



EIOPA-BoS-17/280
30 October 2017

EIOPA's first set of advice to the European Commission on specific items in the Solvency II Delegated Regulation

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1. Introduction

Final report on the Public Consultation No. 17/004

1. EIOPA has consulted on a first set of advice to the European Commission on the review of specific items in the Solvency II Delegated Regulation (Public Consultation No. 17/004).
2. After having analysed the comments from stakeholders, EIOPA has modified its advice where appropriate. EIOPA has also provided a summary of the main comments received during this public consultation. EIOPA answered each comment received.

Review of Solvency Capital Requirement

3. The European Commission expressed its intention to review methods, assumptions and standard parameters used when calculating the Solvency Capital Requirement with the standard formula. This review is to be performed before December 2018¹.
4. The European Commission has asked EIOPA to provide technical advice as part of its review of the Solvency Capital Requirement².

Content of this advice

5. This advice is on the following areas:
 1. Simplified calculations;
 2. Reducing reliance on external credit ratings;
 3. Exposures guaranteed and exposures to regional governments and local authorities (RGLA);
 4. Risk-mitigation techniques;
 5. Undertaking specific parameters;
 6. Look-through for investment related undertakings;
 7. Loss-absorbing capacity of deferred taxes (LAC DT): factual information only.
 8. Impact assessment

Structure of this advice

6. The advice is divided into [8] chapters covering the areas described in the paragraph above. Each of the first six chapters follows the same structure
 - Extract from the call for advice
 - Legal basis
 - EIOPA's advice
 - Analysis

¹ Recital 150 of Commission Delegated Regulation (EU) 2015/35

² See:

https://eiopa.europa.eu/Publications/Requests%20for%20advice/CfA_annex.pdf
and

<https://eiopa.europa.eu/Publications/Requests%20for%20advice/2017.02.21%20-%20Annex%20CfA%20II.pdf>

- Advice (and if relevant proposals for legal articles)
- 7. Chapter 7 on loss absorbing capacity of deferred taxes provides information only. Advice on this topic is in a separate consultation paper.
- 8. Chapter 8 provides the impact assessment of the policy options considered during the development of this advice.

Update of EIOPA's advice in specific areas

- 9. EIOPA is providing its advice in two tranches. This advice is the first tranche. The second tranche will be sent to the European Commission by end-February 2018.
- 10. The advice in this first tranche is in specified places subject to further update by end-February 2018. Where this is not specified, the advice by EIOPA in this document is final.

Engagement with stakeholders

- 11. EIOPA has engaged with stakeholders throughout the development of all of its advice.
- 12. EIOPA issued a first discussion paper in December 2016. It has held meetings with stakeholders during 2017 on 23 May, 8 June and 27 September. In addition EIOPA has been in dialogue with its Insurance and Reinsurance Stakeholder Group.
- 13. EIOPA has also sought information on specific topics from (re)insurance undertakings and from national supervisory Authorities.

Appreciation

- 14. EIOPA would like to record its appreciation of all those who have responded to its engagement with stakeholders.

2. Simplified calculations

2.1. Call for advice

The Delegated Act provides simplifications for many, but not for all, calculations in the standard formula. For example, no simplifications are provided for the non-life lapse risk submodule and the submodules of the non-life catastrophe risk.

EIOPA is asked to:

- Provide information on the current use of the existing simplifications and, where relevant, on reasons why these simplifications are not used.*
- Suggest improvements for the existing simplifications and explore and propose methods and criteria for further simplifications, in order to ensure that simple and easy to apply methodologies are provided for all standard formula calculations, bearing in mind the need to strengthen a proportionate application of the requirements.*

2.2. Legal basis

Directive 2009/138/EC³ ("Solvency II Directive")

15. Article 109: simplifications in the standard formula

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

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

16. Article 111: implementing measures and in particular paragraph (1)(l):

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

Delegated Regulation

17. 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;

³ Directive 2009/138/EC of 25 November 2009 of the European Parliament and of the Council on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II) (OJ L 335, 17.12.2009, p. 1)

(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.

2.3. Advice

2.3.1. Previous advice

18.CEIOPS-DOC-24/08 "Advice to the European Commission on the Principle of Proportionality in the Solvency II Framework Directive Proposal"⁴

19.CEIOPS-DOC-73/10: "CEIOPS' Advice for Level 2 Implementing Measures on Solvency II: SCR standard formula Article 111(I) Simplified calculations in the standard formula"⁵

2.3.2. Analysis

Proportionality assessment

20.The assessment required by Article 88 of the Delegated Regulation is twofold. First, there is an assessment of the nature, scale and complexity of the risks; and second, there is 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 underlying assumptions and the specific risk profile.

21.The responsibility to choose an adequate and reliable calculation of the SCR ultimately lies with the administrative or management body of the undertaking. The actuarial function plays an important role in coordinating the calculation of the capital requirement and in providing regular reports to the management body on its tasks. An assessment of the proportionality of the chosen methodology vis-à-vis the nature, scale and complexity of the underlying risks should be seen as part of the (re)insurance undertakings' internal system of governance. This assessment is also required for the purpose of the own-risk and solvency assessment ("ORSA") supervisory report.

⁴ <https://eiopa.europa.eu/CEIOPS-Archive/Documents/Consultations/AdviceProportionality.pdf#search=filename%3AAdviceProportionality.pdf>

⁵ <https://eiopa.europa.eu/CEIOPS-Archive/Documents/Advices/CEIOPS-L2-Advice-Simplifications-for-SCR.pdf>

22. The assessment of the nature, scale and complexity of the risks is intended to provide a basis for checking the appropriateness of specific simplified calculations carried out in the second step.
23. As a result, the documentation of this first assessment is expected to be already addressed, being part of the ORSA process and report and of the tasks of the actuarial function, but it is also a necessary preliminary for (re)insurance undertakings to be able to perform the second assessment.
24. The second assessment evaluates whether the application of a particular simplified calculation is proportionate. It aims at capturing the model error implied by the change of method and whether it can be considered immaterial.
25. In this context, a “material” error means that a misstatement of the value of the sub-module/module influences the decision-making or judgment of the intended user of the information contained in the calculation of the SCR (e.g. Article 19(3) last paragraph and Article 38(3) of the Delegated Regulation). The criteria for materiality should be consistent with the approach of the (re)insurance undertaking to materiality in other areas of the solvency assessment and should be reflected in the ORSA.
26. It is acknowledged that, in practice, an assessment of the model error is not easy. (Re)Insurance undertakings should not be required to quantify the degree of model error in precise quantitative terms or to re-calculate the value of the capital charge using the non-simplified (standard) method in order to demonstrate that the error is immaterial. Instead, it would be sufficient to demonstrate that there is reasonable assurance for the model error to be immaterial.
27. The current requirements of an “evaluation in quantitative or qualitative terms” reflect this process. In particular, where a qualitative evaluation indicates that the error is immaterial there is no need to evaluate the error in quantitative terms.
28. Having in mind the process by which the error can be evaluated, the concerns that the proportionality assessment is too burdensome and unduly preventing (re)insurance undertakings from applying simplified calculations do not seem valid. National Supervisory Authorities (“NSAs”) have confirmed that (re)insurance undertakings face issues in applying a simplified calculation where they wish to demonstrate that the model error is immaterial by calculating it with the standard method. As explained above, that is not what Article 88 of the Delegated Regulation requires.
29. The number of simplified calculations that have been used for the calculation of the SCR standard formula in 2016 is reported via the annual QRT. Indeed, for each sub-module calculation where a simplified calculation exists, undertakings should report whether they have used the simplified calculation or not. The table below provides an overview for undertakings that are no captive:

Risk where simplified calculation is used	Number of undertakings using the simplified calculation	Number of undertakings calculating the module
Counterparty default risk	316	2,270
Disability-morbidity risk	15	1,009
Health disability-morbidity risk-income protection	12	299
Health disability-morbidity risk-medical expenses	4	99
Health expense risk	11	497
Health longevity risk	7	374
Health mortality risk	5	179
Lapse risk	13	1,012
Life catastrophe risk	106	1,013
Life expense risk	22	1,015
Longevity risk	16	1,010
Mortality risk	30	1,012
SLT lapse risk	5	291
Spread risk - bonds and loans	33	2,099

30.The total number of simplified calculations reported is 595. However this figure underestimates the number of simplified calculations being really used. Indeed, for the counterparty default risk, there are six different simplified calculations possible and undertakings report whether they have used at least one simplified calculation.

31.Information reported by NSAs lead to think that the figure of 316 is largely underestimating the real number of simplified calculations being used for the counterparty default risk module. Please also refer to EIOPA's work on simplifying this module (other consultation paper).

32.There are also specific simplified calculations for captives: one for interest rate risk, being used by 15 captives; one for market risk concentration, being used by 10 captives; one for spread risk on bonds and loans, being used by 8 captives; one for premium and reserve risk, being used by 35 captives.

Life underwriting risk and similar-to-life-techniques health underwriting risk

33.The difficulties in the calculation of the capital requirements for life underwriting risk are linked to the granularity of the calculation.

34.Article 35 of the Delegated Regulation provides that the cash-flow projections used in the calculation of the best estimates for life insurance obligations are to be made separately for each policy. Where the separate calculation for each policy would be an undue burden on the (re)insurance undertaking, projections may be carried out by grouping policies.

35.In practice, this option for grouping policies is very often used by (re)insurance undertakings.

36. The mortality and the longevity risk sub-modules require the calculation to be done on a policy level. However, the calculation may instead also be done based on the grouping of policies used for the best estimate calculation, provided that the result is not materially different.
37. The lapse risk-module requires the calculation to be performed where the provided increase or decrease in lapse rates result in an increase of technical provisions without the risk margin. For the mass lapse risk calculation, the calculation is to be performed on a per policy basis.
38. A way to simplify the calculations of the lapse risk sub-module is to allow for the calculation to be based on the homogeneous risk groups used in the best estimate calculations.
39. This simplified calculation could be applied only where the (re)insurance undertaking can demonstrate that the particular grouping used for calculating the best estimate does not allow for material compensations between policies.
40. The increase (resp. decrease) in lapse rates should be applied only to those options for which the exercise of the option would result in an increase (resp. decrease) of the value of the best estimate calculated for the appropriate homogeneous risk group.
41. Articles 91 (and 97) of the Delegated Regulation provides a simplified calculation for the capital requirement for the mortality risk.
42. The formula provided by this simplified calculation assumes that the total capital at risk CAR does not vary over time. An adjustment of this simplified calculation would easily allow to take into account situations where this is not the case:

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

where “ q ” denotes the expected average mortality rate of the insured persons during all future years of insurance weighted by the sum insured;

where “ CAR_k ” denotes the total capital at risk in year k .

Non-life underwriting risk module and non-similar-to-life-techniques health underwriting risk sub-module

43. The difficulties encountered for the calculation of the non-life lapse risk sub-module are similar to those described for the life lapse risk sub-module.
44. The calculation of this sub-module is required to be performed on a per policy basis.

45. A way to simplify the calculations of the non-life lapse risk sub-module is to allow for the calculation to be based on the homogeneous risk groups used in the best estimate calculations for the premium provision.
46. This simplified calculation would be applied only where the (re)insurance undertaking can demonstrate that the particular grouping with which it has calculated the best estimate does not allow for material compensations between policies.
47. The increase in lapse rates should be applied only to those options for which the exercise of the option would result in an increase of the value of the best estimate calculated for the appropriate homogeneous risk group.

Diversification benefits

48. The standard formula follows a modular approach. That means it is composed of several modules, results of which are aggregated via an aggregation matrix to reflect the correlation between risks and to allow for diversification benefits. Most of the modules are also composed of several sub-modules and aggregation matrices also apply at that sub-level.
49. The basic SCR is therefore not the simple summation of the capital requirements of each module, since diversification benefits are taken into account:

$$BasicSCR = \sqrt{\sum_{i,j} Corr_{i,j} \cdot SCR_i \cdot SCR_j} + SCR_{intangibles}$$

50. A way to simplify this calculation would be not to take account of diversification benefits, which would mean that the basic SCR is overestimated:

$$BasicSCR = \sum_i SCR_i + SCR_{intangibles}$$

51. The same could apply at sub-modules level, where not applying the correlation matrix leads to a more conservative outcome.

2.3.3. EIOPA's advice

Proportionality assessment

52. EIOPA's advice is not to modify the current requirements of Article 88 of the Delegated Regulation: the number of simplified calculations used by (re)insurance undertakings illustrates the appropriate application of the proportionality principle by (re)insurance undertakings and National Supervisory Authorities. EIOPA could also provide further guidance in its supervisory handbook.

53.The first step of assessing the nature, scale and complexity of the risks is intended to provide a basis for checking the appropriateness of a specific simplified calculation carried out in the subsequent step.

54.The second step of evaluating the error is intended to assess whether the error is immaterial (i.e. it does not influence the decision-making or judgment of the intended user of the information contained in the calculation of the SCR). (Re)Insurance undertakings should not be required to re-calculate the value of the capital charge using the standard methods. Instead, it would be sufficient for (re)insurance undertakings to demonstrate that there is reasonable assurance that the error is immaterial. For this purpose it is possible to perform first a qualitative evaluation of the error and, where it indicates that the error is immaterial, there is no need to evaluate the error in quantitative terms.

Non-life lapse risk sub-module

55.For the purposes of determining the loss in basic own funds of the (re)insurance undertakings under the event referred to in point (a) of paragraph 1 of Article 118 and of Article 150 of the Delegated Regulation, 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.

56.(Re)insurance undertakings should be provided with a simplified calculation that allows the calculation to be based on the same homogeneous risk groups that are used for the calculation of the Best Estimate.

57.The discontinuance of 40 % should be applied to those homogeneous risk groups where it would result in an increase of technical provisions without the risk margin.

58.This simplified calculation should only be applied where the (re)insurance undertaking can demonstrate that the particular grouping used for calculating the best estimate does not allow for material compensations between policies in case of lapse events.

Lapse risk sub-module

59.For the purposes of determining the loss in basic own funds of the (re)insurance undertaking under the events referred to in paragraphs 2, 3 and 6 of Article 142 and of Article 159 of the Delegated Regulation, the undertaking is basing the calculation on the type of discontinuance which most negatively affects the basic own funds of the undertaking on a per policy basis.

60.(Re)insurance undertakings should be provided with a simplified calculation that allows the calculation to be based on the same homogeneous risk groups that are used for the calculation of the Best Estimate.

61.The events referred to in paragraph 2, 3 and 6 of Article 142 and of Article 159 of the Delegated Regulation should be applied to those homogeneous risk groups where it would result in an increase of technical provisions without the risk margin.

62. This simplified calculation should only be applied where the (re)insurance undertaking can demonstrate that the particular grouping used for calculating the best estimate does not allow for material compensations between policies in case of lapse events.

Simplified calculations of the capital requirement for life mortality risk and for health mortality risk

63. The capital requirements for mortality risk may be calculated with the simplification provided by Articles 91 and 97 of the Delegated Regulation.

64. The formula provided by this simplified calculation assumes that the total capital at risk CAR does not vary over time. In order to take into account situations where this variation over time would need to be reflected, the simplified calculation should be adjusted as follows:

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

65. Where “q” denotes the expected average mortality rate of the insured persons during all future years of insurance weighted by the sum insured and where “CAR_k” denotes the total capital at risk in year k.

66. Article 91 of the Delegated Regulation presents a typo: the denominator should not be “1 – i_k” but should be “1 + i_k”.

Diversification benefits

67. Undertakings should be allowed to calculate their basic SCR or their SCR for a given sub-module without taking into account diversification benefits, i.e. not applying correlation matrices, where it leads to a more conservative outcome.

Clarification in Article 88 of the Delegated Regulation

68. The Delegated Regulation reads as follows:

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.

69.At the beginning of this provision the reference to Article 109 should relate to the Solvency II Directive not the Delegated Regulation; in the same sentence a reference to simplified calculations "included in this chapter" is missing; there is no point (b) in paragraph 2 – the reference should be to paragraph 1.

70.Article 88 of the Delegated Regulation should be corrected.

2.3.4. New Articles

71.EIOPA would like to suggest correcting Article 88 of the Delegated Regulation as follows:

Article 88 Proportionality

1. For the purposes of Article 109 of Directive 2009/138/EC, insurance and reinsurance undertakings shall determine whether one of the simplified calculations included in this chapter 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~~ paragraph 1 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.

3. Reducing reliance on external credit ratings in the standard formula

3.1. Call for advice

In line with the provisions of Regulation (EC) No 1060/2009⁶, the Union is working towards reviewing, at a first stage, whether any references to external credit ratings in Union law trigger or have the potential to trigger sole or mechanistic reliance on such external credit ratings and, at a second stage, all references to external credit ratings for regulatory purposes with a view to deleting them by 2020, provided that appropriate alternatives to credit risk assessment are identified and implemented.

The Solvency II standard formula provides for different risk considerations depending on whether an external rating is available or not and what rating is assigned to such exposure. To mitigate the risk of over-reliance on ratings, the Solvency II Directive provides that insurers, when they use an external credit rating assessment in the calculation of technical provisions and the Solvency Capital Requirement, shall assess the appropriateness of those external credit assessments as part of their risk management by using additional assessments wherever practicably possible in order to avoid any automatic dependence on external assessments. In addition, the Delegated Regulation (Article 4(5)) sets out a requirement on (re)insurers to produce their own internal credit assessments for larger or more complex exposures, which also contributes to reducing the risk of over-reliance. Even though such mitigation rules are in place, the use of ratings contained in the Delegated Act may create an incentive for (re)insurers to rely on assessments from rating agencies.

Therefore, EIOPA is asked to:

- Further develop the framework for the use of alternative credit assessments in the Solvency II standard formula, by setting out methods and criteria for a standardized approach to derive alternative credit assessments. Such an approach should also target exposures that do not have an external credit assessment, and not be limited to large and complex exposures.*

3.2. Legal basis

Solvency II Directive

72. Article 13(40) of the Solvency II Directive defines "external credit assessment institution" or "ECAI" as a credit rating agency that is registered or certified in accordance with Regulation (EC) No 1060/2009 or a central bank issuing ratings which are exempt from the application of that regulation.

Delegated Regulation

73. According to Recital 2 of the Delegated Regulation in order to reduce overreliance on external ratings, insurance and reinsurance undertakings should aim at having their own credit assessment on all their exposures.

⁶ 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)

However, in view of the proportionality principle, insurance and reinsurance undertakings are only required to have own credit assessments on their larger or more complex exposures.

74. Article 4 of the Delegated Regulation sets out general requirements on the use of credit assessments by (re)insurance undertakings. According to paragraph 5 of this Article 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.

Implementing regulation

75. The European Commission published the following implementing regulations regarding external credit assessment:

- Commission Implementing Regulation (EU) 2015/2015 laying down implementing technical standards on the procedures for assessing external credit assessments,
- Commission Implementing Regulation (EU) 2016/1800 laying down implementing technical standards with regard to the allocation of credit assessments of external credit assessment institutions to an objective scale of credit quality.

3.3. Advice

3.3.1. Previous advice

76. In the initial CEIOPS' Advice for *Answers to the European Commission on the second wave of Calls for Advice in the framework of the Solvency II project* the following was included:

10.160 CEIOPS notes two valuable sources of data input for determining the factors that should be applied to credit risk: ratings and credit spreads (reflecting the markets' perception of creditworthiness).

77. Moreover in the Explanatory text:

10.97 Different sources of information might be used for the calibration of the factors applicable to credit risk. The use of external ratings can introduce a number of practical difficulties concerning recognition and comparability, together with the treatment of unrated exposures. In the CRD context, banking supervisors are required to recognise individual ratings agencies and map their output onto standard credit quality steps. CEIOPS could draw upon experience in the banking sector (and the expertise of CEBS) if it concluded that external ratings should play a role in Solvency II.

10.98 Credit spreads might also be used to reflect the market's perception of credit quality. Higher credit spreads are historically more volatile and therefore should result in a higher capital requirement. Although also credit spreads may not be available for every exposure an undertaking should be

able to produce a reasonable proxy for the credit spread (marking to model value).

10.99 CEIOPS would not envisage that insurers should develop, within the context of the standard formula, credit rating models along the lines of the CRD. However, the Internal Rating Based Approach (using generalised assumptions about the input parameters) might be used to calibrate the SCR standard formula.

3.3.2. Analysis

Assessment by commercial and non-commercial third parties

78.External credit rating agencies are a certain type of commercial third party. According to Article 4(1) of the Regulation (EC) No 1060/2009 credit institutions, investment firms, insurance undertakings, reinsurance undertakings, institutions for occupational retirement provision, management companies, investment companies, alternative investment fund managers and central counterparties may use credit ratings for regulatory purposes only if they are issued by credit rating agencies established in the Union and registered in accordance with such Regulation.

79.In specific cases, the assessment provided by ECAIs may be replaced by undertakings' own assessment. This is the case in Solvency II with the use of internal credit assessment for larger or more complex exposures and with the use of internal models for the SCR calculation, which may include allocation to credit quality steps depending on the specificities of the internal model; this is also the case in the CRD with the internal rating based approach. In the CRD, internal assessments need to be approved by the National Competent Authority and are then allowed to be used by credit institutions.

80.The use of results from approved internal models could potentially be allowed under certain conditions. This will be further investigated by EIOPA in the context of the second call for advice.

81.The assessments done by the OECD or the IMF do not seem appropriate to be used to allocate exposures to credit quality steps.

82.The OECD Country Risk Classification is for example not a sovereign risk classification and should therefore not be compared with the sovereign risk classifications of private credit rating agencies (CRAs). Conceptually, it is more similar to the "country ceilings" that are produced by some of the major CRAs.

Proportionate approach and simplified calculation

83.The use of credit quality steps and ratings is justified by the need to ensure sufficient risk-sensitivity in the measurement and calculation of the technical provisions and the Solvency Capital Requirement.

84.For that purpose, Article 4 of the Delegated Regulation requires (re)insurance undertakings using the standard formula to calculate their SCR to nominate at least one ECAI.

85. The intention is that the debt portfolio of (re)insurance undertakings is covered by nominated ECAIs, such that external credit assessments can be used to allocate each exposure to one of the seven credit quality steps.
86. In most cases, (re)insurance undertakings need to nominate several ECAIs to cover their whole portfolio. Indeed, the contracts usually provided by ECAIs are standardised and cover a certain number of asset classes.
87. Information on the use of ECAIs can be derived from the quarterly reporting for the fourth semester and the "list of assets" template. The database is composed of 2,022 (re)insurance undertakings. 1,663 of these undertakings have reported at least 1 ECAI. On average undertakings have nominated 2.5 ECAIs to cover their investments.
88. This may lead to situations where specific asset classes are covered by multiple ECAIs. Indeed, where a specific asset class is not covered by the already existing contract with an ECAI, the (re)insurance undertaking needs to sign a new contract with another ECAI to ensure that all of its investments are covered. On average, the first nominated ECAI covers 73 % of the "vanilla" corporate bonds of the (re)insurance undertaking. It seems that in practice, when signing a new contract for covering specific investments, asset classes already covered under the previous contract are covered again. This would be due to standardised contracts provided by ECAIs.
89. In particular for smaller (re)insurance undertakings, this situation may raise an issue as the licensing fees for ECAIs add up although asset classes and investments are already covered by one ECAI. In some cases, this additional cost may not be proportionate to the risks a (re)insurance undertaking is facing.
90. In a situation where a (re)insurance undertaking has already nominated an ECAI that covers almost all its debt portfolio, the question arises whether the risks of the asset classes not already covered justify the nomination of another ECAI. This would lead to asset classes being covered by two ECAIs and to licensing fees that are not proportionate to the risks of the asset classes not covered.
91. Article 109 of the Solvency II Directive and Article 88 of the Delegated Regulation provide a framework under which (re)insurance undertakings are allowed to use simplified calculations where they can demonstrate that the simplified calculation is proportionate to the nature, scale and complexity of the risks.
92. This framework can be used to provide a solution to smaller (re)insurance undertakings that face the issue described above. Several conditions would need to be met:
- a (re)insurance undertaking has already nominated at least one ECAI that covers at least 80 % of its debt portfolio;

- the remaining asset classes and investments not covered by the nominated ECAI are bonds⁷ or similar investments that provide a redemption payment on the date of maturity or before, as well as a return payment, in the form of a regular coupon payment on a fixed or floating interest rate basis; loans, structured notes and collateralised securities and derivatives are explicitly excluded from the simplified calculation;
- the assets in scope of the simplified calculation do not cover liabilities that provide mechanism of profit participations, or unit/index-linked liabilities or liabilities where the matching adjustment is applied. For such business a detailed assessment of the credit quality of the investments is considered necessary for the protection of policyholders.

