earthquake risk in risk zones i and j of region r set out in Annex IX.
- For all regions set out in Annex VI and all risk zones of those regions set out in Annex IX, the weighted sum insured for earthquake risk in a particular earthquake zone i of a particular region r shall be equal to the following:

$$WSI_{(earthquake,r,i)} = W_{(earthquake,r,i)} \cdot SI_{(earthquake,r,i)}$$

where:

- $W_{(earthquake,r,i)}$ denotes the risk weight for earthquake risk in risk zone i of region r set out in Annex X;
- $SI_{(earthquake,r,i)}$ denotes the sum insured for earthquake risk in earthquake zone i of region r .

- For all regions set out in Annex VI and all risk zones of those regions set out in Annex IX, the sum insured for earthquake risk in a particular earthquake zone i of a particular region r shall be equal to the following:

$$SI_{(earthquake,r,i)} = SI_{(property,r,i)} + SI_{(onshore-property,r,i)}$$

where:

- $SI_{(property,r,i)}$ denotes the sum insured of the insurance or reinsurance undertaking for lines of business 7 and 19 as set out in Annex I in relation to contracts that cover earthquake risk and where the risk is situated in risk zone i of region r ;
- $SI_{(onshore-property,r,i)}$ denotes the sum insured of the insurance or reinsurance undertaking for lines of business 6 and 18 as set out in Annex I in relation to contracts that cover onshore property damage by earthquake and where the risk is situated in risk zone i of region r .

5. The capital requirement for earthquake risk in regions other than those set out in Annex XIII shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss in relation to each insurance and reinsurance contract that covers one or both of the following insurance or reinsurance obligations:

- (a) obligations of lines of business 7 or 19 as set out in Annex I that cover earthquake risk, where the risk is not situated in one of the regions set out in Annex XIII;
- (b) obligations of lines of business 6 or 18 as set out in Annex I in relation to onshore property damage by earthquake, where the risk is not situated in one of the regions set out in Annex XIII.

6. The amount of the instantaneous loss, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, referred to in paragraph 5 shall be equal to the following amount:

$$L_{(earthquake, other)} = 1,2 \cdot (0,5 \cdot DIV_{earthquake} + 0,5) \cdot P_{earthquake}$$

where:

- (a) $DIV_{earthquake}$ is calculated in accordance with Annex III, but based on the premiums in relation to the obligations referred to in points (a) and (b) of paragraph 5 and restricted to the regions 5 to 18 set out in Annex III;
- (b) $P_{earthquake}$ is an estimate of the premiums to be earned by insurance and reinsurance undertakings for each contract that covers the obligations referred to in points (a) and (b) of paragraph 5 during the following 12 months: for this purpose premiums shall be gross, without deduction of premiums for reinsurance contracts.

Article 123

Flood risk sub-module

1. The capital requirement for flood risk shall be equal to the following:

$$SCR_{flood} = \sqrt{\left(\sum_{(r,s)} CorrFL_{(r,s)} \cdot SCR_{(flood,r)} \cdot SCR_{(flood,s)} \right) + SCR_{(flood, other)}^2}$$

where:

- (a) the sum includes all possible combinations (r,s) of the regions set out in Annex VII;
- (b) $CorrFL_{(r,s)}$ denotes the correlation coefficient for flood risk for region r and region s as set out in Annex VII;
- (c) $SCR_{(flood,r)}$ and $SCR_{(flood,s)}$ denote the capital requirements for flood risk in region r and s respectively;
- (d) $SCR_{(flood, other)}$ denotes the capital requirement for flood risk in regions other than those set out in Annex XIII.

2. For all regions set out in Annex VII, the capital requirement for flood risk in a particular region r shall be the larger of the following capital requirements:

- (a) the capital requirement for flood risk in region r according to scenario A as set out in paragraph 3;
- (b) the capital requirement for flood risk in region r according to scenario B as set out in paragraph 4.

3. For all regions set out in Annex VII, the capital requirement for flood risk in a particular region r according to scenario A shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from the following sequence of events:

- (a) an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to 65 % of the specified flood loss in region r ;
- (b) a loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to 45 % of the specified flood loss in region r .

4. For all regions set out in Annex VII, the capital requirement for flood risk in a particular region r according to scenario B shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from the following sequence of events:

- (a) an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to 100 % of the specified flood loss in region r ;
- (b) a loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to 10 % of the specified flood loss in region r .

5. For all regions set out in Annex VII, the specified flood loss in a particular region r shall be equal to the following amount:

$$L_{(flood,r)} = Q_{(flood,r)} \cdot \sqrt{\sum_{(i,j)} Corr_{(flood,r,i,j)} \cdot WSI_{(flood,r,i)} \cdot WSI_{(flood,r,j)}}$$

where:

- (a) $Q_{(flood,r)}$ denotes the flood risk factor for region r as set out in Annex VII;
- (b) the sum includes all possible combinations of risk zones (i,j) of region r set out in Annex IX;
- (c) $Corr_{(flood,r,i,j)}$ denotes the correlation coefficient for flood risk in flood zones i and j of region r set out in Annex XXIV;
- (d) $WSI_{(flood,r,i)}$ and $WSI_{(flood,r,j)}$ denote the weighted sums insured for flood risk in risk zones i and j of region r set out in Annex IX.

6. For all regions set out in Annex VII and all risk zones of those regions set out in Annex IX, the weighted sum insured for flood risk in a particular flood zone i of a particular region r shall be equal to the following:

$$WSI_{(flood,r,i)} = W_{(flood,r,i)} \cdot SI_{(flood,r,i)}$$

where:

- (a) $W_{(flood,r,i)}$ denotes the risk weight for flood risk in risk zone i of region r set out in Annex X;
- (b) $SI_{(flood,r,i)}$ denotes the sum insured for flood risk in flood zone i of region r .

7. For all regions set out in Annex VII and all risk zones of those regions set out in Annex IX, the sum insured for a particular flood zone i of a particular region r shall be equal to the following:

$$SI_{(flood,r,i)} = SI_{(property,r,i)} + SI_{(onshore-property,r,i)} + 1,5 \cdot SI_{(motor,r,i)}$$

where:

- (a) $SI_{(property,r,i)}$ denotes the sum insured by the insurance or reinsurance undertaking for lines of business 7 and 19 as set out in Annex I in relation to contracts that cover flood risk, where the risk is situated in risk zone i of region r ;
- (b) $SI_{(onshore-property,r,i)}$ denotes the sum insured by the insurance or reinsurance undertaking for lines of business 6 and 18 as set out in Annex I in relation to contracts that cover onshore property damage by flood and where the risk is situated in risk zone i of region r ;
- (c) $SI_{(motor,r,i)}$ denotes the sum insured by the insurance or reinsurance undertaking for lines of business 5 and 17 as set out in Annex I in relation to contracts that cover flood risk, where the risk is situated in risk zone i of region r .

8. The capital requirement for flood risk in regions other than those set out in Annex XIII, shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss in relation to each insurance and reinsurance contract that covers any of the following insurance or reinsurance obligations:

- (a) obligations of lines of business 7 or 19 as set out in Annex I that cover flood risk, where the risk is not situated in one of the regions set out in Annex XIII;
- (b) obligations of lines of business 6 or 18 as set out in Annex I in relation to onshore property damage by flood, where the risk is not situated in one of the regions set out in Annex XIII;
- (c) obligations of lines of business 5 or 17 as set out in Annex I that cover flood risk, where the risk is not situated in one of the regions set out in Annex XIII.

9. The amount of the instantaneous loss, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, referred to in paragraph 8 shall be equal to the following amount:

$$L_{(flood,other)} = 1,1 \cdot (0,5 \cdot DIV_{flood} + 0,5) \cdot P_{flood}$$

where:

- (a) DIV_{flood} is calculated in accordance with Annex III, but based on the premiums in relation to the obligations referred to in points (a), (b) and (c) of paragraph 8 and restricted to the regions 5 to 18 set out in point (8) of Annex III;
- (b) P_{flood} is an estimate of the premiums to be earned by the insurance or reinsurance undertaking for each contract that covers the obligations referred to in points (a), (b) and (c) of paragraph 8 during the following 12 months: for this purpose, premiums shall be gross, without deduction of premiums for reinsurance contracts.

Article 124

Hail risk sub-module

1. The capital requirement for hail risk shall be equal to the following:

$$SCR_{\text{hail}} = \sqrt{\left(\sum_{(r,s)} \text{CorrHL}_{(r,s)} \cdot SCR_{(\text{hail},r)} \cdot SCR_{(\text{hail},s)} \right) + SCR_{(\text{hail},\text{other})}^2}$$

where:

- (a) the sum includes all possible combinations (r,s) of the regions set out in Annex VIII;
 - (b) $\text{CorrHL}_{(r,s)}$ denotes the correlation coefficient for hail risk for region r and region s as set out in Annex VIII;
 - (c) $SCR_{(\text{hail},r)}$ and $SCR_{(\text{hail},s)}$ denote the capital requirements for hail risk in regions r and s respectively;
 - (d) $SCR_{(\text{hail},\text{other})}$ denotes the capital requirement for hail risk in regions other than those set out in Annex VIII.
2. For all regions set out in Annex VIII, the capital requirement for hail risk in a particular region r shall be the larger of the following capital requirements:
- (a) the capital requirement for hail risk in region r according to scenario A;
 - (b) the capital requirement for hail risk in region r according to scenario B.
3. For all regions set out in Annex VIII, the capital requirement for hail risk in a particular region r according to scenario A shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from the following sequence of events:
- (a) an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to 70 % of the specified hail loss in region r ;
 - (b) a loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to 50 % of the specified hail loss in region r .
4. For all regions set out in Annex VIII, the capital requirement for hail risk in a particular region r according to scenario B shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from the following sequence of events:
- (a) an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to 100 % of the specified hail loss in region r ;
 - (b) a loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to 20 % of the specified hail loss in region r .
5. For all regions set out in Annex VIII, the specified hail loss in a particular region r shall be equal to the following amount:

$$L_{(\text{hail},r)} = Q_{(\text{hail},r)} \cdot \sqrt{\sum_{(i,j)} \text{Corr}_{(\text{hail},r,i,j)} \cdot WSI_{(\text{hail},r,i)} \cdot WSI_{(\text{hail},r,j)}}$$

where:

- (a) $Q_{(\text{hail},r)}$ denotes the hail risk factor for region r as set out in Annex VIII;
 - (b) the sum includes all possible combinations of risk zones (i,j) of region r set out in Annex IX;
 - (c) $\text{Corr}_{(\text{hail},r,i,j)}$ denotes the correlation coefficient for hail risk in risk zones i and j of region r set out in Annex XXV;
 - (d) $WSI_{(\text{hail},r,i)}$ and $WSI_{(\text{hail},r,j)}$ denote the weighted sums insured for hail risk in risk zones i and j of region r set out in Annex IX.
6. For all regions set out in Annex VIII and all risk zones of those regions set out in Annex IX, the weighted sum insured for hail risk in a particular hail zone i of a particular region r shall be equal to the following:

$$WSI_{(\text{hail},r,i)} = W_{(\text{hail},r,i)} \cdot SI_{(\text{hail},r,i)}$$

where:

- (a) $W_{(\text{hail},r,i)}$ denotes the risk weight for hail risk in risk zone i of region r set out in Annex X;
- (b) $SI_{(\text{hail},r,i)}$ denotes the sum insured for hail risk in hail zone i of region r .

7. For all regions set out in Annex VIII and all hail zones, the sum insured for hail risk in a particular hail zone i of a particular region r shall be equal to the following:

$$SI_{(hail,r,i)} = SI_{(property,r,i)} + SI_{(onshore-property,r,i)} + 5 \cdot SI_{(motor,r,i)}$$

where:

- (a) $SI_{(property,r,i)}$ denotes the sum insured by the insurance or reinsurance undertaking for lines of business 7 and 19 as set out in Annex I in relation to contracts that cover hail risk, where the risk is situated in risk zone i of region r ;
- (b) $SI_{(onshore-property,r,i)}$ denotes the sum insured by the insurance or reinsurance undertaking for lines of business 6 and 18 as set out in Annex I in relation to contracts that cover onshore property damage by hail, where the risk is situated in risk zone i of region r ;
- (c) $SI_{(motor,r,i)}$ denotes the sum insured by the insurance or reinsurance undertaking for insurance or reinsurance obligations for lines of business 5 and 17 as set out in Annex I in relation to contracts that cover hail risk, where the risk is situated in risk zone i of region r .

8. The capital requirement for hail risk in regions other than those set out in Annex XIII, shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss in relation to each insurance and reinsurance contract that covers one or more of the following insurance or reinsurance obligations:

- (a) obligations of lines of business 7 or 19 as set out in Annex I that cover hail risk, where the risk is not situated in one of the regions set out in Annex XIII;
- (b) obligations of lines of business 6 or 18 as set out in Annex I in relation to onshore property damage by hail, where the risk is not situated in one of the regions set out in Annex XIII;
- (c) obligations of lines of business 5 or 17 as set out in Annex I that cover hail risk, where the risk is not situated in one of the regions set out in Annex XIII.

9. The amount of the instantaneous loss, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, referred to in paragraph 8 shall be equal to the following amount:

$$L_{(hail,other)} = 0,3 \cdot (0,5 \cdot DIV_{hail} + 0,5) \cdot P_{hail}$$

where:

- (a) DIV_{hail} is calculated in accordance with Annex III, but based on the premiums in relation to the obligations referred to in points (a), (b) and (c) of paragraph 8 and restricted to the regions 5 to 18 set out in Annex III;
- (b) P_{hail} is an estimate of the premiums to be earned by the insurance or reinsurance undertaking for each contract that covers the obligations referred to in points (a), (b) and (c) of paragraph 8 during the following 12 months: for this purpose premiums shall be gross, without deduction of premiums for reinsurance contracts.

Article 125

Subsidence risk sub-module

1. The capital requirement for subsidence risk shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to the following:

$$L_{\text{subsidence}} = 0,0005 \cdot \sqrt{\sum_{(i,j)} \text{Corr}_{(\text{subsidence},i,j)} \cdot \text{WSI}_{(\text{subsidence},i)} \cdot \text{WSI}_{(\text{subsidence},j)}}$$

where:

- (a) the sum includes all possible combinations of risk zones (i,j) of France set out in Annex IX;
- (b) $\text{Corr}_{(\text{subsidence},i,j)}$ denotes the correlation coefficient for subsidence risk in risk zones i and j set out in Annex XXVI;
- (c) $\text{WSI}_{(\text{subsidence},i)}$ and $\text{WSI}_{(\text{subsidence},j)}$ denote the weighted sums insured for subsidence risk in risk zones i and j of France set out in Annex IX.

2. For all subsidence zones the weighted sum insured for subsidence risk in a particular risk zone i of France set out in the Annex IX shall be equal to the following:

$$WSI_{(subsidence,i)} = W_{(subsidence,i)} \cdot SI_{(subsidence,i)}$$

where:

- (a) $W_{(subsidence,i)}$ denotes the risk weight for subsidence risk in risk zone i set out in Annex X;
- (b) $SI_{(subsidence,i)}$ denotes the sum insured of the insurance or reinsurance undertaking for lines of business 7 and 19 as set out in Annex I in relation to contracts that cover subsidence risk of residential buildings in subsidence zone i .

Article 126

Interpretation of catastrophe scenarios

1. For the purposes of Article 121(3) and (4), Article 123(3) and (4) and Article 124(3) and (4), insurance and reinsurance undertakings shall base the calculation of the capital requirement on the following assumptions:

- (a) the two consecutive events referred to in those Articles are independent;
- (b) insurance and reinsurance undertakings do not enter into new insurance risk mitigation techniques between the two events.

2. Notwithstanding point (d) of Article 83(1), where current reinsurance contracts allow for reinstatements, insurance and reinsurance undertakings shall take into account future management actions in relation to the reinstatements between the first and the second event. The assumptions about future management actions shall be realistic, objective and verifiable.

Article 127

Sub-module for catastrophe risk of non-proportional property reinsurance

1. The capital requirement for catastrophe risk of non-proportional property reinsurance shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss in relation to each reinsurance contract that covers reinsurance obligations of line of business 28 as set out in Annex I other than non-proportional reinsurance obligations relating to insurance obligations included in lines of business 9 and 21 set out in Annex I.

2. The amount of the instantaneous loss, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, referred to in paragraph 1 shall be equal to the following:

$$L_{npproperty} = 2,5 \cdot (0,5 \cdot DIV_{npproperty} + 0,5) \cdot P_{npproperty}$$

where:

- (a) $DIV_{npproperty}$ is calculated in accordance with Annex III, but based on the premiums earned by the insurance and reinsurance undertaking in line of business 28 as set out in Annex I, other than non-proportional reinsurance obligations relating to insurance obligations included in lines of business 9 and 21 as set out in Annex I;
- (b) $P_{npproperty}$ is an estimate of the premiums to be earned by the insurance or reinsurance undertaking during the following 12 months for each contract that covers the reinsurance obligations of line of business 28 as set out in Annex I other than non-proportional reinsurance obligations relating to insurance obligations included in lines of business 9 and 21 as set out in Annex I: for this purpose premiums shall be gross, without deduction of premiums for reinsurance contracts.

Article 128

Man-made catastrophe risk sub-module

1. The man-made catastrophe risk sub-module shall consist of all of the following sub-modules:

- (a) the motor vehicle liability risk sub-module;
- (b) the marine risk sub-module;
- (c) the aviation risk sub-module;
- (d) the fire risk sub-module;
- (e) the liability risk sub-module;
- (f) the credit and suretyship risk sub-module.

2. The capital requirement for the man-made catastrophe risk shall be equal to the following:

$$SCR_{mmCAT} = \sqrt{\sum_i SCR_i^2}$$

where:

- (a) the sum includes all sub-modules set out in paragraph 1;
 (b) SCR_i denotes the capital requirements for sub-module i .

Article 129

Motor vehicle liability risk sub-module

1. The capital requirement for motor vehicle liability risk shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to the following amount in euro:

$$L_{motor} = \max(6\,000\,000; 50\,000 \cdot \sqrt{N_a + 0,05 \cdot N_b + 0,95 \cdot \min(N_b; 20\,000)})$$

where:

- (a) N_a is the number of vehicles insured by the insurance or reinsurance undertaking in lines of business 4 and 16 as set out in Annex I with a deemed policy limit above EUR 24 000 000;
 (b) N_b is the number of vehicles insured by the insurance or reinsurance undertaking in lines of business 4 and 16 as set out in Annex I with a deemed policy limit below or equal to EUR 24 000 000.

The number of motor vehicles covered by the proportional reinsurance obligations of the insurance or reinsurance undertaking shall be weighted by the relative share of the undertaking's obligations in respect of the sum insured of the motor vehicles.

2. The deemed policy limit referred to in paragraph 1 shall be the overall limit of the motor vehicle liability insurance policy or, where no such overall limit is specified in the terms and conditions of the policy, the sum of the limits for damage to property and for personal injury. Where the policy limit is specified as a maximum per victim, the deemed policy limit shall be based on the assumption of ten victims.

Article 130

Marine risk sub-module

1. The capital requirement for marine risk shall be equal to the following:

$$SCR_{marine} = \sqrt{SCR_{tanker}^2 + SCR_{platform}^2}$$

where:

- (a) SCR_{tanker} is the capital requirement for the risk of a tanker collision;
 (b) $SCR_{platform}$ is the capital requirement for the risk of a platform explosion.

2. The capital requirement for the risk of a tanker collision shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to the following:

$$L_{tanker} = \max_t (SI_{(hull,t)} + SI_{(liab,t)} + SI_{(pollution,t)})$$

where:

- (a) the maximum relates to all oil and gas tankers insured by the insurance or reinsurance undertaking in respect of tanker collision in lines of business 6, 18 and 27 set out in Annex I;
 (b) $SI_{(hull,t)}$ is the sum insured by the insurance or reinsurance undertaking for marine hull insurance and reinsurance in relation to tanker t ;

- (c) $SI_{(liab,t)}$ is the sum insured by the insurance or reinsurance undertaking for marine liability insurance and reinsurance in relation to tanker t ;
- (d) $SI_{(pollution,t)}$ is the sum insured by the insurance or reinsurance undertaking for oil pollution insurance and reinsurance in relation to tanker t .

3. The capital requirement for the risk of a platform explosion shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to the following:

$$L_{platform} = \max_p(SI_p)$$

where:

- (a) the maximum relates to all oil and gas offshore platforms insured by the insurance or reinsurance undertaking in respect of platform explosion in lines of business 6, 18 and 27 set out in Annex I;
- (b) SI_p is the accumulated sum insured by the insurance or reinsurance undertaking for the following insurance and reinsurance obligations in relation to platform p :
- (i) obligations to compensate for property damage;
 - (ii) obligations to compensate for the expenses for the removal of wreckage;
 - (iii) obligations to compensate for loss of production income;
 - (iv) obligations to compensate for the expenses for capping of the well or making the well secure;
 - (v) liability insurance and reinsurance obligations.

Article 131

Aviation risk sub-module

The capital requirement for aviation risk shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to the following:

$$L_{aviation} = \max_a(SI_a)$$

where:

- (a) the maximum relates to all aircrafts insured by the insurance or reinsurance undertaking in lines of business 6, 18 and 27 set out in Annex I;
- (b) SI_a is the sum insured by the insurance or reinsurance undertaking for aviation hull insurance and reinsurance and aviation liability insurance and reinsurance in relation to aircraft a .

Article 132

Fire risk sub-module

1. The capital requirement for fire risk shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to the sum insured by the insurance or reinsurance undertaking with respect to the largest fire risk concentration.

2. The largest fire risk concentration of an insurance or reinsurance undertaking is the set of buildings with the largest sum insured that meets all of the following conditions:

- (a) the insurance or reinsurance undertaking has insurance or reinsurance obligations in lines of business 7 and 19 set out in Annex I, in relation to each building which cover damage due to fire or explosion, including as a result of terrorist attacks;
- (b) all buildings are partly or fully located within a radius of 200 meters.

3. For the purposes of paragraph 2, the set of buildings may be covered by one or several insurance or reinsurance contracts.

Article 133

Liability risk sub-module

1. The capital requirement for liability risk shall be equal to the following:

$$SCR_{liability} = \sqrt{\sum_{(i,j)} Corr_{(liability,i,j)} \cdot SCR_{(liability,i)} \cdot SCR_{(liability,j)}}$$

where:

- (a) the sum includes all possible combinations of liability risk groups (i,j) as set out in Annex XI;
- (b) $Corr_{(liability,i,j)}$ denotes the correlation coefficient for liability risk of liability risk groups i and j as set out in Annex XI;
- (c) $SCR_{(liability,i)}$ denotes the capital requirement for liability risk of liability risk group i.

2. For all liability risk groups set out in Annex XI the capital requirement for liability risk of a particular liability risk group i shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to the following:

$$L_{(liability,i)} = f_{(liability,i)} \cdot P_{(liability,i)}$$

where:

- (a) $f_{(liability,i)}$ denotes the risk factor for liability risk group i as set out in Annex XI;
- (b) $P_{(liability,i)}$ denotes the premiums earned by the insurance or reinsurance undertaking during the following 12 months in relation to insurance and reinsurance obligations in liability risk group i; for this purpose premiums shall be gross, without deduction of premiums for reinsurance contracts.

3. The calculation of the loss in basic own funds referred to in paragraph 2 shall be based on the following assumptions:

- (a) the loss of liability risk group i is caused by n_i claims and the losses caused by these claims are representative for the business of the insurance or reinsurance undertaking in liability risk group i and sum up to the loss of liability risk group i;
- (b) the number of claims n_i is equal to the lowest integer that exceeds the following amount:

$$\frac{f_{(liability,i)} \cdot P_{(liability,i)}}{1,15 \cdot Lim_{(i,1)}}$$

where:

- (i) $f_{(liability,i)}$ and $P_{(liability,i)}$ are defined as in paragraph 2;
- (ii) $Lim_{(i,1)}$ denotes the largest liability limit of indemnity provided by the insurance or reinsurance undertaking in liability risk group i;
- (c) where the insurance or reinsurance undertaking provides unlimited cover in liability risk group i, the number of claims n_i is equal to one.

Article 134

Credit and suretyship risk sub-module

1. The capital requirement for credit and suretyship risk shall be equal to the following:

$$SCR_{credit} = \sqrt{SCR_{default}^2 + SCR_{recession}^2}$$

where:

- (a) $SCR_{default}$ is the capital requirement for the risk of a large credit default;
- (b) $SCR_{recession}$ is the capital requirement for recession risk.

2. The capital requirement for the risk of a large credit default shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous default of the two largest exposures relating to obligations included in the lines of business 9 and 21 of an insurance or reinsurance undertaking. The calculation of the capital requirement shall be based on the assumption that the loss-given-default, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, of each exposure is 10 % of the sum insured in relation to the exposure.

3. The two largest credit insurance exposures referred to in paragraph 2 shall be determined based on a comparison of the net loss-given-default of the credit insurance exposures, being the loss-given-default after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles.

4. The capital requirement for recession risk shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is equal to 100 % of the premiums earned by the insurance or reinsurance undertaking during the following 12 months in lines of business 9 and 21.

Article 135

Sub-module for other non-life catastrophe risk

The capital requirement for other non-life catastrophe risk shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, that is equal to the following amount:

$$L_{other} = \sqrt{(c_1 \cdot P_1 + c_2 \cdot P_2)^2 + (c_3 \cdot P_3)^2 + (c_4 \cdot P_4)^2 + (c_5 \cdot P_5)^2}$$

where:

- (a) P_1, P_2, P_3, P_4 and P_5 denote estimates of the gross premium, without deduction of the amounts recoverable from reinsurance contracts, expected to be earned by the insurance or reinsurance undertaking during the following 12 months in relation to the groups of insurance and reinsurance obligations 1 to 5 set out in Annex XII;
- (b) c_1, c_2, c_3, c_4 and c_5 denote the risk factors for the groups of insurance and reinsurance obligations 1 to 5 set out in Annex XII.

SECTION 3

Life underwriting risk module

Article 136

Correlation coefficients

1. The life underwriting risk module shall consist of all of the following sub-modules:

- (a) the mortality risk sub-module referred to in point (a) of subparagraph 2 of Article 105(3) of Directive 2009/138/EC;
- (b) the longevity risk sub-module referred to in point (b) of subparagraph 2 of Article 105(3) of Directive 2009/138/EC;
- (c) the disability-morbidity risk sub-module referred to in point (c) of subparagraph 2 of Article 105(3) of Directive 2009/138/EC;
- (d) the life-expense risk sub-module referred to in point (d) of subparagraph 2 of Article 105(3) of Directive 2009/138/EC;
- (e) the revision risk sub-module referred to in point (e) of subparagraph 2 of Article 105(3) of Directive 2009/138/EC;
- (f) the lapse risk sub-module referred to in point (f) of subparagraph 2 of Article 105(3) of Directive 2009/138/EC;
- (g) the life-catastrophe risk sub-module referred to in point (g) of subparagraph 2 of Article 105(3) of Directive 2009/138/EC.

2. The capital requirement for life underwriting risk shall be equal to the following:

$$SCR_{life} = \sqrt{\sum_{i,j} CorrNL_{(i,j)} \cdot SCR_i \cdot SCR_j}$$

where:

(a) the sum covers all possible combinations (i,j) of the sub-modules set out in paragraph 1;

(b) $Corr_{NL_{(i,j)}}$ denotes the correlation parameter for life underwriting risk for sub-modules i and j ;

(c) SCR_i and SCR_j denote the capital requirements for risk sub-module i and j respectively.

3. The correlation coefficient $Corr_{i,j}$ referred to in point 3 of Annex IV of Directive 2009/138/EC shall be equal to the item set out in row i and in column j of the following correlation matrix:

$i \backslash j$	Mortality	Longevity	Disability	Life expense	Revision	Lapse	Life catastrophe
Mortality	1	- 0,25	0,25	0,25	0	0	0,25
Longevity	- 0,25	1	0	0,25	0,25	0,25	0
Disability	0,25	0	1	0,5	0	0	0,25
Life expense	0,25	0,25	0,5	1	0,5	0,5	0,25
Revision	0	0,25	0	0,5	1	0	0
Lapse	0	0,25	0	0,5	0	1	0,25
Life catastrophe	0,25	0	0,25	0,25	0	0,25	1

Article 137

Mortality risk sub-module

1. The capital requirement for mortality risk referred to in Article 105(3)(a) of Directive 2009/138/EC shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous permanent increase of 15 % in the mortality rates used for the calculation of technical provisions

2. The increase in mortality rates referred to in paragraph 1 shall only apply to those insurance policies for which an increase in mortality rates leads to an increase in technical provisions without the risk margin. The identification of insurance policies for which an increase in mortality rates leads to an increase in technical provisions without the risk margin may be based on the following assumptions:

(a) multiple insurance policies in respect of the same insured person may be treated as if they were one insurance policy;

(b) where the calculation of technical provisions is based on groups of policies as referred to in Article 35, the identification of the policies for which technical provisions increase under an increase of mortality rates may also be based on those groups of policies instead of single policies, provided that it yields a result which is not materially different.

3. With regard to reinsurance obligations, the identification of the policies for which technical provisions increase under an increase of mortality rates shall apply to the underlying insurance policies only and shall be carried out in accordance with paragraph 2.

Article 138

Longevity risk sub-module

1. The capital requirement for longevity risk referred to in Article 105(3)(b) of Directive 2009/138/EC shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous permanent decrease of 20 % in the mortality rates used for the calculation of technical provisions.

2. The decrease in mortality rates referred to in paragraph 1 shall only apply to those insurance policies for which a decrease in mortality rates leads to an increase in technical provisions without the risk margin. The identification of insurance policies for which a decrease in mortality rates leads to an increase in technical provisions without the risk margin may be based on the following assumptions:

- (a) multiple insurance policies in respect of the same insured person may be treated as if they were one insurance policy;
- (b) where the calculation of technical provisions is based on groups of policies as referred to in Article 35, the identification of the policies for which technical provisions increase under a decrease of mortality rates may also be based on those groups of policies instead of single policies, provided that it yields a result which is not materially different.

3. With regard to reinsurance obligations, the identification of the policies for which technical provisions increase under a decrease of mortality rates shall apply to the underlying insurance policies only and shall be carried out in accordance with paragraph 2.

Article 139

Disability-morbidity risk sub-module

The capital requirement for disability-morbidity risk referred to in Article 105(3)(c) of Directive 2009/138/EC shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from the combination of the following instantaneous permanent changes:

- (a) an increase of 35 % in the disability and morbidity rates which are used in the calculation of technical provisions to reflect the disability and morbidity experience in the following 12 months;
- (b) an increase of 25 % in the disability and morbidity rates which are used in the calculation of technical provisions to reflect the disability and morbidity experience for all months after the following 12 months;
- (c) a decrease of 20 % in the disability and morbidity recovery rates used in the calculation of technical provisions in respect of the following 12 months and for all years thereafter.

Article 140

Life-expense risk sub-module

The capital requirement for life-expense risk referred to in Article 105(3)(d) of Directive 2009/138/EC shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from the combination of the following instantaneous permanent changes:

- (a) an increase of 10 % in the amount of expenses taken into account in the calculation of technical provisions;
- (b) an increase of 1 percentage point to the expense inflation rate (expressed as a percentage) used for the calculation of technical provisions.

With regard to reinsurance obligations, insurance and reinsurance undertakings shall apply those changes to their own expenses and, where relevant, to the expenses of the ceding undertakings.

Article 141

Revision risk sub-module

The capital requirement for revision risk referred to in Article 105(3)(e) of Directive 2009/138/EC shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous permanent increase of 3 % in the amount of annuity benefits only on annuity insurance and reinsurance obligations where the benefits payable under the underlying insurance policies could increase as a result of changes in the legal environment or in the state of health of the person insured.

*Article 142***Lapse risk sub-module**

1. The capital requirement for lapse risk referred to in Article 105(3)(f) of Directive 2009/138/EC shall be equal to the largest of the following capital requirements:

- (a) the capital requirement for the risk of a permanent increase in lapse rates;
- (b) the capital requirement for the risk of a permanent decrease in lapse rates;
- (c) the capital requirement for mass lapse risk.

2. The capital requirement for the risk of a permanent increase in lapse rates shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous permanent increase of 50 % in the option exercise rates of the relevant options set out in paragraphs 4 and 5. Nevertheless, the increased option exercise rates shall not exceed 100 % and the increase in option exercise rates shall only apply to those relevant options for which the exercise of the option would result in an increase of technical provisions without the risk margin.

3. The capital requirement for the risk of a permanent decrease in lapse rates shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous permanent decrease of 50 % in the option exercise rates of the relevant options set out in paragraph 4 and 5. Nevertheless, the decrease in option exercise rates shall not exceed 20 percentage points and the decrease in option exercise rates shall only apply to those relevant options for which the exercise of the option would result in a decrease of technical provisions without the risk margin.

4. The relevant options for the purposes of paragraphs 2 and 3 shall be the following:

- (a) all legal or contractual policyholder rights to fully or partly terminate, surrender, decrease, restrict or suspend insurance cover or permit the insurance policy to lapse;
- (b) all legal or contractual policyholder rights to fully or partially establish, renew, increase, extend or resume the insurance or reinsurance cover.

For the purposes of point (b), the change in the option exercise rate referred to in paragraphs 2 and 3 shall be applied to the rate reflecting that the relevant option is not exercised.

5. In relation to reinsurance contracts the relevant options for the purposes of paragraph 2 and 3 shall be the following:

- (a) the rights referred to in paragraph 4 of the policy holders of the reinsurance contracts;
- (b) the rights referred to in paragraph 4 of the policy holders of the insurance contracts underlying the reinsurance contracts;
- (c) where the reinsurance contracts covers insurance or reinsurance contracts that will be written in the future, the right of the potential policy holders not to conclude those insurance or reinsurance contracts.

6. The capital requirement for mass lapse risk shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from a combination of the following instantaneous events:

- (a) the discontinuance of 70 % of the insurance policies falling within the scope of operations referred to with Article 2(3)(b)(iii) and (iv) of Directive 2009/138/EC, for which discontinuance would result in an increase of technical provisions without the risk margin and where one of the following conditions are met:
 - (i) the policyholder is not a natural person and discontinuance of the policy is not subject to approval by the beneficiaries of the pension fund;
 - (ii) the policyholder is a natural person acting for the benefit of the beneficiaries of the policy, except where there is a family relationship between that natural person and the beneficiaries, or where the policy is effected for private estate planning or inheritance purposes and the number of beneficiaries under the policy does not exceed 20;
- (b) the discontinuance of 40 % of the insurance policies other than those falling within point (a) for which discontinuance would result in an increase of technical provisions without the risk margin;
- (c) where reinsurance contracts cover insurance or reinsurance contracts that will be written in the future, the decrease of 40 % of the number of those future insurance or reinsurance contracts used in the calculation of technical provisions.

The events referred to in the first subparagraph shall apply uniformly to all insurance and reinsurance contracts concerned. In relation to reinsurance contracts, the event referred to in point (a) shall apply to the underlying insurance contracts.

For the purposes of determining the loss in basic own funds of the insurance or reinsurance undertaking under the events referred to in points (a) and (b) the undertaking shall base the calculation on the type of discontinuance which most negatively affects the basic own funds of the undertaking on a per policy basis.

7. Where the largest of the capital requirements referred to in points (a), (b) and (c) of paragraph 1 of this Article and the largest of the corresponding capital requirements calculated in accordance with Article 206(2) of this Regulation are not based on the same scenario, the capital requirement for lapse risk referred to in Article 105(3)(f) of Directive 2009/138/EC shall be the capital requirement referred to in points (a), (b) and (c) of paragraph 1 of this Article for which the underlying scenario results in the largest corresponding capital requirement calculated in accordance with Article 206(2) of this Regulations.

Article 143

Life-catastrophe risk sub-module

1. The capital requirement for life-catastrophe risk referred to in Article 105(3)(g) of Directive 2009/138/EC shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous increase of 0.15 percentage points to the mortality rates (expressed as percentages) which are used in the calculation of technical provisions to reflect the mortality experience in the following 12 months.

2. The increase in mortality rates referred to in paragraph 1 shall only apply to those insurance policies for which an increase in mortality rates which are used to reflect the mortality experience in the following 12 months leads to an increase in technical provisions. The identification of insurance policies for which an increase in mortality rates leads to an increase in technical provisions without the risk margin may be based on the following assumptions:

- (a) multiple insurance policies in respect of the same insured person may be treated as if they were one insurance policy;
- (b) where the calculation of technical provisions is based on groups of policies as referred to in Article 35, the identification of the policies for which technical provisions increase under an increase of mortality rates may also be based on those groups of policies instead of single policies, provided that it yields a result which is not materially different.

3. With regard to reinsurance policies, the identification of the policies for which technical provisions increase under an increase of mortality rates shall apply to the underlying insurance policies only and shall be carried out in accordance with paragraph 2.

SECTION 4

Health underwriting risk module

Article 144

Health underwriting risk module

1. The health underwriting risk module shall consist of all of the following sub-modules:

- (a) the NSLT health insurance underwriting risk sub-module;
- (b) the SLT health insurance underwriting risk sub-module;
- (c) the health catastrophe risk sub-module.

2. The capital requirement for health underwriting risk shall be equal to the following:

$$SCR_{\text{health}} = \sqrt{\sum_{i,j} \text{Corr}H_{(i,j)} \cdot SCR_i \cdot SCR_j}$$

where:

- (a) the sum covers all possible combinations (i,j) of the sub-modules set out in paragraph 1;
 - (b) $CorrH_{(i,j)}$ denotes the correlation parameter for health underwriting risk for sub-modules i and j ;
 - (c) SCR_i and SCR_j denote the capital requirements for risk sub-module i and j respectively.
3. The correlation coefficient $CorrH_{(i,j)}$ referred to in paragraph 2 denotes the item set out in row i and in column j of the following correlation matrix:

$i \backslash j$	NSLT health underwriting	SLT health underwriting	Health catastrophe
NSLT health underwriting	1	0,5	0,25
SLT health underwriting	0,5	1	0,25
Health catastrophe	0,25	0,25	1

4. Insurance and reinsurance undertakings shall apply:
- (a) the NSLT health underwriting risk sub-module to health insurance and reinsurance obligations included in lines of business 1, 2, 3, 13, 14, 15 and 25 as set out in Annex I;
 - (b) the SLT health underwriting risk sub-module to health insurance and reinsurance obligations included in lines of business 29, 33 and 35 as set out in Annex I;
 - (c) the health catastrophe risk sub-module to health insurance and reinsurance obligations.

Article 145

NSLT health underwriting risk sub-module

1. The NSLT health underwriting risk sub-module shall consist of the following sub-modules:
 - (a) the NSLT health premium and reserve risk sub-module;
 - (b) the NSLT health lapse risk sub-module.
2. The capital requirement for NSLT health underwriting risk shall be equal to the following:

$$SCR_{NSLT_h} = \sqrt{SCR_{(NSLT_h,pr)}^2 + SCR_{(NSLT_h,lapse)}^2}$$

where:

- (a) $SCR_{(NSLT_h,pr)}$ denotes the capital requirement for NSLT health premium and reserve risk;
- (b) $SCR_{(NSLT_h,lapse)}$ denotes the capital requirement for NSLT health lapse risk.

Article 146

NSLT health premium and reserve risk sub-module

The capital requirement for NSLT health premium and reserve risk shall be equal to the following:

$$SCR_{(NSLT,pr)} = 3 \cdot \sigma_{NSLT_h} \cdot V_{NSLT_h}$$

where:

- (a) σ_{NSLT_h} denotes the standard deviation for NSLT health premium and reserve risk determined in accordance with Article 148;
- (b) V_{NSLT_h} denotes the volume measure for NSLT health premium and reserve risk determined in accordance with Article 147.

Article 147

Volume measure for NSLT health premium and reserve risk

1. The volume measure for NSLT health premium and reserve risk shall be equal to the sum of the volume measures for premium and reserve risk of the segments set out in Annex XIV.

2. For all segments set out in Annex XIV, the volume measure of a particular segment s shall be equal to the following:

$$V_s = (V_{(prem,s)} + V_{(res,s)}) \cdot (0,75 + 0,25 \cdot DIV_s)$$

where:

- (a) $V_{(prem,s)}$ denotes the volume measure for premium risk of segment s ;
- (b) $V_{(res,s)}$ denotes the volume measure for reserve risk of segment s ;
- (c) DIV_s denotes the factor for geographical diversification of segment s .

3. For all segments set out in Annex XIV, the volume measure for premium risk of a particular segment s shall be equal to the following:

$$V_{(prem,s)} = \max(P_s, P_{(last,s)}) + FP_{(existing,s)} + FP_{(future,s)}$$

where:

- (a) P_s denotes an estimate of the premiums to be earned by the insurance or reinsurance undertaking in the segment s during the following 12 months;
- (b) $P_{(last,s)}$ denotes the premiums earned by the insurance and reinsurance undertaking in the segment s during the last 12 months;
- (c) $FP_{(existing,s)}$ denotes the expected present value of premiums to be earned by the insurance and reinsurance undertaking in the segment s after the following 12 months for existing contracts;
- (d) $FP_{(future,s)}$ denotes the expected present value of premiums to be earned by the insurance and reinsurance undertaking in the segment s for contracts where the initial recognition date falls in the following 12 months but excluding the premiums to be earned during the 12 months after the initial recognition date.

4. For all segments set out in Annex XIV, insurance and reinsurance undertakings may, as an alternative to the calculation set out in paragraph 3, choose to calculate the volume measure for premium risk of a particular segment s in accordance with the following formula:

$$V_{(prem,s)} = P_s + FP_{(existing,s)} + FP_{(future,s)}$$

provided that all of the following conditions are met:

- (a) the administrative, management or supervisory body of the insurance or reinsurance undertaking has decided that its earned premiums in the segment s during the following 12 months will not exceed P_s ;
- (b) the insurance or reinsurance undertaking has established effective control mechanisms to ensure that the limits on earned premiums referred to in point (a) will be met;
- (c) the insurance or reinsurance undertaking has informed its supervisory authority about the decision referred to in point (a) and the reasons for it.

For the purposes of this paragraph, the terms P_s , $FP_{(existing,s)}$ and $FP_{(future,s)}$ shall be denoted in accordance with points (a), (c) and (d) of paragraph 3.