93. Where the above conditions are met, (re)insurance undertakings should be allowed to use a simplified calculation to calculate their spread risk sub-module and their market risk concentration sub-module as if the investments not covered by the nominated ECAI were of credit quality step 3.

94. The simplified calculation should be used provided that the (re)insurance undertaking complies with the requirements of Article 88 of the Delegated Regulation. That means that where there is evidence that the average risk profile of the assets or a material part of them is below the credit quality step 3, the simplified calculation would not be appropriate. It is expected that (re)insurance undertakings that would like to use this approach conduct such an assessment.

95. The benefits of this approach would be to reduce the costs and burdens of (re)insurance undertakings that need to enter a contractual relationship with several ECAIs in order to cover the whole of their debt portfolio. Where a part is not covered by an ECAI and where it would not be proportionate to enter in a contractual relationship with an additional ECAI to calculate the SCR Standard Formula, the simplified calculation would provide an alternative.

Internal credit assessments

96. The use of internal credit assessments is widely seen as the best alternative to ECAIs. However, requiring the development of such approaches for all (re)insurance undertakings would be disproportionate. The use of internal rating approaches should therefore be incentivised but not made mandatory for all exposures.

97. Recital 2 of the Delegated Regulation provides that (re)insurance undertakings should aim at having their own credit assessments for all of their exposures. However, Article 4 of the Delegated Regulation requires an internal credit assessment only for larger and more complex exposures. This own internal credit assessment can only generate a higher capital

⁷ Excluding convertible, hybrid or subordinated bonds.

requirement than the one generated by the credit assessments available from nominated ECAIs.

98. Some stakeholders have suggested that it should be possible for internal credit assessments to lead to reduced capital requirements. In other words, if the internal credit assessment was more favourable than the external credit assessment from nominated ECAIs, then the former could be used to determine the capital charge.
99. Such “overruling” of credit assessments by nominated ECAIs would need to be allowed under specific supervisory approval to ensure the protection of policyholders.
100. From a legal perspective, introducing such a new approval process for the standard formula would probably require a change in the Solvency II Directive, which is out of the scope of the current call for advice.
101. Moreover, the Solvency II framework has already introduced several approval processes, for instance for allowing the use of internal models to calculate the SCR or for allowing the use of undertaking specific parameters. EIOPA believes it is not the appropriate time to suggest a new approval process, which may increase the administrative burden for (re)insurance undertakings and NSAs.
102. To further incentivise (re)insurance undertakings to develop their own credit assessment, EIOPA proposes to develop guidance on the way (re)insurance undertakings should perform these assessments and should challenge the assessments provided by nominated ECAI. This would help reducing mechanistic reliance on external ratings, guarantee a consistent robustness and soundness of internal assessments, and allow building experience.
103. This is in particular relevant in light of the European Commission call for advice on unrated debt.
104. While relying solely on internal assessments for the determination of capital requirements cannot be recommended there may be certain asset classes where the internal assessment can be an important element in a comprehensive assessment of the credit risk (see work conducted on the second part of the call for advice on unrated debt).

Market implied ratings and accountancy-based measures

105. Market implied ratings and accountancy-based measure may be presented as alternatives to ECAIs. In practice, these are often used when undertakings are building their internal credit assessments framework.
106. Their use as possible inputs to SCR standard formula calculations has been assessed by EIOPA and stakeholders have provided feedback as well.

107. The conclusion is that the cons of such approaches outweigh the pros and it would not be appropriate to use one or the other as inputs for calculating the SCR standard formula for all exposures (please refer to the impact assessment section for further explanations on the pros and cons). There may though be specific asset classes where the consideration of market and accounting data may be appropriate as one element of a comprehensive assessment of the credit risk; this is being assessed in the context of the second call for advice and the work being conducted on unrated debt.

3.3.3. EIOPA's advice

Proportionate approach and simplified calculation

108. EIOPA advises to introduce two new simplified calculations under the framework of Article 88 of the Delegated Regulation for the spread risk sub-module and for the market risk concentration risk sub-module.

109. The simplified calculations would apply only under the following conditions:

- a (re)insurance undertaking has already nominated at least one ECAI that covers at least 80 % of its debt portfolio;
- the remaining asset classes and investments not covered by the nominated ECAI are bonds⁸ or similar investments that provide a redemption payment on the date of maturity or before, as well as a return payment, in the form of a regular coupon payment on a fixed or floating interest rate basis; loans, structured notes and collateralised securities and derivatives are explicitly excluded from the simplified calculation;
- the assets in scope of the simplified calculation do not cover liabilities that provide mechanism of profit participations, or unit/index-linked liabilities or liabilities where the matching adjustment is applied.

110. Where these conditions are met and where the (re)insurance undertaking complies with the requirements of Article 88 of the Delegated Regulation on proportionality, the (re)insurance undertaking should not be required to nominate another ECAI and should be allowed to calculate its spread risk sub-module and its market risk concentration sub-module as if the assets not covered would be of credit quality step 3. Where there is evidence that the average risk profile of the assets or a material part of them is below the credit quality step 3, the simplified calculation would not be appropriate. This assessment should be undertaken each time the undertaking wishes to use the simplified calculation.

Internal credit assessments

111. EIOPA advises not to further extend internal rating approaches as this stage. Guidance will be provided by EIOPA in order to ascertain a robust and sound internal credit assessment, possibly under the on-going work being carried out on unrated debt. A new assessment may be done in a few years, whether the use of internal credit assessment can be extended.

⁸ Excluding convertible, hybrid or subordinated bonds.

Market implied ratings and accountancy-based measures

112. These options present too many cons to be implemented in a regulatory framework for calculating capital requirements for all exposures (but please refer to the second consultation paper for the work on the second part of the call for advice on unrated debt). Please also refer to the impact assessment section for an outline of the cons.

4. Treatment of guarantees, exposure guaranteed by a third-party and exposures to regional governments and local authorities (RGLA)

4.1. Call for advice

The differences between Delegated Regulation (EU) 2015/35 and Directive 2013/36/EU and Regulation (EU) No 575/2013 as regards exposures guaranteed by a third party and as regards exposures to regional governments and local authorities (under the empowerments in Article 111(1)(c), (e) and (f) of Directive 2009/138/EC).

More specifically, EIOPA is asked to:

Provide information on the current amounts of exposures guaranteed by a third party and of exposures to regional governments and local authorities (RGLA).

Assess the differences between the banking framework and the Delegated Regulation, in the treatment of regional governments and local authorities and in the treatment of exposures guaranteed by a third party.

For each of these differences, assess if they are justified by differences in the business model of the two sectors, by diverging elements in the determination of capital requirements, or on other grounds; and

Investigate under which conditions the risk mitigating effect of guarantees issued by other guarantors can be recognised in the Solvency II framework.

113. Further to the European Commission call for advice, EIOPA decided to investigate more broadly the treatment of government guarantees in the SCR standard formula.

4.2. Legal basis

Delegated Regulation

114. Article 109a(2)(a) of the Solvency II Directive empowers the European Commission to adopt implementing technical standards on lists of regional governments and local authorities, exposures to whom are to be treated as exposures to the central government of the jurisdiction in which they are established for the purposes of the calculation of the market risk module and the counterparty default risk module of the standard formula.

115. According to Article 85 of the Delegated Regulation 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.

116. According to Articles 180(2) and 187(3) of Delegated Regulation exposures that are fully, unconditionally and irrevocably guaranteed by the European Central Bank, Member States' central government and central banks, multilateral development banks and specific international organisations, where the guarantee meets the requirements set out in Article 215, shall also be assigned a risk weight 0 %.

117. For the purpose of calculation the probability of default for type 1 exposure in the counterparty default risk module, according to Article 199(11) of the Delegated Regulation exposures fully, unconditionally and irrevocably guaranteed by counterparties listed in the implementing act adopted pursuant to Article 109a(2)(a) of the Solvency II Directive shall be treated as exposures to the central government.

118. According to Article 215 of the Delegated Regulation in the calculation of the Basic Solvency Capital Requirement, guarantees shall only be recognised where among other things the guarantee fully covers all types of regular payments the obligor is expected to make in respect of the claim.

Implementing Regulation

119. Commission Implementing Regulation (EU) 2015/2011 includes lists of regional governments and local authorities exposures to whom are to be treated as exposures to the central government of the jurisdiction in which they are established, as referred to in Article 109a(2)(a) of the Solvency II Directive.

4.3. Advice

4.3.1. Previous advice

120. In the initial *CEIOPS' Advice for Level 2 Implementing Measures on Solvency II: SCR Standard Formula, Article 111b Calibration of Market Risk Module* the following was included:

4.182 Fully and completely secured exposures receive a risk weight of 0% if these exposures are guaranteed by an OECD or EEA government, and if these exposures are in the currency of the government. This applies to both residential and commercial real estate.

121. This would imply a zero capital charge for the part of the mortgage loans that are covered by the guarantee from the Member States' central government.

4.3.2. Analysis

Current amounts of exposures guaranteed by a third party and of exposures to regional governments and local authorities

122. In its call for advice, the European Commission asked EIOPA to provide information on the current amounts of exposures guaranteed by a third party and of exposures to RGLA. In this section, data regarding RGLA and guarantees are provided across EEA countries as reported in the quarterly quantitative templates for individual undertakings for the situation per 31 December 2016. Please note that no data was available at EIOPA for Iceland; therefore, when referring to EEA data in this paper, this will exclude Iceland.

123. The quantitative analysis based on quantitative reporting templates (QRTs) for individual undertakings from EEA countries shows that the value of RGLA equals 170bn EUR which corresponds to 1.6 % of total Assets and 2.3 % of total Investments (other than assets held for index-linked and unit-linked contracts). RGLA constitutes 7.8 % of total Government bonds (other than those held for index-linked and unit-linked contracts).

Figure 1. Share of RGLA in the total Investments (other than assets held for index-linked and unit-linked contracts) split by countries

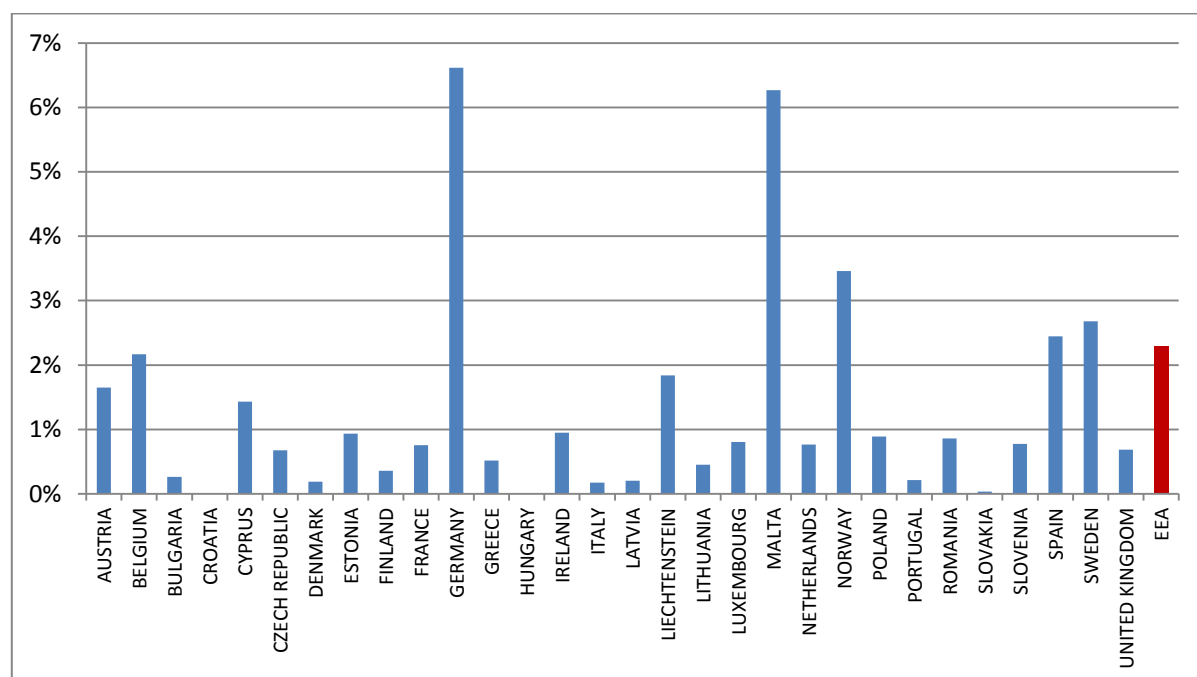
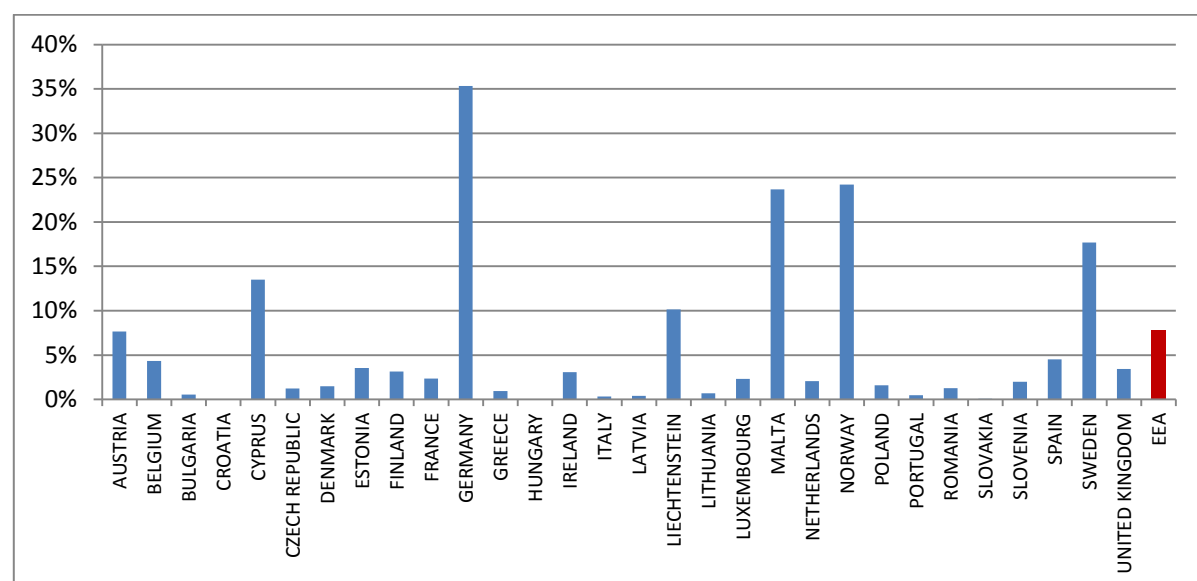


Figure 2. Share of RGLA in the Government bonds split by countries



124. As part of the EIOPA study, NSAs provided information on the value of (re)insurance undertakings' investments with a guarantee from external parties (Member States' central government, RGLA, other third party), and where the guarantor is not part of the same group of the (re)insurance undertaking. The guarantee was linked to the investment rather than to the (re)insurance undertaking itself. NSAs did not report other guarantees received by the (re)insurance undertaking.

125. NSAs' data analysis shows that the value of exposures guaranteed by a third party equals 347bn EUR, among which: Member States' central government guarantees equal 222bn EUR (63.93 %), RGLA guarantees equal 33bn EUR (9.52 %) and other third parties guarantees equal 92bn EUR (26.55 %). Member States' central government and RGLA guarantees constitute ca. 75 % of total guarantees.

Figure 3. Share of Member States' central government and RGLA guarantees in total guarantees

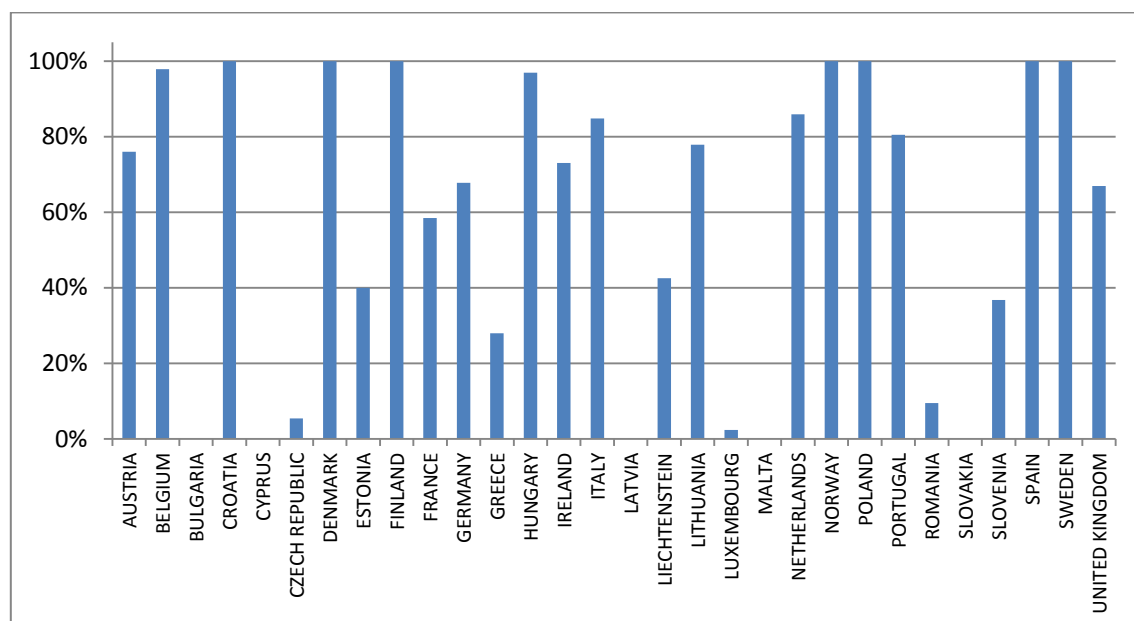
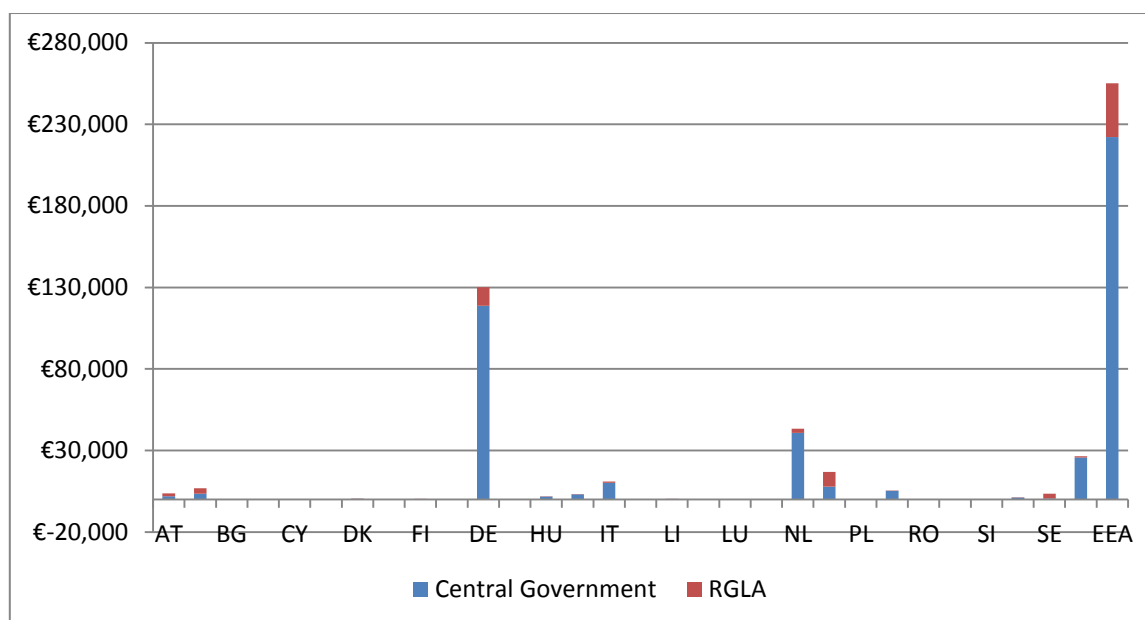


Figure 4. Value of Member States' central government and RGLA guarantees (million euros)



Guarantees issued by RGLA

126. NSAs data provided in the EIOPA study shows that (re)insurance undertakings invest in financial instruments backed by a RGLA guarantee. However according to Article 199(11) of the Delegated Regulation RGLA

guarantees are equivalent to the Member States' central government exposures only for the counterparty default risk module. Most of the debt guaranteed by RGLA should be covered by the spread risk module which means that the same guarantee would be treated differently in the market and counterparty default risk modules.

127. According to Article 85 of the Delegated Regulation, the conditions for a categorisation of RGLA 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 because specific institutional arrangements exist, the effect of which is to reduce the risk of default. However, in the Delegated Regulation, guarantees to Member States' central governments can be taken into account in the market risk module, whereas guarantees of RGLA listed in the Commission Implementing Regulation (EU) 2015/2011 cannot be taken into account. This means that currently in Solvency II, corporate bonds with or without guarantees provided by RGLA listed in the Commission Implementing Regulation (EU) 2015/2011 obtain the same capital requirements, which is not the case in the banking framework.

128. Given the conditions that RGLAs need to comply with to be listed in the Commission Implementing Regulation (EU) 2015/2011, given the inconsistency it introduces in the market risk module, the differences with the banking framework on this aspect do not appear to be justified by differences in business models. Therefore EIOPA advises to recognise direct guarantees provided by RGLA listed in the Commission Implementing Regulation (EU) 2015/2011 as guarantees for Member States central governments. The treatment in the spread risk sub-module and in the market risk concentration sub-module should be aligned.

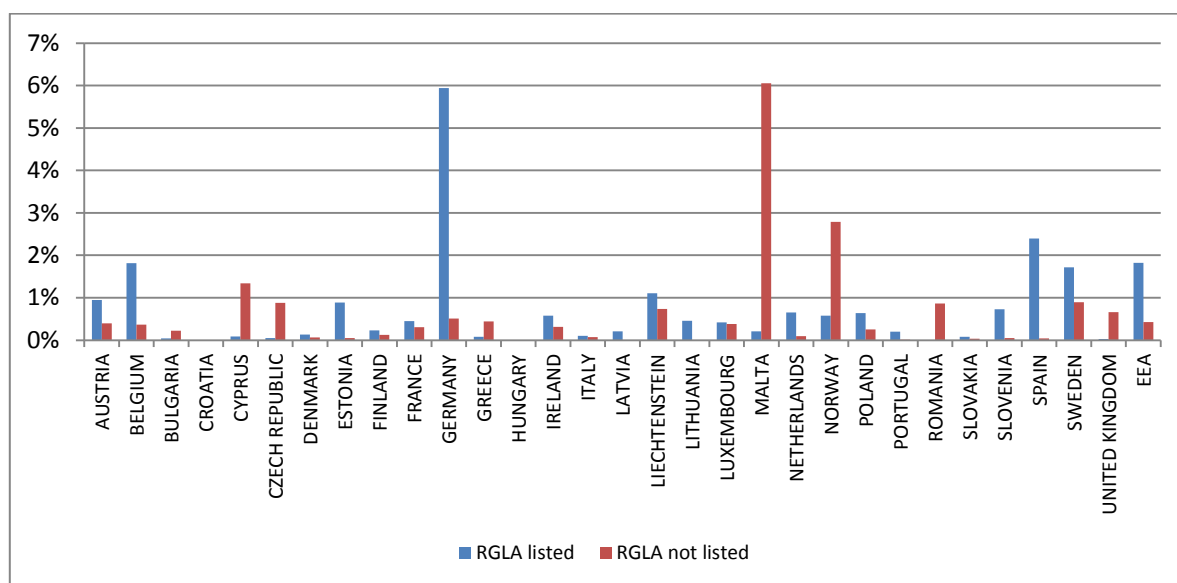
129. Guarantee mechanisms used by e.g. local funding agencies will not be recognised in the standard formula calculations. The Solvency Capital Requirement standard formula is intended to reflect the risk profile of most insurance and reinsurance undertakings and as there are many different guarantee mechanism models: established by governments, self-help organizations, some are public private partnerships (PPP) involving the government, introducing such guarantee mechanisms would not comply with the standard formula underlying assumptions.

130. More details on the differences with regard to RGLA in the Delegated Regulation compared to the ones of the banking regulation are provided in the following sections.

The lists of RGLA, exposures to whom are to be treated as exposures to the Member States' central government

131. The figure below presents the share of RGLA listed in the Commission Implementing Regulation (EU) 2015/2011 and RGLA not listed in the Commission Implementing Regulation (EU) 2015/2011 in total Investments (other than assets held for index-linked and unit-linked contracts) split by (re)insurance undertaking country.

Figure 5. Share of RGLA listed and not listed in the Commission Implementing Regulation (EU) 2015/2011 in the total Investments (other than assets held for index-linked and unit-linked contracts) split by (re)insurance undertaking country



132. A thorough comparison (qualitative and quantitative) of the banking framework and the Delegated Regulation has been performed in order to assess the differences and the sources of differences between the RGLA list in the Commission Implementing Regulation (EU) 2015/2011 with the one from the banking framework.

Table 1. Differences between the RGLA list in the Commission Implementing Regulation (EU) 2015/2011 and the banking framework and the Delegated Regulation

Country	Solvency II	Banking framework
Austria	Land, Gemeinde	Land, Gemeinde
Belgium	gemeenschap, communauté, gewest, région, provincie, province, gemeente, commune	gemeenschap, communauté, gewest, région
Denmark	region, kommune	region, kommune
Finland	kaupunki, stad, kunta, kommun, Ahvenanmaan maakunta, Landskapet Åland	kaupunki, stad, kunta, kommun, Kunnallisessa eläkelaisa tarkoitettu kunnallinen eläkelaitos, Pääkaupunkiseudun Yhteistyövaltuuskunta ⁹
France	région, département, commune	–
Germany	Land, Gemeinde, Gemeindeverband	Land, Gemeinde, Gemeindeverband,
Liechtenstein	Gemeinde	–
Lithuania	savivalybė	savivalybė
Luxembourg	commune	commune
Netherlands	provincie, waterschap, gemeente	provincie, waterschap, gemeente
Poland	województwo, związek powiatów, powiat, związek międzygminny, gmina, miasto stołeczne Warszawa	–
Portugal	Região Autónoma dos Açores, Região Autónoma da Madeira	–
Spain	comunidad autónoma, corporación local	comunidad autónoma, corporación local
Sweden	region, landsting, kommun	region, landsting, kommun
UK	the Scottish Parliament, the National Assembly for Wales, the Northern Ireland Assembly	the Scottish Parliament, the National Assembly for Wales, the Northern Ireland Assembly

133. Quantitative analysis based on quantitative reporting templates (QRTs) for individual undertakings from EEA countries shows that the impact of the differences in RGLA list in the Solvency II and the banking framework equals 10.70bn EUR.

⁹ Pääkaupunkiseudun Yhteistyövaltuuskunta does not exist anymore.

**Table 2. RGLA values split by (re)insurance undertaking country (in millions EUR)
according to the Delegated Regulation and the banking framework**

Country of (re)insurance undertakings	Solvency II		Banking framework		Impact
	RGLA listed	RGLA not listed	RGLA listed	RGLA not listed	
Austria	1 060	441	1 059	442	1
Belgium	5 061	1 014	4 486	1 589	575
Bulgaria	1	6	1	6	0
Cyprus	2	29	1	30	1
Czech republic	5	99	5	99	0
Denmark	235	114	235	114	0
Estonia	10	1	10	1	0
Finland	92	49	92	49	0
France	9 254	6 247	3 637	11 864	5 617
Germany	104 655	8 965	100 903	12 716	3 752
Greece	10	53	10	53	0
Hungary	0	0	0	0	0
Ireland	559	305	482	382	77
Italy	728	483	675	536	53
Latvia	1	0	1	0	0
Liechtenstein	31	21	31	21	0
Lithuania	3	0	3	0	0
Luxembourg	236	217	180	273	55
Malta	14	397	14	397	0
Netherlands	2 347	350	2 153	545	194
Norway	821	3 948	722	4 046	98
Poland	172	69	0	240	172
Portugal	74	4	61	17	12
Romania	0	22	0	22	0
Slovakia	4	2	0	5	4
Slovenia	43	3	39	8	5
Spain	6 232	116	6 226	122	6
Sweden	3 073	1 594	3 048	1 619	25
United kingdom	272	7 115	213	7 174	59
Total	134 994	31 665	124 288	42 371	10 706

134. According to Article 115(2) of the CRR the same conditions as in the Article 85 of the Delegated Regulation need to be fulfilled in order to treat RGLA exposures as exposures to Member States' central governments:

- there is no difference in risk between exposures to these and exposures to the Member States' central government, because of the specific revenue-raising power of the former; and
- specific institutional arrangements exist which reduce the risk of default.

135. However the following reasons for the differences in RGLA list have been identified:

- In the banking framework the list is based on decisions of national banking supervisory authorities on which of the entities in their jurisdictions meet the RGLA criteria. Under Solvency II the list of RGLA treated as Member States' central government is published in the Commission Implementing Regulation (EU) 2015/2011.
- Under Solvency II, there is no similar provision like Article 115(5) of the CRR (intermediate treatment with a risk weight of 20 % applied to all RGLA not listed) so exposures to RGLA are treated either as exposures to the Member States' central government or in the same way as corporate bond exposures in line with the assigned CQS.
- Assessments have been made in different point in time.
- The granularity of the list: the RGLA list in Solvency II contains general information, for example that each "Land" in Austria is eligible, whereas in the banking framework the list is more granular and contains also name of the counterparty (for example that the "Land Burgenland" in Austria is eligible).

136. Despite these reasons the differences do not appear to be justified and both lists should be harmonised. This might require aligning the RGLA list in the Commission Implementing Regulation (EU) 2015/2011 with the list of the banking framework. The harmonisation of both lists will require close cooperation with the European Banking Authority.

Intermediate treatment

137. The introduction of an intermediate treatment of Member States' RGLA not listed in the Commission Implementing Regulation (EU) 2015/2011, as in the banking framework needed to be justified in light of its materiality and of the added complexity this would introduce. This assessment has been conducted by EIOPA on the basis of treating Member States' RGLA that would be not listed in a similar way as it is currently the case in the CRR.

138. In the banking framework banks may choose between two broad methodologies for calculating their risk-based capital requirements for credit risk: the standardised approach and the Internal Ratings-Based (IRB) approach. To determine the risk weights in the standardised approach for certain exposure classes, banks may use assessments by external credit assessment institutions. The Internal Ratings-Based (IRB) approach allows banks to use their internal rating systems for credit risk, subject to the

explicit approval of the bank's supervisor¹⁰. In the standardised approach the risk weights are determined by the category of the borrower: for example sovereign, bank, or corporate and depend on external credit assessments.

139. According to Article 114 of the CRR exposures to Member States' central governments, and central banks denominated and funded in the domestic currency of that central government and central bank shall be assigned a risk weight of 0 % which means that RGLAs of the Member States that are treated as exposures to the central government receive also a risk weight 0 %. For the rest of exposures to central governments and central banks (non-EEA central governments and central banks) for which a credit assessment by a nominated ECAI is available the following risk weights shall be assigned:

Table 3. Risk weight for sovereigns

Credit Quality step	1	2	3	4	5	6
Risk weight	0%	20%	50%	100%	100%	150%

140. Based on the Basel Committee on Banking Supervision document regarding revisions to the Standardised Approach for credit risk¹¹ this corresponds to the following external ratings:

Table 4. Credit assessment for sovereigns

External rating	AAA to AA–	A+ to A–	BBB+ to BBB–	BB+ to B–	Below B–
Risk weight	0%	20%	50%	100%	150%

141. According to Article 115 of the CRR exposures to RGLAs of the Member States that are not treated as exposures to the central government in whose jurisdiction they are established and are denominated and funded in the domestic currency of that regional government and local authority shall be assigned a risk weight of 20%. Taking into account the above mentioned credit assessment for sovereigns (Table 4) the risk weight 20% corresponds to external rating from A+ to A–. In Solvency II, according to the Commission Implementing Regulation (EU) 2016/1800 of 11 October 2016 laying down implementing technical standards with regard to the allocation of credit assessments of external credit assessment institutions to an objective scale of credit quality steps in accordance with Directive 2009/138/EC of the European Parliament and of the Council, credit assessments from A+ to A– are allocated to the second credit quality step (CQS = 2).

142. Taking the above into account, EIOPA's proposal is to calculate the spread risk charge for exposures to Member States' RGLA not listed in the Commission Implementing Regulation (EU) 2015/2011 as exposures in the form of bonds and loans to non-EEA central governments and central banks denominated and funded in the domestic currency of that central government and central bank of credit quality step 2 (Article 180(3) of the Delegated Regulation). The capital requirement for the spread risk would be calculated

¹⁰ Based on *Second consultative document, Standards, Revisions to the Standardised Approach for credit risk*, Basel Committee on Banking Supervision, December 2015.

¹¹ Ibid, page 25.

based on risk weights chosen according to the duration of bond and loans of credit quality step 2. For market concentration risk, the same would be applied: RGLA not listed in the Commission Implementing Regulation (EU) 2015/2011 would receive a risk factor of 12 % according to Article 187(4) of the Delegated Regulation.

143. Quantitative analysis based on quantitative reporting templates (QRTs) for individual undertakings from EEA countries shows that, should the list in the ITS (EU) 2015/2011 be aligned to the banking framework list, RGLA exposure of 42bn EUR would fall under the intermediate treatment.

Table 5. Exposure that would fall under the intermediate treatment (in millions EUR)

Country of (re)insurance undertakings	RGLA exposures held by insurance undertakings (Q4 2016)	Exposure that would fall under the intermediate treatment	Exposure that would fall under the intermediate treatment in percentages
Austria	1,501	442	29%
Belgium	6,075	1,589	26%
Bulgaria	7	6	86%
Cyprus	31	30	97%
Czech Republic	104	99	95%
Denmark	349	114	33%
Estonia	11	1	9%
Finland	141	49	35%
France	15,501	11,864	77%
Germany	113,620	12,716	11%
Greece	63	53	84%
Hungary	0	0	-
Ireland	864	382	44%
Italy	1,211	536	44%
Latvia	1	0	0%
Liechtenstein	52	21	40%
Lithuania	3	0	0%
Luxembourg	453	273	60%
Malta	411	397	97%
Netherlands	2,697	545	20%
Norway	4,769	4,046	85%
Poland	241	240	100%
Portugal	78	17	22%
Romania	22	22	100%
Slovakia	6	5	83%
Slovenia	46	8	17%
Spain	6,348	122	2%
Sweden	4,667	1,619	35%
United Kingdom	7,387	7,174	97%
Total	166,659	42,371	25%

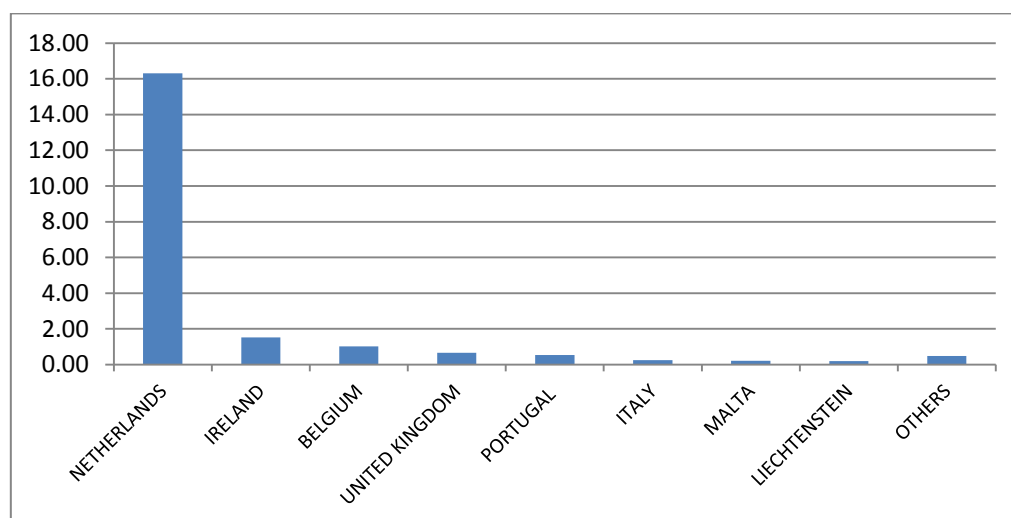
144. For these 42bn EUR of Member States' RGLA not (anymore) listed in the Commission Implementing Regulation (EU) 2015/2011, the spread risk and concentration risk capital charge will be similar to the one associated with bonds and loans of non-EEA central governments and central banks of credit quality step 2. This is considered a sufficient material amount to justify the alignment of the Delegated Regulation with the CRR and to introduce an intermediate treatment.

145. EIOPA has considered taking into account of intermediate treatment in the counterparty risk module, but given the immaterial exposure EIOPA has not proceeded in that direction. EIOPA has not received sufficiently justified evidences to allow including the proposal in its advice. Moreover Guarantees Mechanisms are country specific: the SCR standard formula should cover an average portfolio of (re)insurance undertakings and not each specific portfolio. If the SCR standard formula is not proper then (re)insurance undertaking may use internal models to reflect specificities in the risk profile.

Guarantees from Member States' central governments on type 2 exposures

146. NSAs' data analysis shows that EEA (re)insurance undertakings invest in type 2 exposures which have guarantees by Member States' central government.

Figure 6. Value of type 2 exposures which have guarantees by Member States' central governments (in billion EUR)



147. Most of these type 2 exposures which have guarantees by Member States' central governments are the Dutch residential mortgages loans.

148. Currently in Solvency II, the capital charge for mortgage loans that meet the requirements of Article 191 of the Delegated Regulation is determined via the counterparty default risk module. However, mortgage loans with a (partial or) full guarantee from the Member States' central government or RGLA listed in the Commission Implementing Regulation (EU) 2015/2011 have the same capital charge as similar loans without such a guarantee, as guarantees are not being recognised for type 2 exposures.

149. Article 176(5) of the Delegated Regulation states that capital requirement for spread risk for non-rated loans could be lowered if the value of the collateral, in this case the property held as mortgage, sufficiently covers the value of the loan and the collateral meets the collateral requirements in Article 214 of the Delegated Regulation. This is not a case for mortgage loans that meet the requirements of Article 191 of the Delegated Regulation. Taking this into account and the fact that mortgage loans with guarantees from the Member States' central government have a value of ca. 16bn EUR, EIOPA advises to recognise guarantees from Member States' central government for mortgage loans that meet the requirements of Article 191 of the Delegated Regulation.

Recognition of partial guarantees

150. A partial guarantee is an irrevocable promise by a third party to pay the principal and/or interest up to a pre-determined amount. Usually, the guarantee is structured to cover 100% of each debt service payment, subject to a maximum cumulative payout equal to the guaranteed amount. The guaranteed amount is usually expressed as a percentage of principal and amortizes in proportion to the bond or loan¹².

151. Partial guarantees are recognised in the banking framework. One of the criteria for guarantees in Article 215 of the CRR states that where certain types of payment are excluded from the guarantee, the lending institution has adjusted the value of the guarantee to reflect the limited coverage.

152. NSAs' data analysis shows that (re)insurance undertakings invest in the following financial instruments which are partially guaranteed:

- Dutch residential mortgages loans which are partially guaranteed by the National Mortgage Guarantee scheme ("Nationale Hypotheekgarantie" or NHG). The NHG scheme is administered by the Homeownership Guarantee Fund (Waarborgfonds Eigen Woningen, or 'WEW'). The WEW stands surety for +/- €190 billion in mortgage loans. The NHG scheme is a partial guarantee since:
 - The amount paid out in case of default is at most the difference between the nominal value and the value of the collateral, which means that NHG does not cover all types of regular payments the obligor is expected to make in respect of the claim;
 - The cover of the guarantee declines over time on an annuity-like basis which results in a decrease of the coverage for interest-only mortgages; these interest-only mortgages were popular until 2014;
 - The guarantee covers a certain percentage of the notional value, but does not cover market value losses due to changes (decreases) of market interest rates; the loss stemming from missing high coupons that were set in the past at default is thus not covered by the guarantee;
 - From 2014 onwards almost all Dutch mortgages have an annuity-like based redemption scheme and the guarantee is set at 90

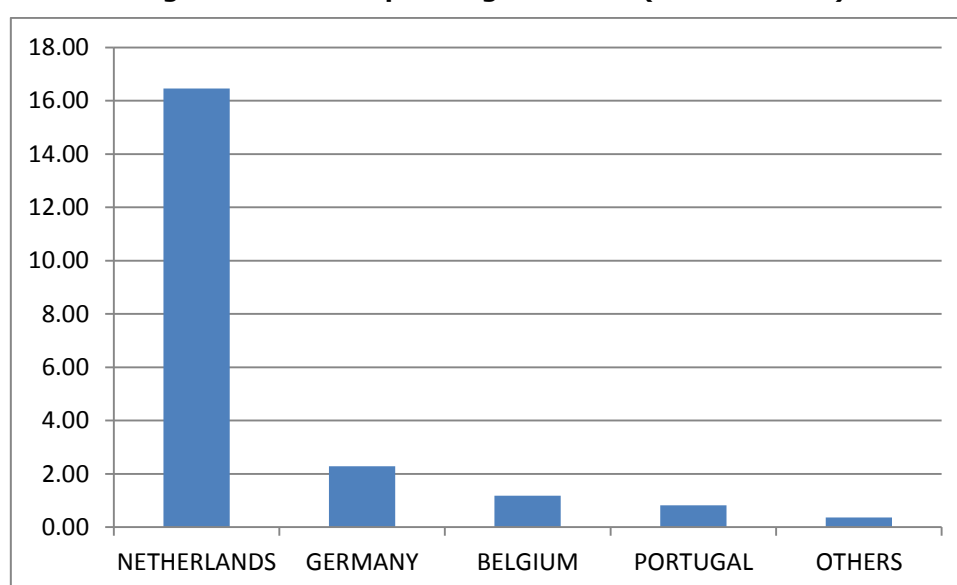
¹² Based on *Structured and securitized products*, International Finance Corporation.

percent of the remaining notional at default; insurance undertakings thus have a 10 percent own risk.

- infrastructure project bonds which are partially guaranteed by the European Investment Bank;
- corporate bonds where the issuer of these instruments have issued mortgages that act as collateral;
- bonds which are guaranteed by the central government as part of National Funds in order to improve the efficiency of utilising public funds;
- real estate and subordinated loans.

153. The materiality of partial guarantees has been assessed on the basis of quantitative data from NSAs. The figure below presents the value of partial guarantees split by countries.

Figure 7. Value of partial guarantees (in billion EUR)



154. Moreover NSAs' data concerning type 2 exposures which have guarantees by Member States' central governments (see 6) shows that the Dutch residential mortgages loans, which are partially guaranteed, mainly constitute the value of instruments with partial guarantees.

155. Since the data from (re)insurance undertakings, collected by the NSAs, show that partial guarantees mainly occur in the counterparty default risk module (i.e. partial guarantees from Member States' central governments and RGLA listed in the Commission Implementing Regulation (EU) 2015/2011 on type 2 exposures), EIOPA advises to only recognise partial guarantees from Member States' central governments and RGLA on type 2 mortgage loans exposures in the counterparty default risk module.

156. EIOPA does not advice to recognize partial guarantees in the spread risk module since the credit quality step of a bond or loan will already reflect the risk mitigating effect of the partial guarantee, irrespective if the guarantor is a Member States' central government, a RGLA or another third party. External Credit Assessment Institutions (ECAI), in their assessment of the credit quality, take into account of all risk mitigating effects like collateral and also partial guarantees. Moreover the default risk is not explicitly covered in

the spread risk module. It is addressed implicitly in the calibration of the factors of movements in credit spreads. Adjusting the credit quality step upwards for partial guarantees would be double counting the risk mitigating effect. For bonds and loans for which no credit assessment by a nominated ECAI is available, partial guarantees could be one of the factors that the insurance undertaking reflects in the internal assessment of a debt as part of the internal assessment process which is described in the second consultation paper. Since the banking framework is not a market value framework it also does not have a credit spread risk module that covers the variation in the market value of bonds and loans due to credit spread changes as in Solvency II. As such, by definition, there cannot be an alignment of how the spread risk sub-module of Solvency II deals with partial guarantees and how the banking regulation deals with partial guarantees. This is not the case for the counterparty default risk module that does have an approach with Probability of Defaults (PDs) and Loss Given Defaults (LGDs) like in the banking framework

157. Partial guarantees should not be recognised in the market risk concentration sub-module as according to Article 184(2)(d) of the Delegated Regulation its calculation excludes exposures included in the scope of the counterparty default risk module.

158. Since EIOPA mainly received data of partial guarantees for type 2 exposures, being mortgage loans, EIOPA advises to adjust only the formula for mortgage loans that meet the requirements of Article 191 of the Delegated Regulation. EIOPA advises to adjust Article 192(4) of the Delegated Regulation in order to reflect the possible risk mitigating effect of partial guarantees as described below.

159. The loss-given-default (LGD) on a mortgage loan shall be equal to the following:

$$LGD = \max(\text{Loan} - (80\% \times \text{Mortgage} + \text{Guarantee}); 0)$$

where:

- *Loan* denotes the value of the mortgage loan in accordance with Article 75 of the Solvency II Directive;
- *Mortgage* denotes the risk-adjusted value of the mortgage;
- *Guarantee* denotes the payment of the guarantor to the (re-)insurance undertaking if the obligor of the mortgage loan would default now and the value of the property held as mortgage would equal 80% of the risk-adjusted value of the mortgage; Guarantee is set to zero if the guarantee on the mortgage loan does not meet the requirements of Article 215 of the Delegated Regulation.

160. The guarantee referred to above should be recognised provided it complies with the requirements of Articles 209 to 215, except for the requirement that it “fully covers ...”.

161. The guarantee referred to in point (c) should be recognised if it is provided by Member States’ central government or by counterparties listed in

the implementing act adopted pursuant to Article 109a(2)(a) of the Solvency II Directive.

162. The implied probabilities of defaults of type 2 exposures in Article 202 of the Delegated Regulation are unaffected whether a partial guarantee is in place or not as it is assumed that guarantees do not affect the probability of default but only the loss given default.

Conclusion

163. This change, together with explicitly allowing for guarantees from Member States' central governments and RGLA listed in the Commission Implementing Regulation (EU) 2015/2011 for type 2 exposures being mortgage loans and adjusting Article 215 of the Delegated Regulation to also allow for direct and irrevocable partial guarantees, allows for the recognition of partial guarantees from Member States' central governments and RGLA on type 2 mortgage loans exposures that meet the requirements of Article 191 of the Delegated Regulation.