5. For the purposes of the calculations set out in paragraphs 3 and 4, premiums shall be net, after deduction of premiums for reinsurance contracts. The following premiums for reinsurance contracts shall not be deducted:

- (a) premiums in relation to non-insurance events or settled insurance claims that are not accounted for in the cash-flows referred to in Article 41(3);
- (b) premiums for reinsurance contracts that do not comply with Articles 209, 210, 211 and 213.

6. For all segments set out in Annex XIV, the volume measure for reserve risk of a particular segment shall be equal to the best estimate for the provision for claims outstanding for the segment, after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, provided that the reinsurance contracts or special purpose vehicles comply with Articles 209, 210, 211 and 213. The volume measure shall not be a negative amount.

7. For all segments set out in Annex XIV, the default factor for geographical diversification shall be either equal to 1 or calculated in accordance with Annex III.

Article 148

Standard deviation for NSLT health premium and reserve risk

1. The standard deviation for NSLT health premium and reserve risk shall be equal to the following:

$$\sigma_{NSLT} = \frac{1}{V_{NSLT}} \cdot \sqrt{\sum_{s,t} CorrHS_{(s,t)} \cdot \sigma_s \cdot V_s \cdot \sigma_t \cdot V_t}$$

where:

- (a) V_{NSLT} denotes the volume measure for NSLT health premium and reserve risk;
- (b) the sum covers all possible combinations (s,t) of the segments set out in Annex XIV;
- (c) $CorrHS_{(s,t)}$ denotes the correlation coefficient for NSLT health premium and reserve risk for segment s and segment t set out in Annex XV;
- (d) σ_s and σ_t denote standard deviations for NSLT health premium and reserve risk of segments s and t respectively;
- (e) V_s and V_t denote volume measures for premium and reserve risk of segments s and t , referred to in Annex XIV, respectively.

2. For all segments set out in Annex XIV, the standard deviation for NSLT health premium and reserve risk of a particular segment s shall be equal to the following:

$$\sigma_s = \frac{\sqrt{\sigma_{(prem,s)}^2 \cdot V_{(prem,s)}^2 + \sigma_{(res,s)}^2 \cdot V_{(res,s)}^2 + 2 \cdot \sigma_{(prem,s)} \cdot V_{(prem,s)} \cdot \sigma_{(res,s)} \cdot V_{(res,s)}}}{V_{(prem,s)} + V_{(res,s)}}$$

where:

- (a) $\sigma_{(prem,s)}$ denotes the standard deviation for NSLT health premium risk of segment s determined in accordance with paragraph 3;
- (b) $\sigma_{(res,s)}$ denotes the standard deviation for NSLT health reserve risk of segment s as set out in Annex XIV;
- (c) $V_{(prem,s)}$ denotes the volume measure for premium risk of segment s referred to in Article 147;
- (d) $V_{(res,s)}$ denotes the volume measure for reserve risk of segment s referred to in Article 147.

3. For all segments set out in Annex XIV, the standard deviation for NSLT health premium risk of a particular segment shall be equal to the product of the standard deviation for NSLT health gross premium risk of the segment set out in Annex XIV and the adjustment factor for non-proportional reinsurance. For all segments set out in Annex XIV the adjustment factor for non-proportional reinsurance shall be equal to 100 %.

Article 149

Health risk equalisation systems

1. For the purposes of Article 109a(4) of Directive 2009/138/EC, health insurance obligations subject to the health risk equalisation systems ('HRES') shall be identified, managed and organised separately from the other activities of the insurance undertakings, without any possibility of transfer to health insurance obligations that are not subject to HRES.

2. The standard deviations for NSLT health premium and reserve risk of segments 1, 2 and 3 in Annex XIV for business that is subject to a HRES shall meet all of the following requirements:

- (a) the standard deviations are determined separately for each of the segments 1, 2 and 3, as set out in Annex XIV, and separately for premium and reserve risk;
- (b) for each of the segments set out in Annex XIV, the standard deviation for premium risk is the lower of the following amounts:
 - (i) the standard deviation for NSLT health premium risk of that segment set out in Annex XIV;
 - (ii) the higher of the following amounts:
 - A. a third of the standard deviation for NSLT health premium risk of that segment set out in Annex XIV;
 - B. an estimate of the representative standard deviation of an insurance undertaking's combined ratio, being the ratio of the following annual amounts:
 - the sum of the payments, including the relating expenses, and technical provisions set up for claims incurred during the year for the business subject to the HRES, including any changes due to the HRES;
 - the earned premium of the year for the business subject to the HRES;
- (c) for each of the segments set out in Annex XIV, the standard deviation for reserve risk is the lower of the following amounts:
 - (i) the standard deviation for NSLT health reserve risk of that segment set out in Annex XIV;
 - (ii) the higher of the following amounts:
 - A. a third of the standard deviation for NSLT health reserve risk of that segment set out in Annex XIV;
 - B. an estimate of the representative standard deviation of an insurance undertaking's run-off ratio, being the ratio of the following annual amounts:
 - the sum of the best estimate provision at the end of the year for claims that were outstanding at the beginning of the year and any claims and expense payments made during the year for claims that were outstanding at the beginning of the year: both amounts include any amendments due to the HRES;
 - the best estimate provision at the beginning of the year for claims outstanding of the business subject to the HRES, including any amendments due to the HRES;
- (d) the determination of the standard deviation is based on adequate, applicable and relevant actuarial and statistical techniques;
- (e) the determination of the standard deviation is based on complete, accurate and appropriate data that is directly relevant for the business subject to the HRES and reflects the average degree of diversification at the level of insurance undertakings;
- (f) the determination of the standard deviation is based on current and credible information and realistic assumptions;
- (g) the determination of the standard deviation also takes into account any risks which are not mitigated by the HRES, in particular the risk referred to in Article 105(4)(a) of Directive 2009/138/EC and risks which are not reflected in the health catastrophe risk sub-module and that could affect a larger number of insurance undertakings subject to the HRES at the same time;
- (h) the methodology for the calculation of the standard deviation and the calculation of the standard deviation is publicly available.

3. Where the implementing act adopted pursuant to Article 109a(4) of Directive 2009/138/EC determine a standard deviation for NSLT health insurance premium risk for business subject to a HRES that meet the requirements set out in paragraph 2 of this Article, insurance undertakings shall use this standard deviation instead of the standard deviation for NSLT health premium risk of the segment set out in Annex XIV of this Regulation for the calculation of the standard deviation for NSLT health premium and reserve risk referred to in Article 148(1) of this Regulation.

Where only a part of an insurance undertaking's business in a segment s is subject to the HRES, the undertaking shall use a standard deviation for NSLT health premium risk of the segment in the calculation of the standard deviation for NSLT health premium and reserve risk referred to in Article 148(1) that is equal to the following:

$$\sigma'_{(prem,s)} = \frac{\sigma_{(prem,s)} \cdot V_{(prem,s,nHRES)} + \sigma_{(prem,s,HRES)} \cdot V_{(prem,s,HRES)}}{V_{(prem,s,nHRES)} + V_{(prem,s,HRES)}}$$

where:

- (a) $\sigma_{(prem,s)}$ denotes the standard deviation for NSLT health premium risk segment s set out in Annex XIV;
- (b) $V_{(prem,s,nHRES)}$ denotes the volume measure for NSLT health premium risk of the business in segment s that is not subject to the HRES;
- (c) $\sigma_{(prem,s,HRES)}$ denotes the standard deviation for NSLT health premium risk of segment s for business subject to the HRES calculated in accordance with paragraph 2;
- (d) $V_{(prem,s,HRES)}$ denotes the volume measure for NSLT health premium risk of business in segment s that is subject to the HRES.

$V_{(prem,s,HRES)}$ and $V_{(prem,s,nHRES)}$ shall be calculated in the same way as the volume measure for NSLT health premium risk of segment s referred to in Article 147, but $V_{(prem,s,HRES)}$ shall only take into account the insurance and reinsurance obligations subject to HRES and $V_{(prem,s,nHRES)}$ shall only take into account the insurance and reinsurance obligations not subject to the HRES.

4. Where the implementing act adopted pursuant to Article 109a(4) of Directive 2009/138/EC determine a standard deviation for NSLT health insurance reserve risk for business subject to a HRES that fulfill the requirements set out in paragraph 2 of this Article, insurance undertakings shall use this standard deviation instead of the standard deviation for NSLT health reserve risk of the segment set out in Annex XIV of this Regulation for the calculation of the standard deviation for NSLT health premium and reserve risk referred to in Article 148(1) of this Regulation.

Where only a part of an insurance undertaking's business in a segment s is subject to the HRES, the undertaking shall use a standard deviation for NSLT health premium risk of the segment in the calculation of the standard deviation for NSLT health premium and reserve risk referred to in Article 148(1) that is equal to the following:

$$\sigma'_{(res,s)} = \frac{\sigma_{(res,s)} \cdot V_{(res,s,nHRES)} + \sigma_{(res,s,HRES)} \cdot V_{(res,s,HRES)}}{V_{(res,s,nHRES)} + V_{(res,s,HRES)}}$$

where:

- (a) $\sigma_{(res,s)}$ denotes the standard deviation for NSLT health reserve risk segment s as set out in Annex XIV;
- (b) $V_{(res,s,nHRES)}$ denotes the volume measure for NSLT health reserve risk of the business in segment s that is not subject to the HRES;
- (c) $\sigma_{(res,s,HRES)}$ denotes the standard deviation for NSLT health reserve risk of segment s for business subject to the HRES calculated in accordance with paragraph 2;
- (d) $V_{(res,s,HRES)}$ denotes the volume measure for NSLT health reserve risk of business in segment s that is subject to the HRES.

$V_{(res,s,nHRES)}$ and $V_{(res,s,HRES)}$ shall be calculated in the same way as the volume measure for NSLT health reserve risk of segment s referred to in Article 147, but $V_{(res,s,HRES)}$ shall only take into account the insurance and reinsurance obligations subject to the HRES and $V_{(res,s,nHRES)}$ shall only take into account the insurance and reinsurance obligations not subject to the HRES.

5. Insurance and reinsurance undertakings may replace the standard deviations for NSLT health premium and reserve risk for business subject to a HRES with parameters specific to the insurance and reinsurance undertaking in accordance with Article 104(7) of Directive 2009/138/EC. Supervisory authorities may require insurance and reinsurance undertakings to replace those standard deviations with parameters specific to the undertaking in accordance with Article 110 of that Directive 2009/138/EC.

Article 150

NSLT health lapse risk sub-module

1. The capital requirement for NSLT health lapse risk referred to in Article 145(1)(b) shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from the combination of the following instantaneous events:

- (a) the discontinuance of 40 % of the insurance policies for which discontinuance would result in an increase of technical provisions without the risk margin;
- (b) where reinsurance contracts cover insurance or reinsurance contracts that will be written in the future, the decrease of 40 % of the number of those future insurance or reinsurance contracts used in the calculation of technical provisions.

2. The events referred to in paragraph 1 shall apply uniformly to all insurance and reinsurance contracts concerned. In relation to reinsurance contracts the event referred to in point (a) of paragraph 1 shall apply to the underlying insurance contracts.

3. For the purposes of determining the loss in basic own funds of the insurance or reinsurance undertaking under the event referred to in point (a) of paragraph 1, the undertaking shall base the calculation on the type of discontinuance which most negatively affects the basic own funds of the undertaking on a per policy basis.

Article 151

SLT health underwriting risk sub-module

1. The SLT health underwriting risk module shall consist of all of the following sub-modules:

- (a) the health mortality risk sub-module;
- (b) the health longevity risk sub-module;
- (c) the health disability-morbidity risk sub-module;
- (d) the health expense risk sub-module;
- (e) the health revision risk sub-module;
- (f) the SLT health lapse risk sub-module.

2. The capital requirement for SLT health underwriting risk shall be equal to the following:

$$SCR_{SLTh} = \sqrt{\sum_{i,j} CorrSLTH_{(i,j)} \cdot SCR_i \cdot SCR_j}$$

where:

- (a) the sum denotes all possible combinations (i,j) of the sub-modules set out in paragraph 1;
- (b) $CorrSLTH_{(i,j)}$ denotes the correlation parameter for SLT health underwriting risk for sub-modules i and j;
- (c) SCR_i and SCR_j denote the capital requirements for risk sub-module i and j respectively.

3. The correlation coefficient $CorrSLTH_{(i,j)}$ referred to in paragraph 2 shall be equal to the item set out in row i and in column j of the following correlation matrix:

i \ j	Health mortality	Health longevity	Health disability-morbidity	Health expense	Health revision	SLT health lapse
Health mortality	1	- 0,25	0,25	0,25	0	0

<i>i</i> \ <i>j</i>	Health mortality	Health longevity	Health disability-morbidity	Health expense	Health revision	SLT health lapse
Health longevity	- 0,25	1	0	0,25	0,25	0,25
Health disability-morbidity	0,25	0	1	0,5	0	0
Health expense	0,25	0,25	0,5	1	0,5	0,5
Health revision	0	0,25	0	0,5	1	0
SLT health lapse	0	0,25	0	0,5	0	1

Article 152

Health mortality risk sub-module

1. The capital requirement for health mortality risk shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous permanent increase of 15 % in the mortality rates used for the calculation of technical provisions.
2. The increase in mortality rates referred to in paragraph 1 shall only apply to those insurance policies for which an increase in mortality rates leads to an increase in technical provisions without the risk margin. The identification of insurance policies for which an increase in mortality rates leads to an increase in technical provisions without the risk margin may be based on the following:
 - (a) multiple insurance policies in respect of the same insured person may be treated as if they were one insurance policy;
 - (b) where the calculation of technical provisions is based on groups of policies as referred to in Article 35, the identification of the policies for which technical provisions increase under an increase of mortality rates may also be based on those groups of policies instead of single policies, provided that it yields a result which is not materially different.
3. With regard to reinsurance obligations, the identification of the policies for which technical provisions increase under an increase of mortality rates shall apply to the underlying insurance policies only and shall be carried out in accordance with paragraph 2.

Article 153

Health longevity risk sub-module

1. The capital requirement for health longevity risk shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous permanent decrease of 20 % in the mortality rates used for the calculation of technical provisions.
2. The decrease in mortality rates referred to in paragraph 1 shall only apply to those insurance policies for which a decrease in mortality rates leads to an increase in technical provisions without the risk margin. The identification of insurance policies for which a decrease in mortality rates leads to an increase in technical provisions without the risk margin may be based on the following assumptions:
 - (a) multiple insurance policies in respect of the same insured person may be treated as if they were one insurance policy;
 - (b) where the calculation of technical provisions is based on groups of policies as referred to in Article 35, the identification of the policies for which technical provisions increase under an decrease of mortality rates may also be based on those groups of policies instead of single policies, provided that it yields a result which is not materially different.

3. With regard to reinsurance obligations, the identification of the policies for which technical provisions increase under an decrease of mortality rates shall apply only to the underlying insurance policies and shall be carried out in accordance with paragraph 2.

Article 154

Health disability-morbidity risk sub-module

1. The capital requirement for health disability-morbidity risk shall be equal to the sum of the following:
 - (a) the capital requirement for medical expense disability-morbidity risk;
 - (b) the capital requirement for income protection disability-morbidity risk.
2. Insurance and reinsurance undertakings shall apply:
 - (a) the scenarios underlying the calculation of the capital requirement for medical expense disability-morbidity risk only to medical expense insurance and reinsurance obligations where the underlying business is pursued on a similar technical basis to that of life insurance;
 - (b) the scenarios underlying the calculation of the capital requirement for income protection disability-morbidity risk only to income protection insurance and reinsurance obligations where the underlying business is pursued on a similar technical basis to that of life insurance.

Article 155

Capital requirement for medical expense disability-morbidity risk

1. The capital requirement for medical expense disability-morbidity risk shall be equal to the larger of the following capital requirements:
 - (a) the capital requirement for the increase of medical payments;
 - (b) the capital requirement for the decrease of medical payments.
2. The capital requirement for the increase of medical payments shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from the following combination of instantaneous permanent changes:
 - (a) an increase of 5 % in the amount of medical payments taken into account in the calculation of technical provisions;
 - (b) an increase by 1 percentage point to the inflation rate of medical payments (expressed as a percentage) used for the calculation of technical provisions.
3. The capital requirement for the decrease of medical payments shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from the following combination of instantaneous permanent changes:
 - (a) a decrease of 5 % in the amount of medical payments taken into account in the calculation of technical provisions;
 - (b) a decrease by 1 percentage point from the inflation rate of medical payments (expressed as a percentage) used for the calculation of technical provisions.

Article 156

Capital requirement for income protection disability-morbidity risk

The capital requirement for income protection disability-morbidity risk shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from the following combination of instantaneous permanent changes:

- (a) an increase of 35 % in the disability and morbidity rates which are used in the calculation of technical provisions to reflect the disability and morbidity in the following 12 months;
- (b) an increase of 25 % in the disability and morbidity rates which are used in the calculation of technical provisions to reflect the disability and morbidity in the years after the following 12 months;

- (c) where the disability and morbidity recovery rates used in the calculation of technical provisions are lower than 50 %, a decrease of 20 % in those rates;
- (d) where the disability and morbidity persistency rates used in the calculation of technical provisions are equal or lower than 50 %, an increase of 20 % in those rates.

Article 157

Health expense risk sub-module

The capital requirement for health expense risk shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from the following combination of instantaneous permanent changes:

- (a) an increase of 10 % in the amount of expenses taken into account in the calculation of technical provisions;
- (b) an increase by 1 percentage point to the expense inflation rate (expressed as a percentage) used for the calculation of technical provisions.

With regard to reinsurance obligations, insurance and reinsurance undertakings shall apply those changes to their own expenses and, where relevant, to the expenses of the ceding undertakings.

Article 158

Health revision risk sub-module

The capital requirement for health revision risk shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous permanent increase of 4 % in the amount of annuity benefits, only on annuity insurance and reinsurance obligations where the benefits payable under the underlying insurance policies could increase as a result of changes in inflation, the legal environment or the state of health of the person insured.

Article 159

SLT health lapse risk sub-module

1. The capital requirement for SLT health lapse risk referred to in Article 151(1)(f) shall be equal to the largest of the following capital requirements:

- (a) capital requirement for the risk of a permanent increase in SLT health lapse rates;
- (b) capital requirement for the risk of a permanent decrease in SLT health lapse rates;
- (c) capital requirement for SLT health mass lapse risk.

2. The capital requirement for the risk of a permanent increase in SLT health lapse rates shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous permanent increase of 50 % in the exercise rates of the relevant options set out in paragraph 4 and 5. Nevertheless, the increased option exercise rates shall not exceed 100 % and the increase in option exercise rates shall only apply to those relevant options for which the exercise would result in an increase of technical provisions without the risk margin.

3. The capital requirement for the risk of a permanent decrease in SLT health lapse rates shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous permanent decrease of 50 % in the option exercise rates of the relevant options set out in paragraph 4 and 5. Nevertheless, the decrease in option exercise rates shall not exceed 20 percentage points and the decrease in option exercise rates shall only apply to those relevant options for which the exercise would result in a decrease of technical provisions without the risk margin.

4. The relevant options for the purposes of paragraphs 2 and 3 shall be the following:

- (a) all legal or contractual policyholder rights to fully or partly terminate, surrender, decrease, restrict or suspend the insurance or reinsurance cover or permit the insurance policy to lapse;
- (b) all legal or contractual policyholder rights to fully or partially establish, renew, increase, extend or resume the insurance or reinsurance cover.

For the purposes of point (b), the change in the option exercise rate referred to in paragraphs 2 and 3 should be applied to the rate reflecting that the relevant option is not exercised.

5. In relation to reinsurance contracts, the relevant options for the purposes of paragraphs 2 and 3 shall be the following:

- (a) the rights referred to in paragraph 4 of the policy holders of the reinsurance contracts;
- (b) the rights set out in paragraph 4 of the policy holders of the insurance contracts underlying the reinsurance contracts;
- (c) where reinsurance contracts cover insurance or reinsurance contracts that will be written in the future, the right of the potential policy holders not to conclude those insurance or reinsurance contracts.

6. The capital requirement for SLT health mass lapse risk shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from a combination of the following instantaneous events:

- (a) the discontinuance of 40 % of the insurance policies for which discontinuance would result in an increase of technical provisions without the risk margin;
- (b) where reinsurance contract covers insurance or reinsurance contracts that will be written in the future, the decrease of 40 % of the number of those future insurance or reinsurance contracts used in the calculation of the technical provisions.

The events referred to in the first subparagraph shall apply uniformly to all insurance and reinsurance contracts concerned. In relation to reinsurance contracts the event referred to in point (a) shall apply to the underlying insurance contracts.

For the purposes of determining the loss in basic own funds of the insurance or reinsurance undertaking under the event referred to in point (a), the undertaking shall base the calculation on the type of discontinuance which most negatively affects the basic own funds of the undertaking on a per policy basis.

7. Where the largest of the capital requirements referred to in points (a) (b), and (c) of paragraph 1 of this Article and the largest of the corresponding capital requirements calculated in accordance with Article 206(2) of this Regulation are not based on the same scenario, the capital requirement for lapse risk referred to in Article 105(3)(f) of Directive 2009/138/EC shall be the capital requirement referred to in points (a), (b) or (c) of paragraph 1 of this Article for which the underlying scenario results in the largest corresponding capital requirement calculated in accordance with Article 206(2) of this Regulation.

Article 160

Health catastrophe risk sub-module

1. The capital requirement for the health catastrophe risk sub-module shall be equal to the following:

$$SCR_{\text{healthCAT}} = \sqrt{SCR_{\text{ma}}^2 + SCR_{\text{ac}}^2 + SCR_{\text{p}}^2}$$

where:

- (a) SCR_{ma} denotes the capital requirement of the mass accident risk sub-module;
- (b) SCR_{ac} denotes the capital requirement of the accident concentration risk sub-module;
- (c) SCR_{p} denotes the capital requirement of the pandemic risk sub-module.

2. Insurance and reinsurance undertakings shall apply:

- (a) the mass accident risk sub-module to health insurance and reinsurance obligations other than workers' compensation insurance and reinsurance obligations;
- (b) the accident concentration risk sub-module to workers' compensation insurance and reinsurance obligations and to group income protection insurance and reinsurance obligations;
- (c) the pandemic risk sub-module to health insurance and reinsurance obligations other than workers' compensation insurance and reinsurance obligations.

Article 161

Mass accident risk sub-module

1. The capital requirement for the mass accident risk sub-module shall be equal to the following:

$$SCR_{ma} = \sqrt{\sum_s SCR_{(ma,s)}^2}$$

where:

- (a) the sum includes all countries set out in Annex XVI;
- (b) $SCR_{(ma,s)}$ denotes the capital requirement for mass accident risk of country s .
2. For all countries set out in Annex XVI, the capital requirement for mass accident risk of a particular country s shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles is calculated as follows:

$$L_{(ma,s)} = r_s \cdot \sum_e x_e \cdot E_{(e,s)}$$

where:

- (a) r_s denotes the ratio of persons affected by the mass accident in country s as set out in Annex XVI;
- (b) the sum includes the event types e set out in Annex XVI;
- (c) x_e denotes the ratio of persons who will receive benefits of event type e as a result of the accident as set out in Annex XVI;
- (d) $E_{(e,s)}$ denotes the total value of benefits payable by insurance and reinsurance undertakings for event type e in country s .
3. For all event types set out in Annex XVI and all countries set out in Annex XVI, the sum insured of an insurance or reinsurance undertaking for a particular event type e in a particular country s shall be equal to the following:

$$E_{(e,s)} = \sum_i SI_{(e,i)}$$

where:

- (a) the sum includes all insured persons i of the insurance or reinsurance undertaking who are insured against event type e and are inhabitants of country s ;
- (b) $SI_{(e,i)}$ denotes the value of the benefits payable by the insurance or reinsurance undertaking for the insured person i in case of event type e .

The value of the benefits shall be the sum insured or where the insurance contract provides for recurring benefit payments the best estimate of the benefit payments in case of event type e . Where the benefits of an insurance contract depend on the nature or extent of any injury resulting from event e , the calculation of the value of the benefits shall be based on the maximum benefits obtainable under the contract which are consistent with the event. For medical expense insurance and reinsurance obligations the value of the benefits shall be based on an estimate of the average amounts paid in case of event e , assuming the insured person is disabled for the duration specified and taking into account the specific guarantees the obligations include.

4. Where Article 88 is complied with, insurance or reinsurance undertakings may calculate the value of benefits payable to insured person referred to in paragraph 3 based on homogenous risk groups, provided that the grouping of policies complies with Article 35.

Article 162

Accident concentration risk sub-module

1. The capital requirement for the accident concentration risk sub-module shall be equal to the following:

$$SCR_{ac} = \sqrt{\sum_c SCR_{(ac,c)}^2}$$

where:

- (a) the sum includes all countries c ;
- (b) $SCR_{(ac,c)}$ denotes the capital requirement for accident concentration risk of country c .

2. For all countries the capital requirement for accident concentration risk of country c shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is calculated as follows:

$$L_{(ac,c)} = C_c \cdot \sum_e x_e \cdot CE_{(e,c)}$$

where:

- (a) C_c denotes the largest accident risk concentration of insurance and reinsurance undertakings in country c ;
- (b) the sum includes the event types e set out in Annex XVI;
- (c) x_e denotes the ratio of persons which will receive benefits of event type e as a result of the accident as set out in Annex XVI;
- (d) $CE_{(e,c)}$ denotes the average value of benefits payable by insurance and reinsurance undertakings for event type e for the largest accident risk concentration in country c .

3. For all countries, the largest accident risk concentration of an insurance or reinsurance undertaking in a country c shall be equal to the largest number of persons for which all of the following conditions are met:

- (a) the insurance or reinsurance undertaking has a workers' compensation insurance or reinsurance obligation or an group income protection insurance or reinsurance obligation in relation to each of the persons;
- (b) the obligations in relation to each of the persons cover at least one of the events set out in Annex XVI;
- (c) the persons are working in the same building which is situated in country c .

4. For all event types and countries, the average sum insured of an insurance or reinsurance undertaking for event type e for the largest accident risk concentration in country c shall be equal to the following:

$$CE_{(e,c)} = \frac{1}{N_e} \sum_{i=1}^{N_e} SI_{(e,i)}$$

where:

- (a) N_e denotes the number of insured persons of the insurance or reinsurance undertaking which are insured against event type e and which belong to the largest accident risk concentration of the insurance or reinsurance undertaking in country c ;
- (b) the sum includes all the insured persons referred to in point (a);
- (c) $SI_{(e,i)}$ denotes the value of the benefits payable by the insurance or reinsurance undertaking for the insured person i in case of event type e .

The value of the benefits referred to in point (c) shall be the sum insured or where the contract provides for recurring benefit payments the best estimate of the benefit payments in case of event type e . Where the benefits of an insurance policy depend on the nature or extent of the injury resulting from event e , the calculation of the value of the benefits shall be based on the maximum benefits obtainable under the policy, which are consistent with the event. For medical expense insurance and reinsurance obligations the value of the benefits shall be based on an estimate of the average amounts paid in case of event e , assuming the insured person is disabled for the duration specified and taking into account the specific guarantees the obligations include.

5. Where Article 88 is complied with, insurance or reinsurance undertakings may calculate the value of the benefits payable by the insurance or reinsurance undertaking for the insured person referred to in paragraph 4 based on homogenous risk groups, provided that the grouping of policies complies with the requirements set out in Article 35.

Article 163

Pandemic risk sub-module

1. The capital requirement for the pandemic risk sub-module shall be equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous loss of an amount that, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, is calculated as follows:

$$L_p = 0,000075 \cdot E + 0,4 \cdot \sum_c N_c \cdot M_c$$

where:

- (a) E denotes the income protection pandemic exposure of insurance and reinsurance undertakings;
- (b) the sum includes all countries c ;
- (c) N_c denotes the number of insured persons of insurance and reinsurance undertakings which meet all of the following conditions:
 - (i) the insured persons are inhabitants of country c ,
 - (ii) the insured persons are covered by medical expense insurance or reinsurance obligations, other than workers' compensation insurance or reinsurance obligations, that cover medical expenses resulting from an infectious disease;
- (d) M_c denotes the expected average amount payable by insurance or reinsurance undertakings per insured person of country c in case of a pandemic.

2. The income protection pandemic exposure of an insurance or reinsurance undertaking shall be equal to the following:

$$E = \sum_i E_i$$

where:

- (a) the sum includes all insured persons i covered by the income protection insurance or reinsurance obligations other than workers' compensation insurance or reinsurance obligations;
- (b) E_i denotes the value of the benefits payable by the insurance or reinsurance undertaking, for the insured person i in case of a permanent work disability caused by an infectious disease. The value of the benefits shall be the sum insured or where the contract provides for recurring benefit payments the best estimate of the benefit payments assuming that the insured person is permanently disabled and will not recover.

3. For all countries, the expected average amount payable by insurance or reinsurance undertakings per insured person of a particular country c in case of a pandemic shall be equal to the following:

$$M_c = \sum_h H_h \cdot CH_{(h,c)}$$

where:

- (a) the sum includes the types of healthcare utilisation h set out in Annex XVI;
- (b) H_h denotes the ratio of insured persons with clinical symptoms utilising healthcare h as set out in Annex XVI;
- (c) $CH_{(h,c)}$ denotes the best estimate of the amounts payable by insurance and reinsurance undertakings for an insured person in country c in relation to medical expense insurance or reinsurance obligations, other than workers' compensation insurance or reinsurance obligations, for healthcare utilisation h in the event of a pandemic.

SECTION 5

Market risk module

Subsection 1

Correlation coefficients

Article 164

1. The market risk module shall consist of all of the following sub-modules:

- (a) the interest rate risk sub-module referred to in point (a) of subparagraph 2 of Article 105(5) of Directive 2009/138/EC;

- (b) the equity risk sub-module referred to in point (b) of subparagraph 2 of Article 105(5) of Directive 2009/138/EC;
- (c) the property risk sub-module referred to in point (c) of subparagraph 2 of Article 105(5) of Directive 2009/138/EC;
- (d) the spread risk sub-module referred to in point (d) of subparagraph 2 of Article 105(5) of Directive 2009/138/EC;
- (e) the currency risk sub-module referred to in point (e) of subparagraph 2 of Article 105(5) of Directive 2009/138/EC;
- (f) the market risk concentrations sub-module referred to in point (f) of subparagraph 2 of Article 105(5) of Directive 2009/138/EC.

2. The capital requirement for market risk referred to in Article 105(5) of Directive 2009/138/EC shall be equal to the following:

$$SCR_{market} = \sqrt{\sum_{ij} Corr_{(ij)} \cdot SCR_i \cdot SCR_j}$$

where:

- (a) the sum covers all possible combinations ij of sub-modules of the market risk module;
- (b) $Corr_{(i,j)}$ denotes the correlation parameter for market risk for sub-modules i and j ;
- (c) SCR_i and SCR_j denote the capital requirements for sub-modules i and j respectively.

3. The correlation parameter $Corr_{(ij)}$ referred to in paragraph 2 shall be equal to the item set out in row i and in column j of the following correlation matrix:

$i \backslash j$	Interest rate	Equity	Property	Spread	Concentration	Currency
Interest rate	1	A	A	A	0	0,25
Equity	A	1	0,75	0,75	0	0,25
Property	A	0,75	1	0,5	0	0,25
Spread	A	0,75	0,5	1	0	0,25
Concentration	0	0	0	0	1	0
Currency	0,25	0,25	0,25	0,25	0	1

The parameter A shall be equal to 0 where the capital requirement for interest rate risk set out in Article 165 is the capital requirement referred to in point (a) of that Article. In all other cases, the parameter A shall be equal to 0,5.

Subsection 2

Interest rate risk sub-module

Article 165

General provisions

1. The capital requirement for interest rate risk referred to in point (a) of the second subparagraph Article 105(5) of Directive 2009/138/EC shall be equal to the larger of the following:

- (a) the sum, over all currencies, of the capital requirements for the risk of an increase in the term structure of interest rates as set out in Article 166 of this Regulation;
- (b) the sum, over all currencies, of the capital requirements for the risk of a decrease in the term structure of interest rates as set out in Article 167 of this Regulation.

2. Where the larger of the capital requirements referred to in points (a) and (b) of paragraph 1 and the larger of the corresponding capital requirements calculated in accordance with Article 206(2) are not based on the same scenario, the capital requirement for interest rate risk shall be the capital requirement referred to in points (a) or (b) of paragraph 1 for which the underlying scenario results in the largest corresponding capital requirement calculated in accordance with Article 206(2).

Article 166

Increase in the term structure of interest rates

1. The capital requirement for the risk of an increase in the term structure of interest rates for a given currency shall be equal to the loss in the basic own funds that would result from an instantaneous increase in basic risk-free interest rates for that currency at different maturities in accordance with the following table:

Maturity (in years)	Increase
1	70 %
2	70 %
3	64 %
4	59 %
5	55 %
6	52 %
7	49 %
8	47 %
9	44 %
10	42 %
11	39 %
12	37 %
13	35 %
14	34 %
15	33 %
16	31 %
17	30 %
18	29 %
19	27 %
20	26 %
90	20 %

For maturities not specified in the table above, the value of the increase shall be linearly interpolated. For maturities shorter than 1 year, the increase shall be 70 %. For maturities longer than 90 years, the increase shall be 20 %.

2. In any case, the increase of basic-risk-free interest rates at any maturity shall be at least one percentage point.

3. The impact of the increase in the term structure of basic risk-free interest rates on the value of participations as referred to in Article 92(2) of Directive 2009/138/EC in financial and credit institutions shall be considered only on the value of the participations that are not deducted from own funds pursuant to Article 68 of this Regulation. The part deducted from own funds shall be considered only to the extent that such impact increases the basic own funds.

Article 167

Decrease in the term structure of interest rates

1. The capital requirement for the risk of a decrease in the term structure of interest rates for a given currency shall be equal to the loss in the basic own funds that would result from an instantaneous decrease in basic risk-free interest rates for that currency at different maturities in accordance with the following table:

Maturity (in years)	Decrease
1	75 %
2	65 %
3	56 %
4	50 %
5	46 %
6	42 %
7	39 %
8	36 %
9	33 %
10	31 %
11	30 %
12	29 %
13	28 %
14	28 %
15	27 %
16	28 %
17	28 %
18	28 %
19	29 %
20	29 %
90	20 %

For maturities not specified in the table above, the value of the decrease shall be linearly interpolated. For maturities shorter than 1 year, the decrease shall be 75 %. For maturities longer than 90 years, the decrease shall be 20 %.

2. Notwithstanding paragraph 1, for negative basic risk-free interest rates the decrease shall be nil.
3. The impact on the value of participations as referred to in Article 92(2) of Directive 2009/138/EC in financial and credit institutions of the decrease in the term structure of basic risk-free interest rates shall be considered only on the value of the participations that are not deducted from own funds pursuant to Article 68 of this Regulation. The part deducted from own funds shall be considered only to the extent that such impact increases the basic own funds.

Subsection 3

Equity risk sub-module

Article 168

General provisions

1. The equity risk sub-module referred to in point (b) of the second subparagraph of Article 105(5) of Directive 2009/138/EC shall include a risk sub-module for type 1 equities and a risk sub-module for type 2 equities.
2. Type 1 equities shall comprise equities listed in regulated markets in the countries which are members of the European Economic Area (EEA) or the Organisation for Economic Cooperation and Development (OECD).
3. Type 2 equities shall comprise equities listed in stock exchanges in countries which are not members of the EEA or the OECD, equities which are not listed, commodities and other alternative investments. They shall also comprise all assets other than those covered in the interest rate risk sub-module, the property risk sub-module or the spread risk sub-module, including the assets and indirect exposures referred to in Article 84(1) and (2) where a look-through approach is not possible and the insurance or reinsurance undertaking does not make use of the provisions in Article 84(3).

4. The capital requirement for equity risk shall be equal to the following:

$$SCR_{equity} = \sqrt{SCR_{type1equities}^2 + 2 \cdot 0,75 \cdot SCR_{type1equities} \cdot SCR_{type2equities} + SCR_{type2equities}^2}$$

where:

- (a) $SCR_{type1equities}$ denotes the capital requirement for type 1 equities;
- (b) $SCR_{type2equities}$ denotes the capital requirement for type 2 equities.

5. The impact of the instantaneous decreases set out in Articles 169 and 170 on the value of participations as referred to in Article 92(2) of Directive 2009/138/EC in financial and credit institutions shall be considered only on the value of the participations that are not deducted from own funds pursuant to Article 68 of this Regulation.

6. The following equities shall in any case be considered as type 1:

- (a) equities held within collective investment undertakings which are qualifying social entrepreneurship funds as referred to in Article 3(b) of Regulation (EU) No 346/2013 of the European Parliament and of the Council ⁽¹⁾ where the look-through approach set out in Article 84 of this Regulation is possible for all exposures within the collective investment undertaking, or units or shares of those funds where the look through approach is not possible for all exposures within the collective investment undertaking;
- (b) equities held within collective investment undertakings which are qualifying venture capital funds as referred to in Article 3(b) of Regulation (EU) No 345/2013 where the look-through approach set out in Article 84 of this Regulation is possible for all exposures within the collective investment undertaking, or units or shares of those funds where the look through approach is not possible for all exposures within the collective investment undertaking;

⁽¹⁾ Regulation (EU) No 346/2013 of the European Parliament and of the Council of 17 April 2013 on European social entrepreneurship funds (O) L 115, 25.4.2013, p. 18).

- (c) as regards closed-ended and unleveraged alternative investment funds which are established in the Union or, if they are not established in the Union, which are marketed in the Union in accordance with Articles 35 or 40 of Directive 2011/61/EU:
- (i) equities held within such funds where the look-through approach set out in Article 84 of this Regulation is possible for all exposures within the alternative investment fund;
 - (ii) units or shares of such funds where the look-through approach is not possible for all exposures within the alternative investment fund.

Article 169

Standard equity risk sub-module

1. The capital requirement for type 1 equities referred to in Article 168 of this Regulation shall be equal to the loss in the basic own funds that would result from the following instantaneous decreases:
 - (a) an instantaneous decrease equal to 22 % in the value of type 1 equity investments in related undertakings within the meaning of Article 212(1)(b) and 212(2) of Directive 2009/138/EC where these investments are of a strategic nature;
 - (b) an instantaneous decrease equal to the sum of 39 % and the symmetric adjustment as referred to in Article 172 of this Regulation, in the value of type 1 equities other than those referred to in point (a).
2. The capital requirement for type 2 equities referred to in Article 168 of this Regulation shall be equal to the loss in the basic own funds that would result from the following instantaneous decreases:
 - (a) an instantaneous decrease equal to 22 % in the value of type 2 equity investments in related undertakings with the meaning of Article 212(1)(b) and 212(2) of Directive 2009/138/EC where these investments are of a strategic nature;
 - (b) an instantaneous decrease equal to the sum of 49 % and the symmetric adjustment as referred to in Article 172, in the value of type 2 equities, other than those referred to in point (a).

Article 170

Duration-based equity risk sub-module

1. Where an insurance or reinsurance undertaking has received supervisory approval to apply the provisions set out in Article 304 of Directive 2009/138/EC, the capital requirement for type 1 equities shall be equal to the loss in the basic own funds that would result from the following instantaneous decreases:
 - (a) an instantaneous decrease equal to 22 % in the value of the type 1 equities corresponding to the business referred to in point (i) of Article 304(1)(b) of Directive 2009/138/EC;
 - (b) an instantaneous decrease equal to 22 % in the value of type 1 equity investments in related undertakings within the meaning of Article 212(1)(b) and 212(2) of Directive 2009/138/EC where these investments are of a strategic nature;
 - (c) an instantaneous decrease equal to the sum of 39 % and the symmetric adjustment as referred to in Article 172 of this Regulation, in the value of type 1 equities, other than those referred to in points (a) or (b).
2. Where an insurance or reinsurance undertaking has received supervisory approval to apply the provisions set out in Article 304 of Directive 2009/138/EC, the capital requirement for type 2 equities shall be equal to the loss in the basic own funds that would result from an instantaneous decrease:
 - (a) equal to 22 % in the value of the type 2 equities corresponding to the business referred to in point (i) of Article 304(1)(b) of Directive 2009/138/EC;
 - (b) equal to 22 % in the value of type 2 equity investments in related undertakings within the meaning of Article 212(1)(b) and (2) of Directive 2009/138/EC, where these investments are of a strategic nature;
 - (c) equal to the sum of 49 % and the symmetric adjustment as referred to in Article 172 of this Regulation, in the value of type 2 equities, other than those referred to in points (a) or (b).

*Article 171***Strategic equity investments**

For the purposes of Article 169(1)(a) and (2)(a) and of Article 170(1)(b) and (2)(b), equity investments of a strategic nature shall mean equity investments for which the participating insurance or reinsurance undertaking demonstrates the following:

- (a) that the value of the equity investment is likely to be materially less volatile for the following 12 months than the value of other equities over the same period as a result of both the nature of the investment and the influence exercised by the participating undertaking in the related undertaking;
- (b) that the nature of the investment is strategic, taking into account all relevant factors, including:
 - (i) the existence of a clear decisive strategy to continue holding the participation for long period;
 - (ii) the consistency of the strategy referred to in point (a) with the main policies guiding or limiting the actions of the undertaking;
 - (iii) the participating undertaking's ability to continue holding the participation in the related undertaking;
 - (iv) the existence of a durable link;
 - (v) where the insurance or reinsurance participating company is part of a group, the consistency of such strategy with the main policies guiding or limiting the actions of the group.

*Article 172***Symmetric adjustment of the equity capital charge**

1. The equity index referred to in Article 106(2) of Directive 2009/138/EC shall comply with all of the following requirements:

- (a) the equity index measures the market price of a diversified portfolio of equities which is representative of the nature of equities typically held by insurance and reinsurance undertakings;
- (b) the level of the equity index is publicly available;
- (c) the frequency of published levels of the equity index is sufficient to enable the current level of the index and its average value over the last 36 months to be determined.

2. Subject to paragraph 4, the symmetric adjustment shall be equal to the following:

$$SA = \frac{1}{2} \cdot \left(\frac{CI - AI}{AI} - 8\% \right)$$

where:

- (a) CI denotes the current level of the equity index;
- (b) AI denotes the weighted average of the daily levels of the equity index over the last 36 months.

3. For the purposes of calculating the weighted average of the daily levels of the equity index, the weights for all daily levels shall be equal. The days during the last 36 months in respect of which the index was not determined shall not be included in the average.

4. The symmetric adjustment shall not be lower than – 10 % or higher than 10 %.

*Article 173***Criteria for the use of transitional measure for standard equity risk**

The transitional measure for standard equity risk set out in Article 308b(12) of Directive 2009/138/EC shall only be applied to type 1 equities that were purchased on or before 1 January 2016 and which are not subject to the duration-based equity risk pursuant to Article 304 of that Directive.

Subsection 4

Property risk sub-module

Article 174

The capital requirement for property risk referred to in point (c) of the second subparagraph of Article 105(5) of Directive 2009/138/EC shall be equal to the loss in the basic own funds that would result from an instantaneous decrease of 25 % in the value of immovable property.

Subsection 5

Spread risk sub-module

Article 175

Scope of the spread risk sub-module

The capital requirement for spread risk referred to in point (d) of the second subparagraph of Article 105(5) of Directive 2009/138/EC shall be equal to the following:

$$SCR_{spread} = SCR_{bonds} + SCR_{securitisation} + SCR_{cd}$$

where

- (a) SCR_{bonds} denotes the capital requirement for spread risk on bonds and loans;
- (b) $SCR_{securitisation}$ denotes the capital requirement for spread risk on securitisation positions;
- (c) SCR_{cd} denotes the capital requirement for spread risk on credit derivatives.

Article 176

Spread risk on bonds and loans

1. The capital requirement for spread risk on bonds and loans SCR_{bonds} shall be equal to the loss in the basic own funds that would result from an instantaneous relative decrease of $stress_i$ in the value of each bond or loan i other than mortgage loans that meet the requirements in Article 191, including bank deposits other than cash at bank referred to in Article 189(2)(b).

2. The risk factor $stress_i$ shall depend on the modified duration of the bond or loan i denominated in years (dur_i). dur_i shall never be lower than 1. For variable interest rate bonds or loans, dur_i shall be equivalent to the modified duration of a fixed interest rate bond or loan of the same maturity and with coupon payments equal to the forward interest rate.

3. Bonds or loans for which a credit assessment by a nominated ECAI is available shall be assigned a risk factor $stress_i$ depending on the credit quality step and the modified duration dur_i of the bond or loan i according to the following table.

Credit quality step		0		1		2		3		4		5 and 6	
Duration (dur_i)	$stress_i$	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i
up to 5	$b_i \cdot dur_i$	—	0,9 %	—	1,1 %	—	1,4 %	—	2,5 %	—	4,5 %	—	7,5 %
More than 5 and up to 10	$a_i + b_i \cdot (dur_i - 5)$	4,5 %	0,5 %	5,5 %	0,6 %	7,0 %	0,7 %	12,5 %	1,5 %	22,5 %	2,5 %	37,5 %	4,2 %
More than 10 and up to 15	$a_i + b_i \cdot (dur_i - 10)$	7,0 %	0,5 %	8,4 %	0,5 %	10,5 %	0,5 %	20,0 %	1,0 %	35,0 %	1,8 %	58,5 %	0,5 %

Credit quality step		0		1		2		3		4		5 and 6	
Duration (dur_i)	$stress_i$	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i
More than 15 and up to 20	$a_i + b_i \cdot (dur_i - 15)$	9,5 %	0,5 %	10,9 %	0,5 %	13,0 %	0,5 %	25,0 %	1,0 %	44,0 %	0,5 %	61,0 %	0,5 %
More than 20	$\min[a_i + b_i \cdot (dur_i - 20); 1]$	12,0 %	0,5 %	13,4 %	0,5 %	15,5 %	0,5 %	30,0 %	0,5 %	46,5 %	0,5 %	63,5 %	0,5 %

4. Bonds and loans for which a credit assessment by a nominated ECAI is not available and for which debtors have not posted collateral that meets the criteria set out in Article 214 shall be assigned a risk factor $stress_i$ depending on the duration dur_i of the bond or loan i according to the following table:

Duration (dur_i)	$stress_i$
up to 5	$3\% \cdot dur_i$
More than 5 and up to 10	$15 + 1,7\% \cdot (dur_i - 5)$
More than 10 and up to 20	$23,5\% + 1,2\% \cdot (dur_i - 10)$
More than 20	$\min(35,5\% + 0,5\% \cdot (dur_i - 20); 1)$

5. Bonds and loans for which a credit assessment by a nominated ECAI is not available and for which debtors have posted collateral, where the collateral of those bonds and loans meet the criteria set out in Article 214, shall be assigned a risk factor $stress_i$ according to the following:

- where the risk-adjusted value of collateral is higher than or equal to the value of the bond or loan i , $stress_i$ shall be equal to half of the risk factor that would be determined in accordance with paragraph 4;
- where the risk-adjusted value of collateral is lower than the value of the bond or loan i , and where the risk factor determined in accordance with paragraph 4 would result in a value of the bond or loan i that is lower than the risk-adjusted value of the collateral, $stress_i$ shall be equal to the average of the following:
 - the risk factor determined in accordance with paragraph 4;
 - the difference between the value of the bond or loan i and the risk-adjusted value of the collateral, divided by the value of the bond or loan i ;
- where the risk-adjusted value of collateral is lower than the value of the bond or loan i , and where the risk factor determined in accordance with paragraph 4 would result in a value of the bond or loan i that is higher than or equal to the risk-adjusted value of the collateral, $stress_i$ shall be determined in accordance with paragraph 4.

The risk-adjusted value of the collateral shall be calculated in accordance with Articles 112, 197, 198.

6. The impact of the instantaneous decrease in the value of participations, as referred to in Article 92(2) of Directive 2009/138/EC, in financial and credit institutions shall be considered only on the value of the participations that are not deducted from own funds pursuant to Article 68 of this Regulation.

Article 177

Spread risk on securitisation positions: general provisions

1. The capital requirement $SCR_{securitisation}$ for spread risk on securitisation positions shall be the sum of a capital requirement for type 1 securitisation positions, a capital requirement for type 2 securitisation positions and a capital requirement for resecuritisation positions.

2. Type 1 securitisation positions shall include securitisation positions that meet all of the following criteria:
- (a) the position has been assigned to credit quality step 3 or better;
 - (b) the securitisation is listed in a regulated market of a country which is a member of the EEA or the OECD, or is admitted to trading in an organised trading venue providing for an active and sizable market for outright sales which has the following features:
 - (i) historical evidence of market breadth and depth as proven by low bid-ask spreads, high trading volume and a large number of market participants;
 - (ii) the presence of a robust market infrastructure;
 - (c) the position is in the most senior tranche or tranches of the securitisation and possess the highest level of seniority at all times during the ongoing life of the transaction; for these purposes, a tranche shall be deemed the most senior where after the delivery of an enforcement notice and where applicable an acceleration notice, the tranche is not subordinated to other tranches of the same securitisation transaction or scheme in respect of receiving principal and interest payments, without taking into account amounts due under interest rate or currency derivative contracts, fees or other similar payments;
 - (d) the underlying exposures have been acquired by the securitisation special purpose entity (SSPE) within the meaning of Article 4(1)(66) of Regulation (EU) No 575/2013 in a manner that is enforceable against any third party and are beyond the reach of the seller (originator, sponsor or original lender) and its creditors including in the event of the seller's insolvency;
 - (e) the transfer of the underlying exposures to the SSPE may not be subject to any severe clawback provisions in the jurisdiction where the seller (originator, sponsor or original lender) is incorporated; this includes but is not limited to provisions under which the sale of the underlying exposures can be invalidated by the liquidator of the seller (originator, sponsor or original lender) solely on the basis that it was concluded within a certain period before the declaration of the seller's insolvency or provisions where the SSPE can prevent such invalidation only if it can prove that it was not aware of the insolvency of the seller at the time of sale;
 - (f) the underlying exposures have their administration governed by a servicing agreement which includes servicing continuity provisions to ensure, at a minimum, that a default or insolvency of the servicer does not result in a termination of servicing;
 - (g) the documentation governing the securitisation includes continuity provisions to ensure, at a minimum, the replacement of derivative counterparties and of liquidity providers upon their default or insolvency, where applicable;
 - (h) the securitisation position is backed by a pool of homogeneous underlying exposures, which all belong to only one of the following categories, or by a pool of homogeneous underlying exposures which combines residential loans referred to in points (i) and (ii):
 - (i) residential loans secured with a first-ranking mortgage granted to individuals for the acquisition of their main residence, provided that one of the two following conditions is met:
 - the loans in the pool meet on average the loan-to-value requirement laid down in point (i) of Article 129(1)(d) of Regulation (EU) No 575/2013;
 - the national law of the Member State where the loans were originated provides for a loan-to-income limit on the amount that an obligor may borrow in a residential loan, and that Member State has notified this law to the Commission and EIOPA. The loan-to-income limit shall be calculated on the gross annual income of the obligor, taking into account the tax obligations and other commitments of the obligor and the risk of changes in the interest rates over the term of the loan. For each residential loan in the pool, the percentage of the obligor's gross income that may be spent to service the loan, including interest, principal and fee payments, does not exceed 45 %.
 - (ii) fully guaranteed residential loans referred to in Article 129(1)(e) of Regulation (EU) No 575/2013, provided that the loans meet the collateralisation requirements laid down in that paragraph and meet on average the loan-to-value requirement laid down in point (i) of Article 129(1)(d) of Regulation (EU) No 575/2013;

- (iii) commercial loans, leases and credit facilities to undertakings to finance capital expenditures or business operations other than the acquisition or development of commercial real estate, provided that at least 80 % of the borrowers in the pool in terms of portfolio balance are small and medium-sized enterprises at the time of issuance of the securitisation, and none of the borrowers is an institution as defined in Article 4(1)(3) of Regulation (EU) No 575/2013;
- (iv) auto loans and leases for the financing of motor vehicles or trailers as defined in points (11) and (12) of Article 3 of Directive 2007/46/EC of the European Parliament and of the Council ⁽¹⁾, agricultural or forestry tractors as referred to in Directive 2003/37/EC of the European Parliament and of the Council ⁽²⁾, motorcycles or motor tricycles as defined in points (b) and (c) of Article 1(2) of Directive 2002/24/EC of the European Parliament and of the Council ⁽³⁾ or tracked vehicles as referred to in point (c) of Article 2(2) of Directive 2007/46/EC. Such loans or leases may include ancillary insurance and service products or additional vehicle parts, and in the case of leases, the residual value of leased vehicles. All loans and leases in the pool shall be secured with a first-ranking charge or security over the vehicle or an appropriate guarantee in favour of the SSPE, such as a retention of title provision;
- (v) loans and credit facilities to individuals for personal, family or household consumption purposes.
- (i) the position is not in a resecuritisation or a synthetic securitisation as referred to in Article 242(11) of Regulation (EU) No 575/2013;
- (j) the underlying exposures do not include transferable financial instruments or derivatives, except financial instruments issued by the SSPE itself or other parties within the securitisation structure and derivatives used to hedge currency risk and interest rate risk;
- (k) at the time of issuance of the securitisation or when incorporated in the pool of underlying exposures at any time after issuance, the underlying exposures do not include exposures to credit-impaired obligors (or where applicable, credit-impaired guarantors), where a credit-impaired obligor (or credit-impaired guarantor) is a borrower (or guarantor) who:
 - (i) has declared bankruptcy, agreed with his creditors to a debt dismissal or reschedule or had a court grant his creditors a right of enforcement or material damages as a result of a missed payment within three years prior to the date of origination;
 - (ii) is on an official registry of persons with adverse credit history;
 - (iii) has a credit assessment by an ECAI or has a credit score indicating a significant risk that contractually agreed payments will not be made compared to the average obligor for this type of loans in the relevant jurisdiction.
- (l) at the time of issuance of the securitisation or when incorporated in the pool of underlying exposures at any time after issuance, the underlying exposures do not include exposures in default within the meaning of Article 178(1) of Regulation (EU) No 575/2013;
- (m) the repayment of the securitisation position is not structured to depend predominantly on the sale of assets securing the underlying exposures; however, this shall not prevent such exposures from being subsequently rolled-over or refinanced;
- (n) where the securitisation has been set up without a revolving period or the revolving period has terminated and where an enforcement or an acceleration notice has been delivered, principal receipts from the underlying exposures are passed to the holders of the securitisation positions via sequential amortisation of the securitisation positions and no substantial amount of cash is trapped in the SSPE on each payment date;
- (o) where the securitisation has been set up with a revolving period, the transaction documentation provides for appropriate early amortisation events, which shall include at a minimum all of the following:
 - (i) a deterioration in the credit quality of the underlying exposures;

⁽¹⁾ Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (Framework Directive) (OJ L 263, 9.10.2007, p. 1).

⁽²⁾ Directive 2003/37/EC of the European Parliament and of the Council of 26 May 2003 on type-approval of agricultural or forestry tractors, their trailers and interchangeable towed machinery, together with their systems, components and separate technical units and repealing Directive 74/150/EEC (OJ L 171, 9.7.2003, p. 1–80).

⁽³⁾ Directive 2002/24/EC of the European Parliament and of the Council of 18 March 2002 relating to the Type-approval of two or three-wheel motor vehicles and repealing Council Directive 92/61/EEC (OJ L 124, 9.5.2002, p. 1–44).

- (ii) a failure to generate sufficient new underlying exposures of at least similar credit quality;
 - (iii) the occurrence of an insolvency-related event with regard to the originator or the servicer;
- (p) at the time of issuance of the securitisation, the borrowers (or, where applicable, the guarantors) have made at least one payment, except where the securitisation is backed by credit facilities referred to in point (h)(v) of this paragraph;
- (q) in the case of securitisations where the underlying exposures are residential loans referred to in point (h)(i) or (ii), the pool of loans does not include any loan that was marketed and underwritten on the premise that the loan applicant or, where applicable intermediaries, were made aware that the information provided might not be verified by the lender;
- (r) in the case of securitisations where the underlying exposures are residential loans referred to in point (h)(i) or (ii), the assessment of the borrower's creditworthiness meets the requirements set out in paragraphs 1 to 4, 5(a), and 6 of Article 18 of Directive 2014/17/EU of the European Parliament and of the Council ⁽¹⁾ or equivalent requirements in countries that are not members of the Union;
- (s) in the case of securitisations where the underlying exposures are auto loans and leases and consumer loans and credit facilities referred to in point (h)(v) of this paragraph, the assessment of the borrower's creditworthiness meets the requirements set out in Article 8 of Directive 2008/48/EC of the European Parliament and of the Council ⁽²⁾ or equivalent requirements in countries that are not members of the Union;
- (t) where the issuer, originator or sponsor of the securitisation is established in the Union, it complies with the requirements laid down in Part Five of Regulation (EU) No. 575/2013 and discloses information, in accordance with Article 8b of Regulation (EU) No 1060/2009, on the credit quality and performance of the underlying exposures, the structure of the transaction, the cash flows and any collateral supporting the exposures as well as any information that is necessary for investors to conduct comprehensive and well-informed stress tests; where the issuer, originator and sponsors are established outside the Union, comprehensive loan-level data in compliance with standards generally accepted by market participants is made available to existing and potential investors and regulators at issuance and on a regular basis.

3. Type 2 securitisation positions shall include all securitisation positions that do not qualify as type 1 securitisation positions.

4. Notwithstanding paragraph 2, securitisations that were issued before the entry into force of this Regulation shall qualify as type 1 if they meet only the requirements set out in points (a), (c), (d), (h), (i) and (j) of paragraph 2. Where the underlying exposures are residential loans referred to in point (h)(i) of paragraph 2, none of the two conditions on the loan-to-value or loan-to-income ratios set out in that point shall apply to those securitisations.

5. Notwithstanding paragraph 2, a securitisation position where the underlying exposures are residential loans referred to in point (h)(i) of paragraph 2 that do not meet the average loan-to-value requirement nor the loan-to-income requirement set out in that point, shall qualify as a type 1 securitisation position until 31 December 2025, provided that all of the following requirements are met:

- (a) the securitisation was issued after the date of entry into force of this Regulation;
- (b) the underlying exposures comprise residential loans that were granted to obligors before the application of the national law providing for a loan-to-income limit.
- (c) the underlying exposures do not comprise residential loans that were granted to obligors after the date of entry into force of this Regulation and which do not comply with the loan-to-income requirement as referred to in point (h)(i) of paragraph 2.

⁽¹⁾ Directive 2014/17/EU of the European Parliament and of the Council of 4 February 2014 on credit agreements for consumers relating to residential immovable property and amending Directives 2008/48/EC and 2013/36/EU and Regulation (EU) No 1093/2014, OJ L 60, 28.2.2014, p. 34.

⁽²⁾ Directive 2008/48/EC of the European Parliament and of the Council of 23 April 2008 on credit agreements for consumers and repealing Council Directive 87/102/EEC, OJ L 133, 22.5.2008, p. 66.

Article 178

Spread risk on securitisation positions: calculation of the capital requirement

1. The capital requirement for spread risk on type 1 securitisation positions shall be equal to the loss in the basic own funds that would result from an instantaneous relative decrease of $stress_i$ in the value of each type 1 securitisation position i . The risk factor $stress_i$ shall be equal to the following:

$$stress_i = \min(b_i \cdot dur_i; 1)$$

where:

- (a) dur_i denotes the modified duration of securitisation position i denominated in years;
- (b) b_i shall be assigned depending on the credit quality step of securitisation position i according to the following table:

Credit quality step	0	1	2	3
b_i	2,1 %	3 %	3 %	3 %

2. The capital requirement for spread risk on type 2 securitisation position shall be equal to the loss in the basic own funds that would result from an instantaneous relative decrease of $stress_i$ in the value of each type 2 securitisation position i . The risk factor $stress_i$ shall be equal to the following

$$stress_i = \min(b_i \cdot dur_i; 1)$$

where:

- (a) dur_i denotes the modified duration of securitisation position i denominated in years;
- (b) b_i shall be assigned depending on the credit quality step of securitisation position i according to the following table:

Credit quality step	0	1	2	3	4	5	6
b_i	12,5 %	13,4 %	16,6 %	19,7 %	82 %	100 %	100 %

3. The capital requirement for spread risk on resecuritisation positions shall be equal to the loss in the basic own funds that would result from an instantaneous relative decrease of $stress_i$ in the value of each resecuritisation position i . The risk factor $stress_i$ shall be equal to the following

$$stress_i = \min(b_i \cdot dur_i; 1)$$

where:

- (a) dur_i denotes the modified duration of resecuritisation position i denominated in years;
- (b) b_i shall be assigned depending on the credit quality step of resecuritisation position i according to the following table:

Credit quality step	0	1	2	3	4	5	6
b_i	33 %	40 %	51 %	91 %	100 %	100 %	100 %

4. The modified duration dur_i referred to in paragraphs 1 and 2 shall not be lower than 1 year.

5. Securitisation positions for which a credit assessment from a nominated ECAI is not available shall be assigned a risk factor $stress_i$ of 100 %.

Article 179

Spread risk on credit derivatives

1. The capital requirement SCR_{cd} for spread risk on credit derivatives other than those referred to in paragraph 4 shall be equal to the higher of the following capital requirements:

- (a) the loss in the basic own funds that would result from an instantaneous increase in absolute terms of the credit spread of the instruments underlying the credit derivatives, as set out in paragraphs 2 and 3;
- (b) the loss in the basic own funds that would result from an instantaneous relative decrease of the credit spread of the instruments underlying the credit derivatives by 75 %.

For the purposes of point (a), the instantaneous increase of the credit spread of the instruments underlying the credit derivatives for which a credit assessment by a nominated ECAI is available shall be calculated according to the following table.

Credit quality step	0	1	2	3	4	5	6
Instantaneous increase in spread (in percentage points)	1,3	1,5	2,6	4,5	8,4	16,20	16,20

2. For the purposes of point (a) of paragraph 1, the instantaneous increase of the credit spread of the instruments underlying the credit derivatives for which a credit assessment by a nominated ECAI is not available shall be 5 percentage points.

3. Credit derivatives which are part of the undertaking's risk mitigation policy shall not be subject to a capital requirement for spread risk, as long as the undertaking holds either the instruments underlying the credit derivative or another exposure with respect to which the basis risk between that exposure and the instruments underlying the credit derivative is not material in any circumstances.

4. Where the larger of the capital requirements referred to in points (a) and (b) of paragraph 1 and the larger of the corresponding capital requirements calculated in accordance with Article 206(2) are not based on the same scenario, the capital requirement for spread risk on credit derivatives shall be the capital requirement referred to in paragraph 1 for which the underlying scenario results in the largest corresponding capital requirement calculated in accordance with Article 206(2).

Article 180

Specific exposures

1. Exposures in the form of bonds referred to Article 52(4) of Directive 2009/65/EC (covered bonds) which have been assigned to credit quality step 0 or 1 shall be assigned a risk factor $stress_i$ according to the following table.

Duration (dur_i) \ Credit quality step	0	1
up to 5	$0,7 \% \cdot dur_i$	$0,9 \% \cdot dur_i$
More than 5 years	$\min(3,5\% + 0,5\% \cdot (dur_i - 5); 1)$	$\min(4,5\% + 0,5\% \cdot (dur_i - 5); 1)$

2. Exposures in the form of bonds and loans to the following shall be assigned a risk factor $stress_i$ of 0 %:

- (a) the European Central Bank;
- (b) Member States' central government and central banks denominated and funded in the domestic currency of that central government and the central bank;
- (c) multilateral development banks referred to in paragraph 2 of Article 117 of Regulation (EU) No 575/2013;
- (d) international organisations referred to in Article 118 of Regulation (EU) No 575/2013;

Exposures in the form of bonds and loans that are fully, unconditionally and irrevocably guaranteed by one of the counterparties mentioned in points (a) to (d), where the guarantee meets the requirements set out in Article 215, shall also be assigned a risk factor $stress_i$ of 0 %.

3. Exposures in the form of bonds and loans to central governments and central banks other than those referred to in point (b) of paragraph 2, denominated and funded in the domestic currency of that central government and central bank, and for which a credit assessment by a nominated ECAI is available shall be assigned a risk factor $stress_i$ depending on the credit quality step and the duration of the exposure according to the following table:

Credit quality step		0 and 1		2		3		4		5 and 6	
Duration (dur_i)	$stress_i$	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i
up to 5	$b_i \cdot dur_i$	—	0,0 %	—	1,1 %	—	1,4 %	—	2,5 %	—	4,5 %
More than 5 and up to 10	$a_i + b_i \cdot (dur_i - 5)$	0,0 %	0,0 %	5,5 %	0,6 %	7,0 %	0,7 %	12,5 %	1,5 %	22,5 %	2,5 %
More than 10 and up to 15	$a_i + b_i \cdot (dur_i - 10)$	0,0 %	0,0 %	8,4 %	0,5 %	10,5 %	0,5 %	20,0 %	1,0 %	35,0 %	1,8 %
More than 15 and up to 20	$a_i + b_i \cdot (dur_i - 15)$	0,0 %	0,0 %	10,9 %	0,5 %	13,0 %	0,5 %	25,0 %	1,0 %	44,0 %	0,5 %
More than 20	$\min[a_i + b_i \cdot (dur_i - 20); 1]$	0,0 %	0,0 %	13,4 %	0,5 %	15,5 %	0,5 %	30,0 %	0,5 %	46,5 %	0,5 %

4. Exposures in the form of bonds and loans to an insurance or reinsurance undertaking for which a credit assessment by a nominated ECAI is not available and where this undertaking meets its Minimum Capital Requirement, shall be assigned a risk factor $stress_i$ from the table in Article 176(3) depending on the undertaking's solvency ratio, using the following mapping between solvency ratios and credit quality steps:

Solvency ratio	196 %	175 %	122 %	95 %	75 %	75 %
Credit quality step	1	2	3	4	5	6

Where the solvency ratio falls in between the solvency ratios set out in the table above, the value of $stress_i$ shall be linearly interpolated from the closest values of $stress_i$ corresponding to the closest solvency ratios set out in the table above. Where the solvency ratio is lower than 75 %, $stress_i$ shall be equal to the factor corresponding to the credit quality steps 5 and 6. Where the solvency ratio is higher than 196 %, $stress_i$ shall be the same as the factor corresponding to the credit quality step 1.

For the purposes of this paragraph, 'solvency ratio' denotes the ratio of the eligible amount of own funds to cover the Solvency Capital Requirement and the Solvency Capital Requirement, using the latest available values.

5. Exposures in the form of bonds and loans to an insurance or reinsurance undertaking which does not meet its Minimum Capital Requirement shall be assigned a risk factor $stress_i$ according to the following table:

Duration (dur_i)	risk factor $stress_i$
up to 5	$7,5 \% \cdot dur_i$
More than 5 and up to 10	$37,50 \% + 4,20 \% \cdot (dur_i - 5)$
More than 10 and up to 15	$58,50 \% + 0,50 \% \cdot (dur_i - 10)$
More than 15 and up to 20	$61 \% + 0,50 \% \cdot (dur_i - 15)$
More than 20	$\min(63,5\% + 0,5\% \cdot (dur_i - 20); 1)$

6. Paragraphs 4 and 5 of this Article shall only apply as of the first date of public disclosure, by the undertaking corresponding to the exposure, of the report on its solvency and financial condition referred to in Article 51 of Directive 2009/138/EC. Before that date, if a credit assessment by a nominated ECAI is available for the exposures, Article 176 of this Regulation shall apply, otherwise, the exposures shall be assigned the same risk factor as the ones that would result from the application of paragraph 4 of this Article to exposures to an insurance or reinsurance undertaking whose solvency ratio is 100 %.

7. Exposures in the form of bonds and loans to a third country insurance or reinsurance undertaking for which a credit assessment by a nominated ECAI is not available, situated in a country whose solvency regime is deemed equivalent to that laid down in Directive 2009/138/EC in accordance with Article 227 of Directive 2009/138/EC, and which complies with the solvency requirements of that third-country, shall be assigned the same risk factor as the ones that would result from the application of paragraph 4 of this Article to exposures to an insurance or reinsurance undertaking whose solvency ratio is 100 %.

8. Exposures in the form of bonds and loans to credit institutions and financial institutions within the meaning of points (1) and (26) of Article 4(1) of Regulation (EU) No 575/2013 which comply with the solvency requirements set out in Directive 2013/36/EU and Regulation (EU) No 575/2013, for which a credit assessment by a nominated ECAI is not available, shall be assigned the same risk factor as the ones that would result from the application of paragraph 4 of this Article to exposures to an insurance or reinsurance undertaking whose solvency ratio is 100 %.

9. The capital requirement for spread risk on credit derivatives where the underlying financial instrument is a bond or a loan to any exposure listed in paragraph 2 shall be nil.

10. Type 1 securitisation positions which are fully, unconditionally and irrevocably guaranteed by the European Investment Fund or the European Investment Bank, where the guarantee meets the requirements set out in Article 215, shall be assigned a risk factor *stress*, of 0 %.

Article 181

Application of the spread risk scenarios to matching adjustment portfolios

Where insurance undertakings apply the matching adjustment referred to in Article 77b of Directive 2009/138/EC, they shall carry out the scenario based calculation for spread risk as follows:

- (a) the assets in the assigned portfolio shall be subject to the instantaneous decrease in value for spread risk set out in Articles 176, 178 and 180 of this Regulation;
- (b) the technical provisions shall be recalculated to take into account the impact on the amount of the matching adjustment of the instantaneous decrease in value of the assigned portfolio of assets. In particular, the fundamental spread shall increase, by an absolute amount that is calculated as the product of the following:
 - (i) the absolute increase in spread that, multiplied by the modified duration of the relevant asset, would result in the relevant risk factor *stress*, referred to in Articles 176, 178 and 180 of this Regulation;
 - (ii) a reduction factor, depending on the credit quality as set out in the following table:

Credit quality step	0	1	2	3	4	5	6
Reduction factor	45 %	50 %	60 %	75 %	100 %	100 %	100 %

For assets in the assigned portfolio for which no credit assessment by a nominated ECAI is available, the reduction factor shall be equal to 100 %.

Subsection 6

Market risk concentrations sub-module*Article 182***Single name exposure**

1. The capital requirement for market risk concentration shall be calculated on the basis of single name exposures. For this purpose exposures to undertakings which belong to the same corporate group shall be treated as a single name exposure. Similarly, immovable properties which are located in the same building shall be considered as a single immovable property.
2. The exposure at default to a counterparty shall be the sum of the exposures to this counterparty.
3. The exposure at default to a single name exposure shall be the sum of the exposures at default to all counterparties that belong to the single name exposure.
4. The weighted average credit quality step on a single name exposure shall be equal to the rounded-up average of the credit quality steps of all exposures to all counterparties that belong to the single name exposure, weighted by the value of each exposure.
5. For the purposes of paragraph 4, exposures for which a credit assessment by a nominated ECAI is available, shall be assigned a credit quality step in accordance with Chapter 1 Section 2 of this Title. Exposures for which a credit assessment by a nominated ECAI is not available shall be assigned to credit quality step 5.

*Article 183***Calculation of the capital requirement for market risk concentration**

1. The capital requirement for market risk concentration shall be equal to the following:

$$SCR_{conc} = \sqrt{\sum_i Conc_i^2}$$

where:

- (a) the sum covers all single name exposures i ;
 - (b) $Conc_i$ denotes the capital requirement for market risk concentration on a single name exposure i .
2. For each single name exposure i , the capital requirement for market risk concentration $Conc_i$ shall be equal to the loss in the basic own funds that would result from an instantaneous decrease in the value of the assets corresponding to the single name exposure i equal to the following:

$$XS_i \cdot g_i$$

where:

- (a) XS_i is the excess exposure referred to in Article 184;
- (b) g_i is the risk factor for market risk concentration referred to in Articles 186 and 187;

*Article 184***Excess exposure**

1. The excess exposure on a single name exposure i shall be equal to the following:

$$XS_i = \text{Max}(0; E_i - CT_i \cdot \text{Assets})$$

where:

- (a) E_i denotes the exposure at default to single name exposure i that is included in the calculation base of the market risk concentrations sub-module;

- (b) Assets denotes the calculation base of the market risk concentrations sub-module;
- (c) CT_i denotes the relative excess exposure threshold referred to in Article 185.
2. The calculation base of the market risk concentration sub-module Assets shall be equal to the value of all assets held by an insurance or reinsurance undertaking, excluding the following:
- (a) assets held in respect of life insurance contracts where the investment risk is fully borne by the policy holders;
- (b) exposures to a counterparty which belongs to the same group as the insurance or reinsurance undertaking, provided that all of the following conditions are met:
- (i) the counterparty is an insurance or reinsurance undertaking, an insurance holding company, a mixed financial holding company or an ancillary services undertaking;
 - (ii) the counterparty is fully consolidated in accordance with Article 335(1)(a);
 - (iii) the counterparty is subject to the same risk evaluation, measurement and control procedures as the insurance or reinsurance undertaking;
 - (iv) the counterparty is established in the Union;
 - (v) there is no current or foreseen material practical or legal impediment to the prompt transfer of own funds or repayment of liabilities from the counterparty to the insurance or reinsurance undertaking;
- (c) the value of the participations as referred to in Article 92(2) of Directive 2009/138/EC in financial and credit institutions that is deducted from own funds pursuant to Article 68 of this Regulation;
- (d) exposures included in the scope of the counterparty default risk module;
- (e) deferred tax assets;
- (f) intangible assets.
3. The exposure at default on a single name exposure i shall be reduced by the amount of the exposure at default to counterparties belonging to that single name exposure and for which the risk factor for market risk concentration referred to in Articles 168 and 187 is 0 %.

Article 185

Relative excess exposure thresholds

Each single name exposure i shall be assigned, in accordance with the following table, a relative excess exposure threshold depending on the weighted average credit quality step of the single name exposure i , calculated in accordance with Article 182(4).

Weighted average credit quality step of single name exposure i	0	1	2	3	4	5	6
Relative excess exposure threshold CT_i	3 %	3 %	3 %	1,5 %	1,5 %	1,5 %	1,5 %

Article 186

Risk factor for market risk concentration

1. Each single name exposure i shall be assigned, in accordance with the following table, a risk factor g_i for market risk concentration depending on the weighted average credit quality step of the single name exposure i , calculated in accordance with Article 182(4).

Weighted average credit quality step of single name exposure i	0	1	2	3	4	5	6
Risk factor g_i	12 %	12 %	21 %	27 %	73 %	73 %	73 %

2. Single name exposures to an insurance or reinsurance undertaking for which a credit assessment by a nominated ECAI is not available and where the undertaking meets its Minimum Capital Requirement, shall be assigned a risk factor g_i for market risk concentration depending on the undertaking's solvency ratio in accordance with the following table:

Solvency ratio	95 %	100 %	122 %	175 %	196 %
Risk factor g_i	73 %	64,5 %	27 %	21 %	12 %

Where the solvency ratio falls in between the solvency ratios set out in the table above, the value of g_i shall be linearly interpolated from the closest values of g_i corresponding to the closest solvency ratios set out in the table above. Where the solvency ratio is lower than 95 %, the risk factor g_i shall be equal to 73 %. Where the solvency ratio is higher than 196 %, the risk factor g_i shall be equal to 12 %.

For the purposes of this paragraph, 'solvency ratio' denotes the ratio of the eligible amount of own funds to cover the Solvency Capital Requirement and the Solvency Capital Requirement, using the latest available values.

3. Single name exposures to insurance or reinsurance undertakings which do not meet their Minimum Capital Requirement, shall be assigned a risk factor g_i for market risk concentration equal to 73 %.

Paragraphs 2 and 3 of this Article shall only apply as of the first date of public disclosure, by the undertaking corresponding to the exposure, of the report on its solvency and financial condition referred to in Article 51 of Directive 2009/138/EC. Before that date, if a credit assessment by a nominated ECAI is available for the single name exposure, paragraph 1 shall apply, otherwise, the exposures shall be assigned a risk factor g_i of 64,5 %.

4. Single name exposures to a third country insurance or reinsurance undertaking, for which a credit assessment by a nominated ECAI is not available, situated in a country whose solvency regime is deemed equivalent pursuant to Article 227 of Directive 2009/138/EC, and which complies with the solvency requirements of those that third-country, shall be assigned a risk factor g_i of 64,5 %.

5. Single name exposures to credit institutions and financial institutions within the meaning of points (1) and (26) of Article 4(1) of Regulation (EU) No 575/2013 and which comply with the solvency requirements set out in of Directive 2013/36/EU and Regulation (EU) No 575/2013, for which a credit assessment by a nominated ECAI is not available, shall be assigned a risk factor g_i of 64,5 %.

6. Single name exposures other than those identified in paragraphs 1 to 5 shall be assigned a risk factor g_i for market risk concentration of 73 %.

Article 187

Specific exposures

1. Exposures in the form of bonds as referred to Article 52(4) of Directive 2009/65/EC (covered bonds) shall be assigned a relative excess exposure threshold CT_i of 15 %, provided that the corresponding exposures in the form of covered bonds have been assigned to credit quality step 0 or 1. Exposures in the form of covered bonds shall be considered as single name exposures, regardless of other exposures to the same counterparty as the issuer of the covered bonds, which constitute a distinct single name exposure.

2. Exposures to a single immovable property shall be assigned a relative excess exposure threshold CT_i of 10 % and a risk factor g_i for market risk concentration of 12 %.

3. Exposures to the following shall be assigned a risk factor g_i for market risk concentration of 0 %:

- (a) the European Central Bank;
- (b) Member States' central government and central banks denominated and funded in the domestic currency of that central government and central bank;
- (c) multilateral development banks referred to in Article 117(2) of Regulation (EU) No 575/2013;
- (d) international organisations referred to in Article 118 of Regulation (EU) No 575/2013.

Exposures that are fully, unconditionally and irrevocably guaranteed by one of the counterparties mentioned in points (a) to (d), where the guarantee meets the requirements set out in Article 215, shall also be assigned a risk factor g_i for market risk concentration of 0 %.

4. Exposures to central governments and central banks other than those referred to in point (b) of paragraph 3, denominated and funded in the domestic currency of that central government and central bank, shall be assigned a risk factor g_i for market risk concentration depending on their weighted average credit quality steps, in accordance with the following table.

Weighted average credit quality step of single name exposure i	0	1	2	3	4	5	6
Risk factor g_i	0 %	0 %	12 %	21 %	27 %	73 %	73 %

5. Exposures in the form of bank deposits shall be assigned a risk factor g_i for market risk concentration of 0 %, provided they meet all of the following requirements:

- (a) the full value of the exposure is covered by a government guarantee scheme in the Union;
- (b) the guarantee covers the insurance or reinsurance undertaking without any restriction;
- (c) there is no double counting of such guarantee in the calculation of the Solvency Capital Requirement.

Subsection 7

Currency risk sub-module

Article 188

1. The capital requirement for currency risk referred to in point (e) of the second subparagraph of Article 105(5) of Directive 2009/138/EC shall be equal to the sum of the capital requirements for currency risk for each foreign currency. Investments in type 1 equities referred to in Article 168(2) and type 2 equities referred to in Article 168(3) which are listed in stock exchanges operating with different currencies shall be assumed to be sensitive to the currency of its main listing. Type 2 equities referred to in Article 168(3) which are not listed shall be assumed to be sensitive to the currency of the country in which the issuer has its main operations. Immovable property shall be assumed to be sensitive to the currency of the country in which it is located.

For the purposes of this Article, foreign currencies shall be currencies other than the currency used for the preparation of the insurance or reinsurance undertaking's financial statements ('the local currency').

2. For each foreign currency, the capital requirement for currency risk shall be equal to the larger of the following capital requirements:

- (a) the capital requirement for the risk of an increase in value of the foreign currency against the local currency;
- (b) the capital requirement for the risk of a decrease in value of the foreign currency against the local currency.

3. The capital requirement for the risk of an increase in value of a foreign currency against the local currency shall be equal to the loss in the basic own funds that would result from an instantaneous increase of 25 % in the value of the foreign currency against the local currency.

4. The capital requirement for the risk of a decrease in value of a foreign currency against the local currency shall be equal to the loss in the basic own funds that would result from an instantaneous decrease of 25 % in the value of the foreign currency against the local currency.

5. For currencies which are pegged to the euro, the 25 % factor referred to in paragraphs 3 and 4 of this Article may be adjusted in accordance with the implementing act adopted pursuant to point (d) of Article 109a(2) of Directive 2009/138/EC, provided that all of the following conditions are met:

- (a) the pegging arrangement shall ensure that the relative changes in the exchange rate over a one-year period do not exceed the relative adjustments to the 25 % factor, in the event of extreme market events, that correspond to the confidence level set out in Article 101(3) of Directive 2009/138/EC;

(b) one of the following criteria is complied with:

- (i) participation of the currency in the European Exchange Rate Mechanism (ERM II);
- (ii) existence of a decision from the Council which recognises pegging arrangements between this currency and the euro;
- (iii) establishment of the pegging arrangement by the law of country establishing the country's currency.

For the purposes of point (a), the financial resources of the parties that guarantee the pegging shall be taken into account.

6. The impact of an increase or a decrease in the value of a foreign currency against the local currency on the value of participations as defined in Article 92(2) of Directive 2009/138/EC in financial and credit institutions, shall be considered only on the value of the participations that are not deducted from own funds pursuant to Article 68 of this Regulation. The part deducted from own funds shall be considered only to the extent such impact increases the basic own funds.

7. Where the larger of the capital requirements referred to in points (a) and (b) of paragraph 2 and the largest of the corresponding capital requirements calculated in accordance with Article 206(2) are not based on the same scenario, the capital requirement for currency risk on a given currency shall be the capital requirement referred to in points (a) or (b) of paragraph 2 for which the underlying scenario results in the largest corresponding capital requirement calculated in accordance with Article 206(2).

SECTION 6

Counterparty default risk module

Subsection 1

General provisions

Article 189

Scope

1. The capital requirement for counterparty default risk shall be equal to the following:

$$SCR_{def} = \sqrt{SCR_{(def,1)}^2 + 1,5 \cdot SCR_{(def,1)} \cdot SCR_{(def,2)} + SCR_{(def,2)}^2}$$

where:

- (a) $SCR_{def,1}$ denotes the capital requirement for counterparty default risk on type 1 exposures as set out in paragraph 2;
- (b) $SCR_{def,2}$ denotes the capital requirement for counterparty default risk on type 2 exposures as set out in paragraph 3.

2. Type 1 exposures shall consist of exposures in relation to the following:

- (a) Risk-mitigation contracts including reinsurance arrangements, special purpose vehicles, insurance securitisations and derivatives;
- (b) Cash at bank as defined in Article 6 item F of Council Directive 91/674/EEC ⁽¹⁾;
- (c) Deposits with ceding undertakings, where the number of single name exposures does not exceed 15;
- (d) Commitments received by an insurance or reinsurance undertaking which have been called up but are unpaid, where the number of single name exposures does not exceed 15, including called up but unpaid ordinary share capital and preference shares, called up but unpaid legally binding commitments to subscribe and pay for subordinated liabilities, called up but unpaid initial funds, members' contributions or the equivalent basic own-fund item for mutual and mutual-type undertakings, called up but unpaid guarantees, called up but unpaid letters of credit, called up but unpaid claims which mutual or mutual-type associations may have against their members by way of a call for supplementary contributions;
- (e) Legally binding commitments which the undertaking has provided or arranged and which may create payment obligations depending on the credit standing or default on a counterparty including guarantees, letters of credit, letters of comfort which the undertaking has provided.

⁽¹⁾ Council Directive 91/674/EEC of 19 December 1991 on the annual accounts and consolidated accounts of insurance undertakings, OJ L 374, 31.12.1991, p. 7.

3. Type 2 exposures shall consist of all credit exposures which are not covered in the spread risk sub-module and which are not type 1 exposures, including the following:

- (a) Receivables from intermediaries;
- (b) Policyholder debtors;
- (c) mortgage loans which meet the requirements in Article 191(2) to (13);
- (d) Deposits with ceding undertakings, where the number of single name exposures exceeds 15;
- (e) Commitments received by an insurance or reinsurance undertaking which have been called up but are unpaid as referred to in paragraph 2(d), where the number of single name exposures exceeds 15.

4. Insurance and reinsurance undertakings may, at their discretion, consider all exposures referred to in points (d) and (e) of paragraph 3 as type 1 exposures, regardless of the number of single name exposures.

5. Where a letter of credit, a guarantee or an equivalent risk mitigation technique has been provided to fully secure an exposure and this risk mitigation technique complies with the requirements of Articles 209 to 215, then the provider of that letter of credit, guarantee or equivalent risk mitigation technique may be considered as the counterparty on the secured exposure for the purposes of assessing the number of single name exposures.