4.3.3. EIOPA's advice

Differences between Delegated Regulation and banking framework

164. As requested by the European Commission, a thorough comparison of the banking framework and the Delegated Regulation has been performed as regards the treatment of regional governments and local authorities and the treatment of exposures guaranteed by a third party in order to analyse the possibility of harmonisation of the CRR and Delegated Regulation provisions.
165. After the comparison of the banking framework and the Delegated Regulation the following differences were identified:

Table 6. Differences between the banking framework and the Delegated Regulation

No	Solvency II	Banking framework	Justification of the difference
1	Regional governments and local authorities do not constitute a separate exposure class (concept of single name exposure).	Regional governments and local authorities constitute a separate exposure class.	Justified
2	Public sector entity is not defined.	Article 4(8) and 116(4) of the CRR defines public sector entity which in exceptional circumstances may be treated as exposures to the Member States' central government.	Justified
3	Partial guarantees are not recognized.	Partial guarantees are recognized.	Not justified for mortgage loans
4	Guarantees issued by RGLA are treated as guarantees issued by the Member States' central government of the jurisdiction in which they are established only in the counterparty default risk module.	Guarantees issued by RGLA are treated as guarantees issued by the Member States' central government of the jurisdiction in which they are established.	Not justified
5	RGLA listed in the Commission Implementing Regulation (EU) 2015/2011 and in the list from the banking framework are based on the same criteria however for some Member States there are differences between both lists.	RGLA listed in the Commission Implementing Regulation (EU) 2015/2011 and in the list from the banking framework are based on the same criteria however for some Member States there are differences between both lists.	Not justified
6	RGLA exposures might be treated in two ways: as exposures to institutions (i.e. as corporate bonds) or as exposures to Member States' central governments.	RGLA exposures might be treated in two ways: as exposures to Member States' central governments or with an intermediate treatment.	Not justified

166. The first two differences are justified because of diverging elements and underlying assumptions in the determination of capital requirements. (Re)Insurance undertakings are mainly exposed to underwriting risk, market risk (risks faced by (re)insurance undertakings depend on both assets and liabilities) whereas the most significant risk to which credit institutions are exposed to is credit risk. According to the Solvency II Directive, credit risk acts in the form of counterparty default risk, or spread risk, or market risk concentrations. Under Solvency II, credit risk is counterparty risk under credit institutions terminology and, in practice, mainly relates to reinsurance arrangements. For (re)insurance undertakings the main part of the counterparty default risk is exposure to reinsurance arrangements, while credit institutions do not have such reinsurance arrangements. In the banking framework, the capital requirement for credit risk is calculated based on an exposure class (the Standardised Approach for credit risk divides assets into various different exposure classes, each exposure must be assigned to one of the exposure classes) while in the Delegated Regulation the capital requirement for counterparty default risk is calculated on the basis of a single name exposure. In the banking framework each exposure shall be

assigned to one of the following exposure classes: exposures to central governments and central banks, institutions, corporates, retail exposures, equity exposures, items representing securitisation positions, other non-credit-obligation assets. The concept of a single name exposure is broader than a separate exposure class as exposures to undertakings which belong to the same corporate group shall be treated as a single name exposure. In the banking framework, for the purpose of credit risk calculations, a risk weight is directly assigned to each exposure which means that the application of risk weights is based on the exposure class to which the exposure is assigned to and its credit quality. In the Delegated Regulation risk weights for type 1 exposures are determined based on the probability of default and loss-given default measures and for type 2 exposures direct risk weights are assigned.

167. Mortgage loans with and without guarantees from Member States' central governments have a similar capital charge in the Delegated Regulation, while the mortgage loans with the guarantees from Member States' central governments are less risky than mortgage loans without such a guarantee. Moreover NSAs' data concerning type 2 exposures which have guarantees by Member States' central governments shows that mostly these type 2 exposures are partially guaranteed. The banking framework allows the recognition of the risk mitigation effect of partial guarantees by including in the CRR the following criteria for guarantees: *where certain types of payment are excluded from the guarantee, the lending institution has adjusted the value of the guarantee to reflect the limited coverage*. It is not justified why in Article of 215 of the Delegated Regulation the criteria from the CRR was not included. Since data from (re)insurance undertakings, collected by the NSAs, shows that partial guarantees mainly occur in the counterparty default module (i.e. partial guarantees from Member States' central governments and RGLA listed in Commission Implementing Regulation (EU) 2015/2011 on type 2 exposures) and that partial guarantees are only material in the case of type 2 mortgage loans, it is justified to only recognise partial guarantees from Member States' central governments and RGLA listed in Commission Implementing Regulation (EU) 2015/2011 on type 2 mortgage loans exposures in the counterparty default risk module.

168. NSAs data provided in the EIOPA study (see part 4.3.2 of Advice) shows that (re)insurance undertakings invest in financial instruments backed by a RGLA guarantee. However according to Article 199(11) of the Delegated Regulation guarantees from RGLA listed in Commission Implementing Regulation (EU) 2015/2011 are equivalent to guarantees from Member States' central government exposures only for the counterparty default risk module, which means that the same guarantee would be treated differently in the market and counterparty default risk modules. However, most of the debt guaranteed by RGLA listed in Commission Implementing Regulation (EU) 2015/2011 is covered in the spread risk sub-module.

169. According to Article 85 of the Delegated Regulation the conditions for a categorisation of RGLA 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.

However, in the Delegated Regulation, guarantees to Member States' central governments can be taken into account in the market risk module, whereas guarantees of RGLA listed in Commission Implementing Regulation (EU) 2015/2011 cannot be taken into account. This means that currently in Solvency II, corporate bonds with or without guarantees provided by RGLA listed in ITS (EU) 2015/2011 obtain the same capital requirements, which is not the case in the banking framework.

170. Considering the analysis above, EIOPA considers that such a difference between the Delegated Regulation and the banking framework is not justified.

171. EIOPA advises to treat direct guarantees issued by RGLA listed in Commission Implementing Regulation (EU) 2015/2011 in the same way as the guarantees issued by Member States' central government of the jurisdiction in which they are established in the market risk module.

172. The list of RGLA in Commission Implementing Regulation (EU) 2015/2011 and the list from the banking framework are based on the same criteria, however for some Member States there are differences between both lists. EIOPA has performed an assessment of the differences and the sources of differences between both lists. The differences identified by EIOPA do not appear to be justified and both lists should be harmonised.

173. The introduction of an intermediate treatment for Member States' RGLA would mean that the RGLA that are not on the list in the Commission Implementing Regulation (EU) 2015/2011 would not be treated as corporate bonds anymore (as it is the case now according to the Delegated Regulation) but would receive a risk weight corresponding to this intermediate treatment. As in many areas insurance and banking regulations have been aligned to avoid regulatory arbitrage, it is desirable to introduce a similar intermediate treatment in the Delegated Regulation as well.

174. After assessing the differences between the banking framework and the Delegated Regulation in the treatment of RGLA and in the treatment of exposures guaranteed by a third party EIOPA advises the following:

Guarantees issued by RGLA

175. In the market risk module, the treatment of direct guarantees issued by RGLA listed in Commission Implementing Regulation (EU) 2015/2011 should be the same as the treatment of guarantees issued by the Member States' central government of the jurisdiction in which they are established.

Aligning the RGLA list in the Commission Implementing Regulation (EU) 2015/2011 with the list of the banking framework

176. The list of RGLA in the Commission Implementing Regulation (EU) 2015/2011 should be aligned with the list of the banking framework. The harmonisation of both lists will require close cooperation with the European Banking Authority. Aligning the RGLA list to the banking regulation might imply modifying the Commission Implementing Regulation (EU) 2015/2011. As that act is not covered by the review of the Delegated Regulation, any concrete change to the list will be proposed outside of this review.

Intermediate treatment for RGLA

177. An intermediate treatment to Member States' RGLA not listed in the implementing act adopted pursuant to point (a) of Article 109a(2) of the Solvency II Directive should be introduced in the standard formula, as a new asset category. The spread risk charge for Member States' RGLA not listed in the Commission Implementing Regulation (EU) 2015/2011 would be similar to the one associated with bonds and loans to non-EEA central governments and central banks denominated and funded in the domestic currency of that central government and central bank of credit quality step 2 (Article 180(3) of the Delegated Regulation). Capital requirement for the spread risk would be calculated based on risk weights chosen according to duration of bond and loans of credit quality step 2. For market concentration risk, the same would be applied: RGLA not listed in the Commission Implementing Regulation (EU) 2015/2011 would receive a risk factor 12 % according to Article 187(4) of the Delegated Regulation.

Guarantees from Member States' central governments and RGLA listed in Commission Implementing Regulation (EU) 2015/2011 on type 2 mortgage loans

178. The recognition of Member States' central governments guarantees and of guarantees from RGLA listed in Commission Implementing Regulation (EU) 2015/2011 should be extended to mortgage loans that meet the requirement of Article 191 of the Delegated Regulation.

Recognition of partial guarantees

179. The risk mitigating effect of a partial guarantee should be recognised for type 2 mortgage loans exposures in the counterparty default risk standard formula module provided that the partial guarantee meets the requirements of article 215 of the Delegated Regulation with the exception of 215(f) that the guarantee 'fully covers...'.

4.3.4. Proposal for new Articles

180. In order to implement the advice the following changes to the Delegated Regulation could be made:

Member States' central governments guarantees

181. Replace Article 192(4) by the following:

The loss-given-default on a mortgage loan shall be equal to the following:

$$LGD = \max(Loan - (80\% \times Mortgage + Guarantee); 0)$$

where:

(a) *Loan* denotes the value of the mortgage loan in accordance with Article 75 of the Solvency II Directive;

(b) *Mortgage* denotes the risk-adjusted value of the mortgage;

(c) *Guarantee* denotes the payment of the guarantor to the (re-)insurance undertaking in case the obligor of the mortgage loan would default and the value of the property held as mortgage would equal 80% of the risk-adjusted value of the mortgage;

The guarantee referred to in point (c) should be recognised provided it complies with the requirements of Articles 209 to 215, except for the requirement in Article 215(f) that it “**fully** covers ...”.

The guarantee referred to in point (c) should be recognised if it is provided by Member States’ central government or by counterparties listed in the implementing act adopted pursuant to point (a) of Article 109a(2) of Directive 2009/138/EC.

Guarantees issued by RGLA

182. Introduction of new provisions in Articles 180(2) and 187(3), based on the existing provision for the counterparty default risk module in Article 199(11): *Exposures 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 Member States’ central government.*

5. Risk-mitigation techniques

5.1. Call for advice

Solvency II is a risk-based framework, which in particular takes account of the effect of certain risk mitigation techniques.

EIOPA is asked to:

- *Provide information on recent market developments as regards risk mitigation techniques, in particular embedded derivatives and longevity risk transfer.*
- *Assess if the framework for the recognition of risk mitigation techniques appropriately covers these recent market developments.*
- *Where necessary, suggest updates to this framework.*

5.2. Legal basis

Solvency II Directive

183. Article 14(36) of the Solvency II Directive defines “risk-mitigation techniques” as “*all techniques which enable insurance and reinsurance undertakings to transfer part or all of their risks to another party*”.

184. Article 101(5) of the Solvency II Directive requires (re)insurance undertakings to take into account the effect of risk-mitigation techniques in the calculation of the Solvency Capital Requirement under the condition that the resulting risks are properly reflected.

185. Article 111(1)(e) and (f) of the Solvency II Directive requires the European Commission to adopt delegated acts for quantifying the impact of risk-mitigation techniques on the Solvency Capital Requirement and for the qualitative requirements they have to meet.

Delegated Regulation

186. Article 83(4) of the Delegated Regulation requires for the scenario based calculations of capital requirements that the impact on the value of risk mitigation instruments which comply with Articles 209 to 215 is taken into account.

187. Articles 208 to 215 of the Delegated Regulation set out quantitative and qualitative requirements for risk-mitigation techniques.

5.3. Advice

5.3.1. Previous advice

- 188. CEIOPS' Advice for Level 2 Implementing Measures on Solvency II: SCR Standard Formula, Allowance of Financial Risk Mitigation Techniques
- 189. CEIOPS' Advice for Level 2 Implementing Measures on Solvency II: SCR Standard Formula, Non-Life Underwriting Risk

5.3.2. Analysis

Article 211

- 190. The requirement in Article 211(2)(a) of the Delegated Regulation that the reinsurers complies with the SCR is very important. Irrespective of the reflection of credit risk in the capital requirements there should be a high degree of confidence that the provider of protection will be able to meet its obligations.
- 191. The provisions in Article 211(3) of the Delegated Regulation are intended to avoid a very large increase in the capital requirements provided that there is a high probability that the SCR will be restored in the prescribed time period.
- 192. If there are practical problems with checking the criteria the automatic solution is not necessarily to drop them. One alternative would simply be no recognition of reinsurance provided by a counterparty that does not meet its SCR.
- 193. At the same time no recognition at all could result in a "spike" in the SCR for the insurer taking out reinsurance while the reinsurer may restore compliance within some months.
- 194. The EIOPA advice tries to strike a balance between these different considerations. It is assumed that at the latest six months after the SCR breach was disclosed the insurer taking out reinsurance has clarity whether the reinsurer has restored compliance with the SCR within six months after the SCR breach.
- 195. For the reasons provided above a full recognition does not seem appropriate. The period in which reinsurance provided by a reinsurer in breach of its SCR is recognised should also be of limited duration.
- 196. Finally, it seems problematic to recognise reinsurance provided by a reinsurer in breach of its MCR.
- 197. The period for recognition should not be prolonged if the recovery period is extended in accordance with Article 138 (3) of the Solvency II Directive: The period for the recognition proposed below starts only with the public disclosure of the SCR breach. Moreover, an extension of the recovery period might indicate a more "difficult" case.

198. On the basis of these considerations the advice set out in the next section is provided. It takes into account concerns about pro-cyclicality by allowing a partial recognition with the possibility of nearly full recognition if the percentage by which the Solvency Capital Requirement is breached is small.

Rolling hedges

199. Restrictions on the frequency of adjustments have the following advantages:

- a. Less frequent adjustments reduce the renewal risk (i.e. the risk that the insurer cannot enter into a new contract when the old one expires).
- b. With increasing complexity the assessment whether the arrangements are "sufficiently similar" as required in Article 209(3) of the Delegated Regulation becomes more difficult.

200. At the same time such restrictions may prevent insurers from adjusting their risk mitigation to changes in their risk position on a timely basis.

201. Any provision has to strike a balance between these considerations.

202. In the following the term "Exposure adjustment" describes the situation where the insurers enters into new contracts, terminates contracts (fully or partially) or enters into offsetting contracts to reflect changes in the hedged position (e.g. entering into additional short future contracts on a stock X because more stocks X were purchased).

203. As the issue is linked to the definition of risk-mitigation techniques which is one topic in the second consultation EIOPA will provide further clarification on what constitutes exposure adjustments in its final advice in February. This should also allow deciding what the term does not cover (e.g. dynamic hedging).

204. Based on the legal text there may be - due to the lack of a definition for "risk-mitigation technique" - different readings on whether more frequent exposure adjustments are allowed. The following discussion is based on what seems technically appropriate and not the current legal situation.

205. In order to avoid the build-up of larger unhedged positions exposure adjustments should be allowed on a weekly basis for the risk-mitigation techniques covered in Article 211 and 212 of the Delegated Regulation.

206. There should also be the possibility to complement them with pre-defined exceptional exposure adjustments (e.g. in case of a daily change of more than 5 % in an exchange rate).

207. The weekly adjustment combined with pre-defined exceptional adjustments should provide sufficient flexibility while limiting renewal risk and complexity.

208. Then there is the question whether restrictions should be imposed on the contracts used for risk-mitigation.
209. Requirements on the minimum maturity of the contracts reduce the frequency with which the risk mitigation has to be adjusted in the absence of exposure adjustments.
210. EIOPA considers that the full recognition despite renewal risk justifies a “hard” quantitative requirement on the maturity instead of relying on the qualitative criteria set out in Article 209.
211. For futures and other financial instruments traded on an exchange at least the monthly contract should be used. This means that the contracts do not have to be “rolled” more than 12 times a year. Given the available markets this should at least for futures not represent an actual restriction.
212. In the case of other financial instruments that are not traded on an exchange this restriction cannot be applied as the contractual arrangements are bilaterally agreed.
213. For these financial instruments the maturity at the inception of the contract should be at least one month.
214. No comments were received requesting more flexibility regarding Article 209(3) of the Delegated Regulation with respect to risk-mitigation techniques using reinsurance contracts or special purpose vehicles (covered in Article 211 of the Delegated Regulation).
215. The same rules with respect to exposures adjustments described in paragraph 205 apply to risk-mitigation techniques covered in Article 211 and 212 of the Delegated Regulation.
216. The maturity of the reinsurance contract or special purpose vehicle at inception should be at least three months.
217. Based on the stakeholder feedback this should not represent an actual restriction.
218. For risk-mitigation techniques covered in Article 211 and 212 of the Delegated Regulation, changing to contracts with different maturities should be possible as long as the requirements regarding the maturity described in paragraphs 211, 213 and 216 are met (shifting from one month to three months futures and back again would for example be allowed).
219. Dynamic hedging strategies where a constant adjustment of the portfolio is necessary can be highly risky as the financial crisis in 2008-2009 has demonstrated.
220. It seems worth clarifying that such dynamic hedging strategies (e.g. dynamic replication of a put option) would not meet the “similarity” requirement in Article 209(3) of the Delegated Regulation: The risk-mitigation effect resulting from an instantaneous shock applied to the

contracts currently in place differs substantially from the risk-mitigation effect that is provided over 12 months.

5.3.3. EIOPA's advice

Rolling hedges

221. Exposure adjustments on a weekly basis for the risk-mitigation techniques covered in Article 211 and 212 of the Delegated Regulation should not prevent the recognition of the risk-mitigation techniques in the SCR standard formula. Unless new facts emerge EIOPA considers that a more frequent adjustment should not be possible.
222. There should also be the possibility to complement them with pre-defined exceptional exposure adjustments (e.g. in case of a daily change of more than 5 % in an exchange rate).
223. EIOPA will provide further clarification on what constitutes exposure adjustments in its final advice in February 2018.
224. For futures and other financial instruments traded on an exchange to be recognised in the SCR standard formula calculation at least the monthly contract should be used.
225. For financial instruments not traded on an exchange the maturity at the inception of the contract should be at least one month.
226. The maturity of the reinsurance contract or special purpose vehicle at inception should be at least three months.
227. For risk-mitigation techniques covered in Article 211 and 212 of the Delegated Regulation, changing to contracts with different maturities should not prevent recognition in the SCR standard formula as long as the requirements regarding the maturity described in paragraphs 224 to 226 are met.

Article 211(3) of the Delegated Regulation ("realistic recovery plan")

228. Undertakings should be allowed to recognise in the calculation of the SCR standard formula reinsurance with a reinsurance undertaking that is in breach of its SCR using the reduction factor set out in Article 211(3) of the Delegated Regulation without further conditions for the period set out below. There should be no recognition in case of a breach of the MCR.
229. The recognition should be allowed for a maximum of six months after the SCR breach has been disclosed subject to the further restriction set out in paragraphs 231 and 232.
230. If there is clarity before the end of the period referred to in paragraph 229 that the reinsurance undertaking complies again with the SCR, then the provisions no longer apply and the reinsurance is recognised again to the full extent.

231. If it becomes clear before the end the period referred to in paragraph 320 that the reinsurance undertaking has not submitted a realistic recovery plan or will not be able to restore compliance within six months after the SCR breach occurred, there should be no recognition of the reinsurance.

232. At the latest six months after the disclosure of non-compliance there is clarity whether compliance has been restored within six months after the SCR breach occurred or not. If compliance with the SCR has been restored then no specific rules are necessary. Otherwise there should be no recognition of the reinsurance.

Adverse development covers

233. EIOPA will be conducting further analyses on adverse development covers, which are a specific type of non-proportional reinsurance. EIOPA will take a position on whether or not these covers should be recognised in the standard formula and, if yes, how, in its final advice to the Commission, by February 2018.

6. Look-through approach: investment related vehicles

6.1. Call for advice

The look-through approach is currently not applied to investments in related undertakings.

EIOPA is asked to:

- *Provide information on related undertakings used by insurance and reinsurance undertakings as an investment vehicle.*
- *Assess under what conditions it may be appropriate to extend the look-through approach to such undertakings.*

6.2. Legal basis

Solvency II Directive

235. The Solvency II Directive does not contain any specific provision regarding the application of the look-through approach.

Delegated Regulation

236. The application of look-through is set out in Article 84 of the Delegated Regulation. Article 84(1) of the Delegated Regulation requires (re)insurance undertakings to calculate the SCR on the basis of each of the underlying assets of collective investment undertakings and other investments packaged as funds (look-through approach). It also establishes (Article 84(2)) that the look through approach shall apply to indirect exposures to market risk (other than collective investment undertakings and investments packaged as funds), counterparty default risk and underwriting risk. Furthermore, in accordance with Article 84(4) of the Delegated Regulation, the look-through approach shall not apply to investments in related undertakings (within the meaning of Article 212(1)(b) and (2) of the Solvency II Directive).

Guidelines

237. EIOPA Guidelines on look through approach¹³ aim at increasing consistency and convergence of professional practice in the application of the look-through approach for all types and sizes of solo undertakings using the standard formula.

238. **Guideline 3** gives some guidance on the interaction between the application of equity risk and the application of property risk for specific types of investments in real estate. Notably guideline 3 reads as follows:

Undertakings should cover the following investments in the property risk sub-module:

- (a) *land, buildings and immovable property rights;*
- (b) *property investment held for the own use of the undertaking.*

¹³ <https://eiopa.europa.eu/publications/eiopa-guidelines/guidelines-on-look-through-approach>

For equity investments in a company exclusively engaged in facility management, real estate administration, real estate project development or similar activities, undertakings should apply the equity risk sub-module. Where undertakings invest in real estate through collective investment undertakings or other investments packaged as funds, they should apply the look-through approach.

6.3. Advice

6.3.1. Previous advice

239. Extract from CEIOPS' Advice for Level 2 Implementing Measures on Solvency II: Structure and Design of Market Risk Module

Investment funds

4.183 In order to properly assess the market risk inherent in collective investment vehicles, and other investments packaged as funds, it shall be necessary to examine their economic substance. Wherever possible, this shall be achieved by applying a look-through approach in order to assess the risks applying to the assets underlying the investment vehicle. Each of the underlying assets would then be subjected to the relevant sub-module stresses and capital charges calculated accordingly.

4.184 The look through approach shall also be applied for other indirect exposures.

4.185 Where a number of iterations of the look-through approach is required (e.g. where an investment fund is invested in other investment funds), the number of iterations shall be sufficient to ensure that all material market risk is captured.

4.186 The above recommendations can be applied to both passive and actively managed funds except for investments in funds that track a well-diversified index including only listed equity from developed markets.

240. Extract from CEIOPS' Advice for Level 2 Implementing Measures on Solvency II: Treatment of participations

The "look-through" method was not considered an appropriate option for the treatment of participations. Under this method, the participating undertaking's investments in (re)insurance undertakings, credit and financial institutions and other related undertakings are consolidated into its solo SCR. The participating undertaking's own funds are replaced with a consolidated calculation of the own funds of the sub-group, and similarly the participating undertaking's SCR is replaced with a group SCR calculation for the sub-group. The look-through approach results in a line by line aggregation of the assets and liabilities of the parent with those of the participation. The disadvantage of this approach is that supervisors are unable to identify what own funds reside in the solo entity commensurate to the risks that it holds on a stand-alone basis.

6.3.2. Analysis

Information on related undertakings used by insurance and reinsurance undertakings as an investment vehicle

241. In order to provide the European Commission with the information and advice requested on related undertakings that serve an investment purpose, EIOPA has sent a questionnaire to the NSAs. The outcome is summarised below.

242. There are relevant cases in Europe where "related undertakings" represent "investment vehicles" for holding assets or have been established with the predominant purpose of holding assets on behalf of the parent insurance company.

243. While in some countries these investment structures may in some cases present up to 50 % of total investments, in other markets these are immaterial.

244. These investment vehicles are generally "alternative investment funds" following dedicated mandates, private equity participations or subsidiaries established for investment purposes. In some cases these subsidiaries are investment companies which have a risk management which mirrors the one of the parent company.