6. The following credit risks shall not be covered in the counterparty default risk module:

- (a) the credit risk transferred by a credit derivative;
- (b) the credit risk on debt issuance by special purpose vehicles, whether as defined in Article 13(26) of Directive 2009/138/EC or not;
- (c) the underwriting risk of credit and suretyship insurance or reinsurance as referred to in lines of business 9, 21 and 28 of Annex I of this Regulation;
- (d) the credit risk on mortgage loans which do not meet the requirements in Article 191(2) to (9).

7. Investment guarantees on insurance contracts provided to policy holders by a third party and for which the insurance or reinsurance undertaking would be liable should the third party default shall be treated as derivatives in the counterparty default risk module.

Article 190

Single name exposures

1. The capital requirement for counterparty default risk shall be calculated on the basis of single name exposures. For that purpose exposures to undertakings which belong to the same corporate group shall be treated as a single name exposure.

2. The insurance or reinsurance undertaking may consider exposures which belong to different members of the same legal or contractual pooling arrangement as different single name exposures where the probability of default of the single name exposure is calculated in accordance with Article 199 and the loss-given-default is calculated in accordance with Article 193 if it is a pool exposure of type A, in accordance with Article 194 if it is a pool exposure of type B and in accordance with Article 195 if it is a pool exposure of type C. Alternatively exposures to the undertakings which belong to the same pooling arrangement shall be treated as a single name exposure.

Article 191

Mortgage loans

1. Retail loans secured by mortgages on residential property (mortgage loans) shall be treated as type 2 exposures under the counterparty default risk provided the requirements in paragraphs 2 to 13 are met.

2. The exposure shall be either to a natural person or persons or to a small or medium sized enterprise.

3. The exposure shall be one of a significant number of exposures with similar characteristics such that the risks associated with such lending are substantially reduced.
4. The total amount owed to the insurance or reinsurance undertaking and, where relevant, to all related undertakings within the meaning of Article 212(1)(b) and (2) of Directive 2009/138/EC, including any exposure in default, by the counterparty or other connected third party, shall not, to the knowledge of the insurance or reinsurance undertaking, exceed EUR 1 million. The insurance or reinsurance undertaking shall take reasonable steps to acquire this knowledge.
5. The residential property is or will be occupied or let by the owner.
6. The value of the property does not materially depend upon the credit quality of the borrower.
7. The risk of the borrower does not materially depend upon the performance of the underlying property, but on the underlying capacity of the borrower to repay the debt from other sources, and as a consequence, the repayment of the facility does not materially depend on any cash flow generated by the underlying property serving as collateral. For those other sources, the insurance or reinsurance undertaking shall determine maximum loan-to-income ratio as part of its lending policy and obtain suitable evidence of the relevant income when granting the loan.
8. All of the following requirements on legal certainty shall be met:
 - (a) a mortgage or charge is enforceable in all jurisdictions which are relevant at the time of the conclusion of the credit agreement and shall be properly filed on a timely basis;
 - (b) all legal requirements for establishing the pledge have been fulfilled;
 - (c) the protection agreement and the legal process underpinning it enable the insurance or reinsurance undertaking to realise the value of the protection within a reasonable timeframe.
9. All of the following requirements on the monitoring of property values and on property valuation shall be met:
 - (a) the insurance or reinsurance undertaking monitors the value of the property on a frequent basis and at a minimum once every three years. The insurance or reinsurance undertaking carries out more frequent monitoring where the market is subject to significant changes in conditions;
 - (b) the property valuation is reviewed when information available to the insurance or reinsurance undertaking indicates that the value of the property may have declined materially relative to general market prices and that review is external and independent and carried out by a valuer who possesses the necessary qualifications, ability and experience to execute a valuation and who is independent from the credit decision process.
10. For the purposes of paragraph 9, insurance or reinsurance undertakings may use statistical methods to monitor the value of the property and to identify property that needs revaluation.
11. The insurance or reinsurance undertaking shall clearly document the types of residential property they accept as collateral and their lending policies in this regard. The insurance or reinsurance undertaking shall require the independent valuer of the market value of the property, as referred to in Article 198(2), to document that market value in a transparent and clear manner.
12. The insurance or reinsurance undertaking shall have in place procedures to monitor that the property taken as credit protection is adequately insured against the risk of damage.
13. The insurance or reinsurance undertaking shall report all of the following data on losses stemming from mortgage loans to the supervisory authority:
 - (a) losses stemming from loans that has been classified as type 2 exposures according with Article 189(3) in any given year;
 - (b) overall losses in any given year.
14. The supervisory authorities shall publish annually on an aggregated basis the data specified in points (a) and (b) of paragraph 13, together with historical data, where available. A supervisory authority shall, upon the request of another supervisory authority in a Member State, the EBA or the EIOPA provide to that supervisory authority, the EBA or the EIOPA more detailed information on the condition of the residential immovable property markets in that Member State.

Article 192

Loss-given-default

1. The loss-given-default on a single name exposure shall be equal to the sum of the loss-given-default on each of the exposures to counterparties belonging to the single name exposure. The loss-given-default shall be net of the liabilities towards counterparties belonging to the single name exposure provided that those liabilities and exposures are set off in the case of default of the counterparties and provided that Articles 209 and 210 are complied with in relation to that right of set-off. No offsetting shall be allowed for if the liabilities are expected to be met before the credit exposure is cleared.

2. The loss-given-default on a reinsurance arrangement or insurance securitisation shall be equal to the following:

$$LGD = \max[50\% \cdot (REcoverables + 50\% \cdot RM_{re}) - F \cdot Collateral; 0]$$

where:

- (a) *Recoverables* denotes the best estimate of amounts recoverable from the reinsurance arrangement or insurance securitisation and the corresponding debtors;
- (b) RM_{re} denotes the risk mitigating effect on underwriting risk of the reinsurance arrangement or securitisation;
- (c) *Collateral* denotes the risk-adjusted value of collateral in relation to the reinsurance arrangement or securitisation;
- (d) *F* denotes a factor to take into account the economic effect of the collateral arrangement in relation to the reinsurance arrangement or securitisation in case of any credit event related to the counterparty.

Where the reinsurance arrangement is with an insurance or reinsurance undertaking or a third country insurance or reinsurance undertaking and 60 % or more of that counterparty's assets are subject to collateral arrangements, the loss-given-default shall be equal to the following:

$$LGD = \max[90\% \cdot (REcoverables + 50\% \cdot RM_{re}) - F \cdot Collateral; 0]$$

where:

F denotes a factor to take into account the economic effect of the collateral arrangement in relation to the reinsurance arrangement or securitisation in the case of a credit event related to the counterparty.

3. The loss-given-default on a derivative shall be equal to the following:

$$LGD = \max(90\%(Derivative + RM_{fin}) - F' \cdot Collateral; 0)$$

where

- (a) *Derivative* denotes the value of the derivative in accordance with Article 75 of Directive 2009/138/EC;
- (b) RM_{fin} denotes the risk mitigating effect on market risk of the derivative;
- (c) *Collateral* denotes the risk-adjusted value of collateral in relation to the derivative;
- (d) *F'* denotes a factor to take into account the economic effect of the collateral arrangement in relation to the derivative in case of a credit event related to the counterparty.

4. The loss-given-default on a mortgage loan shall be equal to the following:

$$LGD = \max(Loan - 80\% \cdot Mortgage; 0)$$

where:

- (a) *Loan* denotes the value of the mortgage loan in accordance with Article 75 of Directive 2009/138/EC;
- (b) *Mortgage* denotes the risk-adjusted value of the mortgage.

5. The loss-given-default on a legally binding commitment as referred to in Article 189(2)(e) of this Regulation shall be equal to the difference between its nominal value and its value in accordance with Article 75 of Directive 2009/138/EC.

6. The loss-given-default on cash at bank as defined in Article 6 item F of Council Directive 91/674/EEC, of a deposit with a ceding undertaking, of an item listed in Article 189(2)(d) or Article 189(3)(e) of this Regulation, or of a receivable from an intermediary or policyholder debtor, as well as any other exposure not listed elsewhere in this Article shall be equal to its value in accordance with Article 75 of Directive 2009/138/EC.

Article 193

Loss-given-default for pool exposures of type A

1. For pool exposures of type A which the undertaking considers as separate single name exposures in accordance with Article 190(2), where members are each only liable up to their respective portion of the obligation covered by the pooling arrangement, the loss-given-default shall be calculated in accordance with Article 192.

For pool exposures of type A which the undertaking considers as separate single name exposures in accordance with Article 190(2), where members are each liable up to the full amount of the obligation covered by the pooling arrangement, the loss-given-default calculated in accordance with Article 192 shall be multiplied by the risk-share factor, calculated as follows:

$$\text{risk-share_factor} = e^{-0.15(\min(\text{SR}, 196\%) - 1)}$$

where:

(a) $SR = (1 - P) \cdot \frac{\sum_i EOF_i}{\sum_i (EOF_i / SR_i)} + \sum_j P_j \cdot SR_j;$

(b) i denotes all pool members falling within the scope defined in Article 2 of Directive 2009/138/EC and j denotes all pool members excluded from the scope of Article 2 of that Directive;

(c) $P = \sum_j P_j;$

(d) P_j denotes the share of the total risk of the pooling arrangement undertaken by pool member j ;

(e) for pool members for which a credit assessment by a nominated ECAI is available, SR_i and SR_j shall be assigned in accordance with the following table:

Credit quality step	0	1	2	3	4	5	6
SR_i	196 %	196 %	175 %	122 %	95 %	75 %	75 %

(f) for pool members which fall within the scope of Directive 2009/138/EC and for which a credit assessment by a nominated ECAI is not available, SR_i and SR_j shall be the latest available solvency ratio;

(g) for pool members situated in a third country and for which a credit assessment by a nominated ECAI is not available:

(i) SR_i and SR_j shall be equal to 100 % where the pool member is situated in a country whose solvency regime is deemed equivalent pursuant to Article 172 of Directive 2009/138/EC;

(ii) SR_i and SR_j shall be equal to 75 % where the pool member is situated in a country whose solvency regime is not deemed equivalent pursuant to Article 172 of Directive 2009/138/EC.

2. Where the undertaking is ceding risk to a pooling arrangement by the intermediary of a central undertaking, the central undertaking shall be considered as part of the pooling arrangement and its share of the risk calculated accordingly.

Article 194

Loss-given-default for pool exposures of type B

1. For pool exposures of type B which the undertaking considers as separate single name exposures in accordance with Article 190(2), where members are each liable up to the full amount of the obligation covered by the pooling arrangement, the loss-given-default shall be calculated as follows:

$$LGD = \max(((1 - RR_c) \cdot (\frac{P_U}{1 - P_c} \cdot BE_c + \Delta RM_c) - F \cdot Collateral); 0)$$

where:

- (a) P_U denotes the undertaking's share of the risk according to the terms of the pooling arrangement;
- (b) P_C denotes the counterparty member's share of the risk according to the terms of the pooling arrangement;
- (c) RR_C is equal to:
 - (i) 10 % if 60 % or more of the assets of the counterparty member are subject to collateral arrangements;
 - (ii) 50 % otherwise;
- (d) BE_C denotes the best estimate of the liability ceded to the counterparty member by the undertaking, net of any amounts reinsured with counterparties external to the pooling arrangement;
- (e) ΔRM_C denotes the counterparty member's contribution to the risk-mitigating effect of the pooling arrangement on the underwriting risk of the undertaking;
- (f) *Collateral* denotes the risk-adjusted value of collateral held by the counterparty member of the pooling arrangement;
- (g) F denotes the factor to take into account the economic effect of the collateral held by the counterparty member, calculated in accordance with Article 197.

2. For pool exposures of type B which the undertaking considers as separate single name exposures in accordance with Article 190(2), where members are each only liable up to their respective portion of the obligation covered by the pooling arrangement, the loss-given-default shall be calculated as follows:

$$LGD = \max(((1 - RR_C) \cdot (P_C \cdot BE_U + \Delta RM_C) - F \cdot Collateral); 0)$$

where:

- (a) P_C denotes the counterparty member's share of the risk according to the terms of the pooling arrangement;
- (b) RR_C is equal to:
 - (i) 10 % if 60 % or more of the assets of the counterparty member are subject to collateral arrangements;
 - (ii) 50 % otherwise;
- (c) BE_U denotes the best estimate of the liability ceded to the pooling arrangement by the undertaking, net of any amounts reinsured with counterparties external to the pooling arrangement;
- (d) ΔRM_C denotes the counterparty member's contribution to the risk-mitigating effect of the pooling arrangement on the underwriting risk of the undertaking;
- (e) *Collateral* denotes the risk-adjusted value of collateral held by the counterparty member of the pooling arrangement;
- (f) F denotes the factor to take into account the economic effect of the collateral held by the counterparty member, calculated in accordance with Article 197.

Article 195

Loss-given-default for pool exposures of type C

For pool exposures of type C which the undertaking considers as separate single name exposures in accordance with Article 190(2), the loss-given-default shall be calculated as follows:

$$LGD = \max(((1 - RR_{CE}) \cdot (P_U \cdot BE_{CE} + \Delta RM_{CE}) - F \cdot Collateral); 0)$$

where:

- (a) P_U denotes the undertaking's share of the risk according to the terms of the pooling arrangement;
- (b) RR_{CE} is equal to:
 - (i) 10 % if 60 % or more of the assets of the external counterparty are subject to collateral arrangements;
 - (ii) 50 % otherwise;

- (c) BE_{CE} denotes the best estimate of the liability ceded to the external counterparty by the pooling arrangement as a whole;
- (d) ΔRM_{CE} denotes the external counterparty's contribution to the risk-mitigating effect of the pooling arrangement on the underwriting risk of the undertaking;
- (e) *Collateral* denotes the risk-adjusted value of collateral held by the counterparty member of the pooling arrangement;
- (f) F denotes the factor to take into account the economic effect of the collateral held by the counterparty member, calculated in accordance with Article 197.

Article 196

Risk-mitigating effect

The risk-mitigating effect on underwriting or market risks of a reinsurance arrangement, securitisation or derivative shall be the difference between the following capital requirements:

- (a) the hypothetical capital requirement for underwriting or market risk of the insurance or reinsurance undertaking that would apply if the reinsurance arrangement, securitisation or derivative did not exist;
- (b) the capital requirement for underwriting or market risk of the insurance or reinsurance undertaking.

Article 197

Risk-adjusted value of collateral

1. The risk-adjusted value of collateral provided by way of security, as referred to in Article 1(26)(b), shall be equal to the difference between the value of the assets held as collateral, valued in accordance with Article 75 of Directive 2009/138/EC, and the adjustment for market risk, as referred to in paragraph 5 of this Article, provided both of the following requirements are fulfilled:

- (a) the insurance or reinsurance undertaking has (or is a beneficiary under a trust where the trustee has) the right to liquidate or retain, in a timely manner, the collateral in the event of a default, insolvency or bankruptcy or other credit event relating to the counterparty (the counterparty requirement);
- (b) the insurance or reinsurance undertaking has (or is a beneficiary under a trust where the trustee has) the right to liquidate or retain, in a timely manner, the collateral in the event of a default, insolvency or bankruptcy or other credit event relating to the custodian or other third party holding the collateral on behalf of the counterparty (the third party requirement).

2. Where the counterparty requirement is met and the criteria set out in Article 214 of this Regulation are met and the third party requirement is not met, the risk-adjusted value of a collateral provided by way of security, as referred to in Article 1(26)(b) of this Regulation, shall be equal to 90 % of the difference between the value of the assets held as collateral in accordance with Article 75 of Directive 2009/138/EC and the adjustment for market risk, as referred to in paragraph 5 of this Article.

3. Where either the counterparty requirement is not met or the requirements in Article 214 are not met, the risk-adjusted value of collateral provided by way of security, as referred to in Article 1(26)(b), shall be zero.

4. The risk-adjusted value of a collateral of which full ownership is transferred, as referred to in Article 1(26)(a) of this Regulation, shall be equal to the difference between the value of the assets held as collateral, valued in accordance with Article 75 of Directive 2009/138/EC, and the adjustment for market risk, as referred to in paragraph 5 of this Article, provided the requirements in Article 214 of this Regulation are fulfilled.

5. The adjustment for market risk is the difference between the following capital requirements:

- (a) the hypothetical capital requirement for market risk of the insurance or reinsurance undertaking that would apply if the assets held as collateral were not included in the calculation;
- (b) the hypothetical capital requirement for market risk of the insurance or reinsurance undertaking that would apply if the assets held as collateral were included in the calculation.

6. For the purposes of paragraph 5, the currency risk of the assets held as collateral shall be calculated by comparing the currency of the assets held as collateral against the currency of the corresponding exposure.

7. Where in case of insolvency of the counterparty, the determination of the insurance or reinsurance undertaking's proportional share of the counterparty's insolvency estate in excess of the collateral does not take into account that the undertaking receives the collateral, the factors F and F' referred to in Article 192(2) and (3) shall both be 100 %. In all other cases these factors shall be 50 % and 90 % respectively.

Article 198

Risk-adjusted value of mortgage

1. The risk-adjusted value of mortgage shall be equal to the difference between the value of the residential property held as mortgage, valued in accordance with paragraph 2, and the adjustment for market risk, as referred to in paragraph 3.
2. The value of the residential property held as mortgage shall be the market value reduced as appropriate to reflect the results of the monitoring required under Article 191(9) and (10) of this Regulation and to take account of any prior claims on the property. The external, independent valuation of the property shall be the same or less than the market value calculated in accordance with Article 75 of Directive 2009/138/EC.
3. The adjustment for market risk referred to in paragraph 1 shall be the difference between the following capital requirements:
 - (a) the hypothetical capital requirement for market risk of the insurance or reinsurance undertaking that would apply if the residential property held as mortgage were not included in the calculation;
 - (b) the hypothetical capital requirement for market risk of the insurance or reinsurance undertaking that would apply if the residential property held as mortgage were included in the calculation.
4. For the purposes of paragraph 2, the currency risk of the residential property held as mortgage shall be calculated by comparing the currency of the residential property against the currency of the corresponding loan.

Subsection 2

Type 1 exposures

Article 199

Probability of default

1. The probability of default on a single name exposure shall be equal to the average of the probabilities of default on each of the exposures to counterparties that belong to the single name exposure, weighted by the loss-given-default in respect of those exposures.
2. Single name exposure i for which a credit assessment by a nominated ECAI is available shall be assigned a probability of default PD_i in accordance with the following table.

Credit quality step	0	1	2	3	4	5	6
Probability of default PD_i	0,002 %	0,01 %	0,05 %	0,24 %	1,20 %	4,2 %	4,2 %

3. Single name exposures i to an insurance or reinsurance undertaking for which a credit assessment by a nominated ECAI is not available and where this undertaking meets its Minimum Capital Requirement, shall be assigned a probability of default PD_i depending on the undertaking's solvency ratio, in accordance with the following table:

Solvency ratio	196 %	175 %	150 %	125 %	122 %	100 %	95 %	75 %
Probability of default	0,01 %	0,05 %	0,1 %	0,2 %	0,24 %	0,5 %	1,2 %	4,2 %

Where the solvency ratio falls in between the solvency ratios specified in the table above, the value of the probability of default shall be linearly interpolated from the closest values of probabilities of default corresponding to the closest solvency ratios specified in the table above. Where the solvency ratio is lower than 75 %, the probability of default shall be 4,2 %. Where the solvency ratios is higher than 196 %, the probability of default shall be 0,01 %.

For the purposes of this paragraph, 'solvency ratio' denotes the ratio of the eligible amount of own funds to cover the Solvency Capital Requirement and the Solvency Capital Requirement, using the latest available values.

4. Exposures to an insurance or reinsurance undertaking that do not meet its Minimum Capital Requirement shall be assigned a probability of default equal to 4,2 %.

5. Paragraphs 3 and 4 of this Article shall only apply as of the first date of public disclosure, by the undertaking corresponding to the exposure, of the report on its solvency and financial condition referred to in Article 51 of Directive 2009/138/EC. Before that date, if a credit assessment by a nominated ECAI is available for the exposures, paragraph 2 shall apply. Otherwise, the exposures shall be assigned the same risk factor as the ones that would result from the application of paragraph 3 to exposures to an insurance or reinsurance undertaking whose solvency ratio is 100 %.

6. Exposures to a third country insurance or reinsurance undertaking for which a credit assessment by a nominated ECAI is not available, situated in a country whose solvency regime is deemed equivalent to that laid down in Directive 2009/138/EC in accordance with Article 227 of Directive 2009/138/EC, and which complies with the solvency requirements of that third-country, shall be assigned a probability of default equal to 0,5 %.

7. Exposures to credit institutions and financial institutions within the meaning of points (1) and (26) of Article 4(1) of Regulation (EU) No 575/2013 which comply with the solvency requirements set out in Directive 2013/36/EU and Regulation (EU) No 575/2013, for which a credit assessment by a nominated ECAI is not available, shall be assigned a probability of default equal to 0,5 %.

8. Exposures to counterparties referred to in points (a) to (d) of Article 180(2) shall be assigned a probability of default equal to 0 %.

9. The probability of default on single name exposures other than those identified in paragraphs 2 to 8 shall be equal to 4,2 %.

10. Where a letter of credit, a guarantee or an equivalent arrangement is provided to fully secure an exposure and this arrangement complies with Articles 209 to 215, the provider of that letter of credit, guarantee or equivalent arrangement may be considered as the counterparty on the secured exposure for the purposes of assessing the probability of default of a single name exposure.

11. For the purposes of paragraph 10, exposures fully, unconditionally and irrevocably guaranteed by counterparties listed in the implementing act adopted pursuant to point (a) of Article 109a(2) of Directive 2009/138/EC shall be treated as exposures to the central government.

Article 200

Type 1 exposures

1. Where the standard deviation of the loss distribution of type 1 exposures is lower than or equal to 7 % of the total losses-given-default on all type 1 exposures, the capital requirement for counterparty default risk on type 1 exposures shall be equal to the following:

$$SCR_{def,1} = 3 \cdot \sigma$$

where σ denotes the standard deviation of the loss distribution of type 1 exposures, as defined in paragraph 4.

2. Where the standard deviation of the loss distribution of type 1 exposures is higher than 7 % of the total losses-given-default on all type 1 exposures and lower or equal to 20 % of the total losses-given-default on all type 1 exposures, the capital requirement for counterparty default risk on type 1 exposures shall be equal to the following:

$$SCR_{def,1} = 5 \cdot \sigma$$

where σ denotes the standard deviation of the loss distribution of type 1 exposures.

3. Where the standard deviation of the loss distribution of type 1 exposures is higher than 20 % of the total losses-given-default on all type 1 exposures, the capital requirement for counterparty default risk on type 1 exposures shall be equal to the total losses-given-default on all type 1 exposures.

4. The standard deviation of the loss distribution of type 1 exposures shall be equal to the following:

$$\sigma = \sqrt{V}$$

where V denotes the variance of the loss distribution of type 1 exposures.

Article 201

Variance of the loss distribution of type 1 exposures

1. The variance of the loss distribution of type 1 exposures as referred to in paragraph 4 of Article 200 shall be equal to the sum of V_{inter} and V_{intra} .

2. V_{inter} shall be equal to the following:

$$V_{inter} = \sum_{(j,k)} \frac{PD_k \cdot (1 - PD_k) \cdot PD_j \cdot (1 - PD_j)}{1,25 \cdot (PD_k + PD_j) - PD_k \cdot PD_j} \cdot TLGD_j \cdot TLGD_k$$

where:

- (a) the sum covers all possible combinations (j,k) of different probabilities of default on single name exposures in accordance with Article 199;
- (b) $TLGD_j$ and $TLGD_k$ denote the sum of losses -given- default on type 1 exposures from counterparties bearing a probability of default PD_j and PD_k respectively.

3. V_{intra} shall be equal to the following:

$$V_{intra} = \sum_j \frac{1,5 \cdot PD_j \cdot (1 - PD_j)}{2,5 - PD_j} \cdot \sum_{PD_j} LGD_i^2$$

where:

- (a) the first sum covers all different probabilities of default on single name exposures in accordance with Article 199;
- (b) the second sum covers all single name exposures that have a probability of default equal to PD_j ;
- (c) LGD_i denotes the loss-given-default on the single name exposure i.

Subsection 3

Type 2 exposures

Article 202

Type 2 exposures

The capital requirement for counterparty default risk on type 2 exposures shall be equal to the loss in the basic own funds that would result from an instantaneous decrease in value of type 2 exposures by the following amount:

$$90\% \cdot LGD_{receivables > 3months} + \sum_i 15\% \cdot LGD_i$$

where:

- (a) $LGD_{receivables > 3months}$ denote the total losses-given-default on all receivables from intermediaries which have been due for more than three months
- (b) the sum is taken on all type 2 exposures other than receivables from intermediaries which have been due for more than three months;
- (c) LGD_i denotes the loss-given-default on the type 2 exposure i.

SECTION 7

Intangible asset module

Article 203

The capital requirement for intangible asset risk shall be equal to the following:

$$SCR_{\text{intangible}} = 0,8 \cdot V_{\text{intangible}}$$

where $V_{\text{intangibles}}$ denotes the amount of intangible assets as recognised and valued in accordance with point 2 of Article 12.

SECTION 8

Operational risk

Article 204

1. The capital requirement for the operational risk module shall be equal to the following:

$$SCR_{\text{Operational}} = \min(0,3 \cdot BSCR; Op) + 0,25 \cdot Exp_{ul}$$

where:

- (a) $BSCR$ denotes the Basic Solvency Capital Requirement;
 - (b) Op denotes the basic capital requirement for operational risk charge;
 - (c) Exp_{ul} denotes the amount of expenses incurred during the previous 12 months in respect of life insurance contracts where the investment risk is borne by policy holders.
2. The basic capital requirement for operational risk shall be calculated as follows:

$$Op = \max(Op_{\text{premiums}}; Op_{\text{provisions}})$$

where:

- (a) Op_{premiums} denotes the capital requirement for operational risks based on earned premiums;
 - (b) $Op_{\text{provisions}}$ denotes the capital requirement for operational risks based on technical provisions.
3. The capital requirement for operational risks based on earned premiums shall be calculated as follows:

$$Op_{\text{premiums}} = \left\{ \begin{array}{l} 0,04 \cdot (Earn_{\text{life}} - Earn_{\text{life-ul}}) + 0,03 \cdot Earn_{\text{non-life}} \\ + \max(0; 0,04 \cdot (Earn_{\text{life}} - 1,2 \cdot pEarn_{\text{life}} - (Earn_{\text{life-ul}} - 1,2 \cdot pEarn_{\text{life-ul}}))) \\ + \max(0; 0,03 \cdot (Earn_{\text{non-life}} - 1,2 \cdot pEarn_{\text{non-life}})) \end{array} \right.$$

where:

- (a) $Earn_{\text{life}}$ denotes the premiums earned during the last 12 months for life insurance and reinsurance obligations, without deducting premiums for reinsurance contracts;
- (b) $Earn_{\text{life-ul}}$ denotes the premiums earned during the last 12 months for life insurance and reinsurance obligations where the investment risk is borne by the policy holders without deducting premiums for reinsurance contracts;
- (c) $Earn_{\text{non-life}}$ denotes the premiums earned during the last 12 months for non-life insurance and reinsurance obligations, without deducting premiums for reinsurance contracts;
- (d) $pEarn_{\text{life}}$ denotes the premiums earned during the 12 months prior to the last 12 months for life insurance and reinsurance obligations, without deducting premiums for reinsurance contracts;
- (e) $pEarn_{\text{life-ul}}$ denotes the premiums earned during the 12 months prior to the last 12 months for life insurance and reinsurance obligations where the investment risk is borne by the policy holders without deducting premiums for reinsurance contracts;
- (f) $pEarn_{\text{non-life}}$ denotes the premium earned during the 12 months prior to the last 12 months for non-life insurance and reinsurance obligations, without deducting premiums for reinsurance contracts.

For the purposes of this paragraph, earned premiums shall be gross, without deduction of premiums for reinsurance contracts.

4. The capital requirement for operational risk based on technical provisions shall be calculated as follows:

$$Op_{provisions} = 0,0045 \cdot \max(0; TP_{life} - TP_{life-ul}) + 0,03 \cdot \max(0; TP_{non-life})$$

where:

- (a) TP_{life} denotes the technical provisions for life insurance and reinsurance obligations;
- (b) $TP_{life-ul}$ denotes the technical provisions for life insurance obligations where the investment risk is borne by the policy holders;
- (c) $TP_{non-life}$ denotes the technical provisions for non-life insurance and reinsurance obligations.

For the purposes of this paragraph, technical provisions shall not include the risk margin, and shall be calculated without deduction of recoverables from reinsurance contracts and special purpose vehicles.

SECTION 9

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

Article 205

General provisions

The adjustment referred to in Article 103(c) of Directive 2009/138/EC for the loss-absorbing capacity of technical provisions and deferred taxes shall be the sum of the following items:

- (a) the adjustment for the loss-absorbing capacity of technical provisions;
- (b) the adjustment for the loss-absorbing capacity of deferred taxes.

Article 206

Adjustment for the loss-absorbing capacity of technical provisions

1. The adjustment for the loss-absorbing capacity of technical provisions shall be equal to the following:

$$Adj_{TP} = - \max(\min(BSCR - nBSCR; FDB); 0)$$

where:

- (a) $BSCR$ denotes the Basic Solvency Capital Requirement referred to in Article 103(a) of Directive 2009/138/EC;
- (b) $nBSCR$ denotes the net Basic Solvency Capital Requirement as referred to in paragraph 2 of this Article;
- (c) FDB denotes the technical provisions without risk margin in relation to future discretionary benefits

2. The net Basic Solvency Capital Requirement shall be calculated in accordance with Section 1, Subsection 1 to 7 of Chapter V with all the following modifications:

- (a) where the calculation of a module or sub-module of the Basic Solvency Capital Requirement is based on the impact of a scenario on the basic own funds of insurance and reinsurance undertakings, the scenario can change the value of the future discretionary benefits included in technical provisions;
- (b) the scenario based calculations of the life underwriting risk module, the SLT health underwriting risk sub-module, the health catastrophe risk sub-module, the market risk module and the counterparty default risk module as well as the scenario-based calculation set out in points (c) and (d) shall take into account the impact of the scenario on future discretionary benefits included in technical provisions; this shall be done on the basis of assumptions on future management actions that comply with Article 23;

- (c) instead of the capital requirement for counterparty default risk on type 1 exposures referred to in Article 189(1), the calculation shall be based on the capital requirement that is equal to the loss in basic own funds that would result from an instantaneous loss, due to default events relating to type 1 exposures, of the amount of the capital requirement for counterparty default risk on type 1 exposures referred to in Article 189(1);
- (d) where insurance and reinsurance undertakings use a simplified calculation for a specific capital requirement as set out in Articles 91, 92, 93, 94, 95(1), 95(2), 96, 101, 103(1)(a), 103(1)(b) or 104 the undertakings shall base the calculation on the capital requirement that is equal to the loss in basic own funds that would result from an instantaneous loss of the amount of the capital requirement referred to in the relevant Article and shall assume that the instantaneous loss is due to the risk that the capital requirement referred to in that Article captures.
3. For the purposes of point (b) of paragraph 2, insurance and reinsurance undertakings shall take into account any legal, regulatory or contractual restrictions in the distribution of future discretionary benefits.

Article 207

Adjustment for the loss-absorbing capacity of deferred taxes

1. The adjustment for the loss-absorbing capacity of deferred taxes shall be equal to the change in the value of deferred taxes of insurance and reinsurance undertakings that would result from an instantaneous loss of an amount that is equal to the sum of the following:
- (a) the Basic Solvency Capital Requirement referred to in Article 103(a) of Directive 2009/138/EC;
- (b) the adjustment for the loss-absorbing capacity of technical provisions referred to in Article 206 of this Regulation;
- (c) the capital requirement for operational risk referred to in Article 103(b) of Directive 2009/138/EC.
2. For the purposes of paragraph 1, deferred taxes shall be valued in accordance with Article 15. Where the loss referred to in paragraph 1 would result in the increase in deferred tax assets, insurance and reinsurance undertakings shall not utilise this increase for the purposes of the adjustment unless they are able to demonstrate that future profits will be available in accordance with Article 15(3), taking into account the magnitude of the loss referred to in paragraph 1 and its impact on the undertaking's current and future financial situation.
3. For the purposes of paragraph 1, a decrease in deferred tax liabilities or an increase in deferred tax assets shall result in a negative adjustment for the loss-absorbing capacity of deferred taxes.
4. Where the calculation of the adjustment in accordance with paragraph 1 results in a positive change of deferred taxes, the adjustment shall be nil.
5. Where it is necessary to allocate the loss referred to in paragraph 1 to its causes in order to calculate the adjustment for the loss-absorbing capacity of deferred taxes, insurance and reinsurance undertakings shall allocate the loss to the risks that are captured by the Basic Solvency Capital Requirement and the capital requirement for operational risk. The allocation shall be consistent with the contribution of the modules and sub-modules of the standard formula to the Basic Solvency Capital Requirement. Where an insurance or reinsurance undertaking uses a partial internal model where the adjustment to the loss-absorbing capacity of technical provisions and deferred taxes are not within the scope of the model, the allocation shall be consistent with the contribution of the modules and sub-modules of the standard formula which are outside of the scope of the model to the Basic Solvency Capital Requirement.

SECTION 10

Risk mitigation techniques

Article 208

Methods and Assumptions

1. Where insurance or reinsurance undertakings transfer underwriting risks using reinsurance contracts or special purpose vehicles that meet the requirements set out in Articles 209, 211 and 213, and where these arrangements provide for protection in several of the scenario-based calculations set out in Title I, Chapter V, Sections 2, 3 and 4, the risk-mitigating effects of these contractual arrangements shall be allocated to the scenario-based calculations in a manner that, without double-counting, captures the economic effect of the protections provided. In particular, the economic

effect of the protections provided shall be captured in determining the loss in basic own funds in the scenario-based calculations.

2. Where insurance or reinsurance undertakings transfer underwriting risks using finite reinsurance, as defined in Article 210(3) of Directive 2009/138/EC, that meet the requirements set out in Articles 209, 211 and 213 of this Regulation, these contracts shall be recognised in the scenario based calculations set out in Title I, Chapter V, Sections 2, 3 and 4 of this Regulation only to the extent underwriting risk is transferred to the counterparty of the contract. Notwithstanding the previous sentence, finite reinsurance, or similar arrangements, where the lack of effective risk transfer is comparable to that of finite reinsurance, shall not be taken into account for the purposes of determining the volume measures for premium and reserve risk in accordance with in Articles 116 and 147 of this Regulation, or for the purposes of calculating undertaking-specific parameters in accordance with Section 13 of this Chapter.

Article 209

Qualitative Criteria

1. When calculating the Basic Solvency Capital Requirement, insurance or reinsurance undertakings shall only take into account risk-mitigation techniques as referred to in Article 101(5) of Directive 2009/138/EC where all of the following qualitative criteria are met:

- (a) the contractual arrangements and transfer of risk are legally effective and enforceable in all relevant jurisdictions;
- (b) the insurance or reinsurance undertaking has taken all appropriate steps to ensure the effectiveness of the arrangement and to address the risks related to that arrangement;
- (c) the insurance or reinsurance undertaking is able to monitor the effectiveness of the arrangement and the related risks on an ongoing basis;
- (d) the insurance or reinsurance undertaking has, in the event of a default, insolvency or bankruptcy of a counterparty or other credit event set out in the transaction documentation for the arrangement, a direct claim on that counterparty;
- (e) there is no double counting of risk-mitigation effects in own funds and in the calculation of the Solvency Capital Requirement or within the calculation of the Solvency Capital Requirement.

2. Only risk-mitigation techniques that are in force for at least the next 12 months and which meet the qualitative criteria set out in this Section shall be fully taken into account in the Basic Solvency Capital Requirement. In all other cases, the risk-mitigation effect of risk-mitigation techniques that are in force for a period shorter than 12 months and which meet the qualitative criteria set out in this Section shall be taken into account in the Basic Solvency Capital Requirement in proportion to the length of time involved for the shorter of the full term of the risk exposure or the period that the risk-mitigation technique is in force.

3. Where contractual arrangements governing the risk-mitigation techniques will be in force for a period shorter than the next 12 months and the insurance or reinsurance undertaking intends to replace that risk-mitigation technique at the time of its expiry with a similar arrangement, the risk-mitigation technique shall be fully taken into account in the Basic Solvency Capital Requirement provided all of the following qualitative criteria are met:

- (a) the insurance or reinsurance undertaking has a written policy on the replacement of that risk-mitigation technique;
- (b) the replacement of the risk-mitigation technique shall not take place more often than every three months;
- (c) the replacement of the risk-mitigation technique is not conditional on any future event, which is outside of the control of the insurance or reinsurance undertaking. Where the replacement of the risk-mitigation technique is conditional on any future event, that is within the control of the insurance or reinsurance undertaking, then the conditions should be clearly documented in the written policy referred to in point (a);
- (d) the replacement of the risk-mitigation technique shall be realistic based on replacements undertaken previously by the insurance or reinsurance undertaking and consistent with its current business practice and business strategy;
- (e) the risk that the risk-mitigation technique cannot be replaced due to an absence of liquidity in the market is not material;

- (f) the risk that the cost of replacing the risk-mitigation technique increases during the following 12 months is reflected in the Solvency Capital Requirement;
- (g) the replacement of the risk-mitigation technique would not be contrary to requirements that apply to future management actions set out in Article 23(5).

Article 210

Effective Transfer of Risk

1. The contractual arrangements governing the risk-mitigation technique shall ensure that the extent of the cover provided by the risk-mitigation technique and the transfer of risk is clearly defined and incontrovertible.
2. The contractual arrangement shall not result in material basis risk or in the creation of other risks, unless this is reflected in the calculation of the Solvency Capital requirement.
3. Basis risk is material if it leads to a misstatement of the risk-mitigating effect on the insurance or reinsurance undertaking's Basic Solvency Capital Requirement that could influence the decision-making or judgement of the intended user of that information, including the supervisory authorities.
4. The determination that the contractual arrangements and transfer of risk is legally effective and enforceable in all relevant jurisdictions in accordance with Article 209(1)(a) shall be based on the following:
 - (a) whether the contractual arrangement is subject to any condition which could undermine the effective transfer of risk, the fulfilment of which is outside the direct control of the insurance or reinsurance undertaking;
 - (b) whether there are any connected transactions which could undermine the effective transfer of risk.

Article 211

Risk-Mitigation techniques using reinsurance contracts or special purpose vehicles

1. Where insurance or reinsurance undertakings transfer underwriting risks using reinsurance contracts or special purpose vehicles, in order for them to take into account the risk-mitigation technique in the Basic Solvency Capital Requirement, the qualitative criteria set out in Articles 209 and 210 and those set out in paragraphs 2 to 6 shall be met.
2. In the case of reinsurance contracts the counterparty shall be any of the following:
 - (a) an insurance or reinsurance undertaking which complies with the Solvency Capital Requirement;
 - (b) a third-country insurance or reinsurance undertaking, situated in a country whose solvency regime is deemed equivalent or temporarily equivalent to that laid down in Directive 2009/138/EC in accordance with Article 172 of that Directive and which complies with the solvency requirements of that third-country;
 - (c) a third country insurance or reinsurance undertaking, which is not situated in a country whose solvency regime is deemed equivalent or temporarily equivalent to that laid down in Directive 2009/138/EC in accordance with Article 172 of that Directive with a credit quality which has been assigned to credit quality step 3 or better in accordance with Section 1, Chapter II of this Title.
3. Where a counterparty to a reinsurance contract is an insurance or reinsurance undertaking which ceases to comply with the Solvency Capital Requirement after the reinsurance contract has been entered into, the protection offered by the insurance risk-mitigation technique may be partially recognised, provided that the insurance or reinsurance undertaking can demonstrate that the counterparty has submitted a realistic recovery plan to its supervisory authorities and compliance with the Solvency Capital Requirement will be restored within the timeframe defined in the recovery plan referred to in Article 138 of Directive 2009/138/EC. For that purpose, the effect of the risk-mitigation technique shall be reduced by the percentage by which the Solvency Capital Requirement is breached.
4. Where risk is transferred to a special purpose vehicle the requirements referred to in Article 211(2) of Directive 2009/138/EC shall be met for the risk-mitigation technique to be taken into account in the Basic Solvency Capital Requirement; where the requirements for a special purpose vehicle to be fully-funded cease to be fully met after the

arrangement has been entered into, the protection offered by the insurance risk-mitigation technique may be partially recognised, provided that the insurance or reinsurance undertaking can demonstrate that compliance with the fully-funded requirement will be restored within three months; for this purpose, the effect of the risk-mitigation technique shall be reduced by the percentage of the aggregated maximum risk exposure of the special purpose vehicle, referred to in Article 326 of this Regulation not covered by the assets of the special purpose vehicle or by an equivalent amount where Article 211(3) of Directive 2009/138/EC is applicable.

5. Where risk is transferred to a special purpose vehicle referred to in Article 211(3) of Directive 2009/138/EC, the risk-mitigation technique shall only be taken into account in the Basic Solvency Capital Requirement where the law of the Member State is equivalent to that set out in Article 211(2) of that Directive and that law is complied with by the special purpose vehicle.

6. Where risk is transferred to a special purpose vehicle that is regulated by a third country supervisory authority, the risk-mitigation technique shall only be taken into account in the Basic Solvency Capital Requirement where requirements equivalent to those set out in Article 211(2) of Directive 2009/138/EC are met by the special purpose vehicle.

Article 212

Financial Risk-Mitigation techniques

1. Where insurance or reinsurance undertakings transfer risk, in order for the risk-mitigation technique to be taken into account in the Basic Solvency Capital Requirement, other than in the cases referred to in Article 211, including transfers through the purchase or issuance of financial instruments, the qualitative criteria provided in paragraphs 2 to 5 shall be met, in addition to the qualitative criteria set out in Articles 209 and 210.

2. The risk-mitigation technique shall be consistent with the insurance or reinsurance undertaking's written policy on risk management, as referred to in Article 44(2) of Directive 2009/138/EC.

3. The insurance or reinsurance undertaking shall be able to value the assets, liabilities that are subject to the risk mitigation technique and, where the risk-mitigation technique includes the use of financial instruments, the financial instruments, reliably in accordance with Article 75 of Directive 2009/138/EC.

4. Where the risk-mitigation technique includes the use of financial instruments, the financial instruments shall have a credit quality which has been assigned to credit quality step 3 or better in accordance with Section 2, Chapter I of this Title.