245. Some of these undertakings principally contain investments in property while others contain a diversified asset portfolio. In several cases the investment companies are fully held and controlled by the insurance company.

246. In some cases, the related undertaking is not listed, therefore requiring a 49 % equity shock plus the symmetric adjustment (+/- 10%). When the

related undertaking represents a material part of the balance sheet total and the related undertaking is unrated, the capital charge under the concentration sub-module can become disproportionately high. This treatment may not reflect the underlying investment portfolio of the related undertaking which is usually highly diversified.

247. By contrast to the calculation of the SCR at the level of the undertaking, the application of the look through approach to the underlying investments is compulsory for calculating the group SCR, where the related undertaking falls under the treatment of Article 335(a), (b) or (c). This sometimes leads to counter-intuitive results, where the solo SCR of the insurance undertaking is higher than the group SCR despite limited differences in scope and underlying risk.
248. In several markets related undertakings are widely used when the undertakings invest in property. There are also cases where the infrastructure investments are placed. For some life insurance undertakings, property investments alone may account for 5-10 % of the total investments and may be material.
249. Some NSAs expressed that for the investment related undertakings with property investments, assuming no leverage is used by the related undertaking, the current treatment overestimates the capital charge compared to if the look-through approach was applied. However, if leverage is allowed in the related undertaking, the current capital charge could underestimate the effective risk.
250. In some cases, the look through approach was already applied by the (re)insurance undertaking investing in "related investment vehicles" that are not (re)insurance undertakings because they have no purpose other than holding assets on behalf of the insurance undertaking.
251. This type of investment structure is used independently from the business composition of the (re)insurance undertaking (life, non-life and health insurance undertakings may make use of it).
252. In some cases the investment related undertakings are used for holding all types of assets such as fixed income and equity. For some markets mortgages are often held in these types of separate undertakings as opposed to on the balance sheet of the insurance undertaking.
253. When investing in mortgages, the difference between the capital charge calculated using the market risk sub-module (on the value of the related undertaking with a shock of 22 %, 39 % or 49 % as appropriate) with a capital requirement calculated on the basis of the counterparty default risk

module - type 2 exposures (directly on the mortgages; shock of less than 10 % depending on quality of the portfolio) has proven to be relevant.

254. In some markets the application of the equity risk capital requirement for property holding related undertakings has been considered by local supervisors not to reflect the actual risk. If these investments are treated as strategic equity investments, the capital requirement may be relatively similar to the capital requirement for property investments. Otherwise the capital requirement for type 2 equities will apply, which may overstates the risk.
255. The standard formula may understate the capital requirements (in some cases) for highly leveraged investment companies, if these are treated as equity investments. For investments in unit trusts or open-ended investment companies (OEICs), where the share price directly reflects the value of the underlying investments, a look-through approach may capture the risks more appropriately.

Assessment under what conditions it may be appropriate to extend the look-through approach to such undertakings

256. The call for advice requires a specific focus on those related undertaking which may represent "investment vehicles" for holding assets or may have been established with the predominant purpose of holding assets on behalf of the parent/participating entity. This creates an important identification issue as "investment related undertakings" are not defined in the Delegated Regulation.
257. A clear definition should be given of these "investment related undertakings". It appears from the practices identified above by NSAs that the existence of a specific and formalized investment mandate is a key element.
258. There may however be cases where, additionally to this investment mandate, the related undertaking may be pursuing other significant business on behalf, or not, of the parent or participating undertaking. In those cases, applying look-through may be inappropriate. For instance, if a related undertaking pursues insurance business, applying look-through would mean proceeding with a sub-consolidation similar to the calculation that is done for the purpose of the group solvency.
259. Therefore the "investment related undertaking" should operate on behalf of the parent or participating undertaking and principally support its operations related to investment activities.

260. As outlined above, the benefits identified for extending the look-through approach to such cases outweigh the cons. In particular, it appears that there are several situations in the EEA where applying the equity shock for type 2 overestimates the risks as the “investment related undertaking” has an investment portfolio which is either more diversified or specialised in real estate. Moreover, not applying the look-through may lead to a higher market risk concentration, which does not reflect the reality of the underlying risks.
261. Some stakeholders have requested that the look-through be mandatory, but where there is proof that calculating the SCR with the look-through approach leads to a lower SCR than applying a type 2 equity risk charge of 49 %, then (re)insurance undertakings should be free to set the SCR to the more conservative level of capital and not be obliged to look-through anymore. This proposal may be sensible, in particular considering the work that EIOPA is carrying out as regards potential simplifications of the look-through approach. It will be further considered for the second set of advice.

6.3.3. EIOPA’s advice

262. For investments in “related undertakings” which are substantially “investment funds” (i.e. “investment vehicles”), the principle of “substance over form” should apply: the look-through approach should capture the risks more appropriately.
263. Therefore the application of the look-through approach should be extended to “investment related undertakings”. An “investment related undertaking” should be defined as a related undertaking (as defined in Article 212(1)(b) of the Solvency II Directive) that meets the following conditions:
- its main purpose is holding or managing assets on behalf of the (parent) insurance undertaking;
 - it supports the operations of the insurance undertaking related to investment activities, following a specific and formalized investment mandate;
 - it does not run any other significant business than investing for the purpose of the parent undertaking (i.e. entity whose main activity is to invest for the purpose of the parent undertaking).
264. The application of the look through approach to “investment related undertakings” should be mandatory, regardless whether it is likely to determine a lower SCR. This might happen when the SCR resulting from the underlying assets is lower than the SCR obtained by applying the equity risk charge. In those cases undertakings should apply the look-through approach which is more risk-sensitive.
265. The “related undertakings” that are not established for investment purposes because they do not meet the conditions of the paragraph above are still subject to Article 84(4) of the Delegated Regulation.

266. According to Article 84(3) of the Delegated Regulation, when the application of the look through approach of Article 84(1) is not possible, undertakings might apply the simplified approach contained in Article 84(3), or alternatively the equity risk type 2 of Article 168 of the Delegated Regulation, provided that the resulting SCR will be a prudent evaluation of the risk. In the second part of its Advice on the review of some items in the Delegated Regulation, EIOPA will propose some refinements to the simplified approach of Article 84(3) of the Delegated Regulation. In that respect EIOPA will also propose some additional provisions to make sure that the application of a simplified approach will determine a prudent calculation of the SCR.

Example: The look-through approach should be applied to open-ended collective investment schemes in the form of a contractual fund or an investment company with variable capital (SICAV).

7. Undertaking specific parameters

7.1. Call for advice

The framework for undertaking specific parameters provides for standardised methods to replace a defined set of parameters in the standard formula, where sufficient data is available to calculate calibrations tailored to its liabilities. This framework should be provided wherever possible in the underwriting risk module.

EIOPA is asked to:

- Provide information on the use of undertaking specific parameters by insurance and reinsurance undertakings and by groups.*
- Assess standardised methods to replace additional parameters in the underwriting risk modules and assess any criteria with respect to the completeness, accuracy and appropriateness of the data used that must be met before supervisory approval is given.*
- Assess alternative methods for the calculation of the undertaking specific parameter for non-proportionate reinsurance, with a view to amending or replacing the current method.*
- Assess additional methods to calculate group specific parameters that build on undertaking specific parameters, in particular in view of their risk sensitivity and complexity.*

7.2. Legal basis

Solvency II Directive

267. Article 104(7) of the Solvency II Directive specifies that subject to approval by the supervisory authorities, insurance and reinsurance undertakings may, within the design of the standard formula, replace a subset of its parameters by parameters specific to the undertaking concerned when calculating the life, non-life and health underwriting risk modules. Such parameters shall be calibrated on the basis of the internal data of the undertaking concerned, or of data which is directly relevant for the operations of that undertaking using standardised methods. When granting supervisory approval, supervisory authorities shall verify the completeness, accuracy and appropriateness of the data used.

Delegated Regulation

268. Article 218 of the Delegated Regulation defines the subset of standard parameters that may be replaced by undertaking-specific parameters. Article 219 concretises the data criteria for the use of undertaking-specific parameters. Article 220 specifies the standardised methods to be used to calculate the undertaking-specific parameters. For the calculation of the undertaking-specific parameters, undertakings can select a method from a number of standardised methods prescribed in Annex XVII of the Delegated Regulation.

269. At group level, Article 338 of the Delegated Regulation on group-specific parameters states that subject to approval by the group supervisor, the consolidated group Solvency Capital Requirement may, within the framework

of the standard formula, be calculated by replacing a subset of the standard parameters laid down in Article 218 by parameters specific to the group ('group-specific parameters'). Data used to calculate group-specific parameters shall satisfy the criteria set out in Article 104(7) of the Solvency II Directive and Article 219 of the Delegated Regulation. The standardised methods used to calculate the group-specific parameters are the methods set out in Article 220 of the Delegated Regulation.

Guidelines

270. EIOPA Guidelines on undertaking specific parameters (EIOPA-BoS-14/178) provide further specification on the data quality criteria that should be taken into account during the process of calculating undertaking-specific parameters and group-specific parameters. The role of the actuarial function is mentioned as very important in the assessment of the quality of data used in the calculation of undertaking-specific parameters. The Guidelines also aim at harmonising the supervisory approval process for the group-specific parameters.

ITS

271. Commission implementing regulation (EU) 2015/498 of 24 March 2015 specifies the supervisory approval procedure to use undertaking-specific parameters.

7.3. Advice

7.3.1. Previous advice

272. CEIOPS-DOC-71/10: "SCR standard formula – Article 111 j, k – Undertaking-specific parameters".¹⁴

7.3.2. Analysis

Information on the use of undertaking specific parameters (USPs) by (re)insurance undertakings and groups

273. The table below provides with an overview of the USPs approved by NSAs:

¹⁴ <https://eiopa.europa.eu/CEIOPS-Archive/Documents/Advices/CEIOPS-L2-Advice-Undertaking-specific-parameters.pdf>

Table 7. Undertaking specific parameters approved by NSAs

Standard parameters that may be replaced	Number of USPs approved	Lines of business
Standard deviation for non-life premium risk	47	8 Assistance 6 Medical expense 6 Miscellaneous 5 Other motor 4 Motor vehicle liability 6 Legal expenses 2 Income protection 3 Fire and other 3 General liability 1 Marine, aviation, transport 1 NP reinsurance property 1 NP reinsurance casualty 1 NP reinsurance MAT
Adjustment factor for non-proportional reinsurance	2	1 General liability 1 Motor vehicle liability
Standard deviation for non-life reserve risk	34	3 Income protection 4 Motor vehicle liability 4 Other motor 9 Legal expenses 3 Fire and other 2 Medical expense 3 General liability 1 Miscellaneous 1 Marine, aviation, transport 1 Credit and suretyship 1 NP reinsurance property 1 NP reinsurance casualty 1 NP reinsurance MAT
Increase in amount of annuity benefits for the life revision risk	0	

274. As regards group specific parameters (GSPs), there are six groups for which GSPs have been approved. For two of them, both the standard parameters for premium and reserve risks for medical expense, motor vehicle liabilities and other motor insurance were replaced by group specific

parameter. For the remaining groups: one has GSP for premium risk and medical expense approved; the other has GSP for premium risk for assistance business approved; the other two have 9 GSPs approved for premium and reserve risks on different LoBs.

275. In addition to the numbers provided above, NSAs have reported that several application-processes were on-going or that other (re)insurance undertakings were discussing with their supervisors the possibility to use USPs. If these USPs are approved, there could be at least 15 other undertakings using USPs in the near future.

276. Other undertakings have considered applying for USPs but did not feel the necessity for doing so given their high solvency ratios. The priority of (re)insurance undertakings is also to gain experience with the application of Solvency II before applying for USPs. Few undertakings were interested in applying for the use of USPs but did not have the required amount of internal or relevant external data (minimum of 5 years).

277. So far, no application for USP considered the use of relevant external data. The main reason for this seems to be limited awareness about this possibility: several (re)insurance undertakings are not aware that they could complement their data with relevant external data. Difficulty in collecting relevant external data seems also to be one reason: (re)insurance undertakings do not necessarily want to share their own data for the purpose with their competitors.

278. NSAs have reported that a very small number of applications were rejected: only two applications across the EU were rejected by NSAs. In both cases, the reason is that the data was not considered sufficient in view of the requirements of Article 219 of the Delegated Regulation.

Assessment of criteria with respect to the completeness, accuracy and appropriateness of the data used that must be met before supervisory approval is given

279. The numbers provided above show that there are 83 USPs that have been approved across the EU and more applications are being considered by NSAs during 2017. Given that we are only in the second year of application of the Solvency II framework, this can be considered a high number.

280. In order to be able to use USPs, (re)insurance undertakings are required to have, at least, five years of historical data. This is to ensure a meaningful outcome of the application of the standardised methods, but also to incentivise (re)insurance undertakings to improve their data quality and consistency over time. The data quality required for using USPs is, in substance, similar to the one required for the calculation of the best estimate. Several (re)insurance undertakings have started to calculate their best estimate with the quality required by Solvency II only since 2016. For instance, the triangles of best estimates required in the annual QRTs are not filled-in retrospectively (i.e. before 2016). Therefore it is expected that more (re)insurance undertakings will be able to apply for the use of USPs in the coming years.

281. There are specific requirements on data for (re)insurance undertakings to use the standardised methods provided by the USP framework. One of the requirements that seem to be raising difficulties is linked with assumptions about log-normality. Without it the result of multiplying three times the standard deviation with the volume measure would not comply with the calibration requirement at the 99.5% Value-at-risk. The underlying assumptions of the standard formula are, by necessity, also relevant for the standardised methods used for USP calculations.

282. It may be difficult to prove that aggregated losses follow a log-normal assumption. However, one starting point for engaging in the discussion with NSAs is already to prove that aggregated losses do not follow a different probability distribution than the log-normal. This is also usually easier to prove.

Assessment of standardised methods to replace additional parameters in the underwriting risk modules

283. The figures shown above prove that most of the methods are relevant for (re)insurance undertakings to calculate their SCR.

284. There is no USP being used for the revision risk-submodules. This is not due to an issue with supervisory practices since there was no undertaking applying for the use of such USP. It seems also hard to believe that it would be due to the difficulty of the method, since it is not more complex than the others.

285. On the other hand, compared to the other risks for which USPs possibility exists, revision risk is usually less material. Moreover, it may only be relevant in some jurisdictions. EIOPA will analyse the materiality of this risk once the annual QRT will be available.

286. As regards the possibility to develop standardised methods for new risks: some stakeholders have suggested developing such methods for the mortality, longevity and lapse risks. The methods suggested by stakeholders have been assessed as not appropriate by EIOPA. Hence, at this stage, it is proposed to advise no new standardised method to the European Commission.

Alternative methods for the calculation of the undertaking specific parameter for non-proportionate reinsurance

287. There are only two USPs that have been approved for the adjustment factor for non-proportional reinsurance.

288. As for revision risk, it seems hard to believe that this low number of USPs is due to the difficulty of the method, or even due to the difficulty of proving the underlying assumptions, since the method is not more complex than the others.

289. There may be a specific difficulty in the sense that the reinsurance programme of each (re)insurance undertaking is reviewed annually to comply with the risk appetite of the undertaking. This may lead to changes and

adjustments in the reinsurance programme such that the data are not representative anymore of the premium risk that the (re)insurance undertaking is exposed to during the following twelve months.

290. On the other hand, there is currently only one standardised method for the calculation of this adjustment factor for non-proportional reinsurance, although different types of treaties are used by (re)insurance undertakings.

291. In particular, one effective way for (re)insurance undertakings to reduce their losses is to use stop-loss treaties. A proposal was received to extend the possibility of USP for the adjustment factor for non-proportional reinsurance to stop-loss treaties. Given the similarities of stop-loss treaties with excess-of-loss treaties, providing such a new standardised method could benefit (re)insurance undertakings.

292. The following provides details on how a new USP method for stop-loss could be defined. It uses, as a basis, Annex XVII "F. Non-proportional reinsurance method" of the Delegated Regulation. Unless indicated otherwise below, the same requirements should apply.

Input data and method-specific data requirements

- (1) Remains unchanged except to replace ultimate claim amounts by the term **aggregated annual losses** and to delete the last part of the sentence "separately for each insurance and reinsurance claim"
- (2) All paragraphs apply with the difference that the term excess of loss is replaced by **stop loss** and the term ultimate claim amounts is replaced by the term **aggregated annual losses** as above.

Method specification

(3) a) can be deleted

b) n denotes the number of financial years for which annual aggregated losses data is available

c) Y_i denotes the aggregated losses in financial year i

d) μ and ω denote the first and second moment, respectively, of the aggregated annual losses distribution, being equal to the following amounts

$$\mu = \frac{1}{n} \sum_{i=1}^n Y_i \text{ and } \omega = \frac{1}{n} \sum_{i=1}^n Y_i^2$$

5) The estimated adjustment factor for non-proportional reinsurance shall be equal to the following:

$$NP' = \left\{ \sqrt{\frac{(\omega_1 + \omega - \omega_2 + 2(b_2 - b_1)(\mu_2 - \mu)) - (\mu_1 + \mu - \mu_2)^2}{\omega - \mu^2}} \right\}, \text{ where paragraph 3(f) applies}$$

$$\sqrt{\frac{\omega_1 - \mu_1^2}{\omega - \mu^2}} \quad \text{else.}$$

6) The parameters, $\mu_1, \mu_2, \omega_1, \omega_2$ shall be equal to the following:

$$\begin{aligned} \mu_1 &= \mu N\left(\frac{\ln(b_1) - \vartheta}{\eta} - \eta\right) + b_1 N\left(-\frac{\ln(b_1) - \vartheta}{\eta}\right) \\ \mu_2 &= \mu N\left(\frac{\ln(b_2) - \vartheta}{\eta} - \eta\right) + b_2 N\left(-\frac{\ln(b_2) - \vartheta}{\eta}\right) \\ \omega_1 &= \omega N\left(\frac{\ln(b_1) - \vartheta}{\eta} - 2\eta\right) + b_1^2 N\left(-\frac{\ln(b_1) - \vartheta}{\eta}\right) \\ \omega_2 &= \omega N\left(\frac{\ln(b_2) - \vartheta}{\eta} - 2\eta\right) + b_2^2 N\left(-\frac{\ln(b_2) - \vartheta}{\eta}\right) \end{aligned}$$

Where:

a)-c) remain unchanged.

7) remains unchanged

Explanations/Derivations

The denominator in the NP factor formula can be first written as:

$$Var(X_{T+1}) = E(X_{T+1}^2) - E(X_{T+1})^2 = \int_0^\infty y^2 f_y dy - \left(\int_0^\infty y f_y dy\right)^2 = \omega - \mu^2, \quad (0)$$

where μ and ω are estimated as in Annex XVII F 3d).

To extend the analysis suggested by the stakeholder also to the case of an unlimited cover, the following notation and known results about (censored) lognormal probabilities and moments are introduced:

Let $k=1,2$ and N denote the cumulative normal distribution function: Let

$$p_k = N\left(-\frac{\ln(b_k) - \vartheta}{\eta}\right) \quad (1)$$

$$\mu_k = \mu N\left(\frac{\ln(b_k) - \vartheta}{\eta} - \eta\right) + b_k p_k \quad (2)$$

$$\omega_k = \omega N\left(\frac{\ln(b_k) - \vartheta}{\eta} - 2\eta\right) + b_k^2 p_k \quad (3)$$

With this notation, the (right-censored) lognormal probabilities and moments can be written as:

$$\int_{b_k}^\infty f_y dy = p_k \quad (4)$$

$$(5) \quad \int_{b_k}^{\infty} y f_y d_y = \mu - \mu_k + b_k p_k$$

$$(6) \quad \int_{b_k}^{\infty} y^2 f_y d_y = \omega - \omega_k + b_k^2 p_k$$

With a stop loss reinsurance and a limited cover one then obtains:

$$\begin{aligned} E(X_{T+1}^{Net})^2 &= \int_0^{b_1} y^2 f_y d_y + b_1^2 \int_{b_1}^{b_2} f_y d_y + \int_{b_2}^{\infty} (y - (b_2 - b_1))^2 f_y d_y \\ &= \int_0^{\infty} y^2 f_y d_y - \int_{b_1}^{\infty} y^2 f_y d_y + b_1^2 \int_{b_1}^{\infty} f_y d_y - b_1^2 \int_{b_2}^{\infty} f_y d_y \\ &\quad + \int_{b_2}^{\infty} y^2 f_y d_y - 2(b_2 - b_1) \int_{b_2}^{\infty} y f_y d_y \\ &\quad + (b_2 - b_1)^2 \int_{b_2}^{\infty} f_y d_y = \omega - (\omega - \omega_1 + b_1^2 p_1) + b_1^2 (p_1) - b_1^2 (p_2) \\ &\quad + (\omega - \omega_2 + b_2^2 p_2) - 2(b_2 - b_1)(\mu - \mu_2 + b_2 p_2) + (b_2 - b_1)^2 p_2 \\ &= \omega_1 + \omega - \omega_2 + 2(b_2 - b_1)(\mu_2 - \mu) \end{aligned} \quad (7)$$

$$\begin{aligned} E(X_{T+1}^{Net}) &= \int_0^{b_1} y f_y d_y + b_1 \int_{b_1}^{b_2} f_y d_y + \int_{b_2}^{\infty} (y - (b_2 - b_1)) f_y d_y = \int_0^{\infty} y f_y d_y - \int_{b_1}^{\infty} y f_y d_y + \\ &+ b_1 \int_{b_1}^{\infty} f_y d_y - b_1 \int_{b_2}^{\infty} f_y d_y + \int_{b_2}^{\infty} y f_y d_y - (b_2 - b_1) \int_{b_2}^{\infty} f_y d_y = \mu - (\mu - \mu_1 + b_1 p_1) + b_1 p_1 + \\ &+ (\mu - \mu_2 + b_2 p_2) - b_2 p_2 = \mu_1 + \mu - \mu_2 \end{aligned} \quad (8)$$

Plugging (0), (7) and (8) in the definition of a non-proportional factor

$$NP' = \frac{Std(X_{net})}{Std(X)} = \frac{\sqrt{E(X_{net}^2) - E(X_{net})^2}}{\sqrt{E(X^2) - E(X)^2}}$$

one ultimately gets

$$NP' = \sqrt{\frac{(\omega_1 + \omega - \omega_2 + 2(b_2 - b_1)(\mu_2 - \mu_1)) - (\mu_1 + \mu - \mu_2)^2}{\omega - \mu^2}}. \quad (9)$$

Appendix: Difference to the NP formula for excess of loss reinsurance

The slight structural difference (the additional terms after the minus sign in the nominator and denominator) to the NP formula for an excess of loss reinsurance comes from the fact that the NP formula for the latter is derived within the collective risk model and an implicit Poisson distribution assumption for the number of claims. Let $X = \sum_{i=1}^N Y_i$ denote the total claims size, N the random

number of claims and Y_i the random ultimate claim amount of claim i . Applying the Wald formulas in the collective risk model one gets

$$(*) \quad E(X) = E(N)E(Y)$$

$$(**) \quad Var(X) = Var(Y)E(N) + Var(N)E(Y)^2$$

Since for a Poisson distribution $E(N)=Var(N)$, expression $(**)$ simplifies to

$$(***) \quad Var(X) = E(N)E(Y^2).$$

Defining the NP factor as a ratio of the net to gross standard deviations as above one obtains

$$NP' = \sqrt{\frac{E(Y_{net}^2)E(N)}{E(Y^2)E(N)}} = \sqrt{\frac{E(Y_{net}^2)}{E(Y^2)E(N)}} \quad (****)$$

From this one can deduce that the additional terms in the NP factors formula (9) disappear in this framework (beside the fact that the random variable and the corresponding moments have a different meaning).

Assessment of additional methods to calculate group specific parameters that build on undertakings specific parameters

293. As said above, there are six groups for which GSPs have been approved. This relatively low number should not raise issues as regards the appropriateness of GSPs. First, many of the USPs approved are being used by mono-liners or specialised (re)insurance undertakings. For GSPs, the differences in the risk profile of (re)insurance undertakings make it more difficult to apply GSPs; in fact, the risk profile of the group may be heterogeneous since, under the same LoB, different products are sold in different jurisdictions. Second, the requirements in terms of historical length of data may be complied with by some undertakings of the group, but not necessarily by all. Third, the standard deviations calibrated by EIOPA reflect the average size and performance of the portfolio of insurance undertakings in the European market. For a cross-border group, the risk profile is expected to be close to these underlying assumptions.

294. For the reasons outlined above, the current GSPs that are based on the consolidated data of the group (or of the entities applying method 1 for the calculation of the group solvency) appear to be still appropriate.

295. The request of the European Commission is also to assess whether there would be additional methods to calculate GSPs based on USPs. USPs may already be used for the purpose of the group solvency calculation where the (re)insurance undertakings using these USPs fall under the scope of method 2.

296. Some stakeholders have proposed to calculate GSPs as a weighted average of USPs. In the following the USP for the standard parameters of the non-life underwriting risk module is taken as an example. Their application leads to a new standard deviation σ_S^{USP} for a specific segment S. If we assume σ_S^{GROUP} being the standard deviation calculated on the basis of the consolidated data, the solution could look like a weighted average. For illustration purpose:

$$\sigma_S^{GSP} = \sigma_S^{GROUP} \cdot \frac{(V_S^{GROUP} - V_S^{USP})}{V_S^{GROUP}} + \sigma_S^{USP} \cdot \frac{V_S^{USP}}{V_S^{GROUP}}$$

297. This approach would however not be appropriate since we are considering standard deviations. The weighted average of single standard deviations does not lead to a standard deviation that is appropriate for the group. Moreover, the consolidated data are net of intra-group transactions. That means that the data of solo undertakings viewed at group level can be somehow different than the data at solo level. Hence it is not absolutely sure that the USP calibrated at solo level still make sense from a technical point of view at group level.

298. For the reasons outlined above, EIOPA does not advice building GSP by using USPs.

7.3.3. EIOPA's advice

Information on the use of USPs by (re)insurance undertakings and groups

299. The table below provides with an overview of the USPs approved by NSAs:

Table 8. Undertaking specific parameters approved by NSAs

Standard parameters that may be replaced	Number of USPs approved	Lines of business
Standard deviation for non-life premium risk	47	8 Assistance 6 Medical expense 6 Miscellaneous 5 Other motor 4 Motor vehicle liability 6 Legal expenses 2 Income protection 3 Fire and other 3 General liability 1 Marine, aviation, transport 1 NP reinsurance property 1 NP reinsurance casualty 1 NP reinsurance MAT
Adjustment factor for non-proportional reinsurance	2	1 General liability 1 Motor vehicle liability
Standard deviation for non-life reserve risk	34	3 Income protection 4 Motor vehicle liability 4 Other motor 9 Legal expenses 3 Fire and other 2 Medical expense 3 General liability 1 Miscellaneous 1 Marine, aviation, transport 1 Credit and suretyship 1 NP reinsurance property 1 NP reinsurance casualty 1 NP reinsurance MAT
Increase in amount of annuity benefits for the life revision risk	0	

300. As regards GSPs, there are six groups for which GSPs have been approved. For two of them, both the standard parameters for premium and reserve risks for medical expense, motor vehicle liabilities and other motor insurance were replaced by group specific parameter. For the remaining groups: one has GSP for premium risk and medical expense approved; the other has GSP for premium risk for assistance business approved; the other two have 9 GSPs approved for premium and reserve risks on different LoBs.

Assessment of criteria with respect to the completeness, accuracy and appropriateness of the data used that must be met before supervisory approval is given

301. EIOPA considers the data criteria as appropriate and does not advise the European Commission to modify them.

Assessment of standardised methods to replace additional parameters in the underwriting risk modules

302. EIOPA considers the current standardised methods as appropriate and does not advise the European Commission to modify them.

303. As regards the possibility to develop standardised methods for new risks: some stakeholders have suggested developing such methods for the mortality, longevity and lapse risks. EIOPA will further consider the methodologies proposed by stakeholders for USP on lapse risk and provide its final advice by February 2018.

Alternative methods for the calculation of the undertaking specific parameter for non-proportionate reinsurance

304. EIOPA advises a new standardised method for the calculation of the adjustment factor for non-proportional reinsurance.

305. This new standardised method is to be applied in the case of stop-loss treaties. Please refer to paragraph 307 for further details on the method.

Assessment of additional methods to calculate group specific parameters that build on undertakings specific parameters

306. As the standardised methods for USPs provide standard deviations of the risks, it would not be appropriate to build GSPs with USPs since it would not reflect the risk profile at group level.

7.3.4. Proposal for new Articles

307. The following provides details on how the new USP method for stop-loss should be defined. It uses, as a basis, Annex XVII "F. Non-proportional reinsurance method" of the Delegated Regulation. Unless indicated otherwise below, the same requirements should apply.

Input data and method-specific data requirements

- (1) Remains unchanged except to replace ultimate claim amounts by the term **aggregated annual losses** and to delete the last part of the sentence "separately for each insurance and reinsurance claim"
- (2) All paragraphs apply with the difference that the term excess of loss is replaced by **stop loss** and the term ultimate claim amounts is replaced by the term **aggregated annual losses** as above.

Method specification

(3) a) can be deleted

b) n denotes the number of financial years for which annual aggregated losses data is available

c) Y_i denotes the aggregated losses in financial year i

d) μ and ω denote the first and second moment, respectively, of the aggregated annual losses distribution, being equal to the following amounts

$$\mu = \frac{1}{n} \sum_{i=1}^n Y_i \text{ and } \omega = \frac{1}{n} \sum_{i=1}^n Y_i^2$$

5) The estimated adjustment factor for non-proportional reinsurance shall be equal to the following:

$$NP' = \begin{cases} \sqrt{\frac{(\omega_1 + \omega - \omega_2 + 2(b_2 - b_1)(\mu_2 - \mu)) - (\mu_1 + \mu - \mu_2)^2}{\omega - \mu^2}}, & \text{where paragraph 3(f) applies} \\ \sqrt{\frac{\omega_1 - \mu_1^2}{\omega - \mu^2}} & \text{else.} \end{cases}$$

6) The parameters, $\mu_1, \mu_2, \omega_1, \omega_2$ shall be equal to the following:

$$\begin{aligned} \mu_1 &= \mu N\left(\frac{\ln(b_1) - \vartheta}{\eta} - \eta\right) + b_1 N\left(-\frac{\ln(b_1) - \vartheta}{\eta}\right) \\ \mu_2 &= \mu N\left(\frac{\ln(b_2) - \vartheta}{\eta} - \eta\right) + b_2 N\left(-\frac{\ln(b_2) - \vartheta}{\eta}\right) \\ \omega_1 &= \omega N\left(\frac{\ln(b_1) - \vartheta}{\eta} - 2\eta\right) + b_1^2 N\left(-\frac{\ln(b_1) - \vartheta}{\eta}\right) \end{aligned}$$

$$\omega_2 = \omega N \left(\frac{\ln(b_2) - \vartheta}{\eta} - 2\eta \right) + b_2^2 N \left(-\frac{\ln(b_2) - \vartheta}{\eta} \right)$$

Where:

a)-c) remain unchanged.

7) remains unchanged

8. Loss-absorbing capacity of deferred taxes (LAC DT)

8.1. Call for advice

308. The European Commission has asked EIOPA to report on the different methods currently applied and on their impact regarding LAC DT. The European Commission states that *"The calculation for reduction in capital requirements due to a deferred tax adjustment is complex, and requires a high level of supervisory judgement, resulting in possibly divergent practices in Member States."*

309. EIOPA finds that NSAs have similar approaches with respect to more than 75 % of almost 100 billion euros in LAC DT across the EEA¹⁵, which is the part of LAC DT that is being demonstrated by a net DTL on the balance sheet. Where carry-back is applicable in the tax regime NSAs also allow for its use to demonstrate LAC DT, further increasing the part of more than 75 % of LAC DT where supervisors have similar approaches. With respect to the remaining part of LAC DT that is being demonstrated by future profits, NSAs do have different approaches.

310. Regression analyses suggest that almost 40 % of the variation in LAC DT across the EEA can be explained by differences in the balance sheet of undertakings, differences in the tax regime and the size of the undertakings. The fact that an undertaking is in one or another jurisdiction may explain an approximately additional 35 % of the variation in LAC DT; this difference may be due to differences in supervisory practices, but also due to differences in the tax regime and the risk characteristics of the undertakings in the different jurisdictions that are not captured by the variables on these aspects in the regression analyses.

311. In this first response to the Call for Advice EIOPA will only address the request for information from the European Commission and will not yet come up with any advice on possible changes in the Delegated Regulation. EIOPA will continue working on supervisory convergence and advises changes in the Delegated Regulation in its second response to the Call for Advice.

8.2. What is LAC DT

312. LAC DT, the Loss Absorbing Capacity of Deferred Taxes, is the phenomenon that undertakings are able to transfer a part of a shock loss to their tax authority and that the impact of the loss on own funds is therefore lower than the original gross loss itself. The idea is that the economic Solvency II loss also results in fiscal losses and that these fiscal losses result in tax reductions if fiscal profits are available to utilise/offset these fiscal losses. LAC DT is a natural consequence of a post-tax supervision framework like Solvency II.

¹⁵ Please note that no data was available at EIOPA for Iceland; therefore, when referring to EEA data in this paper, this will exclude Iceland.

8.2.1. What are deferred taxes?

313. Deferred taxes occur for two reasons on the Solvency II balance sheet:

- If the valuation principles for Solvency II differ from the fiscal valuation principles and the economic Solvency II profits and losses have not yet been fiscally recognised, temporary differences between the fiscal and Solvency II valuations may occur.
 - *Deferred Tax Liabilities* ("DTL") occur when the valuation of an asset (liability) is higher (lower) on the Solvency II balance sheet than on the fiscal balance sheet and more taxes on that asset (liability) will be paid than when that asset (liability) would be bought (sold) today.
 - *Deferred Tax Assets* ("DTA") occur when the valuation of an asset (liability) is lower (higher) on the Solvency II balance sheet than on the fiscal balance sheet and less taxes on that asset (liability) will be paid than when that asset (liability) would be bought (sold) today.
- If fiscal losses from previous years can be carried-forward to reduce the tax payments in future years, if future fiscal profits are available, then a DTA for this advantage is recognised on the Solvency II balance sheet as well.

8.2.2. DTA and DTL and Solvency II own funds

314. DTL included in the balance sheet are liabilities that are directly deducted from balance sheet assets when calculating the tier 1 reconciliation reserve, which is included in the own funds. DTA are recognised as assets on the Solvency II balance sheet if the carry-back¹⁶ and carry-forward possibilities in the applicable tax regime allow offsetting against existing DTL or future fiscal profits are available for its utilisation. Net DTA on the Solvency II balance sheet count as tier 3 eligible own funds, up to 15 % of the SCR.

8.2.3. What is LAC DT in Solvency II?

315. Within the Solvency II framework the calculation of the SCR reflects the loss absorbing capacity of deferred taxes. The impact of the shock loss according to the SCR Standard Formula may be reduced by this LAC DT if the undertaking can provide credible evidence that they can utilise the fiscal losses stemming from the impact of this pre-tax shock loss. LAC DT corresponds to the change in taxes after the shock loss, irrespective of whether the change is a decrease in net DTL or an increase in net DTA.

8.2.4. Comparison with deferred taxes in the banking stress tests

316. Broadly speaking, the SCR for (re)insurance undertakings is calculated by aggregating the impact of different shocks that together make up a specific scenario, while the capital requirements for banks are based on risk-weights

¹⁶ A fiscal loss that has already materialized is not included in the Solvency II balance sheet as a DTA as it is directly being offset against previous fiscal profits, if these profits were available.

and not on a specific scenario. However, a stress-test for banks defined by a specific scenario could be compared to an SCR calculation for a (re)insurance undertaking. In the 2016 EBA stress test deferred tax assets were dealt with as follows:

"373. Tax effect: Banks shall apply a common simplified tax rate of 30 %. Deferred tax assets (DTA) are expected to be created as a consequence of the offsetting of negative pre-tax profits. The creation of new DTA arising from temporary differences in valuation in the tax and accounting accounts is not permitted. This only affects DTA that are created during the time horizon of the exercise, i.e. banks shall not recalculate and account for a stock of past DTA using the simplified tax rate. Banks are reminded of Section 3, Sub-section 1 of the CRR, in particular Art. 36(1)(c) and related Art. 38, 39 and 48. Full phase-out of deduction of DTA from Common Equity Tier 1 (CET1) capital as per Art. 469 and the associated schedule in Art. 472 and all ancillary rules as outlined in the CRR shall apply. Banks shall also take into account any accelerated phase-out schedule as established by national legislations and the applicable competent authority. The resulting effects shall be included in the banks' projections."

317. In the SCR-like calculation for banks DTA from temporary differences after the shock loss were not recognised and DTA only arise from the carry-forward of fiscal losses stemming from the stress-scenario. Moreover the eligibility of DTA for carry-forward as own funds is being phased out for banks, i.e. it is being deducted from common equity tier 1 and will no longer be recognised by 2018. DTA stemming from temporary differences are not being deducted from common equity tier 1, but get a risk weight of 250 %.

8.3. Legal basis

318. In this section EIOPA sets out all Solvency II regulation that relates to LAC DT.

Solvency II Directive

319. Article 103 of the Solvency II Directive on the structure of the standard formula states the following:

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

- (a) the Basic Solvency Capital Requirement, as laid down in Article 104;*
- (b) the capital requirement for operational risk, as laid down in Article 107;*
- (c) **the adjustment for the loss-absorbing capacity of** technical provisions and **deferred taxes**, as laid down in Article 108.*

320. Article 108 of the Solvency II Directive on the adjustment for the loss-absorbing capacity of technical provisions and deferred taxes states the following:

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

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

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

321. Next to these specific requirements for LAC DT all regulation regarding the, scenario-based, calculations of the SCR applies. Regulation regarding the Basic Solvency Capital Requirements does not apply to LAC DT as LAC DT is not an element of the Basic Solvency Capital Requirements.

Delegated Regulation

322. Articles 205 and 207 in section 9 on the adjustment for the loss-absorbing capacity of technical provisions and deferred taxes in chapter V on the Solvency capital requirement standard formula of the Delegated Regulation contains the regulation on LAC DT. Article 205 contains general provisions and no requirements for LAC DT. Article 207 sets out the regulation regarding the calculation of LAC DT:

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.

323. Article 15 of the Delegated Regulation, which is referred to in Article 207 on LAC DT sets out the regulation for the valuation of deferred taxes on the Solvency II balance sheet:

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 carry-forward of unused tax credits and the carry-forward 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 carry-forward of unused tax losses or the carry-forward of unused tax credits.

324. Article 9 of the Delegated Regulation sets out the general requirements for the valuation of all assets and liabilities other than technical provisions:

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.

325. Article 9(2) of the Delegated Regulation implies that Solvency II valuation principles follow the international accounting standards adopted by the European Commission to the extent that they comply with the Solvency II valuation principles, i.e. transfer value, in Article 75 of the Solvency II Directive. The adopted accounting standard for deferred taxes is IAS12, to be used to the extent that it complies with the Solvency II valuation principles.

326. Article 76(a)(iii) lists net deferred tax assets as tier 3 basic own fund items.

327. Furthermore, recital 68 of the Delegated Regulation states that the calculation of the adjustment for the loss-absorbing capacity of technical provisions and deferred taxes should ensure that there is no double counting of the risk mitigating effect provided by future discretionary benefits or deferred taxes.

328. In the Delegated Regulation all regulation regarding the, scenario-based, calculations of the SCR also applies to LAC DT. Regulation regarding the Basic SCR does not apply to LAC DT as LAC DT is not an element of the Basic Solvency Capital Requirements. Article 83(1b) of the Delegated Regulation states that deferred taxes remain unchanged when calculating the Basic SCR.

329. For the purpose of this SCR review EIOPA has left the regulation regarding LAC DT in the group SCR out of scope.

Guidelines

330. A separate set of guidelines regarding the loss-absorbing capacity of technical provisions and deferred taxes has been published by EIOPA (EIOPA-BoS-14/177). Guidelines 6 to 14 in sections II and III relate to the calculation and recognition for the LAC DT adjustment:

Guideline 6 - Granularity of calculation

1.20. Undertakings should perform the calculation of the adjustment for the loss-absorbing capacity of deferred taxes at a level of granularity that reflects all material and relevant regulations in all applicable tax regimes.

Guideline 7 – Valuation principles and approaches

1.21. Undertakings should calculate the adjustment for the loss-absorbing capacity of deferred taxes by stressing the Solvency II balance sheet and determining the consequences on the tax figures of the undertaking. The adjustment should then be calculated on the basis of temporary differences between the stressed Solvency II values and the corresponding figures for tax purposes.

1.22. In accordance with the requirements of Article 15(1) of Commission Delegated Regulation 2015/35, undertakings should take into account all assets and liabilities that are recognised for solvency or tax purposes in the calculation of the loss-absorbing capacity of deferred taxes.

1.23. Notwithstanding paragraph 1.22, supervisory authorities should allow undertakings, when determining the tax consequences of the loss referred to in Article 207(1) of Commission Delegated Regulation 2015/35, to use an approach based on average tax rates, provided they are able to demonstrate that those average tax rates are determined at an appropriate level, and that such an approach avoids a material misstatement of the adjustment.

Guideline 8 - Loss attribution

1.24. Where undertakings use an approach based on average tax rates, they should allocate the loss referred to in Article 207(1) of Commission Delegated Regulation 2015/35 to its causes in accordance with Article 207(5) of Commission Delegated Regulation 2015/35 if the calculation of the deferred tax adjustment on an aggregate level does not reflect all material and relevant regulations of applicable tax regimes.

1.25. Where the allocation set out in paragraph 1.24 does not reflect all material and relevant regulations of applicable tax regimes, undertakings should allocate the loss to balance sheet items with a sufficient level of granularity to meet this requirement.

Guideline 9 - Arrangements for the transfer of profits or losses

1.26. Where an undertaking has entered into contractual agreements regarding the transfer of profit or loss to another undertaking or is bound by other arrangements under existing tax legislation in the member state (tax groups) or an arrangement whereby such transfer occurs or is considered to occur through an offset of such losses against profits of another undertaking under the applicable tax consolidation rules in the Member State (fiscal unity), the

undertaking should take these agreements or arrangements into account in the calculation of the adjustment for loss-absorbing capacity of deferred taxes.

1.27. Where it is contractually agreed and probable that a loss will be transferred to a another undertaking or where such loss transfer occurs or is considered to occur through an offset of such losses against profits of another undertaking ("receiving undertaking") after the undertaking ("transferring undertaking") suffers the instantaneous loss referred to in Article 207(1) of Commission Delegated Regulation 2015/35, the transferring undertaking should only recognise the related deferred tax adjustment to the extent that the payment or other benefit will be received in exchange for the transfer of notional tax losses.

1.28. The transferring undertaking should only recognise the payment or benefit receivable to the extent that a deferred tax adjustment could be recognised under Guideline 10 if the loss was not transferred.

1.29. The transferring undertaking should only recognise payment or benefits receivable if the arrangement or contractual agreement is legally effective and enforceable by the transferring undertaking with respect to the transfer of those items.

1.30. If the value of payment or benefit receivable is conditional on the solvency or tax position of the receiving undertaking or that of the existing tax consolidation (fiscal unity) as a whole, the transferring undertaking should base the valuation of the payment or benefits receivable on a reliable estimate of the value that is expected to be received in exchange for loss transferred.

1.31. The transferring undertaking should verify that the receiving undertaking is able to honor its obligations in stressed circumstances, namely after suffering the Solvency Capital Requirement stress if the receiving undertaking is subject to Solvency II.

1.32. The transferring undertaking should reflect any tax payable on the payment or benefit received in the recognised amount of notional deferred taxes.

1.33. Where the receiving solo undertaking is subject to Solvency II it should not recognise the transferred loss in the calculation of the adjustment for the loss-absorbing capacity of deferred taxes.

Guideline 10 - Temporary nature

1.34. Undertakings should recognise notional deferred tax assets conditional on their temporary nature. The recognition should be based on the extent to which offsetting is permitted according to the relevant tax regimes. This may include offset against past tax liabilities or current or likely future tax liabilities.

Guideline 11 - Avoidance of double counting

1.35. Undertakings should ensure that deferred tax assets arising from the instantaneous loss defined in Article 207(1) of Commission Delegated Regulation 2015/35 are not supported by the same deferred tax liabilities or future taxable profits already supporting the recognition of deferred tax assets for valuation purposes in the Solvency II balance sheet in accordance with Article 75 of Solvency II.

1.36. Undertakings should follow in their recognition of notional deferred tax assets in a stressed Solvency II balance sheet the principles set out in Article 15 of Commission Delegated Regulation 2015/35.

Guideline 12 - Recognition based on future profits

1.37. If the recognition of notional deferred tax assets is supported by an assessment of future taxable profit, undertakings should recognise notional deferred tax assets to the extent it is probable that they will have sufficient future taxable profit available after suffering the instantaneous loss.

1.38. Undertakings should employ appropriate techniques to assess the temporary nature of the notional deferred tax assets and the timing of future taxable profits which meet the following requirements:

(a) The assessment is in accordance with Article 15(3) of Commission Delegated Regulation 2015/35;

(b) The assessment takes into account the prospects of the undertaking after suffering the instantaneous loss.

Guideline 13 - Relief where demonstration of eligibility is burdensome

1.39. Supervisory authorities should allow undertakings to disregard notional deferred tax assets in the calculation of the adjustment for loss-absorbing capacity where it would be too burdensome for the undertaking to demonstrate their eligibility.

Guideline 14 - Notional deferred tax liabilities

1.40. Without prejudice to Article 207(4) of Commission Delegated Regulation 2015/35 undertakings should include notional deferred tax liabilities resulting from the instantaneous loss defined in Article 207(1) of Commission Delegated Regulation 2015/35 in the calculation of the adjustment for the loss-absorbing capacity of deferred taxes.

331. Besides these guidelines on LAC DT, the guidelines regarding deferred taxes in the guidelines on recognition and valuation of assets and liabilities other than technical provisions (EIOPA-BoS-15/113) are also relevant:

Guideline 9 - Deferred taxes – recognition and valuation

Discounting deferred taxes

1.26. Undertakings should not discount deferred tax assets and liabilities.

Setting off deferred tax assets and liabilities on the Solvency II balance sheet

1.27. An undertaking should offset deferred tax assets and deferred tax liabilities only if, it has a legally enforceable right to set off current tax assets against current tax liabilities; and if the deferred tax assets and the deferred tax liabilities relate to taxes levied by the same tax authority on the same taxable undertaking.

Recognition and valuation of a net deferred tax asset

1.28. Where there are insufficient taxable temporary differences, which are expected to reverse in the same period as the expected reversal of the deductible temporary differences, the undertaking should consider the likelihood

that taxable profits will arise in the same period as the reversal of the deductible temporary differences or in the periods into which a tax loss arising from the deferred tax asset can be carried back or forward.

1.29. When making projections of taxable profits and assessing the likelihood that sufficient taxable profits will arise in the future, an undertaking should:

a) take into consideration that even a strong earnings history may not provide sufficient objective evidence of future profitability;

b) take into consideration that the degree of uncertainty relating to future taxable profits resulting from expected new business increases as the projection horizon becomes longer, and particularly when these projected profits are expected to arise in periods beyond the normal planning cycle of the undertaking;

c) consider that some tax rules can delay or restrict recovery of unused tax losses and unused tax credits;

d) avoid double counting: taxable profits resulting from the reversal of taxable temporary differences should be excluded from the estimated future taxable profits where they have been used to support the recognition of deferred tax assets;

e) ensure that when making projections of taxable profits, these projections are both credible and broadly consistent with the assumptions made for other projected cash flows. In particular, the assumptions underlying the projections should be consistent with those underlying the valuations of technical provisions and assets on the solvency balance sheet.