5. Where the risk-mitigation technique is not a financial instrument, the counterparties to the risk-mitigation technique shall have a credit quality which has been assigned to credit quality step 3 or better in accordance with Section 2, Chapter I of this Title.

Article 213

Status of the counterparties

1. In the event that the qualitative criteria in Article 211(1) and Article 212(3) and (4) are not met, insurance and reinsurance undertakings shall only take into account the risk-mitigation techniques when calculating the Basic Solvency Capital Requirement where one of the following criteria is met:

- (a) the risk-mitigation technique meets the qualitative criteria set out in Articles 209, 210 and Article 212(1) and (2) and collateral arrangements exist that meet the criteria provided in Article 214;
- (b) the risk-mitigation technique is accompanied by another risk-mitigation technique, where the other technique when viewed in combination with the first technique meets the qualitative criteria in Articles 209, 210, and Article 212(1) and (2) and where the counterparties to the other technique meet the criteria provided in Articles 211(1) and Article 212(3) and (4).

2. For the purposes of point (a) of paragraph 1 of this Article, where the value, in accordance with Article 75 of Directive 2009/138/EC of the collateral is less than the total risk exposure, the collateral arrangement shall only be taken into account to the extent that the collateral covers the risk exposure.

*Article 214***Collateral Arrangements**

1. In the calculation of the Basic Solvency Capital Requirement, collateral arrangements shall only be recognised where, in addition to the qualitative criteria in Articles 209 and 210, the following criteria are met:

- (a) the insurance or reinsurance undertaking transferring the risk shall have the right to liquidate or retain, in a timely manner, the collateral in the event of a default, insolvency or bankruptcy or other credit event of the counterparty;
- (b) there is sufficient certainty as to the protection achieved by the collateral because of either of the following:
 - (i) it is of sufficient credit quality, is of sufficient liquidity and is sufficiently stable in value;
 - (ii) it is guaranteed by a counterparty, other than a counterparty referred to in Article 187(5) and 184(2) who has been assigned a risk factor for concentration risk of 0 %;
- (c) there is no material positive correlation between the credit quality of the counterparty and the value of the collateral;
- (d) the collateral is not securities issued by the counterparty or a related undertaking of that counterparty.

2. Where a collateral arrangement meets the definition in Article 1(26)(b) and involves collateral being held by a custodian or other third party, the insurance or reinsurance undertaking shall ensure that all of the following criteria are met:

- (a) the relevant custodian or other third party segregates the assets held as collateral from its own assets;
- (b) the segregated assets are held by a deposit-taking institution that has a credit quality which has been assigned to credit quality step 3 or better in accordance with Section 2, Chapter I of this Title;
- (c) the segregated assets are individually identifiable and can only be changed or substituted with the consent of the insurance or reinsurance undertaking or a person acting as a trustee in relation to the insurance or reinsurance undertaking's interest in such assets;
- (d) the insurance or reinsurance undertaking has (or is a beneficiary under a trust where the trustee has) the right to liquidate or retain, in a timely manner, the segregated assets in the event of a default, insolvency or bankruptcy or other credit event relating to the custodian or other third party holding the collateral on behalf of the counterparty;
- (e) the segregated assets shall not be used to pay, or to provide collateral in favour of, any person other than the insurance or reinsurance undertaking or as directed by the insurance or reinsurance undertaking.

*Article 215***Guarantees**

In the calculation of the Basic Solvency Capital Requirement, guarantees shall only be recognised where explicitly referred to in this Chapter, and where in addition to the qualitative criteria in Articles 209 and 210, all of the following criteria are met:

- (a) the credit protection provided by the guarantee is direct;
- (b) the extent of the credit protection is clearly defined and incontrovertible;
- (c) the guarantee does not contain any clause, the fulfilment of which is outside the direct control of the lender, that:
 - (i) would allow the protection provider to cancel the protection unilaterally;
 - (ii) would increase the effective cost of protection as a result of a deterioration in the credit quality of the protected exposure;
 - (iii) could prevent the protection provider from being obliged to pay out in a timely manner in the event that the original obligor fails to make any payments due;
 - (iv) could allow the maturity of the credit protection to be reduced by the protection provider;

- (d) on the default, insolvency or bankruptcy or other credit event of the counterparty, the insurance or reinsurance undertaking has the right to pursue, in a timely manner, the guarantor for any monies due under the claim in respect of which the protection is provided and the payment by the guarantor shall not be subject to the insurance or reinsurance undertaking first having to pursue the obligor;
- (e) the guarantee is an explicitly documented obligation assumed by the guarantor;
- (f) the guarantee fully covers all types of regular payments the obligor is expected to make in respect of the claim.

SECTION 11

Ring fenced funds

Article 216

Calculation of the Solvency Capital Requirement in the case of ring-fenced funds and matching adjustment portfolios

1. In the case of ring-fenced funds determined in accordance with Article 81(1) of this Regulation or in the case insurance or reinsurance undertakings have received approval to apply a matching adjustment to the risk-free interest term structure in accordance with Article 77b of Directive 2009/138/EC, insurance and reinsurance undertakings shall make an adjustment to the calculation of the Solvency Capital Requirement following the method that is set out in Article 217 of this Regulation.

2. However, where an insurance or reinsurance undertaking has received supervisory approval to apply the provisions set out in Article 304 of Directive 2009/138/EC to a ring-fenced funds, it shall not adjust the calculation in accordance with Article 217 of this Regulation, but base the calculation of the assumption of full diversification between the assets and liabilities of the ring-fenced funds and the rest of the undertaking.

Article 217

Solvency Capital Requirement calculation method for ring-fenced funds and matching adjustment portfolios

1. Insurance and reinsurance undertakings shall calculate a notional Solvency Capital Requirement for each ring-fenced fund and each matching adjustment portfolio, as well as for the remaining part of the undertaking, in the same manner as if those ring-fenced funds and matching adjustment portfolio and the remaining part of the undertaking were separate undertakings.

2. Insurance and reinsurance undertakings shall calculate their Solvency Capital Requirement as the sum of the notional Solvency Capital Requirements for each of the ring-fenced funds and each matching adjustment portfolio and for the remaining part of the undertaking.

3. Where the calculation of the capital requirement for a risk module or sub-module of the Basic Solvency Capital Requirement is based on the impact of a scenario on the basic own funds of the insurance or reinsurance undertaking, the impact of the scenario on the basic own funds at the level of the ring-fenced fund and matching adjustment portfolio and the remaining part of the undertaking shall be calculated.

4. The basic own funds at the level of the ring-fenced fund or matching adjustment portfolio shall be those restricted own-fund items that meet the definition of basic own funds set out in Article 88 of Directive 2009/138/EC.

5. Where profit participation arrangements exist in the ring-fenced fund, insurance and reinsurance undertakings shall apply the following approach when adjusting the Solvency Capital Requirement:

- (a) where the calculation referred to in paragraph 3 would result in an increase in the basic own funds at the level of the ring-fenced fund, the estimated change in those basic own funds shall be adjusted to reflect the existence of profit participation arrangements in the ring-fenced fund; in this case, the adjustment to the change in the basic own funds of the ring-fenced fund shall be the amount by which technical provisions would increase due to the expected future distribution to policy holders or beneficiaries of that ring-fenced fund;
- (b) where the calculation referred to in paragraph 3 would result in a decrease in the basic own funds at the level of the ring-fenced fund, the estimated change in those basic own funds for the calculation of the net Basic Solvency Capital Requirement, as referred to in Article 206(2), shall be adjusted to reflect the reduction in future discretionary benefits payable to policy holders or beneficiaries of that ring-fenced fund; the adjustment shall not exceed the amount of future discretionary benefits within the ring-fenced fund.

6. Notwithstanding paragraph 1, the notional Solvency Capital Requirement for each ring-fenced fund and each matching adjustment portfolio shall be calculated using the scenario-based calculations under which basic own funds for the undertaking as a whole are most negatively affected.

7. For the purposes of determining the scenario under which basic own funds are most negatively affected for the undertaking as a whole, the undertaking shall first calculate the sum of the results of the impacts of the scenarios on the basic own funds at the level of each ring-fenced fund and each matching adjustment portfolio, in accordance with paragraphs 3 and 5. The sums at the level of each ring-fenced fund and each matching adjustment portfolio shall be added to one another and to the results of the impact of the scenarios on the basic own funds in the remaining part of the insurance or reinsurance undertaking.

8. The notional Solvency Capital Requirement for each ring-fenced fund and each matching adjustment portfolio shall be determined by aggregating the capital requirements for each sub-module and risk module of the Basic Solvency Capital Requirement.

9. Insurance and reinsurance undertakings shall assume that there is no diversification of risks between each of the ring-fenced funds and each matching adjustment portfolio and the remaining part of the insurance or reinsurance undertaking.

SECTION 12

Undertaking-specific parameters

Article 218

Subset of standard parameters that may be replaced by undertaking-specific parameters

1. The subset of standard parameters that may be replaced by undertaking-specific parameters as set out in Article 104(7) of Directive 2009/138/EC shall comprise the following parameters:

- (a) in the non-life premium and reserve risk sub-module, for each segment set out in Annex II of this Regulation:
 - (i) the standard deviation for non-life premium risk referred to in Article 117(2)(a) of this Regulation;
 - (ii) the standard deviation for non-life gross premium risk referred to in Article 117(3) of this Regulation;
 - (iii) the adjustment factor for non-proportional reinsurance referred to in Article 117(3) of this Regulation, provided that there is a recognisable excess of loss reinsurance contract for that segment as set out in paragraph 2 of this Article;
 - (iv) the standard deviation for non-life reserve risk referred to in Article 117(2)(b) of this Regulation;
- (b) in the life revision risk sub-module, the increase in the amount of annuity benefits referred to in Article 141 of this Regulation, provided that the annuities falling under that sub-module are not subject to material inflation risk;
- (c) in the NSLT health premium and reserve risk sub-module, for each segment set out in Annex XIV of this Regulation:
 - (i) the standard deviation for NSLT health premium risk referred to in Article 148(2)(a) of this Regulation;
 - (ii) the standard deviation for NSLT health gross premium risk referred to in Article 148(3) of this Regulation;
 - (iii) the adjustment factor for non-proportional reinsurance referred to in Article 148(3) of this Regulation, provided that there is a recognisable excess of loss reinsurance contract for that segment as set out in paragraph 2;
 - (iv) the standard deviation for NSLT health reserve risk referred to in Article 148(2)(b) of this Regulation;
- (d) in the health revision risk sub-module, the increase in the amount of annuity benefits referred to in Article 158 of this Regulation, provided that the annuities falling under that sub-module are not subject to material inflation risk.

Insurance and reinsurance undertakings shall not replace both the standard parameters referred to in point (a)(ii) and (iii) of the same segment or both the standard parameters referred to in point (c)(ii) and (iii) of the same segment.

2. An excess of loss reinsurance contract for a segment shall be considered recognisable provided it meets the following conditions:

- (a) it provides, to the extent that losses of the ceding undertaking that relate either to single insurance claims or all insurance claims under the same policy during a specified time period are larger than a specified retention, complete compensation for such losses up to a specified limit or without limit;
- (b) it covers all insurance claims that the insurance or reinsurance undertaking may incur in the segment or homogeneous risk groups within the segment during the following 12 months;
- (c) it allows for a sufficient number of reinstatements so as to ensure that all claims of multiple events incurred during the following 12 months are covered;
- (d) it complies with Articles 209, 210, 211 and 213.

For the purposes of this Article 'excess of loss reinsurance contract' shall also denote arrangements with special purpose vehicles that provide risk transfer which is equivalent to that of an excess of loss reinsurance contract.

3. Where insurance or reinsurance undertakings have concluded several excess of loss reinsurance contracts that each meet the requirements set out in point (d) of paragraph 2, and that in combination meet the requirements set out in points (a), (b) and (c) of paragraph 2, their combination shall be considered as one recognisable excess of loss insurance contract.

4. For the purposes of points (b) and (d) of paragraph 1, inflation risk shall be considered to be material where ignoring it in the calculation of the capital requirement for revision risk could influence the decision-making or the judgement of the users of that information, including the supervisory authorities.

Article 219

Data criteria

1. Data used to calculate undertaking-specific parameters shall only be considered to be complete, accurate and appropriate where they satisfy the following criteria:

- (a) the data meet the conditions set out in Article 19(1), (2) and (3), and the insurance or reinsurance undertaking complies in relation to that data with the requirements set out in Article 19(4), where any reference to the calculation of technical provisions shall be understood as referring to the calculation of the undertaking-specific parameter;
- (b) the data are capable of being incorporated into the standardised methods;
- (c) the data do not prevent the insurance or reinsurance undertaking from complying with the requirements of Article 101(3) of Directive 2009/13/EC;
- (d) the data meet any additional data requirement necessary to use each standardised method.
- (e) the data and its production process are thoroughly documented, including:
 - (i) the collection of data and analysis of its quality, where the documentation required includes a directory of the data, specifying their source, characteristics and usage and the specification for the collection, processing and application of the data;
 - (ii) the choice of assumptions used in the production and adjustment of the data, including adjustments with regard to reinsurance and catastrophe claims and about the allocation of expenses, where the documentation required includes a directory of all relevant assumptions that the calculation of technical provisions is based upon and a justification for the choice of the assumptions;
 - (iii) the selection and application of actuarial and statistical methods for the production and the adjustment of the data;
 - (iv) the validation of the data.

2. Where external data are used, they shall satisfy the following additional criteria:

- (a) the process for collecting data is transparent, auditable and known by the insurance or reinsurance undertaking that uses the data to calculate undertaking-specific parameters on its basis;
- (b) where the data stem from different sources, the assumptions made in the collection, processing and application of data ensure that the data are comparable;

- (c) the data stem from insurance and reinsurance undertakings whose business and risk profile is similar to that of the insurance or reinsurance undertaking whose undertaking-specific parameter is calculated in the basis of those data;
- (d) undertakings using the external data are able to verify that there is sufficient statistical evidence that the probability distributions underlying their own data and that of the underlying external data have a high degree of similarity, in particular with respect to the level of volatility they reflect;
- (e) external data only comprises data from undertakings with a similar risk profile and this risk profile is similar to the risk profile of the undertaking using the data, in particular that the external data comprise data from undertakings whose business nature and risk profile with respect to the external data is similar and for which there is sufficient statistical evidence that the probability distributions underlying the external data will exhibit a high degree of homogeneity.

Article 220

Standardised methods to calculate the undertaking-specific parameters

1. Where insurance and reinsurance undertakings calculate undertaking-specific parameters they shall use, for each parameter, the standardised methods set out in Annex XVII as follows:

- (a) the premium risk method for undertaking-specific parameters replacing the standard parameters referred to in Article 218(1)(a)(i), (a)(ii), (c)(i) and (c)(ii);
- (b) the reserve risk method 1 or the reserve risk method 2 for undertaking-specific parameters replacing the standard parameters referred to in Article 218(1)(a)(iv), and (c)(iv);
- (c) the non-proportional reinsurance method for undertaking-specific parameters replacing the standard parameters referred to in Article 218(1)(a)(iii) and (c)(iii);
- (d) the revision risk method for undertaking-specific parameters replacing the standard parameters referred to in Article 218(1)(b) and (d).

2. Where the undertaking is able to use more than one standardised method, the method that provides the most accurate result for the purposes of fulfilling the calibration requirements included in Article 101(3) of Directive 2009/138/EC shall be used.

However, where an undertaking is not able to demonstrate the greater accuracy of the results of one standardised method over the other standardised methods to calculate an undertaking-specific parameter, the method providing the most conservative result shall be used.

SECTION 13

Procedure for updating correlation parameters

Article 221

1. Supervisory authorities shall collect the quantitative undertaking-specific data necessary for determining dependencies between risks referred to in Article 309(8) and shall provide them on an annual basis to EIOPA for the purposes of updating correlation parameters.

2. EIOPA may analyse the data referred to in paragraph 1 for the purposes of providing an opinion on the update of correlation parameters.

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.

CHAPTER VII

MINIMUM CAPITAL REQUIREMENT*Article 248***Minimum Capital Requirement**

1. The Minimum Capital Requirement shall be equal to the following:

$$MCR = \max(MCR_{combined}; AMCR)$$

where:

- (a) $MCR_{combined}$ denotes the combined Minimum Capital Requirement;
 - (b) AMCR denotes the absolute floor referred to in Article 129(1)(d) of Directive 2009/138/EC and in Article 253 of this Regulation.
2. The combined Minimum Capital Requirement shall be equal to the following:

$$MCR_{combined} = \min(\max(MCR_{linear}; 0,25 \cdot SCR); 0,45 \cdot SCR)$$

where:

- (a) MCR_{linear} denotes the linear Minimum Capital Requirement, calculated in accordance with Articles 249 to 251;
- (b) SCR denotes the Solvency Capital Requirement, calculated in accordance with Chapter V or in accordance with Chapter VI where approval for the use of full or partial internal model has been granted.

Article 249

Linear Minimum Capital Requirement

The linear Minimum Capital Requirement shall be equal to the following:

$$MCR_{linear} = MCR_{(linear,nl)} + MCR_{(linear,l)}$$

where:

- (a) $MCR_{(linear,nl)}$ denotes the linear formula component for non-life insurance and reinsurance obligations;
- (b) $MCR_{(linear,l)}$ denotes the linear formula component for life insurance and reinsurance obligations.

Article 250

Linear formula component for non-life insurance and reinsurance obligations

1. The linear formula component for non-life insurance and reinsurance obligations shall be equal to the following:

$$MCR_{(linear,nl)} = \sum_s \alpha_s \cdot TP_{(nl,s)} + \beta_s \cdot P_s$$

where:

- (a) the sum covers all segments set out in Annex XIX;
 - (b) $TP_{(nl,s)}$ denotes the technical provisions without a risk margin for non-life insurance and reinsurance obligations in the segment s after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, with a floor equal to zero;
 - (c) P_s denotes the premiums written for insurance and reinsurance obligations in the segment s during the last 12 months, after deduction of premiums for reinsurance contracts, with a floor equal to zero;
 - (d) the factors α_s and β_s are set out in Annex XIX.
2. Technical provisions referred to in point (b) of paragraph (1) shall not include any of the following amounts:
 - (a) amounts recoverable from reinsurance contracts or special purpose vehicles that cannot be taken into account in accordance with of Article 41(3) and (5);
 - (b) amounts recoverable from reinsurance contracts or special purpose vehicles, that do not comply with Articles 209, 210, 211 and 213 or with Article 235.
 3. In the calculation of premiums written after deduction of premiums for reinsurance contracts referred to in point (c) of paragraph (1), the following premiums for reinsurance contracts shall not be deducted:
 - (a) premiums in relation to non-insurance events or settled insurance claims that are not accounted for in the cash-flows referred to in Article 41(3);
 - (b) premiums for reinsurance contracts that do not comply with Articles 209, 210, 211 and 213 or with Article 235.

Article 251

Linear formula component for life insurance and reinsurance obligations

1. The linear formula component for life insurance and reinsurance obligations shall be equal to the following:

$$MCR_{linear,l} = 0,037 \cdot TP_{(liffe,1)} - 0,052 \cdot TP_{(liffe,2)} + 0,007 \cdot TP_{(liffe,3)} + 0,021 \cdot TP_{(liffe,4)} + 0,0007 \cdot CAR$$

where:

- (a) $TP_{(life,1)}$ denotes the technical provisions without a risk margin in relation to guaranteed benefits for life insurance obligations with profit participation, after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, with a floor equal to zero, and technical provisions without a risk margin for reinsurance obligations where the underlying life insurance obligations include profit participation, after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, with a floor equal to zero;
 - (b) $TP_{(life,2)}$ denotes the technical provisions without a risk margin in relation to future discretionary benefits for life insurance obligations with profit participation, after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, with a floor equal to zero;
 - (c) $TP_{(life,3)}$ denotes the technical provisions without a risk margin for index-linked and unit-linked life insurance obligations relating to such insurance obligations, after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, with a floor equal to zero;
 - (d) $TP_{(life,4)}$ denotes the technical provisions without a risk margin for all other life insurance and reinsurance obligations, after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles, with a floor equal to zero;
 - (e) CAR denotes the total capital at risk, being the sum, in relation to each contract that give rise to life insurance or reinsurance obligations, of the capital at risk of the contracts, where the capital at risk of a contract means the higher of zero and the difference between the following two amounts:
 - (i) the sum of all of the following:
 - the amount that the insurance or reinsurance undertaking would currently pay in the event of the death or disability of the persons insured under the contract after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
 - the expected present value of amounts not covered in the previous indent that the undertaking would pay in the future in the event of the immediate death or disability of the persons insured under the contract after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
 - (ii) the best estimate of the corresponding obligations after deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles.
2. Technical provisions referred to in points (a) to (d) of paragraph (1), shall not include any of the following:
- (a) amounts recoverable from reinsurance contracts or special purpose vehicles that cannot be taken into account in accordance with Article 41(3) and (5);
 - (b) amounts recoverable from reinsurance contracts or special purpose vehicles that do not comply with Articles 209 to 215 or Article 235.

Article 252

Minimum Capital Requirement: composite insurance undertakings

1. The notional life Minimum Capital Requirement and the notional non-life Minimum Capital Requirement referred to in Article 74(2) of Directive 2009/138/EC shall be calculated in accordance with paragraphs 2 to 11 of this Article.

2. The notional non-life Minimum Capital Requirement shall be equal to the following:

$$NMCR_{nl} = \max(NMCR_{(combined,nl)}; AMCR_{nl})$$

where:

- (a) $NMCR_{(combined,nl)}$ denotes the notional combined non-life Minimum Capital Requirement;
 - (b) $AMCR_{nl}$ denotes the absolute floor prescribed in Article 129(1)(d)(i) of Directive 2009/138/EC and in Article 253 of this Regulation.
3. The notional combined non-life Minimum Capital Requirement shall be equal to the following:

$$NMCR_{(combined,nl)} = \min(\max(NMCR_{(linear,nl)}; 0,25 \cdot (NSCR_{nl} + Addon_{nl})); 0,45 \cdot (NSCR_{nl} + Addon_{nl}))$$

where:

- (a) $NMCR_{(linear, nl)}$ denotes the notional linear Minimum Capital Requirement for non-life insurance or reinsurance activity;
- (b) $NSCR_{nl}$ denotes the notional Solvency Capital Requirement for non-life insurance or reinsurance activity;
- (c) $Addon_{nl}$ denotes the part of the capital add-ons, set by the supervisory authority in accordance with Article 37 of Directive 2009/138/EC, which has been apportioned by that supervisory authority to the non-life insurance or reinsurance activity of the insurance or reinsurance undertaking.

4. The notional linear Minimum Capital Requirement for non-life insurance or reinsurance activity shall be equal to the following:

$$NMCR_{(linear, nl)} = MCR_{(nl, nl)} + MCR_{(l, nl)}$$

where:

- (a) $MCR_{(nl, nl)}$ denotes the linear formula component for non-life insurance and reinsurance obligations relating to non-life insurance or reinsurance activity;
- (b) $MCR_{(l, nl)}$ denotes the linear formula component for life insurance and reinsurance obligations relating to non-life insurance or reinsurance activity.

5. $MCR_{(nl, nl)}$ and $MCR_{(l, nl)}$ shall be calculated in the same way as $MCR_{(linear, nl)}$ and $MCR_{(linear, l)}$ referred to in Articles 250 and 251 of this Regulation respectively, but the technical provisions or premiums written used in the calculation shall only relate to the insurance and reinsurance obligations of non-life insurance or reinsurance activity in the classes of non-life insurance referred to in Annex I of Directive 2009/138/EC.

6. The notional Solvency Capital Requirement for non-life insurance or reinsurance activity shall be equal to the following:

$$NSCR_{nl} = \frac{NMCR_{(linear, nl)}}{NMCR_{(linear, nl)} + NMCR_{(linear, l)}} \cdot SCR$$

where:

- (a) SCR denotes the Solvency Capital Requirement calculated in accordance with Title I, Chapter VI, Section 4, Subsection 2 of Directive 2009/138/EC or with Title I, Chapter VI, Section 4, Subsection 3 of Directive 2009/138/EC, which shall for the purposes of this Article exclude any capital add-on imposed in accordance with Article 37 of that Directive;
- (b) $NMCR_{(linear, nl)}$ denotes the notional linear non-life Minimum Capital Requirement for non-life insurance or reinsurance activity;
- (c) $NMCR_{(linear, l)}$ denotes the notional linear Minimum Capital Requirement for life insurance or reinsurance activity.

7. The notional life Minimum Capital Requirement shall be equal to the following:

$$NMCR_l = \max(NMCR_{(combined, l)}; AMCR_l)$$

where:

- (a) $NMCR_{(combined, l)}$ denotes the notional combined life Minimum Capital Requirement;
- (b) $AMCR_l$ denotes the absolute floor prescribed in Article 129(1)(d)(ii) of Directive 2009/138/EC.

8. The notional combined life Minimum Capital Requirement shall be equal to the following:

$$NMCR_{(combined, l)} = \min(\max(NMCR_{(linear, l)}; 0,25 \cdot (NSCR_l + Addon_l)); 0,45 \cdot (NSCR_l + Addon_l))$$

where:

- (a) $NMCR_{(linear, l)}$ denotes the notional linear Minimum Capital Requirement for life insurance or reinsurance activity;
- (b) $NSCR_l$ denotes the notional Solvency Capital Requirement for life insurance or reinsurance activity;
- (c) $Addon_l$ denotes the part of the capital add-ons, set by the supervisory authority in accordance with Article 37 of Directive 2009/138/EC, which has been apportioned by that supervisory authority to the life insurance or reinsurance activity of the insurance or reinsurance undertaking.

9. The notional linear Minimum Capital Requirement for life insurance or reinsurance activity shall be equal to the following:

$$NMCR_{(linear,l)} = MCR_{(nl,l)} + MCR_{(l,l)}$$

where:

- (a) $MCR_{(nl,l)}$ denotes the linear formula component for non-life insurance and reinsurance obligations relating to life insurance or reinsurance activity;
- (b) $MCR_{(l,l)}$ denotes the linear formula component for life insurance and reinsurance obligations relating to life insurance or reinsurance activity.

10. $MCR_{(nl,l)}$ and $MCR_{(l,l)}$ shall be calculated in the same way as $MCR_{(linear,nl)}$ and $MCR_{(linear,l)}$ referred to in Article 250 and 251 of this Regulation respectively, but the technical provisions or premiums written used in the calculation shall only relate to the insurance and reinsurance obligations of life insurance or reinsurance activity in the classes of life insurance referred to in Annex II of Directive 2009/138/EC.

11. The notional Solvency Capital Requirement for life insurance or reinsurance activity shall be equal to the following:

$$NSCR_l = \frac{NMCR_{(linear,l)}}{NMCR_{(linear,nl)} + NMCR_{(linear,l)}} \cdot SCR$$

where:

- (a) SCR denotes the Solvency Capital Requirement calculated in accordance with Title I, Chapter VI, Section 4, Subsection 2 of Directive 2009/138/EC or with Title I, Chapter VI, Section 4, Subsection 3 of Directive 2009/138/EC, which shall for the purposes of this Article exclude any capital add-on imposed in accordance with Article 37 of that Directive;
- (b) $NMCR_{(linear,nl)}$ denotes the notional linear non-life Minimum Capital Requirement for non-life insurance or reinsurance activity;
- (c) $NMCR_{(linear,l)}$ denotes the notional linear Minimum Capital Requirement for life insurance or reinsurance activity.

Article 253

Absolute floor of the Minimum Capital Requirement

1. The absolute floor of the Minimum Capital Requirement for insurance undertakings that have obtained the authorisations referred to in points (a) or (b) of Article 73(2) of Directive 2009/138/EC shall be the sum of the amounts set out in points (i) and (ii) of Article 129(1)(d) of that Directive.

2. Where the gross written premiums for non-life insurance business listed in classes 1 and 2 in Part A of Annex 1 of Directive 2009/138/EC do not exceed 10 % of total gross written premiums of the undertaking as a whole, the absolute floor of the Minimum Capital Requirement shall be equal to the amount set out in point (ii) of Article 129(1) (d) of that Directive.

3. Where the gross written premiums for life insurance business do not exceed 10 % of total gross written premiums of the undertaking as a whole, the absolute floor of the Minimum Capital Requirement shall be equal to the amount set out in point (ii) of Article 129(1) (d) of that Directive.

CHAPTER VIII

INVESTMENTS IN SECURITISATION POSITIONS

Article 254

Risk retention requirements relating to the originators, sponsors or original lenders

1. For the purposes of Article 135(2)(a) of Directive 2009/138/EC, the originator, sponsor or original lender shall retain, on an ongoing basis a material net economic interest which in any event shall not be less than 5 %, as specified in paragraph 2 of this Article, and shall explicitly disclose that commitment to the insurance or reinsurance undertaking in the documentation governing the investment.

2. Only the following retentions shall qualify as retentions of a material net economic interest of not less than 5 %:
 - (a) the retention of no less than 5 % of the nominal value of each of the tranches sold or transferred to investors;
 - (b) in the case of securitisations of revolving exposures within the meaning of Article 242(12) of Regulation (EU) No 575/2013, the retention of the originator's interest of no less than 5 % of the nominal value of the securitised exposures;
 - (c) the retention of randomly selected exposures, equivalent to no less than 5 % of the nominal value of the securitised exposures, where such exposures would otherwise have been securitised in the securitisation, provided that the number of potentially securitised exposures is not less than 100 at origination;
 - (d) the retention of the first loss tranche and, if necessary, other tranches having the same or a more severe risk profile than those transferred or sold to investors and not maturing earlier than those transferred or sold to investors, so that the retention equals in total no less than 5 % of the nominal value of the securitised exposures;
 - (e) the retention of a first loss exposure of not less than 5 % of every securitised exposure in the securitisation.
3. The net economic interest shall be measured at the origination. The net economic interest shall not be subject to any credit risk mitigation or any short positions or any other form of hedging and shall not be sold. The net economic interest shall be determined by the notional value for off-balance sheet items.
4. The retained material net economic interest referred to in paragraph 1 shall not be split amongst different types of retainer.
5. The requirement provided for in paragraph 1 to retain a material net economic interest shall be fulfilled in full by any of the following:
 - (a) the originator or multiple originators;
 - (b) the sponsor or multiple sponsors;
 - (c) the original lender or multiple original lenders.
6. Where the securitised exposures are created by multiple originators, the retention requirement shall be fulfilled by each originator, in relation to the proportion of the total securitised exposures for which it is the originator.
7. Where the securitised exposures are created by multiple original lenders, the retention requirement shall be fulfilled by each original lender, in relation to the proportion of the total securitised exposures for which it is the original lender.
8. By way of derogation from paragraphs 6 and 7, where the securitised exposures are created by multiple originators or multiple original lenders, the retention requirement may be fulfilled in full by a single originator or original lender provided that either of the following conditions are met:
 - (a) the originator or original lender has established and is managing the programme or securitisation scheme;
 - (b) the originator or original lender has established the programme or securitisation scheme and has contributed over 50 % of the total securitised exposures.
9. Where the securitised exposures have been sponsored by multiple sponsors, the retention requirement shall be fulfilled by either:
 - (a) the sponsor whose economic interest is most appropriately aligned with investors as agreed by the multiple sponsors on the basis of objective criteria including the fee structures, the involvement in the establishment and management of the programme or securitisation scheme and exposure to credit risk of the securitisations;
 - (b) by each sponsor proportionately in relation to the number of sponsors.

*Article 255***Exemptions to risk retention requirements**

1. Article 254(1) shall not apply where the securitised exposures are exposures to entities referred to in points (a) to (d) of Article 180(2) or exposures that are fully, unconditionally and irrevocably guaranteed by those entities, where the guarantee meets the requirements set out in Article 215.
2. Article 254(1) shall not apply to securitisations based on a clear, transparent and accessible index, where the underlying assets of that index are identical to those of an index that is widely traded, or are other tradable securities other than securitisation positions.

*Article 256***Qualitative requirements relating to insurance and reinsurance undertakings**

1. Insurance and reinsurance undertakings investing in securitisation shall meet the requirements laid down in paragraphs 2 to 7.
2. Insurance and reinsurance undertakings shall conduct adequate due diligence prior to making the investment, which shall include an assessment of the commitment of the originator, sponsor or original lender to maintain a material net economic interest securitisation of no less than 5 % on an on-going basis and of the factors that could undermine that commitment to maintain that interest as disclosed in accordance with point (f) of paragraph 3.
3. Before investing in securitisation, and thereafter as appropriate, insurance and reinsurance undertakings shall ensure that the originator, the sponsor or the original lender has all of the following features:
 - (a) the originator, sponsor or original lender grants credit based on sound and well-defined criteria and clearly establishes the process for approving, amending, renewing and refinancing loans to be securitised as well as loans which it will not securitise;
 - (b) the originator, sponsor or original lender has in place effective systems to manage the ongoing administration and monitoring of their credit risk-bearing portfolios and exposures, including for identifying and managing problematic credits and for making adequate value adjustments and provisions;
 - (c) the originator, sponsor or original lender adequately diversifies each credit portfolio based on its target market and overall credit strategy;
 - (d) the originator, sponsor or original lender grants ready access to all relevant data necessary for the insurance or reinsurance undertaking to comply with the requirements set out in paragraphs 4 to 7;
 - (e) the originator, sponsor or original lender has a written policy on credit risk that includes their risk tolerance limits and provisioning policy and how it measures, monitors and controls that risk;
 - (f) the originator, sponsor or original lender discloses the level of the retained net economic interest as referred to in Article 254(1) as well as any factors that could undermine the maintenance of the minimum required net economic interest as set out in that paragraph.
4. Insurance or reinsurance undertakings investing in securitisation shall establish written monitoring procedures commensurate with the risk profile of their securitisation positions to monitor performance of the underlying exposures on an ongoing basis and in a timely manner.
5. Insurance or reinsurance undertakings investing in securitisation shall ensure that there is an adequate level of internal reporting to their administrative, management or supervisory body so that they are aware of material securitisation positions and that the risks from those investments are adequately managed.
6. Insurance and reinsurance undertakings investing in securitisation shall regularly perform stress tests on the cash flows and collateral values supporting the underlying exposures. Any stress test shall be commensurate with the nature, scale and complexity of the risk inherent in the securitisation position.

7. Insurance and reinsurance undertakings investing in securitisation shall be able to demonstrate to their supervisory authorities that for each of those investments they have a comprehensive and thorough understanding of the investment and its underlying exposures and that they have implemented written policies and procedures for their risk management.

Article 257

Requirements for investments in securitisation that no longer comply with the risk-retention and qualitative requirements

1. Where insurance and reinsurance undertakings become aware that the originator, sponsor or original lender fails to comply with the requirements set out in Article 254, or insurance or reinsurance undertakings become aware that the requirements set out in Article 256(2) and (3) are not being complied with, they shall inform the supervisory authority immediately.
2. Where the requirements in Article 256(2) and (3) are not fulfilled in any respect by reason of the negligence or omission of the insurance or reinsurance undertaking, the supervisory authority shall impose a proportionate increase to the Solvency Capital Requirement in accordance with paragraph 3 of this Article.
3. Where the standard formula is used for the calculation of spread risk as referred to in Article 178, for the purposes of the calculation of the increased Solvency Capital Requirement referred to in paragraph 2 of this Article, the capital requirement for spread risk of the relevant securitisation positions shall be based on risk factors as referred to in Article 178, but increased by no less than 250 % of those risk factors.
4. The risk factors shall be progressively increased with each subsequent breach of the requirements set out in Article 256.
5. Where insurance and reinsurance undertakings fail to comply with any requirement set out in Article 256(4) to (7) of this Regulation, by reason of their negligence or omission, the supervisory authorities shall assess whether that failure should be considered a significant deviation from the undertaking's system of governance as referred to in Article 37(1)(c) of Directive 2009/138/EC.

CHAPTER IX

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CHAPTER X

CAPITAL ADD-ON

SECTION 1

Circumstances for imposing a capital add-on*Article 276***Assessment of a significant deviation as regards the SCR**

For the purposes of Article 37(1)(a) and (b) of Directive 2009/138/EC, in concluding that the risk profile of an insurance or reinsurance undertaking deviates significantly from the assumptions underlying the Solvency Capital Requirement as calculated using the standard formula or an internal model, supervisory authorities shall take into account all relevant factors including all of the following:

- (a) the nature, type and size of the deviation;
- (b) the likelihood and severity of any adverse impact on policyholders and beneficiaries;
- (c) the level of sensitivity of the assumptions to which the deviation relates;
- (d) the anticipated duration and volatility of the deviation over the duration of the deviation.

*Article 277***Assessment of a significant deviation as regards the governance**

For the purposes of Article 37(1)(c) of Directive 2009/138/EC, in concluding that the system of governance of an insurance or reinsurance undertaking deviates significantly from the standards laid down in Title I, Chapter IV, Section 2 of that Directive, supervisory authorities shall take into account all relevant factors including all of the following:

- (a) the effect of the deviation from the governance standards as laid down in Title I, Chapter IV, Section 2 of Directive 2009/138/EC on the sound and prudent management of the business and whether the deviation arises from an inadequate implementation of a requirement relating to the system of governance or a failure to implement such a requirement;
- (b) the likelihood and severity of any adverse impact on policyholders and beneficiaries;
- (c) the different ways of organising an effective system of governance which is proportionate to the nature, scale and complexity of the risks inherent in the business of the undertaking;
- (d) the probable financial loss the undertaking could incur as a consequence of the deviation;
- (e) the anticipated duration of the deviation.

*Article 278***Assessment of a significant deviation as regards adjustments to the relevant risk-free rate and transitional measures**

1. For the purposes of Article 37 (1)(d) of Directive 2009/138/EC, in concluding that the risk profile of an insurance or reinsurance undertaking deviates significantly from the assumptions underlying the matching adjustment referred to in Article 77b of that Directive, the volatility adjustment referred to in Article 77d of that Directive or the transitional measures referred to in Article 308c and 308d of that Directive, supervisory authorities shall take into account all relevant factors including all of the following:

- (a) the nature, type and size of the deviation;
- (b) the likelihood and severity of any adverse impact on policyholders and beneficiaries;
- (c) the level of sensitivity of the assumptions to which the deviation relates;
- (d) the anticipated duration and volatility of the deviation over the duration of the deviation;
- (e) the impact of the deviation on the Solvency Capital Requirement and own funds of the undertaking.

2. With respect to the matching adjustment and transitional measures and with respect to the volatility adjustment, where Member States require prior approval for this adjustment, where supervisory authorities have allowed an insurance or reinsurance undertaking to use one of these adjustments or transitional measures, they may impose a capital add-on pursuant to Article 37 paragraph (1)(d) of Directive 2009/138/EC only in circumstances where the deviation from the assumptions underlying the adjustments or transitional measures is of a temporary nature and does not justify revoking the supervisory approval for the use of the adjustment or the transitional measure.

Article 279

Add-ons in relation to deviations from Solvency Capital Requirement assumptions

1. Where the modified Solvency Capital Requirement as calculated under Article 282(a) exceeds the Solvency Capital Requirement as calculated under 282(b) by 10 percent or more, supervisory authorities shall conclude that the risk profile of the insurance or reinsurance undertaking deviates significantly from the assumptions underlying the Solvency Capital Requirement within the meaning of Article 37(1)(a) and (b) of Directive 2009/138/EC, unless they have strong evidence that this is not the case on the basis of the factors set out in article 276.

2. Where the modified Solvency Capital Requirement as calculated in Article 282(a) exceeds the Solvency Capital Requirement as calculated in 282(b) by 15 percent or more, supervisory authorities shall conclude that the risk profile of the insurance or reinsurance undertaking deviates significantly from the assumptions underlying the Solvency Capital Requirement within the meaning of Article 37(1)(a) and (b) of Directive 2009/138/EC.

Article 280

Assessment of the requirement to use an internal model

1. For the purposes of Article 37(1)(a)(i) of Directive 2009/138/EC, the circumstances in which the requirement to use an internal model is inappropriate include those where the estimated financial and other resources required to develop the internal model are disproportionate to the size of the deviation of the risk profile of the undertaking from the assumptions underlying the Solvency Capital Requirement.

2. For the purposes of Article 37(1)(a)(i) of Directive 2009/138/EC, the requirement to use an internal model is ineffective where no internal model has been developed or where the developed internal model fails to meet the general conditions for the approval of full and partial internal models as set out in Title I, Chapter VI, Section 4, Subsections 1 and 3 of Directive 2009/138/EC.

Article 281

Appropriate timeframe for adapting the internal model

For the purposes of Article 37(1)(b) and (c) of Directive 2009/138/EC respectively, in concluding that the adaptation of the internal model to better reflect the given risk profile has failed or that the application of other measures is unlikely to improve deficiencies, supervisory authorities shall take account of all relevant factors in determining an appropriate timeframe, including the likelihood and severity of any adverse impact on policy holders and beneficiaries. That timeframe shall not exceed 6 months.

SECTION 2

Methodologies for calculating capital add-ons

Article 282

Calculation of add-ons in relation to deviations from SCR assumptions

For the purposes of imposing a capital add-on pursuant to Article 37(1)(a) or (b) of Directive 2009/138/EC, supervisory authorities shall calculate the capital add-on as the difference, at a given point in time, between the following:

- (a) the Solvency Capital Requirement of the insurance or reinsurance undertaking, excluding any previous or simultaneous capital add-on, that would be calculated if the standard formula or internal model, as appropriate, were modified so as to reflect the actual risk profile of the insurance or reinsurance undertaking and to ensure compliance with Article 101(3) of Directive 2009/138/EC;
- (b) the Solvency Capital Requirement of the insurance or reinsurance undertaking, excluding any previous or simultaneous capital add-on.