Guideline 10 - Deferred taxes – documentation

1.30. Upon request, undertakings should be able to provide supervisory authorities with, at a minimum, information based on the undertakings' records:

a) on sources of temporary differences that may lead to the recognition of deferred taxes;

b) regarding recognition and valuation principles applied for deferred taxes;

c) in respect of each type of timing difference and in respect of each type of unused tax loss and unused tax credit, the calculation of the amount of the deferred tax assets or liabilities recognised, as well as underlying assumptions related to that amount;

d) describing the recognition of deferred tax assets, including at least:

- existence of any taxable temporary differences relating to the same tax authority, the same taxable undertaking and the same type of tax which are expected to reverse in the same period as the expected reversal of the deductible temporary difference or, as the case may be, would result in taxable amounts against which the unused tax losses or unused tax credits can be utilised before they expire;

- when there are insufficient taxable temporary differences relating to the same tax authority, the same taxable undertaking and the same type of tax, documentation demonstrating that it is probable that the

entity will have sufficient taxable profit relating to the same tax authority and the same taxable undertaking and the same type of tax in the same period as the reversal of the deductible temporary difference or in the periods into which a tax loss arising from the deferred tax asset can be carried back or forward or, as the case may be, that it is probable that the undertaking will have taxable profits before the unused tax losses or unused tax credits expire.

e) on the amount and expiry date, if any, of deductible temporary differences, unused tax losses and unused tax credits for which deferred tax assets are or are not recognised.

Guideline 11 - Deferred tax treatment where undertakings are excluded from group supervision

1.31. Undertakings should apply the following principles for the recognition of deferred taxation where related undertakings are excluded from the scope of group supervision under Article 214(2) of the Solvency II Directive:

a) where holdings in related undertakings are excluded from the scope of group supervision under Article 214(2)(a) of the Solvency II Directive, the deferred tax related to that excluded undertaking should not be recognised at either individual or group level;

b) where holdings in related undertakings are excluded from the scope of group supervision under Article 214(2)(b) or (c) of the Solvency II Directive, the deferred tax related to that related undertaking should not be recognised at group level.

8.4. LAC DT numbers across the EEA¹⁷

332. EIOPA hypothesises that five factors may influence the amount of LAC DT; the applicable tax rate, other elements of the tax regime, the net DTL on the balance sheet, the size of the undertaking and the solvency ratio. Other elements of the tax regime are the carry-back and carry-forward possibilities. There may be even more elements of the tax regimes that imply differences in LAC DT across the EEA, but these are left out of this analysis as data on these other characteristics are not readily available.

333. In this section EIOPA analyses the variation in LAC DT across the EEA as reported in the Day One templates for the situation per 31 December 2016. EIOPA has data on 2834 undertakings of which 2799 contain valid data for this analysis.

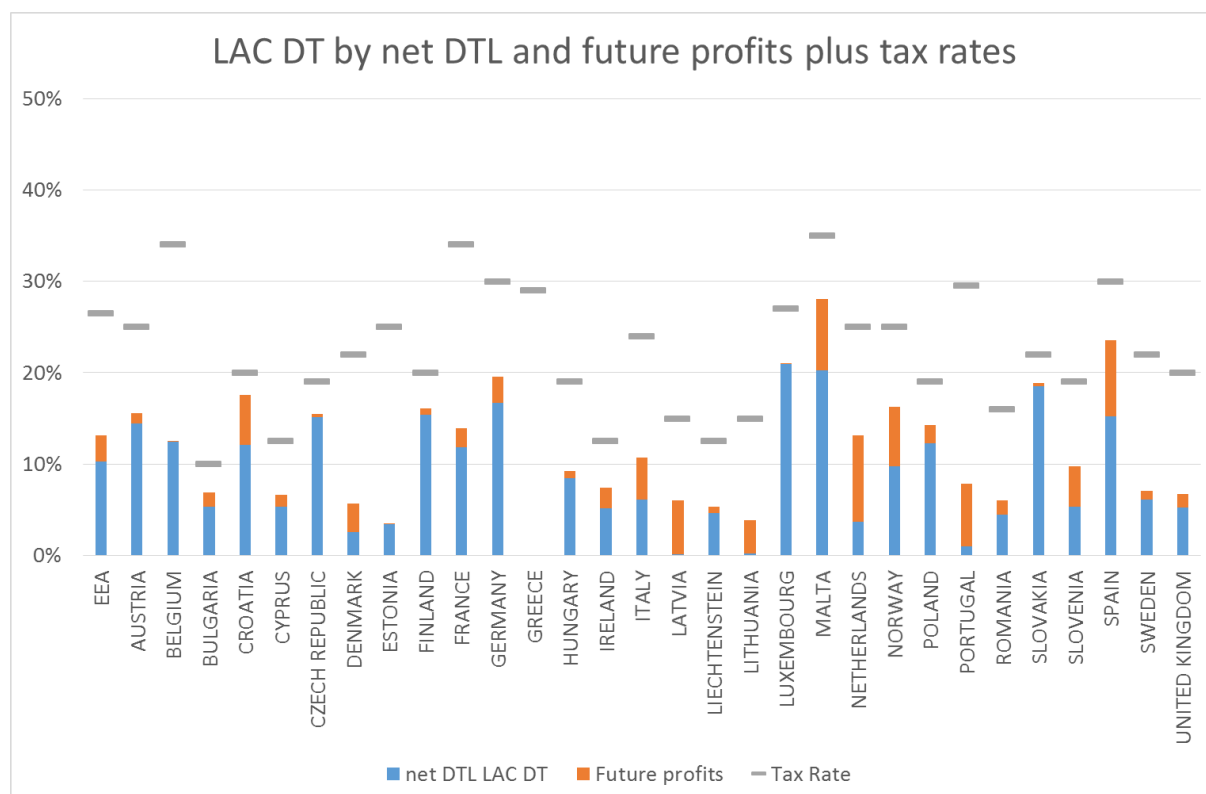
334. Figure 8 shows for the whole EEA as well as for each of the 30 jurisdictions, the total amount of LAC DT as percentage of the bSCR* (defined as the basic SCR plus operational risk and the loss absorbing capacity of technical provisions). The blue bars show the part of LAC DT for which likely utilisation is being demonstrated by a net DTL position on the balance sheet; and the orange bars indicate the part of LAC DT that is being

¹⁷ Please note that no data was available at EIOPA for Iceland; therefore, when referring to EEA data in this paper, this will exclude Iceland.

demonstrated by other means, including future profits. The latter also includes, for some jurisdictions which permit it, the part for which likely utilisation is being demonstrated by past fiscal profits, i.e. carry-back.¹⁸ 'Future profits' may refer both to those derived from new business, returns on assets and liabilities as well as to other sources. EIOPA observes variations in the amount of LAC DT as a percentage of the bSCR*. EIOPA also observes variation in the amount of LAC DT compared to the maximum achievable LAC DT, being the tax rate, and variation in the proportion of LAC DT for which likely utilisation is being demonstrated by net DTL and by other means including future profits. For example, in Croatia and Luxembourg LAC DT is close to the tax rate and for Luxembourg likely utilisation this is fully being demonstrated by net DTL, while in Croatia likely utilisation of LAC DT also relies on future profits. Whereas Belgium, Austria, France, Luxembourg and Germany, among others, almost fully rely on net DTL for the demonstrating likely utilisation of LAC DT, LAC DT in Norway, Spain and the Netherlands rely mainly on future profits, and carry-back if applicable.

¹⁸ Carry-back allows undertakings to receive a deduction from the taxes paid in the previous year to the extent that they experience fiscal losses in the current year. In the case of LAC DT this implies that the part of the shock loss that is also a direct fiscal loss (note that part of the shock loss may only occur as fiscal loss at a later stage) can be deducted from (carried back to) the fiscal profits from the previous year. As such, this part of demonstrating LAC DT is the most certain part as it does not rely on future profits at all. It is being allowed in jurisdictions where it is applicable.

Figure 8. Split of LAC DT over net DTL and other sources (future profits) versus the tax rate per jurisdiction in the EEA.*/**



*** The total LAC DT per jurisdiction, both "net DTL LAC DT" and "Future Profits", are the sums of the LAC DT in a specific jurisdiction as a percentage of the sums of the bSCR*, the SCR excluding LAC DT, in that jurisdiction.**

**** The part of LAC DT that is being demonstrated by future profits for Ireland, the Netherlands and the United Kingdom also contain the part of LAC DT that is being demonstrated by carry-back.**

335. This graph is built on the assumption that the entire amount of net DTL was used to demonstrate likely utilisation of LAC DT and that only likely utilisation of the remaining part was demonstrated by reference to future profits. That is, EIOPA compared LAC DT on the Solvency II reporting templates with the net DTL on the Solvency II balance sheet. It has assumed that the difference between those two figures represents likely utilisation demonstrated by future profits and (where possible) carry-back; the regular reporting templates do not allow it to separate out these two means of demonstrating likely utilisation. There might be cases where only a limited part of net DTL of the Solvency II balance sheet has been used to demonstrate utilisation, because of the application of some conditions of IAS12. However, at the same time it is not possible to determine what part of LAC DT is being demonstrated by future profits rather than net DTL, because, for example, the timing of the DTL did not allow for the utilisation of the DTA after the shock loss.

336. As well as showing LAC DT as a percentage of the bSCR* (as in Figure 8), Table 9 also shows the amount of LAC DT in euros. Total LAC DT in the EEA

amounts to 96.5 billion euros on a total bSCR* of 731.9 billion euros. Likely utilisation of 75.2 billion euros of this LAC DT is being demonstrated by net DTL on the balance sheet, and the remaining 21.3 billion euros by future profits and carry-back. The deferred taxes on the Solvency II balance sheet amount to a net DTL of 100.9 billion euros; although this is sufficient to fully absorb the total LAC DT of 96.5 billion euros, in practice this is not the case as some undertakings have a higher net DTL than their maximum LAC DT possible or have not been able to fully use their net DTL to demonstrate their maximum LAC DT, while other undertakings have a net DTA on their Solvency II balance sheet.

Table 9. Amounts of LAC DT across the different jurisdictions in the EEA split in contributions by net DTL and future profits for both Standard Formula and Internal Model undertakings

	<i>net DTA</i>		<i>bSCR*</i>	<i>LAC DT</i>		<i>net DTL LAC DT</i>		<i>Future profits</i>		<i>Tax Rate</i>
EEA	-100.9	-13.8%	731.9	96.5	13.2%	75.2	10.3%	21.3	2.9%	26.5%
AUSTRIA	-2.8	-17.8%	15.6	2.4	15.5%	2.3	14.5%	0.2	1.1%	25.0%
BELGIUM	-2.2	-10.7%	21.1	2.6	12.6%	2.6	12.5%	0.0	0.1%	34.0%
BULGARIA	0.0	-5.1%	0.6	0.0	6.9%	0.0	5.3%	0.0	1.6%	10.0%
CROATIA	-0.1	-12.7%	0.8	0.1	17.6%	0.1	12.1%	0.0	5.5%	20.0%
CYPRUS	0.0	-9.1%	0.5	0.0	6.7%	0.0	5.3%	0.0	1.4%	12.5%
CZECH REPUBLIC	-0.4	-19.1%	2.3	0.4	15.5%	0.3	15.2%	0.0	0.3%	19.0%
DENMARK	-1.1	-12.8%	9.0	0.5	5.7%	0.2	2.6%	0.3	3.1%	22.0%
ESTONIA	0.0	-6.4%	0.3	0.0	3.4%	0.0	3.4%	0.0	0.0%	25.0%
FINLAND	-1.4	-19.4%	7.2	1.2	16.1%	1.1	15.4%	0.1	0.7%	20.0%
FRANCE	-23.9	-15.4%	155.6	21.7	14.0%	18.4	11.9%	3.3	2.1%	34.0%
GERMANY	-39.9	-27.5%	145.1	28.4	19.6%	24.2	16.7%	4.2	2.9%	30.0%
GREECE	0.4	25.0%	1.7	0.0	0.1%	0.0	0.1%	0.0	0.0%	29.0%
HUNGARY	-0.1	-11.7%	0.8	0.1	9.3%	0.1	8.4%	0.0	0.8%	19.0%
IRELAND	-1.5	-6.1%	24.5	1.8	7.4%	1.3	5.2%	0.5	2.2%	12.5%
ITALY	-3.9	-6.5%	60.0	6.4	10.7%	3.7	6.1%	2.8	4.6%	24.0%
LATVIA	0.0	3.5%	0.1	0.0	6.0%	0.0	0.1%	0.0	5.9%	15.0%
LIECHTENSTEIN	0.0	-2.5%	1.4	0.1	5.4%	0.1	4.6%	0.0	0.7%	12.5%
LITHUANIA	0.0	1.1%	0.2	0.0	3.8%	0.0	0.2%	0.0	3.6%	15.0%
LUXEMBOURG	-4.5	-36.3%	12.5	2.6	20.9%	2.6	20.9%	0.0	0.0%	27.0%
MALTA	-1.2	-56.8%	2.1	0.6	28.1%	0.4	20.2%	0.2	7.9%	35.0%
NETHERLANDS	2.0	5.2%	38.3	5.0	13.1%	1.4	3.7%	3.6	9.4%	25.0%
NORWAY	-1.9	-13.4%	13.8	2.2	16.2%	1.4	9.8%	0.9	6.4%	25.0%
POLAND	-1.3	-21.6%	6.3	0.9	14.2%	0.8	12.3%	0.1	2.0%	19.0%
PORTUGAL	0.1	2.0%	4.0	0.3	7.9%	0.0	1.0%	0.3	6.8%	29.5%
ROMANIA	0.0	-3.7%	0.6	0.0	6.0%	0.0	4.5%	0.0	1.6%	16.0%
SLOVAKIA	-0.2	-23.2%	0.8	0.1	18.9%	0.1	18.5%	0.0	0.3%	22.0%
SLOVENIA	-0.1	-9.9%	1.1	0.1	9.7%	0.1	5.3%	0.0	4.4%	19.0%
SPAIN	-5.6	-21.0%	26.9	6.3	23.5%	4.1	15.3%	2.2	8.3%	30.0%
SWEDEN	-2.2	-7.3%	30.0	2.1	7.1%	1.8	6.1%	0.3	1.0%	22.0%
UNITED KINGDOM	-8.3	-5.6%	147.8	10.0	6.7%	7.8	5.3%	2.2	1.5%	20.0%

The bSCR, SCR excluding LAC DT, or, put differently, the basic SCR plus operational risk and the loss absorbing capacity of technical provisions as well as the net DTA on the Solvency II balance sheet (negative numbers indicate a net DTL), the total LAC DT, the part of LAC demonstrated by net DTL and the part of LAC DT demonstrated by future profits for 2799, Standard Formula, Partial and Full Internal Model, undertakings. In the second columns these amounts are displayed as a percentage of the bSCR*. The last column contains the applicable tax rate in the specific jurisdiction.*

337. Table 10 is similar to Table 9 except that it excludes 76 undertakings with an internal model and only includes the 2723 undertakings that calculate their SCR using the Standard Formula or using a Partial Internal Model; for the latter EIOPA assumes that the Partial Internal Model does not cover LAC DT. The total bSCR* for undertakings using the Standard Formula is 596.8 billion euros and their LAC DT equals 80.9 billion euros, 13.5 % thereof. This percentage is slightly higher than for Internal Model undertakings; the contribution of net DTL (61.4 billion euros, 10.3 %) is equal, while future profits, including carry-back where applicable, (19.4 billion euros, 3.3 %) contribute more to this relatively higher LAC DT for Standard Formula Undertakings.

Table 10. Amounts of LAC DT across the different jurisdictions in the EEA split in contributions by net DTL and future profits for Standard Formula and Partial Internal Model undertakings

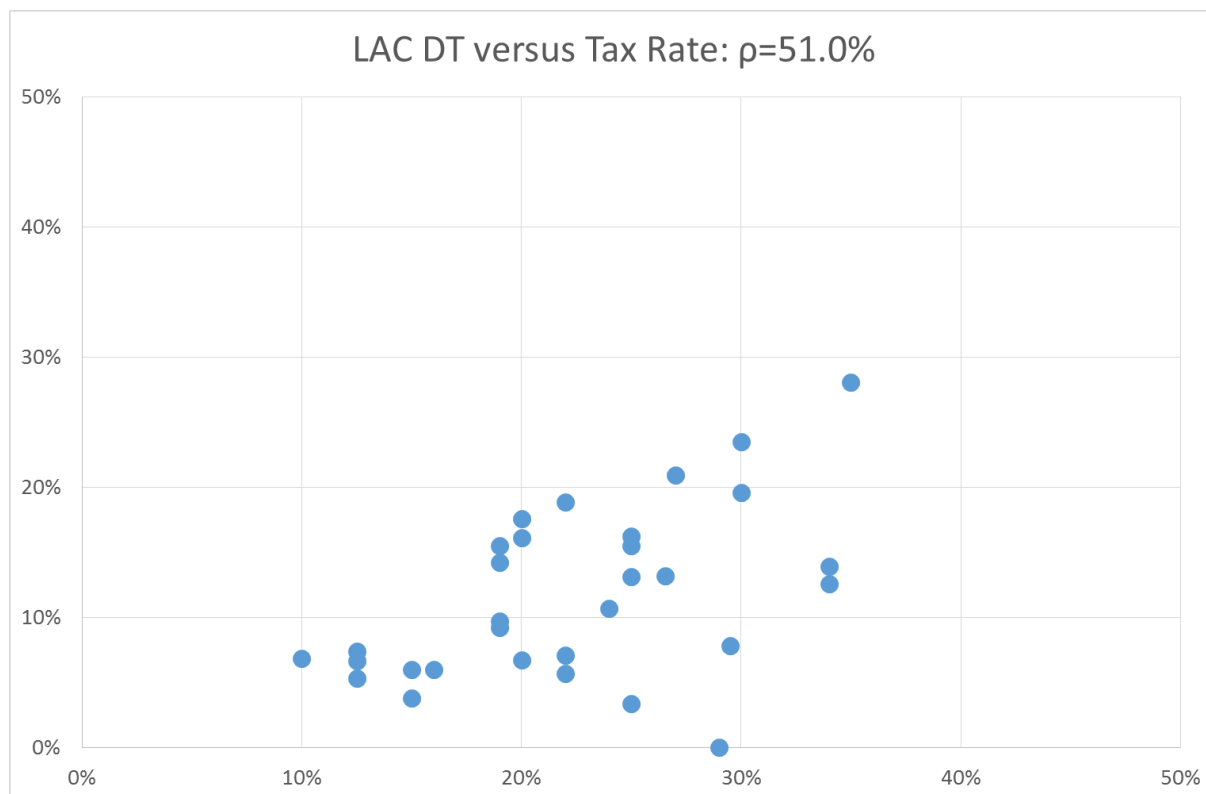
	net DTA		bSCR*	LAC DT		net DTL LAC DT		Future profits		Tax Rate
EEA	-84.0	-14.1%	596.8	80.9	13.5%	61.4	10.3%	19.4	3.3%	26.6%
AUSTRIA	-2.6	-17.6%	15.0	2.4	15.7%	2.2	14.6%	0.2	1.1%	25.0%
BELGIUM	-1.7	-9.4%	17.7	2.1	12.0%	2.1	11.9%	0.0	0.1%	34.0%
BULGARIA	0.0	-5.1%	0.6	0.0	6.9%	0.0	5.3%	0.0	1.6%	10.0%
CROATIA	-0.1	-12.7%	0.8	0.1	17.6%	0.1	12.1%	0.0	5.5%	20.0%
CYPRUS	0.0	-9.1%	0.5	0.0	6.7%	0.0	5.3%	0.0	1.4%	12.5%
CZECH REPUBLIC	-0.4	-19.1%	2.3	0.4	15.5%	0.3	15.2%	0.0	0.3%	19.0%
DENMARK	-1.1	-12.8%	8.9	0.5	5.7%	0.2	2.6%	0.3	3.1%	22.0%
ESTONIA	0.0	-6.4%	0.3	0.0	3.4%	0.0	3.4%	0.0	0.0%	25.0%
FINLAND	-1.4	-19.4%	7.2	1.2	16.1%	1.1	15.4%	0.1	0.7%	20.0%
FRANCE	-21.0	-16.8%	124.5	17.3	13.9%	15.4	12.3%	1.9	1.5%	34.0%
GERMANY	-30.1	-28.2%	106.8	21.0	19.7%	16.9	15.8%	4.1	3.8%	30.0%
GREECE	0.4	25.0%	1.7	0.0	0.1%	0.0	0.1%	0.0	0.0%	29.0%
HUNGARY	-0.1	-11.7%	0.8	0.1	9.3%	0.1	8.4%	0.0	0.8%	19.0%
IRELAND	-0.9	-5.2%	17.4	1.3	7.7%	0.8	4.8%	0.5	2.9%	12.5%
ITALY	-3.7	-6.7%	55.2	6.2	11.2%	3.4	6.2%	2.8	5.0%	24.0%
LATVIA	0.0	3.5%	0.1	0.0	6.0%	0.0	0.1%	0.0	5.9%	15.0%
LIECHTENSTEIN	0.0	-2.5%	1.4	0.1	5.4%	0.1	4.6%	0.0	0.7%	12.5%
LITHUANIA	0.0	1.1%	0.2	0.0	3.8%	0.0	0.2%	0.0	3.6%	15.0%
LUXEMBOURG	-4.0	-35.9%	11.1	2.4	21.7%	2.4	21.7%	0.0	0.0%	27.0%
MALTA	-0.1	-12.9%	1.1	0.3	22.3%	0.1	8.0%	0.2	14.4%	35.0%
NETHERLANDS	2.0	5.2%	38.3	5.0	13.1%	1.4	3.7%	3.6	9.4%	25.0%
NORWAY	-1.9	-13.4%	13.8	2.2	16.2%	1.4	9.8%	0.9	6.4%	25.0%
POLAND	-1.3	-21.6%	6.3	0.9	14.2%	0.8	12.3%	0.1	2.0%	19.0%
PORTUGAL	0.1	2.0%	4.0	0.3	7.9%	0.0	1.0%	0.3	6.8%	29.5%
ROMANIA	0.0	-3.7%	0.6	0.0	6.0%	0.0	4.5%	0.0	1.6%	16.0%
SLOVAKIA	-0.2	-23.2%	0.8	0.1	18.9%	0.1	18.5%	0.0	0.3%	22.0%
SLOVENIA	-0.1	-9.9%	1.1	0.1	9.7%	0.1	5.3%	0.0	4.4%	19.0%
SPAIN	-5.6	-21.0%	26.9	6.3	23.5%	4.1	15.3%	2.2	8.3%	30.0%
SWEDEN	-2.2	-7.3%	30.0	2.1	7.1%	1.8	6.1%	0.3	1.0%	22.0%
UNITED KINGDOM	-7.2	-7.1%	100.3	8.0	8.0%	6.2	6.2%	1.8	1.8%	20.0%

The bSCR*, SCR excluding LAC DT, or, put differently, the basic SCR plus operational risk and the loss absorbing capacity of technical provisions as well as the net DTA on the solvency II balance sheet (negative numbers indicate a net DTL), the total LAC DT, the part of LAC demonstrated by net DTL and the part of LAC DT demonstrated by future profits for 2723, both Standard Formula and Partial Internal Model, undertakings. In the second columns these amounts are displayed as a percentage of the bSCR*. The last column contains the applicable tax rate in the specific jurisdiction.

8.4.1. Tax rates and LAC DT

338. Both theory and the previous figure and tables indicate that LAC DT varies with the applicable tax rate. Figure 9 shows a scatter plot of the LAC DT per jurisdiction against the applicable tax rate in that jurisdiction. The correlation coefficient between the average reported LAC DT per jurisdiction on 31 December 2016 and the applicable tax rate is 51.0 %.