*Article 283***Scope and approach of modifications as regards a deviation from SCR assumptions**

1. In calculating the amount referred to in Article 282(a), supervisory authorities shall consider the aspects of the standard formula or the internal model which gave rise to the deviation of the risk profile assumed under the standard formula or the internal model from the actual risk profile of the undertaking including, where relevant, quantifiable risks not taken into account by the standard formula or the internal model, the structure of the formula or the model, aggregation methods, parameters, and assumptions.
2. For the purposes of paragraph 1, supervisory authorities shall modify the assumptions and parameters underlying the Solvency Capital Requirement as calculated using the standard formula or internal model in order for those assumptions or parameters to properly reflect the actual risk profile of the insurance or reinsurance undertaking and to ensure compliance with Article 101(3) of Directive 2009/138/EC.
3. Where the modifications referred to in paragraph 2 are insufficient or inappropriate to calculate the amount referred to in Article 282(a), alternative methodologies which go beyond modifying assumptions or parameters shall be used for the purposes of the calculation referred to in Article 282(a).
4. Any modification referred to in paragraph 2 or alternative methodology referred to in paragraph 3 shall use adequate, applicable and relevant actuarial and statistical techniques and shall be based on accurate, complete and appropriate data of the undertaking, or where these are not available, data which is directly relevant for the operations of that undertaking.
5. Where alternative methodologies referred to in paragraph 3 are insufficient or inappropriate, supervisory authorities may calculate the Solvency Capital Requirement for the purposes of Article 282(a) by comparing the Solvency Capital Requirements of undertakings with similar risk profiles.
6. For the purposes of paragraphs 4 and 5, supervisory authorities may use information relating to other insurance or reinsurance undertakings with similar risk profiles provided that the supervisory authorities ensure that the reasons for their decision to set a capital add-on are stated in accordance with Article 37(1) of Directive 2009/138/EC and that this statement will comply with the professional secrecy requirements in Article 64 of that Directive.
7. Supervisory authorities shall not set off aspects of the risk profile deviation, which indicate that a lower Solvency Capital Requirement would better reflect the insurance or reinsurance undertaking's actual risk profile, against the other aspects which indicate that a higher Solvency Capital Requirement is appropriate, unless the insurance or reinsurance undertaking satisfies all of the following requirements:
 - (a) a modification or a methodology exists which complies with the requirements set out in paragraph 4 to quantify the impact on the amount referred to in Article 282(a) of the aspects which indicate a lower Solvency Capital Requirement;
 - (b) it would be inappropriate to address the aspects which indicate a lower Solvency Capital Requirement by replacing standard parameters by parameters specific to the undertaking in accordance with Article 104(7) of Directive 2009/138/EC or by using an internal model in accordance with Article 112 of that Directive;
 - (c) the overall Solvency Capital Requirement that would result after setting off the risk profile deviations against each other complies with Article 101(3) of Directive 2009/138/EC.

*Article 284***Calculation of add-ons in relation to adjustments to the relevant risk-free rate or transitional measures**

For the purposes of imposing a capital add-on pursuant to Articles 37(1)(d) of Directive 2009/138/EC, supervisory authorities shall calculate the capital add-on as the sum, at a given point in time, of the following amounts:

- (a) the negative of the amount of eligible own funds that would be calculated if the adjustment or transitional measure was modified in a manner that the assumptions underlying the adjustment or transitional measure would fit the actual assets, liabilities and risk profile of the insurance or reinsurance undertaking;

- (b) the amount of the Solvency Capital Requirement, excluding any previous or simultaneous capital add-on, that would be calculated if the adjustment or transitional measure was modified in a manner that the assumptions underlying the adjustment or transitional measure would fit the actual assets, liabilities and risk profile of the insurance or reinsurance undertaking, and ensure compliance with Article 101(3) of Directive 2009/138/EC;
- (c) the amount of eligible own funds;
- (d) the negative of the amount of the Solvency Capital Requirement, excluding any previous or simultaneous capital add-on, of the insurance or reinsurance undertaking.

Article 285

Scope and approach of modifications as regards adjustments to the relevant risk-free rate and transitional measures

1. In calculating the amounts referred to in Article 284(a) and (b), supervisory authorities shall consider the features of the undertaking's assets, liabilities or risk profile which gave rise to the deviation from the assumptions underlying the adjustment or transitional measure.
2. For the purposes of paragraph 1, supervisory authorities shall modify the adjustment or transitional measure and the calculation of the Solvency Capital Requirement in a manner that the assumptions underlying the adjustment or transitional measure would fit the actual assets, liabilities and risk profile of the insurance or reinsurance undertaking, and ensure compliance with Article 101(3) of Directive 2009/138/EC;
3. Any modification referred to in paragraph 2 shall use adequate, applicable and relevant actuarial and statistical techniques and shall be based on accurate, complete and appropriate data of the undertaking, or where these are not available, data which is directly relevant for the operations of that undertaking.

Article 286

Calculation of add-ons in relation to deviations from governance standards

For the purposes of calculating a capital add-on as referred to in Article 37(1)(c) of Directive 2009/138/EC, supervisory authorities shall take into account all relevant factors including all of the following:

- (a) where appropriate, the factors referred to in Article 277;
- (b) where appropriate, capital add-ons set previously for comparable deviations of other insurance or reinsurance undertakings with similar risk profiles provided that supervisory authorities ensure that the reasons for their decision to set a capital add-on are stated in accordance with Article 37(1) of Directive 2009/138/EC and this statement complies with the professional secrecy requirements set out in Article 64 of that Directive.

Article 287

Apportionment of add-ons for undertakings which simultaneously pursue life and non-life insurance activities

1. When calculating a capital add-on in relation to an insurance undertaking to which Article 73(2) or (5) of Directive 2009/138/EC applies, supervisory authorities shall calculate a notional life capital add-on and a notional non-life capital add-on.
2. Where the causes of the relevant deviations can be objectively apportioned between the life insurance activity and the non-life insurance activity, supervisory authorities shall calculate the notional life capital add-on and the notional non-life capital add-on according to the same apportionment.
3. Where an apportionment in accordance with paragraph 2 is not possible, supervisory authorities shall calculate the notional life capital add-on and notional non-life capital add-on in the same way as the apportionment between the notional life Minimum Capital Requirement and the notional non-life Minimum Capital Requirement as referred to in Article 74(2) of Directive 2009/138/EC.

CHAPTER XI

EXTENSION OF THE RECOVERY PERIOD

Article 288

Assessment of exceptional adverse situations

For the purposes of declaring the existence of an exceptional adverse situation affecting insurance and reinsurance undertakings representing a significant share of the market or affected lines of business, as referred to in Article 138(4) of Directive 2009/138/EC, EIOPA shall take into account all of the following factors and criteria:

- (a) the impact of possible subsequent decisions by supervisory authorities to extend the recovery period, on financial markets, on the availability of insurance and reinsurance products and on policy holders and beneficiaries;
- (b) the number, size and market share of the insurance and reinsurance undertakings affected by the exceptional adverse situation and whether the size and nature of those undertakings could, when taken together, have a negative effect on the financial markets or on insurance and reinsurance markets;
- (c) possible pro-cyclical effects of re-establishing compliance with the Solvency Capital Requirement, including distressed sales of assets on financial markets;
- (d) the possibility for insurance and reinsurance undertakings to raise additional own funds in financial markets;
- (e) the availability of an active market for assets held by insurance and reinsurance undertakings and the liquidity of that market;
- (f) the capacity of the reinsurance market to provide reinsurance or retrocession cover;
- (g) the availability in financial markets of adequate risk mitigation techniques, including financial instruments;
- (h) the availability in financial markets of other means to reduce the risk-exposure of insurance and reinsurance undertakings.

Article 289

Factors and criteria to determine the extension of the recovery period

For the purposes of deciding on an extension of the period referred to in Article 138(4) of Directive 2009/138/EC and determining its length for a given insurance or reinsurance undertaking, the supervisory authority shall take into account the factors and criteria mentioned in points (c) to (h) of Article 288 of this Regulation and the following factors and criteria specific to the undertaking:

- (a) the impact of an extension on policy holders and beneficiaries of the insurance and reinsurance undertaking;
- (b) the extent to which the insurance or reinsurance undertaking is affected by the exceptional adverse situation;
- (c) the means available to the undertaking to re-establish compliance with the Solvency Capital Requirement and the existence of a realistic recovery plan;
- (d) the causes and the degree of non-compliance with the Solvency Capital Requirement;
- (e) the composition of own funds held by the insurance or reinsurance undertaking;
- (f) the composition of the assets held by the insurance or reinsurance undertaking;
- (g) the nature and duration of technical provisions and other liabilities of the insurance or reinsurance undertaking;
- (h) when applicable, the availability of financial support from other undertakings of the group to which the insurance or reinsurance undertaking belongs;
- (i) any measures taken by the insurance or reinsurance undertaking to limit the outflow of capital and the deterioration of its solvency position.

CHAPTER XII

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CHAPTER XIII

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CHAPTER XIV

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CHAPTER XV

SPECIAL PURPOSE VEHICLES

SECTION 1

Authorization*Article 318*

The authorisation of a special purpose vehicle by the supervisory authority of the Member State in whose territory the special purpose vehicle is establishing its head office shall be subject to all of the following conditions:

- (a) the special purpose vehicle assumes risks from an insurance or reinsurance undertaking through reinsurance contracts or assumes insurance risks through similar arrangements;
- (b) where the special purpose vehicle assumes risks from more than one insurance or reinsurance undertaking, the solvency of that special purpose vehicle is not adversely affected by winding-up proceedings of any one of those insurance or reinsurance undertakings;
- (c) the contractual arrangements relating to the transfer of risk from an insurance or reinsurance undertaking to the special purpose vehicle and the investment in assets by the special purpose vehicle fulfil the conditions set out in Articles 319 to 321;
- (d) the persons that effectively run the special purpose vehicle satisfy the requirements referred to in Article 322;
- (e) the shareholders or members having a qualifying holding within the meaning of Article 13(21) of Directive 2009/138/EC in the special purpose vehicle satisfy the conditions set out in Article 323;
- (f) the special purpose vehicle has an effective system of governance and meets the requirements set out in Article 324;
- (g) the special purpose vehicle is capable of meeting the requirements referred to in Article 325;
- (h) the special purpose vehicle satisfies the requirements set out in Articles 326 and 327.

SECTION 2

Mandatory contract conditions*Article 319***Fully Funded**

The contractual arrangements relating to the transfer of risk from an insurance or reinsurance undertaking to a special purpose vehicle shall ensure that the special purpose vehicle is at all times fully funded in accordance with Article 326.

*Article 320***Effective transfer of risk**

1. The contractual arrangements relating to the transfer of risk from an insurance or reinsurance undertaking to a special purpose vehicle and from the special purpose vehicle to the providers of debt or financing shall ensure all of the following:

- (a) the transfer of risk is effective in all circumstances;
- (b) the extent of risk transfer is clearly defined and incontrovertible.

2. The transfer of risk shall not be deemed to be effective in all circumstances where there are connected transactions which could undermine the effective transfer of risk.

*Article 321***Rights of the providers of debt or financing mechanisms**

The contractual arrangements relating to the transfer of risk from an insurance or reinsurance undertaking to a special purpose vehicle and from the special purpose vehicle to the providers of debt or finance shall ensure all of the following:

- (a) the claims of the providers of debt or financing mechanisms are at all times subordinated to the reinsurance obligations of the special purpose vehicle to the insurance or reinsurance undertaking;

- (b) no payments are made to the providers of debt or financing, if following those payments the special purpose vehicle would no longer be fully funded;
- (c) the providers of debt or finance to the special purpose vehicle have no rights of recourse to the assets of the insurance or reinsurance undertaking;
- (d) the providers of debt or finance to the special purpose vehicle have no rights to apply for the winding-up of the special purpose vehicle.

SECTION 3

System of governance

Article 322

Fit and proper requirements of persons who effectively run a special purpose vehicle

1. All persons who effectively run a special purpose vehicle shall at all times fulfil the requirements set out in Article 42(1) of Directive 2009/138/EC.
2. Special purpose vehicles shall notify the supervisory authorities of the identity of the persons who effectively run the special purpose vehicle and demonstrate to the supervisory authorities that those persons meet the requirements set out in Article 42(1) of Directive 2009/138/EC.
3. Special purpose vehicles shall notify the supervisory authorities of any changes in the identity of the persons who effectively run the special purpose vehicle and provide the supervisory authorities with all information needed to assess whether any new persons appointed to run the special purpose vehicle are fit and proper in accordance with Article 42(1) of Directive 2009/138/EC.
4. Special purpose vehicles shall notify the supervisory authorities if any of the persons who effectively run a special purpose vehicle have been replaced because they no longer fulfil the requirements set out in Article 42(1) of Directive 2009/138/EC.

Article 323

Fit and proper requirements for shareholders or members with a qualifying holding

1. The assessment of whether the shareholders or members having a qualifying holding within the meaning of Article 13(21) of Directive 2009/138/EC in a special purpose vehicle are fit and proper shall take into account all of the following criteria:
 - (a) the reputation and integrity of the shareholder or member having a qualifying holding in the special purpose vehicle;
 - (b) the financial soundness of the shareholder or member having a qualifying holding in the special purpose vehicle;
 - (c) the level of influence that the shareholder or member having a qualifying holding in the special purpose vehicle will exercise over the special purpose vehicle;
 - (d) whether there are reasonable grounds to suspect that, in connection with the qualifying holding of the shareholder or members having a qualifying holding in the special purpose vehicle, money laundering or terrorist financing within the meaning of Article 1 of Directive 2005/60/EC of the European Parliament and of the Council ⁽¹⁾ is being or has been committed or attempted, or that the qualifying holding could increase the risk thereof.
2. Special purpose vehicles shall notify the supervisory authorities of the identity of the persons who are shareholders or members having a qualifying holding in the special purpose vehicle.

Article 324

Sound administrative and accounting procedures, adequate internal control mechanisms and risk-management requirements

1. Special purpose vehicles shall have an effective system of governance which provides for sound and prudent management of the special purpose vehicle and that is appropriate to the nature, scale and complexity of the risks it assumes and the uses for which it is authorised.

⁽¹⁾ Directive 2005/60/EC of the European Parliament and of the Council of 26 October 2005 on the prevention of the use of the financial system for the purposes of money laundering and terrorist financing (OJ L 309, 25.11.2005, p. 15).

2. The system of governance of the special purpose vehicle shall consist of all of the following:
 - (a) written policies in relation to at least risk management, internal control, administrative and accounting procedures and, where relevant, outsourcing; the written policies shall comprise policies relating to the areas set out in Article 44(2)(a) to (f) of Directive 2009/138/EC to the extent that these are relevant taking into account the uses of the special purpose vehicle;
 - (b) effective internal controls to ensure that the mandatory contract conditions in Section 2 and the requirements in Section 5 are fulfilled on an ongoing basis;
 - (c) an effective risk-management system comprising processes and reporting procedures necessary to identify, measure, monitor, manage and report, on an ongoing basis the risk to which the special purpose vehicle could be exposed.
3. Special purpose vehicles shall ensure that the policies referred to in point (a) of paragraph 2 are implemented effectively.

SECTION 4

Supervisory reporting

Article 325

Supervisory reporting

1. The supervisory authorities in the Member State in which the special purpose vehicle is established may request such information from the special purpose vehicle as is necessary in order to supervise the special purpose vehicle.
2. Special purpose vehicles shall report all of the following information to the supervisory authorities of the Member State in which the special purpose vehicle is established:
 - (a) the value of the assets of the special purpose vehicle valued in accordance with Article 75 of Directive 2009/138/EC distinguished by material class and a description of the basis, methods and assumptions used for their valuation;
 - (b) the aggregate maximum risk exposure of the special purpose vehicle and a description of the basis, methods and assumptions used for the determination of the aggregate maximum risk exposure;
 - (c) conflicts of interest between the special purpose vehicle, the insurance or reinsurance undertakings and the providers of debt or finance;
 - (d) significant transactions entered into by the special purpose vehicle during the last reporting period.
3. Special purpose vehicles shall submit the report referred to in paragraph 2 at least annually.
4. Special purpose vehicles shall submit the report referred to in paragraph 2:
 - (a) no later than 20 weeks after the special purpose vehicle's financial year end for the financial year ending on or after 30 June 2016 but before 1 January 2017;
 - (b) no later than 18 weeks after the special purpose vehicle's financial year end for the financial year ending on or after 1 January 2017 but before 1 January 2018;
 - (c) no later than 16 weeks after the special purpose vehicle's financial year end for the financial year ending on or after 1 January 2018 but before 1 January 2019;
 - (d) no later than 14 weeks after the special purpose vehicle's financial year end for financial years ending on or after 1 January 2019.
5. Special purpose vehicles shall immediately inform the supervisory authorities in the Member State in which the special purpose vehicle is established of any changes that could affect the compliance by the special purpose vehicle with Articles 318 to 324 and Article 326.

SECTION 5

Solvency requirements

Article 326

Solvency requirements

1. In order to be considered fully funded special purpose vehicles shall satisfy all of the following requirements:
 - (a) the assets of the special purpose vehicle are valued in accordance with Article 75 of Directive 2009/138/EC;

- (b) the special purpose vehicle has at all times assets the value of which is equal to or exceeds the aggregate maximum risk exposure and the special purpose vehicle is able to pay the amounts it is liable for as they fall due;
 - (c) the proceeds of the debt issuance or other financing mechanism are fully paid-in.
2. The assessment by supervisory authorities of whether the special purpose vehicle has at all times assets the value of which is equal to or exceeds the aggregate maximum risk exposure and the special purpose vehicle is able to pay the amounts it is liable for as they fall due, shall take into account all of the following:
- (a) the liquidity risk of the special purpose vehicle;
 - (b) the quantifiable risks of the special purpose vehicle;
 - (c) the arrangements for holding assets in the special purpose vehicle.
3. The special purpose vehicle shall demonstrate to the supervisory authorities in its report referred to in Article 325(2) and on request by the supervisory authorities that it satisfies the requirements set out in paragraph 1 and it shall report on points (a) and (b) of paragraph 2.
4. Payments relating to existing insurance and reinsurance contracts, that are expected to be received in the future by the special purpose vehicle from the insurance or reinsurance undertaking that has transferred risk to the special purpose vehicle, may be included in the assets of the special purpose vehicle, provided that all of the following requirements are met:
- (a) the future liabilities of the special purpose vehicle to the providers of debt or finance only arise subject to the receipt of the payments from the insurance or reinsurance undertaking that has transferred risk to the special purpose vehicle;
 - (b) there is no scenario under which the basic own funds of the insurance or reinsurance undertaking which has transferred risks to the special purpose vehicle would be negatively affected by the payment not being received by the special purpose vehicle;
 - (c) the special purpose vehicle continues to meet the conditions set out in paragraph 1 in the event that the payments from the insurance or reinsurance undertaking that has transferred risk to the special purpose vehicle are not received;
 - (d) the payments do not relate to expenses that are excluded from the aggregate maximum risk exposure as defined in paragraph 42 of Article 1.

Article 327

Solvency requirements on investments

Special purpose vehicles shall invest all their assets in accordance with all of the following requirements:

- (a) with respect to the whole portfolio of assets, special purpose vehicles shall only invest in assets and instruments whose risk the special purpose vehicle can properly identify, measure, monitor, manage, control and report;
- (b) assets shall be invested in such a manner as to ensure the security, quality, liquidity and profitability of the portfolio as a whole. In addition the localisation of those assets shall be such as to ensure their availability;
- (c) all assets shall be invested in a manner appropriate to the nature and duration of the special purpose vehicle's liabilities. All assets shall be invested in the best interest of the insurance and reinsurance undertakings transferring risks to the special purpose vehicle;
- (d) the use of derivative instruments shall be possible insofar as they contribute to a reduction of risks or facilitate efficient portfolio management;
- (e) investments and assets which are not admitted to trading on a regulated financial market shall be kept to prudent levels;
- (f) assets shall be properly diversified in such a way as to avoid excessive reliance on any particular asset, issuer or group of undertakings, or geographical area and excessive accumulation of risk in the portfolio as a whole;
- (g) investments in assets issued by the same issuer, or by issuers belonging to the same group, shall not expose the special purpose vehicle to excessive risk concentration.

TITLE II
INSURANCE GROUPS

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TITLE III
THIRD COUNTRY EQUIVALENCE AND FINAL PROVISIONS

CHAPTER I
UNDERTAKINGS CARRYING OUT REINSURANCE ACTIVITIES WITH THEIR HEAD OFFICE IN A THIRD COUNTRY

Article 378

Criteria for assessing third country equivalence

The criteria to be taken into account in order to assess whether the solvency regime of a third country that applies to reinsurance activities of undertakings with their head office in that third country is equivalent to that laid down in Title I of Directive 2009/138/EC shall be the following:

- (a) whether the supervisory authorities of that third country have the power, by law or regulation, to effectively supervise domestic insurance undertakings carrying out reinsurance activities or reinsurance undertakings and impose sanctions or take enforcement action where necessary;

- (b) whether the supervisory authorities of that third country have the necessary means, the relevant expertise, capacities including financial and human resources, and mandate to effectively protect policy holders and beneficiaries regardless of their nationality or place of residence;
- (c) whether the supervisory authorities of that third country, in the exercise of their general duties, duly consider the potential impact of their decisions on the stability of financial systems globally, particularly during emergency situations, on the basis of the information available at that time;
- (d) whether the supervisory authorities of that third country take into account the potential pro-cyclical effects of their actions where exceptional movements in the financial markets occur;
- (e) whether the taking-up of the business of reinsurance in that third country is subject to prior authorisation conditional on a clear, objective and publicly available set of written standards;
- (f) whether the solvency regime of that third country requires domestic insurance or reinsurance undertakings carrying out reinsurance activities to have an effective system of governance in place which provides for sound and prudent management of the business and prescribes all of the following:
 - (i) the existence of an adequate, transparent organisational structure with a clear allocation and appropriate segregation of responsibilities,
 - (ii) requirements for ensuring that persons who effectively run the undertaking are fit and proper, which are equivalent to Article 42 of Directive 2009/138/EC,
 - (iii) the existence of effective processes to ensure the timely transmission of information both within the undertaking and to the relevant supervisory authorities;
 - (iv) requirements for ensuring that the outsourced functions or activities are effectively supervised;
- (g) whether the solvency regime of that third country requires domestic insurance or reinsurance undertakings carrying out reinsurance activities to have an effective risk-management system in place comprising all of the following:
 - (i) strategies, processes and internal reporting procedures necessary to identify, measure, monitor, manage and report risks, to which the undertaking is or could be exposed, at an individual and an aggregated level and on a continuous basis, and their interdependencies;
 - (ii) an effective internal control system;
- (h) whether the solvency regime of that third country requires domestic insurance or reinsurance undertakings carrying out reinsurance activities to establish and maintain effective risk-management, compliance, internal audit and actuarial functions;
- (i) whether the solvency regime of that third country requires domestic insurance or reinsurance undertakings carrying out reinsurance activities to:
 - (i) provide third country supervisory authorities with any information necessary for the purposes of supervision;
 - (ii) disclose publicly, on at least an annual basis, a report on their solvency and financial condition equivalent to that specified in Article 51 of Directive 2009/138/EC;
- (j) whether the solvency regime of that third country requires that proposed changes to the business policy or management of domestic insurance or reinsurance undertakings carrying out reinsurance activities, or to qualifying holdings in such undertakings, are consistent with maintaining a sound and prudent management of those undertakings;
- (k) whether the assessment of the financial position of domestic insurance or reinsurance undertakings carrying out reinsurance activities relies on sound economic principles and whether solvency requirements are based on an economic valuation of all assets and liabilities;
- (l) whether the solvency regime of that third country requires domestic insurance or reinsurance undertakings carrying out reinsurance activities to hold adequate financial resources including all of the following requirements:
 - (i) a requirement that those undertakings establish technical provisions with respect to all of their reinsurance obligations towards policy holders and beneficiaries of reinsurance contracts,

- (ii) a requirement that assets held to cover technical provisions are invested in the best interests of all policy holders and beneficiaries taking into account any disclosed policy objective,
- (iii) a requirement that those undertakings only invest in assets and instruments whose risks the undertaking concerned can properly identify, measure, monitor, manage, control and report,
- (iv) a requirement that those undertakings meet capital requirements set at a level equivalent to that referred to in Article 101(3) of Directive 2009/138/EC which ensures that in the event of significant losses policy holders and beneficiaries are adequately protected and continue to receive payments as they become due,
- (v) a requirement that those undertakings maintain a minimum level of capital, non-compliance with which triggers immediate and ultimate supervisory intervention,
- (vi) a requirement that those undertakings meet the capital requirements referred to in points (iv) and (v) with own funds that are of a sufficient quality and which are able to absorb significant losses, and that own-fund items considered by the supervisory authorities to be of a high quality shall absorb losses both in a going concern and in case of a winding up;
- (m) whether the capital requirements of the solvency regime of that third country are risk-based with the objective of capturing quantifiable risks and that where a significant risk is not quantifiable and cannot be captured in the capital requirements, then that risk is addressed through another supervisory mechanism;
- (n) whether the solvency regime of that third country ensures timely intervention by supervisory authorities of the third country in the event that the capital requirement referred to in point (l)(iv) is not complied with;
- (o) whether the solvency regime of the third country provides that all persons who are working or who have worked for the supervisory authorities of that third country, as well as auditors and experts acting on behalf of those authorities, are bound by obligations of professional secrecy and whether such obligations of professional secrecy extend to information received from all supervisory authorities;
- (p) whether the solvency regime of the third country provides that, without prejudice to cases covered by criminal law, any confidential information received by all persons who are working or who have worked for the supervisory authorities of that third country is not divulged to any person or authority whatsoever, except in summary or aggregate form, such that individual insurance and reinsurance undertakings cannot be identified;
- (q) whether the solvency regime of the third country provides that, where an insurance or reinsurance undertaking has been declared bankrupt or is being compulsorily wound up, confidential information which does not concern third parties involved in attempts to rescue that undertaking may be divulged in civil or commercial proceedings;
- (r) whether third country supervisory authorities which receive confidential information from supervisory authorities only use that information in the course of their duties and for any of the following purposes:
 - (i) to check that the conditions governing the taking-up of business of reinsurance, system of governance and public disclosure and solvency assessment have been met,
 - (ii) to impose sanctions,
 - (iii) in administrative appeals against decisions of the supervisory authorities,
 - (iv) in court proceedings relating to the solvency regime in that third country;
- (s) whether third country supervisory authorities are permitted to exchange information received from supervisory authorities, in the discharge of their supervisory functions or the detection and investigation of breaches of company law, with other authorities, bodies or persons where that authority, body or person is subject to the obligation of professional secrecy in the relevant third country and whether that information is only disclosed once the express agreement of the supervisory authority from which it originates has been obtained and, where appropriate, has been obtained solely for the purposes for which the authority gave its agreement.

CHAPTER II

RELATED THIRD COUNTRY INSURANCE AND REINSURANCE UNDERTAKINGS

Article 379

Criteria for assessing third country equivalence

The criteria to be taken into account in order to assess whether the solvency regime of a third country that applies to insurance and reinsurance undertakings with their head office in that third country is equivalent to that laid down in Title I, Chapter VI of Directive 2009/138/EC shall be the following:

- (a) whether the assessment of the financial position of domestic insurance and reinsurance undertakings relies on sound economic principles and whether solvency requirements are based on an economic valuation of all assets and liabilities;
- (b) whether the solvency regime of that third country requires domestic insurance or reinsurance undertakings to hold adequate financial resources including all of the following:
 - (i) a requirement that those undertakings establish technical provisions with respect to all of their insurance and reinsurance obligations towards policy holders and beneficiaries of insurance and reinsurance contracts,
 - (ii) a requirement that assets held to cover technical provisions are invested in the best interests of all policy holders and beneficiaries taking into account any disclosed policy objective,
 - (iii) a requirement that those undertakings only invest in assets and instruments whose risks the undertaking concerned can properly identify, measure, monitor, manage, control and report,
 - (iv) a requirement that those undertakings meet capital requirements set at a level equivalent to that achieved by Article 101(3) of Directive 2009/138/EC which ensures that in the event of significant losses policy holders and beneficiaries are adequately protected and continue to receive payments as they become due,
 - (v) a requirement that those undertakings maintain a minimum level of capital, non-compliance with which triggers immediate and ultimate supervisory intervention,
 - (vi) a requirement that those undertakings meet the capital requirements referred to in points (iv) and (v) with own funds that are of a sufficient quality and which are able to absorb significant losses, and that own-fund items considered by the supervisory authorities to be of a high quality shall absorb losses both in a going concern and in case of a winding up;
- (c) whether the capital requirements of the solvency regime of that third country are risk-based with the objective of capturing quantifiable risks and, where a significant risk is not quantifiable and cannot be captured in the capital requirements, whether that risk is addressed through another supervisory mechanism;
- (d) whether the solvency regime of that third country ensures timely intervention by supervisory authorities of the third country in the event that the capital requirement referred to in point (b)(iv) is not complied with;
- (e) whether the solvency regime of the third country provides that all persons who are working or who have worked for the supervisory authorities of that third country, as well as auditors and experts acting on behalf of those authorities, are bound by obligations of professional secrecy and whether such obligations of professional secrecy extend to information received from all supervisory authorities;
- (f) whether the solvency regime of the third country provides that, without prejudice to cases covered by criminal law, any confidential information received by all persons who are working or who have worked for the supervisory authorities of that third country is not divulged to any person or authority whatsoever, except in summary or aggregate form, such that individual insurance and reinsurance undertakings cannot be identified;
- (g) whether the solvency regime of the third country provides that, where an insurance or reinsurance undertaking has been declared bankrupt or is being compulsorily wound up, confidential information which does not concern third parties involved in attempts to rescue that undertaking may be divulged in civil or commercial proceedings;
- (h) whether third country supervisory authorities which receive confidential information from supervisory authorities only use that information in the course of their duties and for any of the following purposes:
 - (i) to check that the conditions governing the taking-up of business, system of governance and public disclosure and solvency assessment have been met,
 - (ii) to impose sanctions,

- (iii) in administrative appeals against decisions of the supervisory authorities,
- (iv) in court proceedings relating to the solvency regime in that third country;
- (i) whether third country supervisory authorities are permitted to exchange information received from supervisory authorities, in the discharge of their supervisory functions or the detection and investigation of breaches of company law, with other authorities, bodies or persons where that authority, body or person is subject to the obligation of professional secrecy in the relevant third country and whether that information is only disclosed once the express agreement of the supervisory authority from which it originates has been obtained and, where appropriate, has been obtained solely for the purposes for which the authority gave its agreement.

CHAPTER III

INSURANCE AND REINSURANCE UNDERTAKINGS WITH THE PARENT UNDERTAKINGS OUTSIDE THE UNION

*Article 380***Criteria for assessing third country equivalence**

The criteria which shall be taken into account in order to assess whether the prudential regime in a third country for the supervision of groups is equivalent to that laid down in Title III of Directive 2009/138/EC shall be the following:

- (a) whether the supervisory authorities of the third country have the necessary means, the relevant expertise, capacities including financial and human resources, and mandate to effectively protect policy holders and beneficiaries, regardless of their nationality or place of residence;
- (b) whether the supervisory authorities of the third country are empowered by law or regulation to:
 - (i) determine which undertakings fall under the scope of supervision at group level,
 - (ii) supervise insurance and reinsurance undertakings which are part of a group,
 - (iii) impose sanctions or take enforcement action where necessary;
- (c) whether the supervisory authorities of the third country are able to effectively assess the risk profile and solvency and financial position of insurance and reinsurance undertakings which are part of a group as well as that group's business strategy;
- (d) whether the scope of supervision at group level at least includes all undertakings over which a participating undertaking, as defined in Article 212(1)(a) of Directive 2009/138/EC, exercises dominant or significant influence unless where this would be inappropriate to the objectives of group supervision;
- (e) whether the supervisory authorities of the third country, in the exercise of their general duties, duly consider the potential impact of their decisions on the stability of financial systems globally, particularly during emergency situations, on the basis of the information available at the time;
- (f) whether the supervisory authorities of that third country take into account the potential pro-cyclical effects of their actions where exceptional movements in the financial markets occur;
- (g) whether the prudential regime of that third country requires an effective system of governance at the group level which provides for sound and prudent management of the business and prescribes all of the following:
 - (i) the existence of an adequate transparent organisational structure with a clear allocation and appropriate segregation of responsibilities;
 - (ii) requirements for ensuring that persons who effectively run the undertaking are fit and proper, which are equivalent to Article 42 of Directive 2009/138/EC;
 - (iii) the existence of effective processes to ensure the timely transmission of information both within the group and to the relevant supervisory authorities;
 - (iv) requirements for ensuring that the outsourced functions or activities are effectively supervised;

- (h) whether the prudential regime of that third country requires an effective risk-management system in place at the group level comprising at least all of the following:
 - (i) strategies, processes and internal reporting procedures necessary to identify, measure, monitor, manage and report risks on a continuous basis, to which the group is or could be exposed and their interdependencies;
 - (ii) an effective internal control system;
- (i) whether the prudential regime of that third country requires the group to have sound reporting and accounting procedures to monitor and manage the intra-group transactions and the risk concentrations;
- (j) whether the prudential regime of that third country requires that effective risk-management, compliance, internal audit and actuarial functions are established and maintained by the group;
- (k) whether the prudential regime of that third country requires the group to do all of the following:
 - (i) to provide third country supervisory authorities with any information necessary for the purposes of supervision;
 - (ii) to report significant risk concentration at the level of the group and significant intra-group transactions, on at least an annual basis;
 - (iii) to disclose publicly, on at least an annual basis, a report on the solvency and financial condition of the group which is equivalent to that specified in Article 51 of Directive 2009/138/EC;
- (l) whether the prudential regime of that third country requires that proposed changes to the business policy or management of the group, or to qualifying holdings in the group, are consistent with the sound and prudent management of the group;
- (m) whether the assessment of the financial position of the group relies on sound economic principles and whether the assessment of solvency is based on an economic valuation of all assets and liabilities;
- (n) whether the prudential regime of that third country requires the group to hold adequate financial resources including all of the following:
 - (i) a requirement that the group establishes technical provisions with respect to all of its insurance and reinsurance obligations towards policy holders and beneficiaries of insurance and reinsurance undertakings which are part of the group;
 - (ii) a requirement that assets held to cover technical provisions are invested in the best interests of all policy holders and beneficiaries taking into account any disclosed policy objective;
 - (iii) a requirement that the group only invests in assets and instruments whose risks it can properly identify, measure, monitor, manage, control and report;
 - (iv) a requirement by the supervisory authorities of the third country that the group meet capital requirements set at a level equivalent to that achieved by Article 101(3) of Directive 2009/138/EC which ensures that in the event of significant losses policy holders and beneficiaries are adequately protected and continue to receive payments as they become due;
 - (v) a requirement that insurance or reinsurance undertakings which are part of the group maintain a minimum level of capital, non-compliance with which triggers immediate and ultimate supervisory intervention;
 - (vi) a requirement that the group capital requirement is met with own funds that are of a sufficient quality and which are able to absorb significant losses, and that own-fund items considered by the supervisory authorities to be of a high quality shall absorb losses both in a going concern and in case of a winding up;
- (o) whether the capital requirements of the prudential regime of that third country are risk-based with the objective of capturing quantifiable risks and, where a significant risk is not quantifiable and cannot be captured in the capital requirements, whether that risk is addressed through another supervisory mechanism;
- (p) whether the prudential regime of that third country ensures timely intervention by supervisory authorities of the third country in the event that the capital requirement referred to in point (n)(iv) is not complied with;
- (q) whether the supervisory authorities of the third country restrict the use of own-fund items of a related insurance or reinsurance undertaking where they consider that they cannot effectively be made available to cover the capital requirement of the participating undertaking for which the group solvency is calculated;

- (r) whether the calculation of group solvency in the third country's prudential regime produces a result that is at least equivalent to the result achieved by either one of the calculation methods set out in Articles 230 and 233 of Directive 2009/138/EC, or a combination of them, and that calculation ensures that there is no double use of own funds to meet the group capital requirement and that the intra-group creation of capital through reciprocal financing is eliminated;
- (s) whether the prudential regime of the third country provides that all persons who are working or who have worked for the supervisory authorities of that third country, as well as auditors and experts acting on behalf of those authorities, are bound by obligations of professional secrecy and whether such obligations of professional secrecy extend to information received from all supervisory authorities;
- (t) whether the prudential regime of the third country provides that, without prejudice to cases covered by criminal law, any confidential information received by all persons who are working or who have worked for the supervisory authorities of that third country is not divulged to any person or authority whatsoever, except in summary or aggregate form, such that individual insurance and reinsurance undertakings cannot be identified;
- (u) whether the prudential regime of the third country provides that, where an insurance or reinsurance undertaking has been declared bankrupt or is being compulsorily wound up, confidential information which does not concern third parties involved in attempts to rescue that undertaking may be divulged in civil or commercial proceedings;
- (v) whether third country supervisory authorities which receive confidential information from other supervisory authorities only use that information in the course of their duties and for any of the following purposes:
 - (i) to check that the conditions governing the taking-up of business, system of governance and public disclosure and solvency assessment have been met;
 - (ii) to impose sanctions;
 - (iii) in administrative appeals against decisions of the supervisory authorities;
 - (iv) in court proceedings relating to the solvency regime in that third country;
- (w) whether third country supervisory authorities are permitted to exchange information received from supervisory authorities, in the discharge of their supervisory functions or the detection and investigation of breaches of company law, with other authorities, bodies or persons where that authority, body or person is subject to the obligation of professional secrecy in the relevant third country and whether that information is only disclosed once the express agreement of the supervisory authority from which it originates has been obtained and, where appropriate, has been obtained solely for the purposes for which the authority gave its agreement.

CHAPTER IV
FINAL PROVISIONS

Article 381

This Regulation shall enter into force on the day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 10 October 2014.

For the Commission
The President
José Manuel BARROSO

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ANNEX I

LINES OF BUSINESS

A. **Non-life insurance obligations**(1) *Medical expense insurance*

Medical expense insurance obligations where the underlying business is not pursued on a similar technical basis to that of life insurance, other than obligations included in the line of business 3.

(2) *Income protection insurance*

Income protection insurance obligations where the underlying business is not pursued on a similar technical basis to that of life insurance, other than obligations included in the line of business 3.

(3) *Workers' compensation insurance*

Health insurance obligations which relate to accidents at work, industrial injury and occupational diseases and where the underlying business is not pursued on a similar technical basis to that of life insurance.

(4) *Motor vehicle liability insurance*

Insurance obligations which cover all liabilities arising out of the use of motor vehicles operating on land (including carrier's liability).

(5) *Other motor insurance*

Insurance obligations which cover all damage to or loss of land vehicles (including railway rolling stock).

(6) *Marine, aviation and transport insurance*

Insurance obligations which cover all damage or loss to sea, lake, river and canal vessels, aircraft, and damage to or loss of goods in transit or baggage irrespective of the form of transport. Insurance obligations which cover liabilities arising out of the use of aircraft, ships, vessels or boats on the sea, lakes, rivers or canals (including carrier's liability).

(7) *Fire and other damage to property insurance*

Insurance obligations which cover all damage to or loss of property other than those included in the lines of business 5 and 6 due to fire, explosion, natural forces including storm, hail or frost, nuclear energy, land subsidence and any event such as theft.

(8) *General liability insurance*

Insurance obligations which cover all liabilities other than those in the lines of business 4 and 6.

(9) *Credit and suretyship insurance*

Insurance obligations which cover insolvency, export credit, instalment credit, mortgages, agricultural credit and direct and indirect suretyship.

(10) *Legal expenses insurance*

Insurance obligations which cover legal expenses and cost of litigation.

(11) *Assistance*

Insurance obligations which cover assistance for persons who get into difficulties while travelling, while away from home or while away from their habitual residence.

(12) *Miscellaneous financial loss*

Insurance obligations which cover employment risk, insufficiency of income, bad weather, loss of benefit, continuing general expenses, unforeseen trading expenses, loss of market value, loss of rent or revenue, indirect trading losses other than those mentioned above, other financial loss (non-trading) as well as any other risk of non-life insurance not covered by the lines of business 1 to 11.

B. Proportional non-life reinsurance obligations

The lines of business 13 to 24 shall include proportional reinsurance obligations which relate to the obligations included in lines of business 1 to 12 respectively.

C. Non-proportional non-life reinsurance obligations

(25) *Non-proportional health reinsurance*

Non-proportional reinsurance obligations relating to insurance obligations included in lines of business 1 to 3.

(26) *Non-proportional casualty reinsurance*

Non-proportional reinsurance obligations relating to insurance obligations included in lines of business 4 and 8.

(27) *Non-proportional marine, aviation and transport reinsurance*

Non-proportional reinsurance obligations relating to insurance obligations included in line of business 6.

(28) *Non-proportional property reinsurance*

Non-proportional reinsurance obligations relating to insurance obligations included in lines of business 5, 7 and 9 to 12.

D. Life insurance obligations

(29) *Health insurance*

Health insurance obligations where the underlying business is pursued on a similar technical basis to that of life insurance, other than those included in line of business 33.

(30) *Insurance with profit participation*

Insurance obligations with profit participation other than obligations included in line of business 33 and 34.

(31) *Index-linked and unit-linked insurance*

Insurance obligations with index-linked and unit-linked benefits other than those included in lines of business 33 and 34.

(32) *Other life insurance*

Other life insurance obligations other than obligations included in lines of business 29 to 31, 33 and 34.

(33) *Annuities stemming from non-life insurance contracts and relating to health insurance obligations*

(34) *Annuities stemming from non-life insurance contracts and relating to insurance obligations other than health insurance obligations*

E. Life reinsurance obligations

(35) *Health reinsurance*

Reinsurance obligations which relate to the obligations included in lines of business 29 and 33.

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(36) *Life reinsurance*

Reinsurance obligations which relate to the obligations included in lines of business 30 to 32 and 34.

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ANNEX II

SEGMENTATION OF NON-LIFE INSURANCE AND REINSURANCE OBLIGATIONS AND STANDARD DEVIATIONS FOR THE NON-LIFE PREMIUM AND RESERVE RISK SUB-MODULE

	Segment	Lines of business, as set out in Annex I, that the segment consists of	Standard deviation for gross premium risk of the segment	Standard deviation for reserve risk of the segment
1	Motor vehicle liability insurance and proportional reinsurance	4 and 16	10 %	9 %
2	Other motor insurance and proportional reinsurance	5 and 17	8 %	8 %
3	Marine, aviation and transport insurance and proportional reinsurance	6 and 18	15 %	11 %
4	Fire and other damage to property insurance and proportional reinsurance	7 and 19	8 %	10 %
5	General liability insurance and proportional reinsurance	8 and 20	14 %	11 %
6	Credit and suretyship insurance and proportional reinsurance	9 and 21	12 %	19 %
7	Legal expenses insurance and proportional reinsurance	10 and 22	7 %	12 %
8	Assistance and its proportional reinsurance	11 and 23	9 %	20 %
9	Miscellaneous financial loss insurance and proportional reinsurance	12 and 24	13 %	20 %
10	Non-proportional casualty reinsurance	26	17 %	20 %
11	Non-proportional marine, aviation and transport reinsurance	27	17 %	20 %
12	Non-proportional property reinsurance	28	17 %	20 %

ANNEX III

FACTOR FOR GEOGRAPHICAL DIVERSIFICATION OF PREMIUM AND RESERVE RISK

1. For all segments set out in Annexes II and XIV, the factor for geographical diversification of a particular segment s referred to in Articles 116 and 147 shall be equal to the following:

$$DIV_s = \frac{\sum_r (V_{(prem,r,s)} + V_{(res,r,s)})^2}{(\sum_r (V_{(prem,r,s)} + V_{(res,r,s)}))^2}$$

where:

- (a) each of the sums cover all the geographical regions set out in paragraph 8;
 - (b) $V_{(prem,r,s)}$ denotes the volume measure for premium risk of the segment s and the region r ;
 - (c) $V_{(res,r,s)}$ denotes volume measure for reserve risk of the segment s and the region r .
2. For all segments set out in Annexes II and XIV and all geographical regions set out in paragraph 8, the volume measure for premium risk of a particular segment s and a particular region r shall be calculated in the same way as the volume measure for non-life or NSLT health premium risk of the segment s as referred to in Articles 116 and 147, but taking into account only insurance and reinsurance obligations where the underlying risk is situated in the region r .
 3. For all segments set out in Annexes II and XIV and all geographical regions set out in paragraph 8, the volume measure for reserve risk of a particular segment s and a particular region r shall be calculated in the same way as the volume measure for non-life or NSLT health reserve risk of the segment s as referred to in Articles 116 and 147, but taking into account only insurance and reinsurance obligations where the underlying risk is situated in the region r .
 4. For the purpose of the calculations set out in paragraphs 2 and 3, the criteria set out in Article 13(13) of Directive 2009/138/EC in the case of non-life insurance and the criteria set out in Article 13(14) of Directive 2009/138/EC in the case of life insurance shall be applied as if references in those criteria to Member States extended to regions also.
 5. Notwithstanding paragraph 1, the factor for geographical diversification shall be equal to 1 for segments 6, 10, 11 and 12 set out in Annex II and for segment 4 set out in Annex XIV.
 6. Notwithstanding paragraph 1, the factor for geographical diversification for a segment set out in Annex II shall be equal to 1 if insurance and reinsurance undertakings use an undertaking-specific parameter for the standard deviation for non-life premium risk or non-life reserve risk of the segment to calculate the non-life premium and reserve risk sub-module.
 7. Notwithstanding paragraph 1, the factor for geographical diversification for a segment set out in Annex XIV shall be equal to 1 if insurance and reinsurance undertakings use an undertaking-specific parameter for the standard deviation for NSLT health premium risk or NSLT health reserve risk of the segment to calculate the NSLT health premium and reserve risk sub-module.
 8. Regions for the calculation of the factor for geographical diversification

	Region	Territories that the region consists of
1	Northern Europe	Denmark (except Greenland), Estonia, Finland, Guernsey, Iceland, Ireland, Isle of Man, Jersey, Latvia, Lithuania, Norway, Sweden, United Kingdom (except Anguilla, Bermuda, British Virgin Islands, Cayman Islands, Falkland Islands, Gibraltar, Montserrat, Pitcairn Islands, Saint Helena, Turks and Caicos Islands)
2	Western Europe	Austria, Belgium, France (except French Guiana, French Polynesia, Guadeloupe, Martinique, Mayotte, New Caledonia, Réunion, Saint Barthélemy, Saint Martin, Saint Pierre and Miquelon, Wallis and Futuna), Germany, Liechtenstein, Luxembourg, Monaco, Netherlands (except Aruba, Bonaire, Curaçao, Saba, Sint Eustatius, Sint Maarten), Switzerland
3	Eastern Europe	Belarus, Bulgaria, Czech Republic, Hungary, Moldova, Poland, Romania, Russia, Slovakia, Ukraine

	Region	Territories that the region consists of
4	Southern Europe	Albania, Andorra, Bosnia and Herzegovina, Croatia, Cyprus, the former Yugoslav Republic of Macedonia, Gibraltar, Greece, Italy, Malta, Montenegro, Portugal, San Marino, Serbia, Slovenia, Spain, Vatican City State
5	Central and Western Asia	Armenia, Azerbaijan, Bahrain, Georgia, Iraq, Israel, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Oman, Qatar, Saudi Arabia, Syria, Tajikistan, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan, Yemen
6	Eastern Asia	China, Japan, Mongolia, North Korea, South Korea, Taiwan
7	South and South-Eastern Asia	Afghanistan, Bangladesh, Bhutan, Brunei, Burma/Myanmar, Cambodia, India, Indonesia, Iran, Laos, Malaysia, Maldives, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, East Timor, Vietnam
8	Oceania	American Samoa, Australia, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn Islands, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu, Wallis and Futuna
9	Northern Africa	Algeria, Benin, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Chad, Côte d'Ivoire, Egypt, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Libya, Mali, Mauritania, Morocco, Niger, Nigeria, Saint Helena, Senegal, Sierra Leone, South Sudan, Sudan, Togo, Tunisia
10	Southern Africa	Angola, Botswana, Burundi, Comoros, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Mayotte, Mozambique, Namibia, Congo, Réunion, Rwanda, São Tomé and Príncipe, Seychelles, Somalia, South Africa, Swaziland, Uganda, Tanzania, Zambia, Zimbabwe
11	Northern America excluding the United States of America	Bermuda, Canada, Greenland, Saint Pierre and Miquelon
12	Caribbean and Central America	Anguilla, Antigua & Barbuda, Aruba, Bahamas, Barbados, Belize, Bonaire, British Virgin Islands, Cayman Islands, Costa Rica, Cuba, Curaçao, Dominica, Dominican Republic, El Salvador, Grenada, Guadeloupe, Guatemala, Haiti, Honduras, Jamaica, Martinique, Mexico, Montserrat, Nicaragua, Panama, Puerto Rico, Saint Barthélemy, Saba, Saint Kitts and Nevis, Saint Lucia, Saint Martin, Saint Vincent and the Grenadines, Sint Eustatius, Sint Maarten, Trinidad and Tobago, Turks and Caicos Islands, US Virgin Islands
13	Eastern South America	Brazil, Falkland Islands, French Guiana, Guyana, Paraguay, Suriname, Uruguay
14	Northern, southern and western South America	Argentina, Bolivia, Chile, Colombia, Ecuador, Peru, Venezuela
15	North-east United States of America	Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont
16	South-east United States of America	Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, Virginia, West Virginia
17	Mid-west United States of America	Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Wisconsin
18	Western United States of America	Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Texas, Utah, Washington, Wyoming

CORRELATION MATRIX FOR NON-LIFE PREMIUM AND RESERVE RISK

The correlation parameter $\text{CorrS}(s,t)$ referred to in Article 117(1) shall be equal to the item set out in row s and in column t of the following correlation matrix. The headings of the rows and columns denote the numbers of the segments set out Annex II:

$s \backslash t$	1	2	3	4	5	6	7	8	9	10	11	12
1	1	0,5	0,5	0,25	0,5	0,25	0,5	0,25	0,5	0,25	0,25	0,25
2	0,5	1	0,25	0,25	0,25	0,25	0,5	0,5	0,5	0,25	0,25	0,25
3	0,5	0,25	1	0,25	0,25	0,25	0,25	0,5	0,5	0,25	0,5	0,25
4	0,25	0,25	0,25	1	0,25	0,25	0,25	0,5	0,5	0,25	0,5	0,5
5	0,5	0,25	0,25	0,25	1	0,5	0,5	0,25	0,5	0,5	0,25	0,25
6	0,25	0,25	0,25	0,25	0,5	1	0,5	0,25	0,5	0,5	0,25	0,25
7	0,5	0,5	0,25	0,25	0,5	0,5	1	0,25	0,5	0,5	0,25	0,25
8	0,25	0,5	0,5	0,5	0,25	0,25	0,25	1	0,5	0,25	0,25	0,5
9	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	1	0,25	0,5	0,25
10	0,25	0,25	0,25	0,25	0,5	0,5	0,5	0,25	0,25	1	0,25	0,25
11	0,25	0,25	0,5	0,5	0,25	0,25	0,25	0,25	0,5	0,25	1	0,25
12	0,25	0,25	0,25	0,5	0,25	0,25	0,25	0,5	0,25	0,25	0,25	1

ANNEX XI

LIABILITY RISK GROUPS, RISK FACTORS AND CORRELATION COEFFICIENTS FOR THE LIABILITY RISK SUB-MODULE

<i>i</i>	Liability risk group <i>i</i>	Risk factor $f_{(liability,i)}$
1	Professional malpractice liability insurance and proportional reinsurance obligations other than professional malpractice liability insurance and reinsurance for self-employed craftspersons or artisans	100 %
2	Employers liability insurance and proportional reinsurance obligations	160 %
3	Directors and officers liability insurance and proportional reinsurance obligations	160 %
4	Liability insurance and reinsurance obligations included in lines of business 8 and 20 as set out in Annex I, other than obligations included in liability risk groups 1 to 3 and other than personal liability insurance and proportional reinsurance and other than professional malpractice liability insurance and reinsurance for self-employed craftspersons or artisans	100 %
5	Non-proportional reinsurance of obligations relating to insurance obligations included in line of business 8 as set out in Annex I	210 %

For the purpose of the above table, the following definitions shall apply:

- Professional malpractice liability insurance obligations mean liability insurance obligations included in line of business 8 as set out in Annex I which cover liabilities arising out of professional practice in relation to clients and patients;
- Employers liability insurance obligations mean liability insurance obligations included in line of business 8 as set out in Annex I which cover liabilities of employers arising out of death, illness, accident, disability or infirmity of an employee in the course of the employment;
- Directors and officers insurance obligations mean liability insurance obligations included in line of business 8 as set out in Annex I which cover liabilities of directors and officers of a company, arising out of the management of that company, or losses of the company itself to the extent it indemnifies its directors and officers in relation to such liabilities.
- Personal liability insurance obligations mean liability insurance obligations included in line of business 8 as set out in Annex I which cover liabilities of natural persons in their capacity of private householders.

LIABILITY RISK CORRELATION COEFFICIENTS

<i>i</i> \ <i>j</i>	1	2	3	4	5
1	1	0	0,5	0,25	0,5
2	0	1	0	0,25	0,5
3	0,5	0	1	0,25	0,5
4	0,25	0,25	0,25	1	0,5
5	0,5	0,5	0,5	0,5	1

ANNEX XII

GROUPS OF OBLIGATIONS AND RISK FACTORS FOR THE SUB-MODULE FOR OTHER NON-LIFE CATASTROPHE RISK

<i>i</i>	Group of insurance and reinsurance obligations <i>i</i>	Risk factor c_i
1	Insurance and reinsurance obligations included in lines of business 6 and 18 as set out in Annex I other than marine insurance and reinsurance and aviation insurance and reinsurance	100 %
2	Reinsurance obligations included in line of business 27 as set out in Annex I other than marine reinsurance and aviation reinsurance	250 %
3	Insurance and reinsurance obligations included in lines of business 12 and 24 as set out in Annex I, other than extended warranty insurance and reinsurance obligations provided that the portfolio of these obligations is highly diversified and these obligation do not cover the costs of product recalls	40 %
4	Reinsurance obligations included in line of business 26 as set out in Annex I other than general liability reinsurance	250 %
5	Non-proportional reinsurance obligations relating to insurance obligations included in lines of business 9 and 21 as set out in Annex I	250 %

For the purpose of group 3, 'extended warranty insurance obligation' means insurance obligations which cover the cost of repair or replacement in the event of a breakdown of a consumer good used by the individuals in a private capacity and which may also provide additional cover against eventualities such as accidental damage, loss or theft and assistance in setting up, maintaining and operating the good.

ANNEX XIII

LIST OF REGIONS FOR WHICH NATURAL CATASTROPHE RISK IS NOT CALCULATED BASED ON PREMIUMS

- Member States of the European Union
- Principality of Andorra
- Republic of Iceland
- Principality of Lichtenstein
- Principality of Monaco
- Kingdom of Norway
- Republic of San Marino
- Swiss Confederation
- Vatican City State

ANNEX XIV

SEGMENTATION OF NSLT HEALTH INSURANCE AND REINSURANCE OBLIGATIONS AND STANDARD DEVIATIONS FOR THE NSLT HEALTH PREMIUM AND RESERVE RISK SUB-MODULE

	Segment	Lines of business, as set out in Annex I that the segment consists of	Standard deviation for gross premium risk of the segment	Standard deviation for reserve risk of the segment
1	Medical expense insurance and proportional reinsurance	1 and 13	5 %	5 %
2	Income protection insurance and proportional reinsurance	2 and 14	8.5 %	14 %
3	Workers' compensation insurance and proportional reinsurance	3 and 15	8 %	11 %
4	Non-proportional health reinsurance	25	17 %	20 %

ANNEX XV

CORRELATION MATRIX FOR NSLT HEALTH PREMIUM AND RESERVE RISK

The correlation parameter $\text{CorrHS}(s,t)$ referred to in Article 148(1) shall be equal to the item set out in row s and in column t of the following correlation matrix. The headings of the rows and columns denote the numbers of the segments set out Annex XIV:

$s \backslash t$	1	2	3	4
1	1	0,5	0,5	0,5
2	0,5	1	0,5	0,5
3	0,5	0,5	1	0,5
4	0,5	0,5	0,5	1

ANNEX XVI

HEALTH CATASTROPHE RISK SUB-MODULE OF THE SOLVENCY CAPITAL REQUIREMENT STANDARD
FORMULA

GEOGRAPHICAL SEGMENTATION AND RISK FACTORS FOR THE MASS ACCIDENT RISK SUB-MODULE

Country s	rs — Ratio of persons affected by the mass accident in country s
Republic of Austria	0,30 %
Kingdom of Belgium	0,25 %
Republic of Bulgaria	0,30 %
Republic of Croatia	0,40 %
Republic of Cyprus	1,30 %
Czech Republic	0,10 %
Kingdom of Denmark	0,35 %
Republic of Estonia	0,45 %
Republic of Finland	0,35 %
French Republic; Principality of Monaco; Principality of Andorra	0,05 %
Hellenic Republic	0,30 %
Federal Republic of Germany	0,05 %
Republic of Hungary	0,15 %
Republic of Iceland	2,45 %
Ireland	0,95 %
Italian Republic; Republic of San Marino; Vatican City State	0,05 %
Republic of Latvia	0,20 %
Republic of Lithuania	0,20 %
Grand Duchy of Luxemburg	1,05 %
Republic of Malta	2,15 %
Kingdom of the Netherlands	0,15 %
Kingdom of Norway	0,25 %
Republic of Poland	0,10 %
Portuguese Republic	0,30 %
Romania	0,15 %
Slovak Republic	0,30 %

Country s	r_s — Ratio of persons affected by the mass accident in country s
Republic of Slovenia	0,40 %
Kingdom of Spain	0,10 %
Kingdom of Sweden	0,25 %
Swiss Confederation	0,25 %
United Kingdom of Great Britain and Northern Ireland	0,05 %

DEFINITION OF EVENTS AND RISK FACTORS FOR THE MASS ACCIDENT RISK SUB-MODULE AND ACCIDENT CONCENTRATION RISK SUB-MODULE

Event type e	x_e — Ratio of persons which will be affected by event type e as the result of the accident
Death caused by an accident	10 %
Permanent disability caused by an accident	1,5 %
Disability that lasts 10 years caused by an accident	5 %
Disability that lasts 12 months caused by an accident	13,5 %
Medical treatment caused by an accident	30 %

DEFINITION OF HEALTHCARE UTILISATION AND RISK FACTORS FOR THE PANDEMIC RISK SUB-MODULE

Healthcare utilisation type h	H_h — Ratio of persons with clinical symptoms which will utilise healthcare of type h
Hospitalisation	1 %
Consultation with a medical practitioner	20 %
No formal medical care sought	79 %

ANNEX XVII

METHOD-SPECIFIC DATA REQUIREMENTS AND METHOD SPECIFICATIONS FOR UNDERTAKING-SPECIFIC PARAMETERS OF THE STANDARD FORMULA**A. Definitions and notations**

- (1) For the purpose of this Annex, the following definitions shall apply:
 - (a) 'accident year' means, with respect to a payment for an insurance or reinsurance claim, the year in which the insured event that gave rise to that claim took place;
 - (b) 'development year' means, with respect to a payment for an insurance or reinsurance claim, the difference between the year of that payment and the accident year of that payment.
 - (c) 'reporting year' means, with respect to a payment for an insurance or reinsurance claim, the year in which the insured event that gave rise to that claim was notified to the insurance or reinsurance undertaking;
 - (d) 'financial year' means, with respect to a payment for an insurance or reinsurance claim, the year in which this payment took place.
- (2) For the purpose of this annex, 'segment s' denotes the segment for which the undertaking-specific parameter is determined, being one of the segments set out in Annex II or one of the segments set out in Annex XIV.

B. Premium risk method**Input data and method-specific data requirements**

- (1) The data for estimating the undertaking-specific standard deviation of segment s shall consist of the following:
 - (a) the payments made and the best estimates of the provision for claims outstanding in segment s after the first development year of the accident year of those claims (aggregated losses);
 - (b) the premiums earned in segment s;Those aggregated losses and earned premiums shall be available separately for each accident year of the insurance and reinsurance claims in segment s.
- (2) The following method-specific data requirements shall apply:
 - (a) the data are representative for the premium risk that the insurance or reinsurance undertaking is exposed to during the following twelve months;
 - (b) data are available for at least five consecutive accident years;
 - (c) where the premium risk method is applied to replace the standard parameters referred to in Article 218(1)(a)(i) and (c)(i), the aggregated losses and earned premiums are not adjusted for recoverable from reinsurance contracts and special purpose vehicles or reinsurance premiums;
 - (d) where the premium risk method is applied to replace the standard parameters referred to in Article 218(1)(a)(ii) and (c)(ii):
 - i. the aggregated losses are adjusted for amounts recoverable from reinsurance contracts and special purpose vehicles which are consistent with the reinsurance contracts and special purpose vehicles that are in place to provide cover for the following twelve months;
 - ii. the earned premiums are adjusted for reinsurance premiums which are consistent with the reinsurance contracts and special purpose vehicles that are in place to provide cover for the following twelve months;
 - (e) the aggregated losses are adjusted for catastrophe claims to the extent that the risk of those claims is reflected in the non-life or health catastrophe risk sub-modules;
 - (f) the aggregated losses include the expenses incurred in servicing the insurance and reinsurance obligations;

- (g) the data fit the following assumptions:
- i. expected aggregated losses in a particular segment and accident year are linear proportional in premiums earned in a particular accident year;
 - ii. the variance of aggregated losses in a particular segment and accident year is quadratic in premiums earned in a particular accident year;
 - iii. aggregated losses follow a lognormal distribution;
 - iv. maximum likelihood estimation is appropriate.

Method specification

- (3) For the purpose of paragraphs 4-6, the following notation shall apply:
- (a) accident years are denoted by consecutive numbers starting with 1 for the first accident year for which data are available;
 - (b) T denotes the latest accident year for which data are available;
 - (c) for all accident years, the aggregated losses in segment s in a particular accident year t are denoted by y_t ;
 - (d) for all accident years, the premiums earned in segment s in a particular accident year t are denoted by x_t .
- (4) The undertaking-specific standard deviation of segment s shall be equal to the following:

$$\sigma_{(prem,s,t \sim \mathcal{N})} = c \cdot \hat{\sigma}(\hat{\delta}, \hat{\gamma}) \cdot \sqrt{\frac{T+1}{T-1}} + (1-c) \cdot \sigma_{(prem,s)}$$

where:

- (a) c denotes the credibility factor set out in section G;
 - (b) $\hat{\sigma}$ denotes the standard deviation function set out in paragraph 5;
 - (c) $\hat{\delta}$ denotes the mixing parameter set out in paragraph 6;
 - (d) $\hat{\gamma}$ denotes the logarithmic variation coefficient set out in paragraph 6.
 - (e) $\sigma_{(prem,s)}$ denotes the standard parameter that should be replaced by the undertaking-specific parameter.
- (5) The standard deviation function shall be equal to the following function of two variables:

$$\hat{\sigma}(\hat{\delta}, \hat{\gamma}) = \exp \left(\hat{\gamma} + \frac{\frac{1}{2}T + \sum_{t=1}^T \pi_t(\hat{\delta}, \hat{\gamma}) \cdot \ln \left(\frac{y_t}{x_t} \right)}{\sum_{t=1}^T \pi_t(\hat{\delta}, \hat{\gamma})} \right)$$

where:

- (a) $\hat{\delta}$ and $\hat{\gamma}$ are defined in point (c) and (d) of paragraph 4;
- (b) \exp denotes the exponential function;
- (c) \ln denotes the natural logarithm;
- (d) π_t denotes the following function of two variables:

$$\pi_t(\hat{\delta}, \hat{\gamma}) = \frac{1}{\ln \left(1 + \left((1-\hat{\delta}) \cdot \frac{\bar{x}}{x_t} + \hat{\delta} \right) \cdot e^{2\hat{\gamma}} \right)}$$

where:

- i. $\hat{\delta}$ and $\hat{\gamma}$ are defined in point (c) and (d) of paragraph 4;

ii. \bar{x} denotes the following amount:

$$\bar{x} = \frac{1}{T} \cdot \sum_{i=1}^T x_i$$

- (6) The mixing parameter and the logarithmic variation coefficient shall be the values $\hat{\delta}$ and $\hat{\gamma}$ respectively for which the following amount becomes minimal:

$$\sum_{i=1}^I \pi_i(\hat{\delta}, \hat{\gamma}) \left(\ln \left(\frac{y_i}{x_i} \right) + \frac{1}{2 \cdot \pi_i(\hat{\delta}, \hat{\gamma})} + \hat{\gamma} - \ln(\hat{\sigma}(\hat{\delta}, \hat{\gamma})) \right)^2 - \sum_{i=1}^I \ln(\pi_i(\hat{\delta}, \hat{\gamma}))$$

where:

- (a) \ln denotes the natural logarithm;
 (b) π_i denotes the function set out in point (d) of paragraph 5;
 (c) $\hat{\sigma}$ denotes the standard deviation function set out in paragraph 5;
 (d) \bar{x} denotes the following amount:

$$\bar{x} = \frac{1}{T} \cdot \sum_{i=1}^T x_i$$

For the determination of the minimal amount, no values for the mixing parameter less than zero or exceeding 1 shall be considered.

C. Reserve risk method 1

Input data and method-specific data requirements

- (1) The data for estimating the undertaking-specific standard deviation for non-life reserve risk or NSLT health reserve risk of segment s shall consist of the following:
- the sum of the best estimate provision at the end of the financial year for claims that were outstanding in segment s at the beginning of the financial year and the payments made during the financial year for claims that were outstanding in segment s at the beginning of the financial year;
 - the best estimate of the provision for claims outstanding in segment s at the beginning of the financial year.
- The amounts referred to in points (a) and (b) shall be available separately for different financial years.
- (2) The following method-specific data requirements shall apply:
- the data are representative for the reserve risk that the insurance or reinsurance undertaking is exposed to during the following twelve months
 - data are available for at least five consecutive financial years;
 - the data are adjusted for amounts recoverable from reinsurance contracts and special purpose vehicles which are consistent with the reinsurance contracts and special purpose vehicles that are in place to provide cover for the following twelve months;
 - the data include the expenses incurred in servicing the insurance and reinsurance obligations.
 - the data fit the following assumptions:
 - the amount referred to paragraph 1(a) in that particular segment and financial year is linear proportional in the best estimate of the provision for claims outstanding in that particular segment and financial year;
 - the variance of the amount referred to paragraph 1(a) in a particular segment and financial year is quadratic in the provision for claims outstanding in a particular segment and financial year;

- iii. the amount referred to paragraph 1(a) follows a lognormal distribution;
- iv. maximum likelihood estimation is appropriate.

Method specification

- (3) For the purpose of paragraphs 4-6, the following notation shall apply:
- (a) the financial years are denoted by consecutive numbers starting with 1 for the first financial year for which data are available;
 - (b) T denotes the latest financial year for which data are available;
 - (c) for all financial years, the amount referred to paragraph 1(a) in segment s in a particular financial year t is denoted by y_t ;
 - (d) for all financial years, the best estimate of the provision for claims outstanding in segment s in a particular financial year t are denoted by x_t .
- (4) The undertaking-specific standard deviation for non-life reserve risk or NSLT health reserve risk of segment s shall be equal to the following:

$$\sigma_{i, res, v, f, NSP, s} = c \cdot \hat{\sigma}(\hat{\delta}, \hat{\gamma}) \cdot \sqrt{\frac{T+1}{T-1}} + (1-c) \cdot \sigma_{i, res, v, s}$$

where:

- (a) c denotes the credibility factor set out in section G;
 - (b) $\hat{\sigma}$ denotes the standard deviation function set out in paragraph 5;
 - (c) $\hat{\delta}$ denotes the mixing parameter set out in paragraph 6;
 - (d) $\hat{\gamma}$ denotes the logarithmic variation coefficient set out in paragraph 6.
 - (e) $\sigma_{(pmm, s)}$ denotes the standard parameter that should be replaced by the undertaking-specific parameter.
- (5) The standard deviation function shall be equal to the following function of two variables:

$$\hat{\sigma}(\hat{\delta}, \hat{\gamma}) = \exp \left(\hat{\gamma} + \frac{\frac{1}{2}T + \sum_{t=1}^T \pi_t(\hat{\delta}, \hat{\gamma}) \cdot \ln \left(\frac{y_t}{x_t} \right)}{\sum_{t=1}^T \pi_t(\hat{\delta}, \hat{\gamma})} \right)$$

where:

- (a) $\hat{\delta}$ and $\hat{\gamma}$ are defined in point (c) and (d) of paragraph 4;
- (b) \exp denotes the exponential function;
- (c) \ln denotes the natural logarithm;
- (d) π_t denotes the following function of two variables:

$$\pi_t(\hat{\delta}, \hat{\gamma}) = \frac{1}{\ln \left(1 + \left((1-\hat{\delta}) \cdot \frac{\bar{x}}{x_t} + \hat{\delta} \right) \cdot e^{2\hat{\gamma}} \right)}$$

where:

- i. $\hat{\delta}$ and $\hat{\gamma}$ are defined in point (c) and (d) of paragraph 4;
- ii. \bar{x} denotes the following amount:

$$\bar{x} = \frac{1}{T} \cdot \sum_{t=1}^T x_t$$

- (6) The mixing parameter and the logarithmic variation coefficient shall be the values $\hat{\delta}$ and $\hat{\gamma}$ respectively for which the following amount becomes minimal:

$$\sum_{i=1}^T \pi_i(\hat{\delta}, \hat{\gamma}) \left(\ln\left(\frac{y_i}{x_i}\right) + \frac{1}{2 \cdot \pi_i(\hat{\delta}, \hat{\gamma})} + \hat{\gamma} - \ln(\hat{\sigma}(\hat{\delta}, \hat{\gamma})) \right)^2 - \sum_{i=1}^T \ln(\pi_i(\hat{\delta}, \hat{\gamma}))$$

where:

- (a) \ln denotes the natural logarithm;
- (b) π_i denotes the function set out in point (c) of paragraph 5;
- (c) $\hat{\sigma}$ denotes the standard deviation function set out in paragraph 5;
- (d) \bar{x} denotes the following amount:

$$\bar{x} = \frac{1}{T} \cdot \sum_{i=1}^T x_i$$

For the determination of the minimal amount, no values for the mixing parameter less than zero or exceeding 1 shall be considered.

D. Reserve risk method 2

Input data and method-specific data requirements

- (1) The data for estimating the undertaking-specific standard deviation for deviation for non-life reserve risk or NSLT health reserve risk of segment s shall consist of cumulative payment amounts for insurance or reinsurance claims in segment s (cumulative claims amounts), separately for each accident year and development year of the payments.
- (2) The following method-specific data requirements shall apply:
 - (a) the data are representative for the reserve risk that the insurance or reinsurance undertaking is exposed to during the following twelve months;
 - (b) data are available for at least five consecutive accident years;
 - (c) in the first accident year, data are available for at least five consecutive development years;
 - (d) in the first accident year the cumulative payment amount of the last development year for which data are available includes all the payments of the accident year except an immaterial amount;
 - (e) the number of consecutive accident years for which data are available is not less than the number of consecutive development years in the first accident year for which data are available;
 - (f) the cumulative claims amounts are adjusted for amounts recoverable from reinsurance contracts and special purpose vehicles which are consistent with the reinsurance contracts and special purpose vehicles that are in place to provide cover for the following twelve months;
 - (g) the cumulative claims amounts shall include the expenses incurred in servicing the insurance or reinsurance obligations;
 - (h) the data are consistent with the following assumptions about the stochastic nature of cumulative claims amounts:
 - i. cumulative claims amounts for different accident years are mutually stochastically independent;
 - ii. for all accident years the implied incremental claim amounts are stochastically independent;

- iii. for all accident years the expected value of the cumulative claims amount for a development year is proportional to the cumulative claims amount for the preceding development year;
- iv. for all accident years the variance of the cumulative claims amount for a development year is proportional to the cumulative claims amount for the preceding development year.

For the purposes of point (d), a payment amount shall be considered to be material where ignoring it in the calculation of the undertaking-specific parameter could influence the decision-making or the judgement of the users of that information, including the supervisory authorities

Method specification

- (3) For the purpose of paragraphs 4 and 5, the following notation shall apply:
 - (a) the accident years are denoted by consecutive numbers starting with 0 for the first accident year for which data are available;
 - (b) I denotes the latest accident year for which data are available;
 - (c) J denotes the latest development year in the first accident year for which data are available;
 - (d) $C_{(i,j)}$ denotes the cumulative claims for accident year i and development year j .
- (4) The undertaking-specific standard deviation for non-life reserve risk or NSLT health reserve risk of segment s shall be equal to the following:

$$\sigma_{(res,s)} = c \cdot \frac{\sqrt{MSEP}}{\sum_{i=0}^I (\hat{C}_{(i,J)} - C_{(i,I-1)})} + (1 - c) \cdot \sigma_{(res,s)}$$

where:

- (a) c denotes the credibility factor set out in section G;
- (b) MSEP denotes the mean squared error of prediction as specified in paragraph 5;
- (c) for all accident years and development years, $\hat{C}_{(i,j)}$ denotes the cumulative claims estimate for the specific accident year i and development year j , being defined as follows:

$$\hat{C}_{(i,j)} = C_{(i,i-i)} \hat{f}_{i-i} \cdots \hat{f}_{j-2} \hat{f}_{j-1}$$

where for all development years \hat{f}_j denotes for development factor estimate of the specific development year j , being defined as follows:

$$\hat{f}_j = \frac{\sum_{i=0}^{I-1} C_{(i,j+1)}}{\sum_{i=0}^{I-1} C_{(i,j)}}$$

- (d) $\sigma_{(res,s)}$ denotes the standard parameter for non-life reserve risk or NSLT health reserve risk of segment s .
- (5) The mean squared error of prediction shall be equal to the following:

$$MSEP = \sum_{i=1}^I \hat{C}_{(i,J)}^2 \cdot \frac{\hat{Q}_{i-1}}{C_{(i,i-j)}} + \sum_{i=1}^I \sum_{k=1}^j \hat{C}_{(i,j)} \cdot \hat{C}_{(i,k)} \cdot \left(\frac{\hat{Q}_{i-1}}{S_{i-1}} + \sum_{j=i+1}^{J-1} \frac{C_{(i,j,j)}}{S'_j} \cdot \frac{\hat{Q}_j}{S_j} \right)$$

where:

- (a) for all accident years and development years, $\hat{C}_{(i,j)}$ denotes the cumulative claim estimate in the specific accident year i and development year j , as set out in paragraph 4(c).
- (b) for all development years, S_j denotes for a specific development year j the following amount:

$$S_j = \sum_{i=0}^{I-j-1} C_{(i,j)}$$

(c) for all development years, S'_j denotes for a specific development year j the following amount:

$$S'_j = \sum_{i=0}^{t-j} C_{(ij)}$$

(d) for all development years, \hat{Q}_j denotes for a specific development year j the following amount:

$$\hat{Q}_j = \frac{\hat{\sigma}_j^2}{\hat{f}_j^2}$$

where:

(i) \hat{f}_j denotes the development factor estimate of development year j as set out in paragraph 4(c);

(ii) $\hat{\sigma}_j^2$ denotes the following amount:

$$\hat{\sigma}_j^2 = \frac{1}{T-j-1} \sum_{i=j}^{t-1} C_{(i,j)} \left(\frac{C_{(i,j-1)}}{C_{(i,j)}} - \hat{f}_j \right)^2 \quad j = 0, \dots, (J-2)$$

$$\hat{\sigma}_j^2 = \min \left(\hat{\sigma}_{j-2}^2, \hat{\sigma}_{j-1}^2, \frac{\hat{\sigma}_{j-1}^2}{\hat{\sigma}_{j-2}^2} \right) \quad j = (J-1)$$

E. Revision risk method

Input data and method-specific data requirements

- (1) The data for estimating the undertaking-specific increase in the amount of annuity benefits shall consist of annual amounts of annuity benefits of annuity insurance obligations where the benefits payable could increase as a result of changes in the legal environment or in the state of health of the person insured (annuity benefits), separately for consecutive financial years and each beneficiary.
- (2) The following method-specific data requirements shall apply:
 - (a) the data are representative for the revision risk that the insurance or reinsurance undertaking is exposed to during the following twelve months;
 - (b) data are available for at least five consecutive financial years;
 - (c) the annuity benefits are gross, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles;
 - (d) the annuity benefits shall include the expenses incurred in servicing the annuity obligations;
 - (e) the data are consistent with the following assumptions about the stochastic nature of increases in the amount of annuity benefits:
 - i. the annual number of annuity increases follows a negative binomial distribution, including in the tail of the distribution;
 - ii. the amount of an annuity increase follows a lognormal distribution, including in the tail of the distribution;
 - iii. the annual number of annuity increases and the amounts of the annuity increase are mutually stochastically independent.

Method specification

- (3) For the purpose of paragraphs 4-8, the following notation shall apply:
 - (a) the financial years are denoted by consecutive numbers starting with 1 for the first financial year for which data are available;
 - (b) T denotes the latest financial year for which data are available;

- (c) $A_{(i,t)}$ denotes the annuity benefits of beneficiary i in financial year t ;
- (d) $D_{(i,t)}$ denotes the change of annuity benefits after financial year t , being equal to the following difference:

$$D_{(i,t)} = A_{(i,t)} - A_{(i,t-1)}$$

- (4) The undertaking-specific increase in the amount of annuity benefits shall be equal to the following:

$$S_{USP} = c \cdot \frac{VaR_{0,995}(R) - \bar{R}}{\bar{R}} + (1 - c) \cdot S$$

where:

- (a) c denotes the credibility factor set out in section G;
- (b) \bar{R} denotes the expected value of annuity increases set out in paragraph 5;
- (c) $VaR_{0,995}(R)$ denotes the 99,5 % quantile of the distribution of annuity increases set out in paragraph 6;
- (d) S is equal to 3 % where the calculation is done for the purpose of the revision risk sub-module set out in Article 141 and equal to 4 % where the calculation is done for the purpose of the health revision risk sub-module set out in Article 158.
- (5) The expected value of annuity increases shall be equal to the following:

$$\bar{R} = \bar{X} \cdot \bar{N}$$

where:

- (a) \bar{X} denotes the estimated average change in annuity benefits, restricted to those changes in of annuity benefits that are larger than zero;
- (b) \bar{N} denotes the estimated average number, per financial year, of changes in annuity benefits that are larger than zero.
- (6) The annuity increases shall be equal to the following:

$$R = \sum_{k=1}^N X_k$$

where:

- (a) N denotes the annual number of annuity increases and follows a negative binominal distribution with an expected value that is equal to the estimated number of changes in annuity benefits set out in point (b) of paragraph 5 and with a standard deviation that is equal to the estimated standard deviation of the number of changes in annuity benefits set out in paragraph 7;
- (b) X_k denotes the amount of an annuity increase and follows a lognormal distribution with an expected value that is equal to the estimated average change in annuity benefits set out in point (a) of paragraph 5 and with a standard deviation that is equal to the estimated standard deviation of changes in annuity benefits set out in paragraph 8;
- (c) the annual number of annuity increases and the amounts of the annuity increase are mutually stochastically independent.
- (7) The estimated standard deviation of the number of changes in annuity benefits shall be equal to the following:

$$\hat{\sigma}_N = \sqrt{\frac{1}{T-1} \cdot \sum_{t=1}^T (N_t - \bar{N})^2}$$

where:

- (a) N_t denotes the number of changes in annuity benefits in financial years t that are larger than zero;
- (b) \bar{N} denotes the estimated average change in annuity benefits set out in point (b) of paragraph 5.

- (8) The estimated standard deviation of changes in annuity benefits shall be equal to the following:

$$\hat{\sigma}_v = \sqrt{\frac{1}{n-1} \cdot \sum_{i,t} (D_{(i,t)} - \bar{X})^2}$$

where:

- (a) the sum includes only those beneficiaries i and financial years t for which $D_{(i,t)}$ is larger than zero;
- (b) n denotes the number of summands of the sum referred to in point (a);
- (c) \bar{X} denotes the estimated average change in annuity benefits set out in point (a) of paragraph 5.

F. Non-proportional reinsurance method

Input data and method-specific data requirements

- (1) The data for estimating the undertaking-specific adjustment factor for non-proportional reinsurance shall consist of the ultimate claim amounts of insurance and reinsurance claims that were reported to the insurance or reinsurance undertaking in segment s during the last financial years, separately for each insurance and reinsurance claim.
- (2) The following method-specific data requirements shall apply:
 - (a) the data are representative for the premium risk that the insurance or reinsurance undertaking is exposed to during the following twelve months;
 - (b) the data do not indicate a higher premium risk than reflected in the standard deviation for premium risk used to calculate the Solvency Capital Requirement;
 - (c) the ultimate claim amounts are estimated in the year the insurance and reinsurance claims were reported;
 - (d) data are available for at least five reporting years;
 - (e) where the recognisable excess of loss reinsurance contract applies to gross claims, the ultimate claim amounts are gross;
 - (f) where the recognisable excess of loss reinsurance contract applies to claims after deduction of the recoverables from certain other reinsurance contracts and special purpose vehicles, the amounts receivable from those certain other reinsurance contracts and special purpose vehicles are deducted from the ultimate claim amounts;
 - (g) the ultimate claim amounts shall not include expenses incurred in servicing the insurance and reinsurance obligations;
 - (h) the data are consistent with the assumption that ultimate claim amounts follow a lognormal distribution, including in the tail of the distribution.

Method specification

- (3) For the purpose of paragraphs 4-7, the following notation shall apply:
 - (a) insurance and reinsurance claims for which data are available are denoted by consecutive numbers starting with 1;
 - (b) n denotes the number of insurance and reinsurance claim for which data are available;
 - (c) Y_i denotes the ultimate claim amount of insurance or reinsurance claim i ;
 - (d) μ and ω denote the first and second moment, respectively, of the claim amount distribution, being equal to the following amounts:

$$\mu = \frac{1}{n} \sum_{i=1}^n Y_i \text{ and } \omega = \frac{1}{n} \sum_{i=1}^n Y_i^2$$

- (e) b_1 denotes the amount of the retention of the recognisable excess of loss reinsurance contract referred to in Article 218(2);
- (f) where the recognisable excess of loss reinsurance contract referred to in Article 196(1) provides compensation only up to a specified limit, b_2 denotes the amount of that limit.
- (4) The undertaking-specific specific adjustment factor for non-proportional reinsurance shall be equal to the following:

$$NP_{USP} = c \cdot NP' + (1 - c) \cdot NP$$

where:

- (a) c denotes the credibility factor set out in section G;
- (b) NP' denotes the estimated adjustment factor for non-proportional reinsurance set out in paragraph 5;
- (c) NP denotes the adjustment factor for non-proportional reinsurance set out in Article 117(2).
- (5) The estimated adjustment factor for non-proportional reinsurance shall be equal to the following:

$$NP' = \begin{cases} \sqrt{\frac{\omega_1 - \omega_2 + \omega + 2 \cdot (b_2 - b_1) \cdot (\mu_2 - \mu)}{\omega}}, & \text{where paragraph 3(f) applies,} \\ \sqrt{\frac{\omega_1}{\omega}} & \text{else.} \end{cases}$$

where the parameters μ_2 , ω_1 and ω_2 are set out in paragraph 6.

- (6) The parameters, μ_2 , ω_1 and ω_2 shall be equal to the following:

$$\begin{aligned} \mu_2 &= \mu \cdot N\left(\frac{\ln(b_2) - \vartheta}{\eta} - \eta\right) + b_2 \cdot N\left(-\frac{\ln(b_2) - \vartheta}{\eta}\right) \\ \omega_1 &= \omega \cdot N\left(\frac{\ln(b_1) - \vartheta}{\eta} - 2 \cdot \eta\right) + b_1^2 \cdot N\left(-\frac{\ln(b_1) - \vartheta}{\eta}\right) \\ \omega_2 &= \omega \cdot N\left(\frac{\ln(b_2) - \vartheta}{\eta} - 2 \cdot \eta\right) + b_2^2 \cdot N\left(-\frac{\ln(b_2) - \vartheta}{\eta}\right) \end{aligned}$$

where:

- (a) N denotes the cumulative probability function of the normal distribution;
- (b) \ln denotes the natural logarithm;
- (c) the parameters ϑ and η are equal to the following:

$$\begin{aligned} \vartheta &= 2\ln\mu - \frac{1}{2}\ln\omega \\ \eta &= \sqrt{\ln\omega - 2\ln\mu}. \end{aligned}$$

- (7) Notwithstanding paragraph 5, where non-proportional reinsurance covers homogeneous risk-groups within a segment, the estimated adjustment factor for non-proportional reinsurance shall be equal to the following:

$$NP' = \frac{\sum_h V_{(prem,h)} \cdot NP'_{(h)}}{\sum_h V_{(prem,h)}}$$

where:

- (a) $V_{(prem,h)}$ denotes the volume measure for premium risk of the homogeneous risk group h determined in accordance with paragraph 3 of Article 116;
- (b) $NP'_{(h)}$ denotes the estimated adjustment factor for non-proportional reinsurance of homogeneous risk group h determined in accordance with paragraph 5.

G. Credibility factor

(1) The credibility factor for segments 1, 5 and 6 set out in Annex II shall be equal to the following:

Time lengths in years	Credibility factor c
5	34 %
6	43 %
7	51 %
8	59 %
9	67 %
10	74 %
11	81 %
12	87 %
13	92 %
14	96 %
15 and larger	100 %

(2) The credibility factor for segments 2 to 4 and 7 to 12 set out in Annex II, for the segments set out Annex XIV and for the revision risk method shall be equal to the following:

Time lengths in years	Credibility factor c
5	34 %
6	51 %
7	67 %
8	81 %
9	92 %
10 and larger	100 %

(3) The time length shall be equal to the following:

- (a) for the premium risk method, the number of accident years for which data are available;
- (b) for reserve risk method 1, the number of financial years for which data are available;
- (c) for reserve risk method 2, the number of accident years for which data are available;
- (d) for the revision risk method, the number of financial years for which data are available;
- (e) for the non-proportional reinsurance method, the number of reporting years for which data are available.

ANNEX XVIII

INTEGRATION TECHNIQUES FOR PARTIAL INTERNAL MODELS

A. General provisions

- (1) For the purposes of this Annex, the following definitions shall apply:
- (a) 'unit of the partial internal model' is a component of the partial internal model that is separately calculated and not aggregated within the partial internal model;
- (2) Where insurance and reinsurance undertakings apply integration techniques 1 to 5, their Solvency Capital Requirement shall be the sum of the following items:
- (a) the Basic Solvency Capital Requirements as laid down in sections C to F;
 - (b) the capital requirement for operational risk as laid down in Article 107 of Directive 2009/138/EC, where that capital requirement is not within the scope of the partial internal model, and calculated with the partial internal model, where that capital requirement is within the scope of the partial internal model;
 - (c) the adjustment for the loss-absorbing capacity of technical provisions and deferred taxes, as laid down in paragraph 3, where that adjustment is not within the scope of the partial internal model, and calculated with the partial internal model where that adjustment is within the scope of the partial internal model.
- (3) Where the adjustment for the loss-absorbing capacity of technical provisions and deferred taxes is not within the scope of the partial internal model, it shall be calculated as laid down in Articles 205 to 207, but with the following changes:
- (a) the Basic Solvency Capital Requirement referred to in Articles 206(1) and (2) and 207(1) is calculated in accordance with sections B to F;
 - (b) points (a) to (d) of Article 206(2) apply only to calculations with the standard formula;
 - (c) for the purposes of Article 206(2) the capital requirements used in the calculation of the Basic Solvency Capital Requirement that are calculated with the partial internal take into account the risk-mitigating effect provided by future discretionary benefits of insurance contracts;
 - (d) the capital requirement for operational risk referred to in Article 207(1)(c) is calculated in accordance with paragraph 2(b).

B. Integration technique 1

The Basic Solvency Capital Requirement shall be equal to the sum of the capital requirements for the units of the partial internal model, the capital requirement derived by applying the standard formula for the Basic Solvency Capital Requirement only to the risks that are out of the scope of the partial internal model and the capital requirement for intangible asset risk as set out in Article 203.

C. Integration technique 2

- (1) The Basic Solvency Capital Requirement shall be equal to the following:

$$BSCR = \sqrt{\sum_{ij} Corr_{(ij)} \cdot SCR_i \cdot SCR_j} + SCR_{int}$$

where:

- (a) the sum covers all possible combinations (i,j) of the aggregation list set out in paragraph 2;
- (b) $Corr_{(ij)}$ denotes the correlation parameter, for items i and j of the aggregation list;
- (c) SCR_i and SCR_j denote the capital requirements for the items i and j of the aggregation list respectively;
- (d) SCR_{int} denotes the capital requirement for intangible asset risk as set out in Article 203.

- (2) The items on the aggregation list shall meet the following requirements:
- (a) they shall cover each of the units of the partial internal model;
 - (b) none of the following sub-modules of the standard formula shall be within the scope of the partial internal model:
 - i. the sub-modules of the non-life underwriting risk module set out in Article 114(1);
 - ii. the sub-modules of the life underwriting risk module set out in Article 105(3) of Directive 2009/138/EC;
 - iii. the sub-modules of the health underwriting risk module set out in Article 151(1);
 - iv. the sub-modules of the market risk module set out in Article 105(5) of Directive 2009/138/EC;
 - (c) the counterparty default risk module of the standard formula shall not be within the scope of the partial internal model.

However, where none of the sub-modules of a module of the standard formula are within the scope of the partial internal module, the aggregation list shall include that module instead of its sub-modules.

- (3) The correlation parameters referred to in point (b) of paragraph 1 shall comply with the following requirements:
- (a) for all items i and j from the aggregation list the correlation parameter $Corr_{(i,j)}$ shall not be less than -1 and shall not exceed 1 ;
 - (b) for all items i and j from the aggregation list the correlation parameters $Corr_{(i,j)}$ and $Corr_{(j,i)}$ shall be equal;
 - (c) for all items i from the aggregation list the correlation parameter $Corr_{(i,i)}$ shall be equal to 1 ;
 - (d) for any assignment of real numbers to the items of the aggregation list the following shall hold:

$$\sum_{i,j} Corr_{(i,j)} \cdot x_i \cdot x_j \geq 0$$

where:

- i. the sum covers all possible combinations (i,j) of the aggregation list;
- ii. x_i and x_j are the numbers assigned to the items i and j , respectively, of the aggregation list;
- (e) where the items i and j from the aggregation list are modules of the standard formula, the correlation parameter $Corr_{(i,j)}$ shall be equal to the correlation parameter of the standard formula that is used to aggregate those two modules;
- (f) where the items i and j from the aggregation list are sub-modules of the same module of the standard formula, then the correlation parameter $Corr_{(i,j)}$ shall be equal to the correlation parameter of the standard formula that is used to aggregate those two sub-modules;
- (g) for all items i and j from the aggregation list the correlation parameter $Corr_{(i,j)}$ shall not be less than $Corr_{(i,j)}^{min}$ and shall not exceed $Corr_{(i,j)}^{max}$, where $Corr_{(i,j)}^{min}$ and $Corr_{(i,j)}^{max}$ are appropriate lower and upper bounds selected by the undertaking.

Insurance and reinsurance undertakings shall choose the correlation parameters referred to in point (b) of paragraph 1 in such a way that no other set of correlation parameters that meets the requirements set out in points (a) to (g) results in a higher Solvency Capital Requirement, calculated in accordance with paragraph 1.

D. Integration technique 3

- (1) The Basic Solvency Capital Requirement shall be equal to the following:

$$BSCR = \sqrt{S_S^2 + 2 \cdot S_S \cdot (\omega_1 \cdot P_C + \omega_2 \cdot P_S) + P^2} + SCR_{int}$$

where:

- (a) S_S denotes the capital requirement derived by applying the standard formula for the Basic Solvency Capital Requirement only to the risks not covered by the partial internal model;

- (b) ω_1 denotes the first implied correlation parameter as set out in paragraph 2;
 - (c) P_c denotes the capital requirement reflecting the risks that are both within the scope of the standard formula and the partial internal model, calculated with the partial internal model;
 - (d) ω_2 denotes the second implied correlation parameter as set out in paragraph 3;
 - (e) P_s is the capital requirement reflecting the risks within the scope of the partial internal model but not within the scope of the standard formula, calculated with the partial internal model;
 - (f) P denotes the capital requirement reflecting the risks that are within the scope of the partial internal model, calculated with the partial internal model.
 - (g) SCR_{int} denotes the capital requirement for intangible asset risk as set out in Article 203.
- (2) The first implied correlation parameter shall be equal to the following:

$$\omega_1 = \frac{S^2 - S_s^2 - S_c^2}{d_1 + 2 \cdot S_s \cdot S_c}$$

where:

- (a) S denotes the capital requirement calculated in the same way as the Basic Solvency Capital Requirement by means of the standard formula, but where capital requirements for modules or sub-modules are replaced by capital requirements for those modules or sub-modules that are calculated with the partial internal model where possible;
 - (b) S_c denotes the capital requirement derived by applying the standard formula for the Basic Solvency Capital Requirement only to the risks that are within the scope of the standard formula and the partial internal model, but where the capital requirements for the modules and sub-modules are replaced by capital requirements for those modules or sub-modules that are calculated with the partial internal model;
 - (c) S_s is defined as in paragraph 1(a);
 - (d) d_1 is equal to 1 where S_s or S_c are zero and equal to zero where S_s and S_c are different from zero.
- (3) The second implied correlation parameter shall be equal to the following:

$$\omega_2 = \omega_1 \cdot \omega_3 + \frac{1}{2} \cdot \sqrt{(1 - \omega_1^2) \cdot (1 - \omega_3^2)}$$

where ω_1 is as defined in paragraph 2 and ω_3 is the third implied correlation parameter as set out in paragraph 4.

- (4) The third implied correlation parameter shall be equal to the following:

$$\omega_3 = \frac{P^2 - P_s^2 - P_c^2}{d_2 + 2 \cdot P_s \cdot P_c}$$

where:

- (a) P , P_s and P_c are as defined in paragraph 1;
- (b) d_2 is equal to 1 where P_s or P_c are zero and equal to zero where P_s and P_c are different from zero.

E. Integration technique 4

- (1) The Basic Solvency Capital Requirement shall be equal to the following:

$$BSCR = \sqrt{P^2 + S_s^2 + \sum_{j=k+1}^n 2 \cdot S_j \cdot \left(\sum_{i=1}^l \text{Corr}_{(i,j)} \cdot P_i + \sum_{i=1}^k \text{Corr}_{(i,j)} \cdot S_i \right)} + SCR_{int}$$

where:

- (a) P denotes the capital requirement reflecting the risks that are within the scope of the partial internal model, calculated with the partial internal model;

- (b) S_s denotes the capital requirement derived by applying the standard formula for the Basic Solvency Capital Requirement only to the risks not covered by the partial internal model;
 - (c) k denotes the number of modules of the standard formula that are within the scope of the partial internal model;
 - (d) n denotes the number of modules of the standard formula;
 - (e) l denotes the number of modules of the standard formula for each of which the capital requirement can be calculated with the partial internal model;
 - (f) $Corr_{(i,j)}$ denotes the correlation parameter of the standard formula for the aggregation of modules i and j ;
 - (g) P_i denotes the capital requirement for the module i of the standard formula, calculated with the partial internal model;
 - (h) S_i and S_j denote the capital requirement for modules i and j of the standard formula respectively which are calculated in the following way:
 - i. the module is calculated with the standard formula provided that the module does not consist of sub-modules;
 - ii. the module is calculated in accordance with paragraph 2 provided that the module consist of sub-modules.
 - (i) SCR_{int} denotes the capital requirement for intangible asset risk as set out in Article 203.
- (2) For all modules of the standard formula referred to in paragraph 1(h)(ii), the capital requirement of a particular module shall be calculated with the formula set out in paragraph 1, applying the following denominations:
- (a) P denotes the capital requirement reflecting the risks of the sub-modules of that particular module which are within the scope of the partial internal model, calculated with the partial internal model;
 - (b) S_s denotes the capital requirement derived by applying that particular module only to the risks not covered by the partial internal model;
 - (c) k denotes the number of sub-modules of that particular module that are within the scope of the partial internal model;
 - (d) n denotes the number of sub-modules of that particular module;
 - (e) l denotes the number of sub-modules of that particular module for each of which the capital requirement can be calculated with the partial internal model;
 - (f) $Corr_{(i,j)}$ denotes the correlation parameter of the standard formula for the aggregation of sub-modules i and j of that particular module;
 - (g) P_i denotes the capital requirement for the sub-module i of that particular module, calculated with the partial internal model;
 - (h) S_i and S_j denote the capital requirement for sub-modules i and j of that particular module respectively which are calculated in the following way:
 - i. the sub-module is calculated with the standard formula provided that the sub-module does not consist of other sub-modules;
 - ii. the sub-module is calculated in accordance with paragraph 3 provided that the sub-module consist of other sub-modules.
 - (i) SCR_{int} shall be set to zero.
- (3) For all sub-modules of the standard formula referred to in paragraph 2(h)(ii), the capital requirement of a particular sub-module shall be calculated with the formula set out in paragraph 1, applying the following denominations:
- (a) P denotes the capital requirement reflecting the risks of the sub-modules of that particular sub-module which are within the scope of the partial internal model, calculated with the partial internal model;

- (b) S_s denotes the capital requirement derived by applying that particular sub-module only to the risks not covered by the partial internal model;
- (c) k denotes the number of sub-modules of that particular sub-module that are within the scope of the partial internal model;
- (d) n denotes the number of sub-modules of that particular sub-module;
- (e) l denotes the number of sub-modules of that particular sub-module for each of which the a capital requirement can be calculated with the partial internal model;
- (f) $Corr_{(i,j)}$ denotes the correlation parameter of the standard formula for the aggregation of sub-modules i and j of that particular sub-module;
- (g) P_i denotes the capital requirement for the sub-module i of that particular sub-module, calculated with the partial internal model;
- (h) S_i and S_j denote the capital requirement for sub-modules i and j of that particular sub-module respectively which are calculated in the following way:
 - i. the sub-module is calculated with the standard formula provided that the sub-module does not consists of other sub-modules;
 - ii. the sub-module is calculated in accordance with this paragraph provided that the sub-module consist of other sub-modules.
- (i) SCR_{int} shall be set to zero.

F. Integration technique 5

- (1) The Basic Solvency Capital Requirement shall be equal to the following:

$$BSCR = \sqrt{P^2 + S_s^2 + \frac{2 \cdot P}{\sqrt{\sum_{i=1}^k \sum_{j=1}^k Corr_{(i,j)} \cdot S_i \cdot S_j}} \cdot \sum_{j=k+1}^n \sum_{i=1}^k Corr_{(i,j)} \cdot S_i \cdot S_j + SCR_{int}}$$

where:

- (a) P , S_s , k , n , $Corr_{(i,j)}$ and SCR_{int} are defined as in paragraph 1 of section E;
 - (b) S_i and S_j denote the capital requirement for modules i and j respectively of the standard formula which are calculated in the following way:
 - i. the module is calculated with the standard formula provided that the module does not consists of sub-modules;
 - ii. the module is calculated in accordance with paragraph 2 provided that the module consist of sub-modules.
- (2) For all modules of the standard formula referred to in paragraph 1(b)(ii), the capital requirement of a particular module shall be calculated with the formula set out in paragraph 1, applying the following denominations:
- (a) P , S_s , k , n , $Corr_{(i,j)}$ and SCR_{int} are defined as in paragraph 2 of section E;
 - (b) S_i and S_j denote the capital requirement for sub-modules i and j of that particular module respectively which are calculated in the following way:
 - i. the sub-module is calculated with the standard formula provided that the sub-module does not consists of other sub-modules;
 - ii. the sub-module is calculated in accordance with paragraph 3 provided that the sub-module consist of other sub-modules.

- (3) For all modules of the standard formula referred to in paragraph 2(b)(ii), the capital requirement of a particular module shall be calculated with the formula set out in paragraph 1, applying the following denominations:
- (a) P , S , k , n , $Corr_{(i,j)}$ and SCR_{in} are defined as in paragraph 3 of section E;
 - (b) S_i and S_j denote the capital requirement for sub-modules i and j of that particular module respectively which are calculated in the following way:
 - i. the sub-module is calculated with the standard formula provided that the sub-module does not consists of other sub-modules;
 - ii. the sub-module is calculated in accordance with this paragraph provided that the sub-module consist of other sub-modules.
-

ANNEX XIX

MCR RISK FACTORS FOR NON-LIFE AND HEALTH INSURANCE OR REINSURANCE OBLIGATIONS

	Segment	Lines of business, as set out in Annex I, that the segment consists of	Factor for technical provisions for segments (α_i)	Factor for premiums written for segments (β_i)
1	Medical expense insurance	1 and 13	4,7 %	4,7 %
2	Income protection insurance	2 and 14	13,1 %	8,5 %
3	Workers' compensation insurance	3 and 15	10,7 %	7,5 %
4	Motor vehicle liability insurance and proportional reinsurance	4 and 16	8,5 %	9,4 %
5	Other motor insurance and proportional reinsurance	5 and 17	7,5 %	7,5 %
6	Marine, aviation and transport insurance and proportional reinsurance	6 and 18	10,3 %	14 %
7	Fire and other damage to property insurance and proportional reinsurance	7 and 19	9,4 %	7,5 %
8	General liability insurance and proportional reinsurance	8 and 20	10,3 %	13,1 %
9	Credit and suretyship insurance and proportional reinsurance	9 and 21	17,7 %	11,3 %
10	Legal expenses insurance and proportional reinsurance	10 and 22	11,3 %	6,6 %
11	Assistance and its proportional reinsurance	11 and 23	18,6 %	8,5 %
12	Miscellaneous financial loss insurance and proportional reinsurance	12 and 24	18,6 %	12,2 %
13	Non-proportional casualty reinsurance	26	18,6 %	15,9 %
14	Non-proportional marine, aviation and transport reinsurance	27	18,6 %	15,9 %
15	Non-proportional property reinsurance	28	18,6 %	15,9 %
16	Non-proportional health reinsurance	25	18,6 %	15,9 %

Fylgiskjal II.

COMMISSION DELEGATED REGULATION (EU) 2016/467

of 30 September 2015

amending Commission Delegated Regulation (EU) 2015/35 concerning the calculation of regulatory capital requirements for several categories of assets held by insurance and reinsurance undertakings

(Text with EEA relevance)

Article 1

Amending provisions

Commission Delegated Regulation (EU) 2015/35 is amended as follows:

(1) in Article 1, the following points 55a and 55b are inserted:

‘55a. “Infrastructure assets” means physical structures or facilities, systems and networks that provide or support essential public services.

55b. “Infrastructure project entity” means an entity which is not permitted to perform any other function than owning, financing, developing or operating infrastructure assets, where the primary source of payments to debt providers and equity investors is the income generated by the assets being financed.’;

(2) Article 13 is amended as follows:

(a) in paragraph 2, point (a) is replaced by the following:

‘(a) undertakings that are excluded from the scope of the group supervision under Article 214(2) of Directive 2009/138/EC’;

(b) paragraph 6 is replaced by the following:

‘6. Where the criteria referred to in Article 9(4) of this Regulation are satisfied, and where the use of the valuation methods referred to in points (a) and (b) of paragraph 1 is not possible, holdings in related undertakings may be valued based on the valuation method the insurance or reinsurance undertakings uses for preparing its annual or consolidated financial statements. In such cases, the participating undertaking shall deduct from the value of the related undertaking the value of goodwill and other intangible assets that would be valued at zero in accordance with Article 12(2) of this Regulation.’;

(3) in Article 68, paragraph 3 is replaced by the following:

'3. Notwithstanding paragraphs 1 and 2, insurance and reinsurance undertakings shall not deduct strategic participations as referred to in Article 171 which are included in the calculation of the group solvency on the basis of method 1 as set out in Annex 1 to Directive 2002/87/EC or on the basis of method 1 as set out in Article 230 of Directive 2009/138/EC.;

(4) in Title I, Chapter V, Section 5, the following Subsection 1a is inserted:

'Subsection 1a

Qualifying infrastructure investments

Article 164a

Qualifying infrastructure investments

1. For the purposes of this Regulation, qualifying infrastructure investment shall include investment in an infrastructure project entity that meets the following criteria:

- (a) the infrastructure project entity can meet its financial obligations under sustained stresses that are relevant for the risk of the project;
- (b) the cash flows that the infrastructure project entity generates for debt providers and equity investors are predictable;
- (c) the infrastructure assets and infrastructure project entity are governed by a contractual framework that provides debt providers and equity investors with a high degree of protection including the following:
 - (a) where the revenues of the infrastructure project entity are not funded by payments from a large number of users, the contractual framework shall include provisions that effectively protect debt providers and equity investors against losses resulting from the termination of the project by the party which agrees to purchase the goods or services provided by the infrastructure project entity;
 - (b) the infrastructure project entity has sufficient reserve funds or other financial arrangements to cover the contingency funding and working capital requirements of the project;

Where investments are in bonds or loans, this contractual framework shall also include the following:

- (i) debt providers have security to the extent permitted by applicable law in all assets and contracts necessary to operate the project;
 - (ii) equity is pledged to debt providers such that they are able to take control of the infrastructure project entity prior to default;
 - (iii) the use of net operating cash flows after mandatory payments from the project for purposes other than servicing debt obligations is restricted;
 - (iv) contractual restrictions on the ability of the infrastructure project entity to perform activities that may be detrimental to debt providers, including that new debt cannot be issued without the consent of existing debt providers;
- (d) where investments are in bonds or loans, the insurance or reinsurance undertaking can demonstrate to the supervisor that it is able to hold the investment to maturity;
 - (e) where investments are in bonds for which a credit assessment by a nominated ECAI is not available, the investment instrument is senior to all other claims other than statutory claims and claims from derivatives counterparties;
 - (f) where investments are in equities, or bonds or loans for which a credit assessment by a nominated ECAI is not available, the following criteria are met:
 - (i) the infrastructure assets and infrastructure project entity are located in the EEA or in the OECD;

- (ii) where the infrastructure project entity is in the construction phase the following criteria shall be fulfilled by the equity investor, or where there is more than one equity investor, the following criteria shall be fulfilled by a group of equity investors as a whole:
 - the equity investors have a history of successfully overseeing infrastructure projects and the relevant expertise,
 - the equity investors have a low risk of default, or there is a low risk of material losses for the infrastructure project entity as a result of the their default,
 - the equity investors are incentivised to protect the interests of investors;
 - (iii) the infrastructure project entity has established safeguards to ensure completion of the project according to the agreed specification, budget or completion date;
 - (iv) where operating risks are material, they are properly managed;
 - (v) the infrastructure project entity uses tested technology and design;
 - (vi) the capital structure of the infrastructure project entity allows it to service its debt;
 - (vii) the refinancing risk for the infrastructure project entity is low;
 - (viii) the infrastructure project entity uses derivatives only for risk-mitigation purposes.
2. For the purposes of paragraph 1(b), the cash flows generated for debt providers and equity investors shall not be considered predictable unless all except an immaterial part of the revenues satisfies the following conditions:
- (a) one of the following criteria is met:
 - (i) the revenues are availability-based;
 - (ii) the revenues are subject to a rate-of-return regulation;
 - (iii) the revenues are subject to a take-or-pay contract;
 - (iv) the level of output or the usage and the price shall independently meet one of the following criteria:
 - it is regulated,
 - it is contractually fixed,
 - it is sufficiently predictable as a result of low demand risk;
 - (b) where the revenues of the infrastructure project entity are not funded by payments from a large number of users, the party which agrees to purchase the goods or services provided by the infrastructure project entity shall be one of the following:
 - (i) an entity listed in Article 180(2) of this Regulation;
 - (ii) a regional government or local authority listed in the Regulation adopted pursuant to Article 109a(2)(a) of Directive 2009/138/EC;
 - (iii) an entity with an ECAI rating with a credit quality step of at least 3;
 - (iv) an entity that is replaceable without a significant change in the level and timing of revenues.;
- (5) Article 168 is amended as follows:
- (a) paragraphs 1, 2 and 3 are replaced by the following:
 - ‘1. The equity risk sub-module referred to in point (b) of the second subparagraph of Article 105(5) of Directive 2009/138/EC shall include a risk sub-module for type 1 equities, a risk sub-module for type 2 equities and a sub-risk module for qualifying infrastructure equities.

2. Type 1 equities shall comprise equities listed in regulated markets in countries which are members of the European Economic Area (EEA) or the Organisation for Economic Cooperation and Development (OECD), or traded on multilateral trading facilities, as referred to in Article 4(1)(22) of Directive 2014/65/EU, whose registered office or head office is in EU Member States.

3. Type 2 equities shall comprise equities other than those referred to in paragraph 2, commodities and other alternative investments. They shall also comprise all assets other than those covered in the interest rate risk sub-module, the property risk sub-module or the spread risk sub-module, including the assets and indirect exposures referred to in Article 84(1) and (2) where a look-through approach is not possible and the insurance or reinsurance undertaking does not make use of the provisions in Article 84(3).;

(b) the following paragraph 3a is inserted:

‘3a. Qualifying infrastructure equities shall comprise equity investments in infrastructure project entities that meet the criteria set out in Article 164a.’;

(c) paragraph 4 is replaced by the following:

‘4. The capital requirement for equity risk shall be equal to the following:

$$SCR_{equity} = \sqrt{SCR_{type1equities}^2 + 2 \cdot 0,75 \cdot SCR_{type1equities} \cdot (SCR_{type2equities} + SCR_{quinf}) + (SCR_{type2equities} + SCR_{quinf})^2}$$

where:

(a) $SCR_{type1equities}$ denotes the capital requirement for type 1 equities;

(b) $SCR_{type2equities}$ denotes the capital requirement for type 2 equities;

(c) SCR_{quinf} denotes the capital requirement for qualifying infrastructure equities.’;

(d) paragraph 6 is amended as follows:

(i) points (a) and (b) are replaced by the following:

‘(a) equities, other than qualifying infrastructure equities, held within collective investment undertakings which are qualifying social entrepreneurship funds as referred to in Article 3(b) of Regulation (EU) No 346/2013 of the European Parliament and of the Council (*) where the look-through approach set out in Article 84 of this Regulation is possible for all exposures within the collective investment undertaking, or units or shares of those funds where the look through approach is not possible for all exposures within the collective investment undertaking;

(b) equities, other than qualifying infrastructure equities, held within collective investment undertakings which are qualifying venture capital funds as referred to in Article 3(b) of Regulation (EU) No 345/2013 of the European Parliament and of the Council (**) where the look-through approach set out in Article 84 of this Regulation is possible for all exposures within the collective investment undertaking, or units or shares of those funds where the look through approach is not possible for all exposures within the collective investment undertaking;

(*) Regulation (EU) No 346/2013 of the European Parliament and of the Council of 17 April 2013 on European social entrepreneurship funds (OJ L 115, 25.4.2013, p. 18).

(**) Regulation (EU) No 345/2013 of the European Parliament and of the Council of 17 April 2013 on European venture capital funds (OJ L 115, 25.4.2013, p. 1).’;

(ii) in point (c), point (i) is replaced by the following:

‘(i) equities, other than qualifying infrastructure equities, held within such funds where the look-through approach set out in Article 84 of this Regulation is possible for all exposures within the alternative investment fund.’;

(iii) the following point (d) is added:

'(d) equities, other than qualifying infrastructure equities, held within collective investment undertakings which are authorised as European long-term investment funds pursuant to Regulation (EU) 2015/760 where the look through approach set out in Article 84 of this Regulation is possible for all exposures within the collective investment undertaking, or units or shares of those funds where the look through approach is not possible for all exposures within the collective investment undertaking.;

(6) in Article 169, the following paragraph 3 is added:

'3. The capital requirement for qualifying infrastructure equities referred to in Article 168 of this Regulation shall be equal to the loss in the basic own funds that would result from the following instantaneous decreases:

(a) an instantaneous decrease equal to 22 % in the value of qualifying infrastructure equity investments in related undertakings within the meaning of Article 212(1)(b) and 212(2) of Directive 2009/138/EC where these investments are of a strategic nature;

(b) an instantaneous decrease equal to the sum of 30 % and 77 % of the symmetric adjustment as referred to in Article 172 of this Regulation in the value of qualifying infrastructure equities other than those referred to in point (a).;

(7) in Article 170, the following paragraph 3 is added:

'3. Where an insurance or reinsurance undertaking has received supervisory approval to apply the provisions set out in Article 304 of Directive 2009/138/EC, the capital requirement for qualifying infrastructure equities shall be equal to the loss in the basic own funds that would result from an instantaneous decrease:

(a) equal to 22 % in the value of the qualifying infrastructure equity corresponding to the business referred to in point (i) of Article 304(1) of Directive 2009/138/EC;

(b) equal to 22 % in the value of qualifying infrastructure equity investments in related undertakings within the meaning of Article 212(1)(b) and (2) of Directive 2009/138/EC, where these investments are of a strategic nature;

(c) equal to the sum of 30 % and 77 % of the symmetric adjustment as referred to in Article 172 of this Regulation in the value of qualifying infrastructure equities other than those referred to in points (a) or (b).'

(8) in Article 171, the introductory sentence is replaced by the following:

'For the purposes of Article 169(1)(a), (2)(a) and (3)(a) and of Article 170(1)(b), (2)(b) and (3)(b), equity investments of a strategic nature shall mean equity investments for which the participating insurance or reinsurance undertaking demonstrates the following.;

(9) Article 173 is replaced by the following:

'Article 173

Criteria for the use of transitional measure for standard equity risk

1. The transitional measure for standard equity risk set out in Article 308b(13) of Directive 2009/138/EC shall only apply to equities that were purchased on or before 1 January 2016 and which are not subject to the duration-based equity risk pursuant to Article 304 of that Directive.

2. Where equities are held within an collective investment undertaking or other investments packaged as funds, and where the look-through approach is not possible, the transitional measure set out in Article 308b(13) of Directive 2009/138/EC shall be applied to the proportion of equities held within the collective investment undertaking or investment packaged as funds in accordance with the target underlying asset allocation on 1 January 2016, provided the target allocation is available to the undertaking. The proportion of equities to which the transitional is applied shall be reduced annually in proportion to the asset turnover ratio of the collective investment undertaking or investment packaged as funds. Where the target allocation for equity investments of the collective investment undertaking or investment packaged as funds increases, the proportion of equities the transitional is applied to shall not increase.;

(10) in Article 180, the following paragraphs 11, 12 and 13 are added:

‘11. Exposures in the form of bonds and loans that fulfil the criteria set out in paragraph 12 shall be assigned a risk factor $stress_i$ depending on the credit quality step and the duration of the exposure according to the following table:

Credit quality step		0		1		2		3	
Duration (dur_i)	$stress_i$	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i
up to 5	$b_i \cdot dur_i$	—	0,64 %	—	0,78 %	—	1,0 %	—	1,67 %
More than 5 and up to 10	$a_i + b_i \cdot (dur_i - 5)$	3,2 %	0,36 %	3,9 %	0,43 %	5,0 %	0,5 %	8,35 %	1,0 %
More than 10 and up to 15	$a_i + b_i \cdot (dur_i - 10)$	5,0 %	0,36 %	6,05 %	0,36 %	7,5 %	0,36 %	13,35 %	0,67 %
More than 15 and up to 20	$a_i + b_i \cdot (dur_i - 15)$	6,8 %	0,36 %	7,85 %	0,36 %	9,3 %	0,36 %	16,7 %	0,67 %
More than 20	$\min[a_i + b_i \cdot (dur_i - 20); 1]$	8,6 %	0,36 %	9,65 %	0,36 %	11,1 %	0,36 %	20,05 %	0,36 %

12. The criteria for exposures that are assigned a risk factor in accordance with paragraph 11 shall be:

- (a) the exposure relates to a qualifying infrastructure investment that meets the criteria set out in Article 164a;
- (b) the exposure is not an asset that fulfils the following conditions:
 - it is assigned to a matching adjustment portfolio in accordance with Article 77b(2) of Directive 2009/138/EC,
 - it has been assigned a credit quality step between 0 and 2;
- (c) a credit assessment by a nominated ECAI is available for the exposure;
- (d) the exposure has been assigned a credit quality step between 0 and 3.

13. Exposures in the form of bonds and loans that meet the criteria set out in paragraph 12(a) and (b), but do not meet the criteria set out in paragraph 12(c), shall be assigned a risk factor $stress_i$ equivalent to credit quality step 3 and the duration of the exposure in accordance with the table set out in paragraph 11.;

(11) The last sentence of Article 181(b) shall be replaced by the following:

‘For assets in the assigned portfolio for which no credit assessment by a nominated ECAI is available, and for qualifying infrastructure assets that have been assigned credit quality step 3, the reduction factor shall be 100 %.’

(12) the following Article 261a is inserted:

‘Article 261a

Risk management for qualifying infrastructure investments

1. Insurance and reinsurance undertakings shall conduct adequate due diligence prior to making a qualifying infrastructure investment, including all of the following:

- (a) a documented assessment of how the project satisfies the criteria set out in Article 164a, which has been subject to a validation process, carried out by persons that are free from influence from those persons responsible for the assessment of the criteria, and have no potential conflicts of interest with those persons;

- (b) a confirmation that any financial model for the cash flows of the project has been subject to a validation process carried out by persons that are free from influence from those persons responsible for the development of the financial model, and have no potential conflicts of interest with those persons.
2. Insurance and reinsurance undertakings with a qualifying infrastructure investment shall regularly monitor and perform stress tests on the cash flows and collateral values supporting the infrastructure project entity. Any stress tests shall be commensurate with the nature, scale and complexity of the risk inherent in the infrastructure project.
3. Where insurance or reinsurance undertakings hold material qualifying infrastructure investments, they shall, when establishing the written procedures referred to in Article 41(3) of Directive 2009/138/EC, include provisions for an active monitoring of these investments during the construction phase, and for a maximisation of the amount recovered from these investments in case of a work-out scenario.
4. Insurance or reinsurance undertakings with a qualifying infrastructure investment in bonds or loans shall set up their asset-liability management to ensure that, on an ongoing basis, they are able to hold the investment to maturity.’;
- (13) in Article 316, paragraph 2 is replaced by the following:

‘2. As of 31 December 2020, the disclosure shall include data of the four previous years. In relation to disclosure before 31 December 2020, it shall include data of all previous years starting from 1 January 2016.’.

Article 2

Correcting provisions

Delegated Regulation (EU) 2015/35 is corrected as follows:

1. in Article 73(1), the first sentence is replaced by the following:
- ‘The features referred to in Article 72 shall be either those set out in points (a) to (i) or those set out in point (j)’;
2. Article 170 is corrected as follows:
- (a) in paragraph 1, point (a) is replaced by the following:
- ‘(a) an instantaneous decrease equal to 22 % in the value of the type 1 equities corresponding to the business referred to in point (i) of Article 304(1) of Directive 2009/138/EC.’;
- (b) in paragraph 2, point (a) is replaced by the following:
- ‘(a) equal to 22 % in the value of the type 2 equities corresponding to the business referred to in point (i) of Article 304(1) of Directive 2009/138/EC.’;
3. Article 176 is corrected as follows:
- (a) paragraph 3 is replaced by the following:
- ‘3. Bonds or loans for which a credit assessment by a nominated ECAI is available shall be assigned a risk factor $stress_i$ depending on the credit quality step and the modified duration dur_i of the bond or loan i according to the following table.

Credit quality step		0		1		2		3		4		5 and 6	
Duration (dur_i)	$stress_i$	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i
up to 5	$b_i \cdot dur_i$	—	0,9 %	—	1,1 %	—	1,4 %	—	2,5 %	—	4,5 %	—	7,5 %
More than 5 and up to 10	$a_i + b_i \cdot (dur_i - 5)$	4,5 %	0,5 %	5,5 %	0,6 %	7,0 %	0,7 %	12,5 %	1,5 %	22,5 %	2,5 %	37,5 %	4,2 %

Credit quality step		0		1		2		3		4		5 and 6	
Duration (dur_i)	$stress_i$	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i	a_i	b_i
More than 10 and up to 15	$a_i + b_i \cdot (dur_i - 10)$	7,0 %	0,5 %	8,5 %	0,5 %	10,5 %	0,5 %	20,0 %	1,0 %	35,0 %	1,8 %	58,5 %	0,5 %
More than 15 and up to 20	$a_i + b_i \cdot (dur_i - 15)$	9,5 %	0,5 %	11 %	0,5 %	13,0 %	0,5 %	25,0 %	1,0 %	44,0 %	0,5 %	61,0 %	0,5 %
More than 20	$\min[a_i + b_i \cdot (dur_i - 20); 1]$	12,0 %	0,5 %	13,5 %	0,5 %	15,5 %	0,5 %	30,0 %	0,5 %	46,6 %	0,5 %	63,5 %	0,5 %

(b) paragraph 4 is replaced by the following:

‘4. Bonds and loans for which a credit assessment by a nominated ECAI is not available and for which debtors have not posted collateral that meets the criteria set out in Article 214 shall be assigned a risk factor $stress_i$ depending on the duration dur_i of the bond or loan i according to the following table:

Duration (dur)	$stress_i$
up to 5	$3 \% \cdot dur_i$
More than 5 and up to 10	$15 \% + 1,7 \% \cdot (dur_i - 5)$
More than 10 and up to 20	$23,5 \% + 1,2 \% \cdot (dur_i - 10)$
More than 20	$\min(35,5 \% + 0,5 \% \cdot (dur_i - 20); 1)$

4. in Article 179, paragraph 1 is corrected as follows:

(a) the introductory sentence is replaced by the following:

‘The capital requirement SCR_{cd} for spread risk on credit derivatives other than those referred to in paragraph 3 shall be equal to the higher of the following capital requirements:’;

(b) point (a) is replaced by the following:

‘(a) the loss in the basic own funds that would result from an instantaneous increase in absolute terms of the credit spread of the instruments underlying the credit derivatives;’

5. in Article 192, paragraph 2, in subparagraph 5, the formula is replaced by the following:

$$LGD = \max(90 \% \cdot (Recoverables + 50 \% \cdot RM_r) - F' \cdot Collateral; 0);$$

6. in Article 218, paragraph 3 is replaced by the following:

‘3. Where insurance or reinsurance undertakings have concluded several excess of loss reinsurance contracts that each meet the requirements set out in point (d) of paragraph 2, and that in combination meet the requirements set out in points (a), (b) and (c) of paragraph 2, their combination shall be considered as one recognisable excess of loss reinsurance contract.’;

7. in Article 296, paragraph 4 is replaced by the following:

‘4. The solvency and financial condition report shall include information on the areas set out in Article 263 in complying with the disclosure requirements of the insurance or reinsurance undertaking as laid down in paragraphs 1 and 3 of this Article.’;

8. in Article 317, paragraph 3 is replaced by the following:

'3. Aggregated annual statistical data concerning the supervised undertakings and groups in accordance with Article 316 shall be disclosed in respect of each calendar year within three months after the date by which the undertakings having a financial year ending 31 December are required by Article 312(1)(c) to submit annual quantitative templates. Information concerning the supervisory authorities shall be made available within four months after the 31 December of each calendar year.'

9. in Article 330, paragraph 1 is replaced by the following:

'1. In assessing whether certain own funds eligible to cover the Solvency Capital Requirement of a related insurance or reinsurance undertaking, a related third country insurance or reinsurance undertaking, an insurance holding company or a mixed financial holding company cannot effectively be made available to cover the group Solvency Capital Requirement, the supervisory authorities shall consider all of the following elements:

- (a) whether the own-fund item is subject to legal or regulatory requirements that restrict the ability of that item to absorb all types of losses wherever they arise in the group;
- (b) whether there are legal or regulatory requirements that restrict the transferability of assets to another insurance or reinsurance undertaking;
- (c) whether making those own funds available for covering the group Solvency Capital Requirement would not be possible within a maximum of 9 months;
- (d) whether, where method 2 is used, the own-fund item does not satisfy the requirements set out in Articles 71, 73 and 77; for this purpose, the term "Solvency Capital Requirement" in those Articles shall include both the Solvency Capital Requirement of the related undertaking that has issued the own fund item and the group Solvency Capital Requirement.'

10. in Article 375, paragraph 2 is replaced by the following:

'2. Participating insurance and reinsurance undertakings, insurance holding companies or mixed financial holding companies shall submit to the group supervisor the information referred to in paragraph 1 no later than 26 weeks after the reference date of the opening financial statement as referred to in Article 314(1)(a).'

11. Annex XVII is corrected in accordance with Annex I to this Regulation;

12. Annex XVIII is corrected in accordance with Annex II to this Regulation;

13. Annex XXI is corrected in accordance with Annex III to this Regulation.

Article 3

This Regulation shall enter into force on the day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 30 September 2015.

For the Commission
The President
Jean-Claude JUNCKER

ANNEX I

Annex XVII to Delegated Regulation (EU) 2015/35 is amended as follows:

(1) Part B is amended as follows:

(a) point (2)(c) shall be replaced by the following:

'(c) where the premium risk method is applied to replace the standard parameters referred to in Article 218(1)(a)(ii) and (c)(ii), the aggregated losses and earned premiums are not adjusted for recoverable from reinsurance contracts and special purpose vehicles or reinsurance premiums;'

(b) in point (2)(d) the first sentence shall be replaced by the following:

'where the premium risk method is applied to replace the standard parameters referred to in Article 218(1)(a)(i) and (c)(i):'

(2) In point (5) of part D, the first sentence and first formula shall be replaced by the following:

'The mean squared error of prediction shall be equal to the following:

$$MSEP = \sum_{i=1}^I \hat{C}_{(i,j)}^2 \cdot \left(\frac{\hat{Q}_{i-1}}{C_{(i,i-1)}} + \frac{\hat{Q}_{i-1}}{S_{j-1}} + \sum_{j'=i+1}^{j-1} \frac{C_{(i-j',j)}}{S_{j'}} \cdot \frac{\hat{Q}_{j'}}{S_{j'}} \right) + 2 \cdot \sum_{i=1}^I \sum_{i'=i+1}^I \hat{C}_{(i,i')} \cdot \hat{C}_{(i',j)} \cdot \left(\frac{\hat{Q}_{i-1}}{S_{j-1}} + \sum_{j'=i+1}^{j-1} \frac{C_{(i-j',j)}}{S_{j'}} \cdot \frac{\hat{Q}_{j'}}{S_{j'}} \right);$$

(3) Point (3)(f) of part F shall be replaced by the following:

'(f) where the recognisable excess of loss reinsurance contract referred to in Article 218(2) provides compensation only up to a specified limit, b_2 denotes the amount of that limit.'

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ANNEX II

Annex XVIII to Delegated Regulation (EU) 2015/35 is amended as follows:

(1) In point (2)(b) of part C, the first sentence shall be replaced by the following:

'they include each of the following sub-modules of the standard formula excluding those within the scope of the partial internal model.'

(2) Point (2)(c) of part C shall be replaced by the following:

'(c) they include the counterparty default risk module of the standard formula unless it is within the scope of the partial internal model.'

ANNEX III

Annex XXI to Delegated Regulation (EU) 2015/35 is amended as follows:

(1) The last sentence of part A shall be replaced by the following:

'The information set out in paragraphs 1 to 32 shall be provided in relation to the end of the last calendar year. In relation to paragraphs 12 to 21, 23, 24 and 29 to 31 the information shall relate to the financial year-ends of insurance and reinsurance undertakings and insurance groups which ended in the last calendar year.'

(2) The last sentence of part B shall be replaced by the following:

'The information set out in paragraphs 2 to 18 shall be provided in relation to the last calendar year.'