Figure 9. LAC DT versus the applicable tax rate in the 30 jurisdictions of the EEA (excluding Iceland)



8.4.2. Other elements of the tax regime and LAC DT

339. As stated in the introduction not only the tax rate, but also other elements of the tax regime may affect the amount of LAC DT undertakings are able to demonstrate. EIOPA hypothesises that the following elements of the tax regimes may also be related to the amount of LAC DT an undertaking is able to demonstrate:

- **Carry-forward;** in all jurisdictions, except Estonia, the carry-forward of fiscal losses to reduce future tax payments is allowed
 - *Horizon;* the number of years the fiscal losses can be carried forward to reduce future tax profits, the next table shows that this varies from 4 years to an unlimited horizon
 - *Percentage carry-forward;* in some tax regimes only a certain percentage of the fiscal profit may be reduced by carried forward fiscal losses from previous years, the remainder of the fiscal losses that is not yet used can be carried forward to the next year, but within the limits of the horizon for carry-forward; this percentage varies from 50 % to 100 %
- **Carry-back;** in three jurisdictions, Ireland, the Netherlands and the United Kingdom a fiscal loss can be fully carried-back to the previous year to claim back, a part of, the taxes that were paid on the fiscal profits in that previous year; the remainder of the fiscal loss is available for carry-forward.

340. The next table shows a summary of the tax regimes in the different jurisdictions.

Table 11. Summary of tax regime characteristics across EEA */**

	Tax Rate	Carry-back	Carry-forward	
			Years	Percentage
AUSTRIA	25%	no	∞	75%
BELGIUM	34%	no	∞	100%
BULGARIA	10%	no	5	100%
CROATIA	20%	no	5	100%
CYPRUS	13%	no	5	100%
CZECH REPUBLIC	19%	no	5	100%
DENMARK	22%	no	∞	60%
ESTONIA	25%	no	NA	NA
FINLAND	20%	no	10	100%
FRANCE	34%	no	∞	50%
GERMANY	30%	no	∞	60%
GREECE	29%	no	5	100%
HUNGARY	19%	no	5	50%
IRELAND	13%	yes	∞	100%
ITALY	24%	no	∞	80%
LATVIA	15%	no	∞	100%
LIECHTENSTEIN	13%	no	∞	100%
LITHUANIA	15%	no	∞	70%
LUXEMBOURG	21%	no	∞	100%
MALTA	35%	no	∞	100%
NETHERLANDS	25%	yes	9	100%
NORWAY	25%	no	∞	100%
POLAND	19%	no	5	50%
PORTUGAL	30%	no	5	70%
ROMANIA	16%	no	7	100%
SLOVAKIA	22%	no	4	100%
SLOVENIA	19%	no	∞	50%
SPAIN	30%	no	∞	100%
SWEDEN	22%	no	∞	100%
UNITED KINGDOM	20%	yes	∞	100%

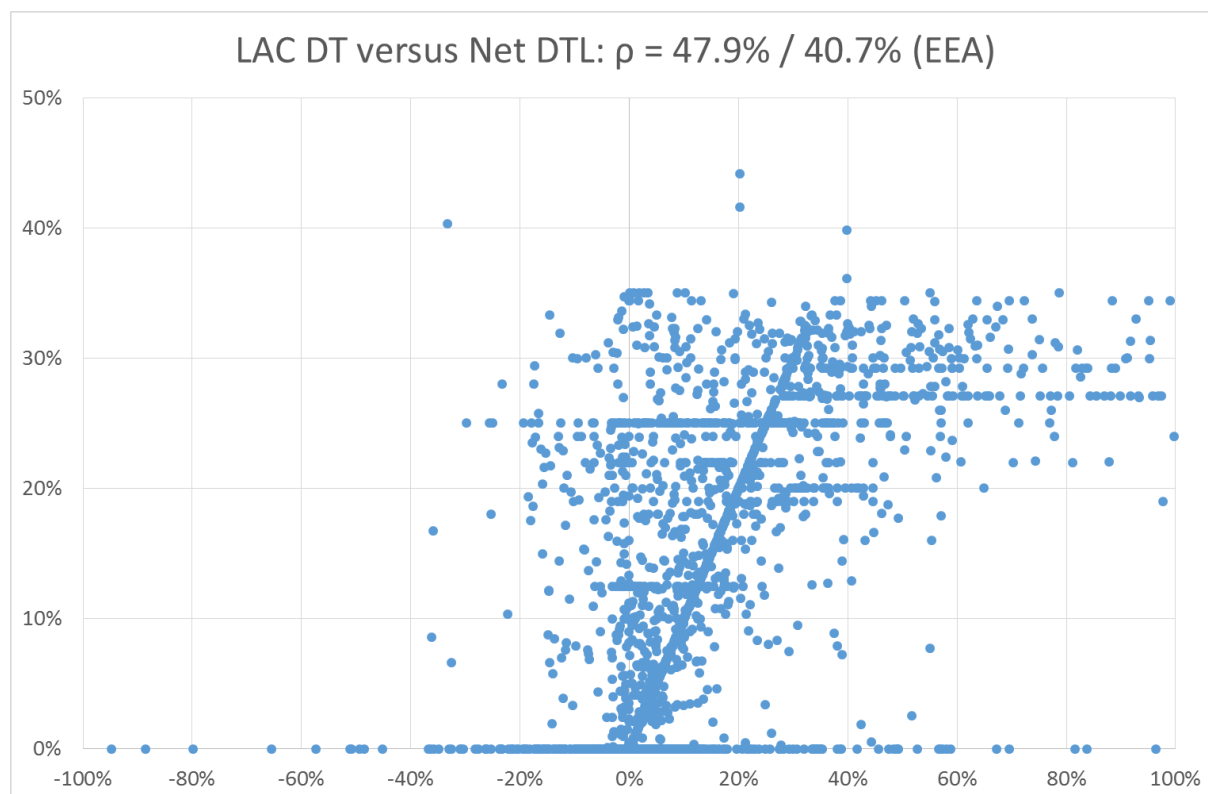
* The average applicable tax rate, whether carry-back is allowed, the number of years over which losses can be carried forward and the percentage of fiscal profits that can be reduced by fiscal losses from previous years. The symbol ∞ in the column number of years of carry-forward indicates that losses can be carried forward indefinitely. In Estonia no corporate taxes are paid, but undertakings pay corporate taxes on their profits in other jurisdictions. The tax regimes reflect the situations applicable for the LAC DT calculations per 31 December 2016.

** In some jurisdictions, up to a certain limit, carry-back and carry-forward are allowed to a broader extent than in this table; for materiality purposes only the characteristics that apply to the largest undertaking are presented.

8.4.3. Net DTL/DTA on the balance sheet and LAC DT

341. Demonstrating likely utilisation of LAC DT by using net DTL on the balance sheet does not involve the projections of future profits if an undertaking can provide credible evidence that after the shock loss the timing of the net DTL sufficiently matches the timing of the net DTA, taking account of the applicable carry-back and carry-forward possibilities in the jurisdiction.
342. The larger the net DTL on the balance sheet of an undertaking, the less it is likely to rely on the projections of future profits for the demonstration of likely utilisation.
343. Furthermore the larger the potential for tax carry back, again the less it might need to rely on the projections of future profits for the demonstration of likely LAC DT utilisation.
344. The projection of future profits requires additional consideration of credibility that may be complex and burdensome. The next figure shows the scatter plot of LAC DT versus the net DTL on the balance sheet (negative numbers are therefore net DTA on the balance sheet). For the 2799 undertakings the correlation coefficient between LAC DT and the net DTL on the balance sheet equals 47.9 % if EIOPA also includes the undertakings that have reported a zero LAC DT. As EIOPA cannot distinguish between undertakings that have just set LAC DT to zero or were unable to demonstrate any LAC DT it also presents the correlation excluding undertakings with LAC DT equal to zero: in that case the correlation equals 40.7 %.

Figure 10. LAC DT versus the net DTL on the Solvency II balance sheet for 2799 undertakings in the EEA

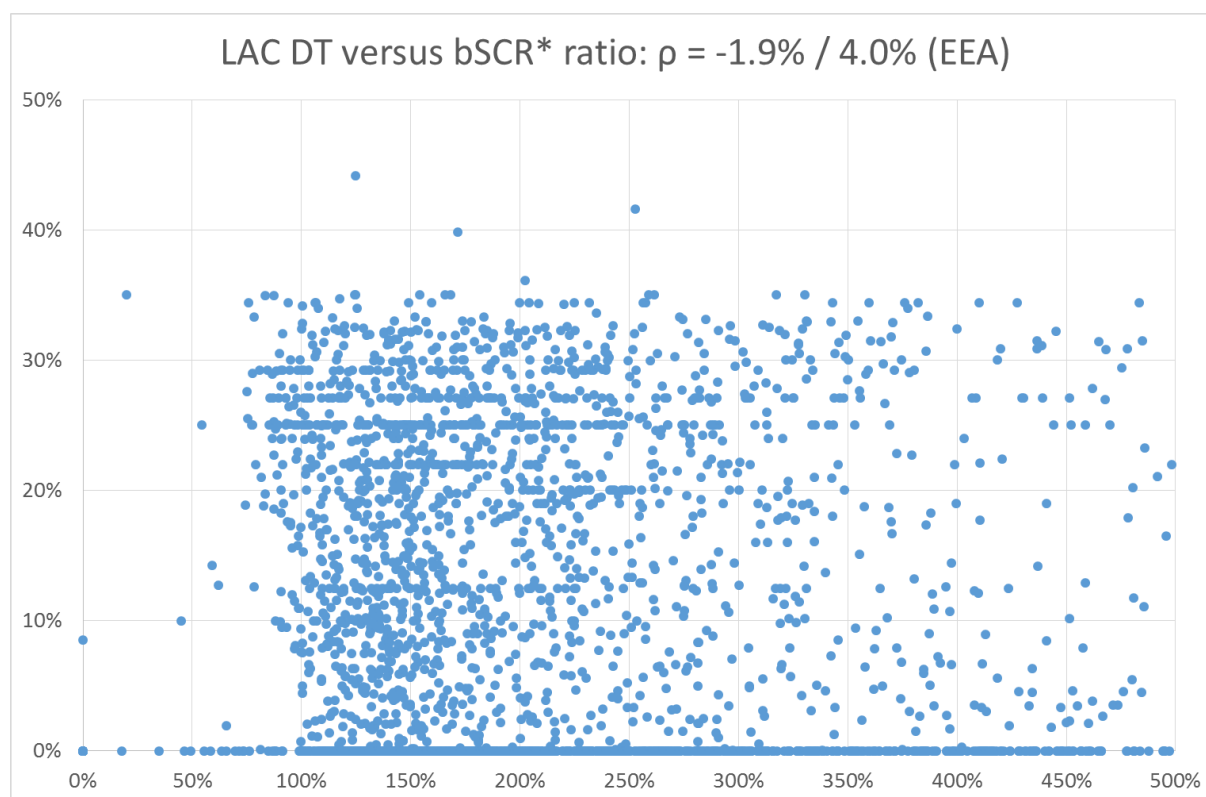


8.4.4. Solvency ratio and LAC DT

345. Another variable that may be of influence on the amount of LAC DT is the financial situation of the undertaking; the better an undertaking is capitalised the better, or more likely, it is able to generate future profits both before and after the shock loss. If this is the case one expects that LAC DT will be higher for undertakings with a higher solvency ratio. The next figure shows a scatter plot of the bSCR* ratio against LAC DT; the reason that EIOPA chose the bSCR* ratio (the SCR ratio without LAC DT) is that including LAC DT would result in a positive relationship being designed into the analysis since a higher LAC DT directly results in a lower SCR and thus a higher SCR ratio.

346. The correlation coefficient between this bSCR* ratio and LAC DT is minus 1.9 %, and 4.0 % if EIOPA excludes the undertakings that reported a LAC DT of zero. This negative correlation, although small, may indicate that undertakings with a relatively low bSCR* ratio more often try to demonstrate likely utilisation of LAC DT than undertakings with a relatively high ratio. The positive correlation of 4.0 % when we exclude undertakings with zero LAC DT, although also small, is in line with our hypothesis that better capitalised undertakings are better able to generate, or at least demonstrate, likely future profits.

Figure 11. LAC DT versus the bSCR* ratio for 2799 undertakings in the EEA.



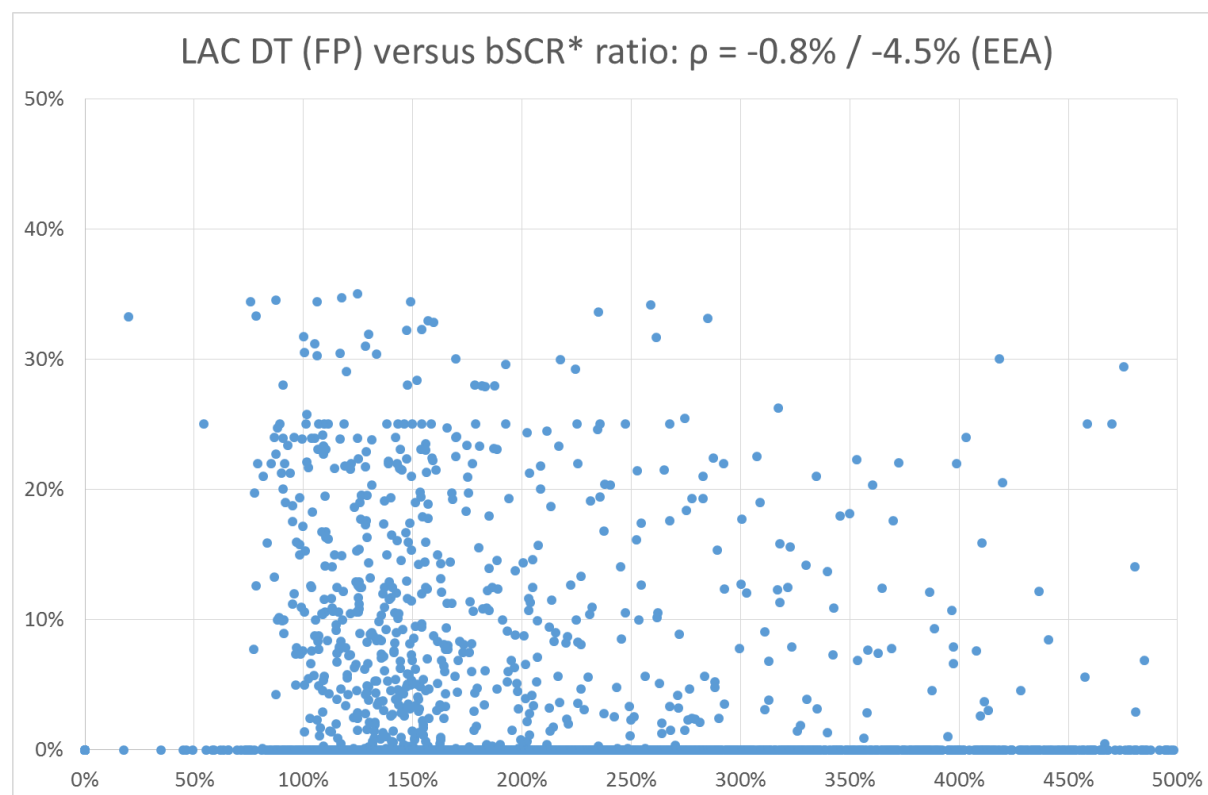
347. Since only LAC DT showing likely utilisation by reference to future profits might be connected with the bSCR* ratio, Figure 12 shows a scatter plot of

that sub-set of total LAC DT against the bSCR* ratio, rather than total LAC DT. Using net DTL to demonstrate likely utilisation would be independent of the bSCR* ratio since it does not require the firm to demonstrate additional future profits; it only requires the firm to demonstrate that the timing of their reversal means the net DTL are available. Unsurprisingly, Figure 12 has fewer data points than Figure 11, since many undertakings rely solely on net DTL to demonstrate likely utilisation of LAC DT.

348. The correlation between likely utilisation of LAC DT demonstrated by future profits and the bSCR* ratio is minus 0,8 %. This changes to minus 4,5 % if EIOPA excludes undertakings that have reported a zero reliance on future profit to demonstrate utilisation. This may indicate that the bSCR* ratio does not affect whether or not undertakings rely on future profits beyond their net DTL for their LAC DT calculation, but that those undertakings with a higher bSCR* ratio that do rely on future profits demonstrate a higher amount of likely future profits.

349. The correlation coefficients between the bSCR* ratio and LAC DT and the future profit part of LAC DT do not differ that much. This may indicate that the correlations in the former figure on LAC DT compared with the bSCR* ratio are driven by the correlations between the future profit part of LAC DT and this ratio.

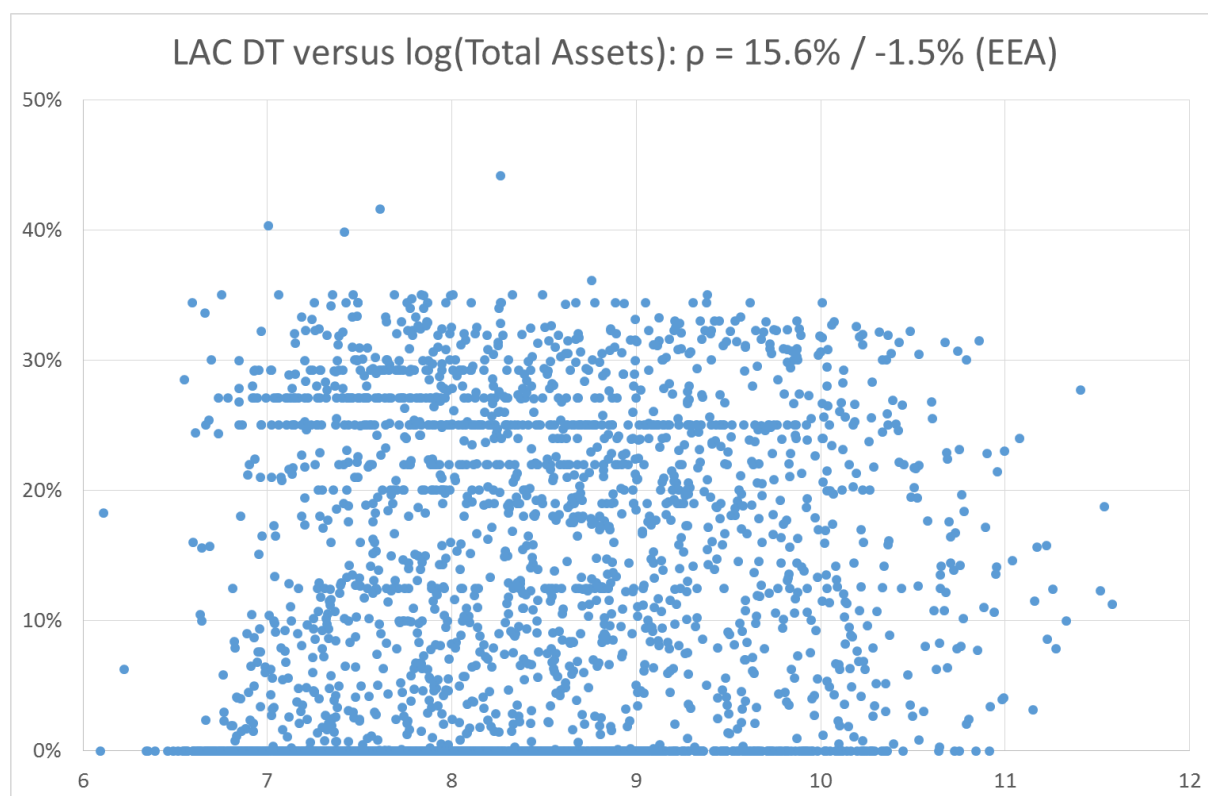
Figure 12. LAC DT part based on future profits versus the bSCR* ratio for 2799 undertakings in the EEA.



8.4.5. Size of the undertaking and LAC DT

350. The last variable that EIOPA expects to influence the amount of LAC DT that is recognised is the size of the undertaking. The larger an undertaking the more resources it is likely to be able to make available for the calculation of LAC DT, in particular if it involves the more complex projections of future profits. Figure 13 shows a scatter plot of LAC DT against the size of an undertaking. On the x-axis, the size of the undertakings is measured by the $\log_{10}$ of its total assets; at "6" undertakings thus have 1 million euros in total assets and at "9" undertakings have 1 billion euros in total assets. The correlation coefficient between LAC DT and this size measure is 15.6 %; if EIOPA excludes the undertakings that recognised no LAC DT the correlation equals minus 1.5 %. This may indicate that the relatively small undertakings have reported a LAC DT of zero and that the size of the undertaking is not as significant for relatively larger undertakings which recognised LAC DT.

Figure 13. LAC DT versus the size ($\log_{10}$ of total assets) for 2799 undertakings in the EEA.



8.4.6. Explaining differences in LAC DT across EEA

351. Tax rates, net DTL, size and the solvency ratio explain 37.4 % of the variation in LAC DT recognition across the EEA, while characteristics like the type of undertaking (life, non-life or both), the method of SCR calculation (standard formula, internal model or partial internal model) and accounting standard (Local GAAP or IFRS) add 0.9 % to this explained variation. Differences in jurisdictions add 35.3 % to the total explanation of the variation in LAC DT across the EEA which is 73.6 %.

352. These numbers on the determinants of LAC DT across the EEA correspond to the R-squared, the percentage of variation explained, from cross-sectional regressions of LAC DT on all these variables. The regression equation for estimating the role of tax rates, net DTL, size and the solvency ratio is the following:

$$LAC\ DT_i = \beta_0 + \beta_1 \times Tax\ Rate_i + \beta_2 \times Net\ DTL_i + \beta_3 \times Ratio_i + \beta_4 \times \log_{10}(Total\ Assets_i) + \varepsilon_i$$

where β_0 corresponds to the intercept of this regression, the $Tax\ Rate_i$ is the applicable or maximum tax rate in the jurisdiction of the undertaking¹⁹, provided to EIOPA by the respective NSAs, $Net\ DTL_i$ is the difference between the DTL and DTA on the balance sheet divided by the SCR excluding LAC DT of undertaking i , $Ratio_i$ is the ratio of eligible own funds for the SCR divided by the SCR excluding LAC DT and the size of undertaking i is measured by the $\log_{10}$ of *Total Assets*. EIOPA excluded LAC DT from the SCR in the variable $Ratio_i$ as in that case LAC DT would be on both sides of the regression equation and a relationship would be found by construction.

353. EIOPA extended the regression equation to include the impact of other undertaking specific characteristics on the variation in LAC DT recognised:

$$LAC\ DT_i = \beta_0 + \beta_1 \times Tax\ Rate_i + \beta_2 \times Net\ DTL_i + \beta_3 \times Ratio_i + \beta_4 \times \log_{10}(Total\ Assets_i) + \beta_5 \times Life_i + \beta_6 \times Both_i + \beta_7 \times IM_i + \beta_8 \times PIM_i + \beta_9 \times IFRS_i + \varepsilon_i$$

where $Life_i$ is a dummy, 0-1, variable that is 1 if the undertaking exclusively pursues life business, $Both_i$ is a dummy variable that is 1 if undertaking i pursues both life and non-life business, IM_i is a dummy that equals 1 if the undertaking has a full internal model, PIM_i is 1 if undertaking i has a partial internal model and $IFRS_i$ equals 1 if IFRS is the accounting standard of the undertaking rather than local GAAP. In this model the estimates of the parameters β_5 , β_6 , β_7 , β_8 and β_9 represent the impact on LAC DT when compared with an undertaking that exclusively pursues non-life business, uses the standard formula for its SCR calculations and uses local GAAP as its accounting standard.

354. EIOPA further extended the regression equation to include the impact of the different jurisdictions on LAC DT. It did this by replacing the intercept term β_0 with 30 dummy variables, each representing one of the 30 jurisdictions:

$$LAC\ DT_i = \beta_1 \times Tax\ Rate_i + \beta_2 \times Net\ DTL_i + \beta_3 \times Ratio_i + \beta_4 \times \log_{10}(Total\ Assets_i) + \beta_5 \times Life_i + \beta_6 \times Both_i + \beta_7 \times IM_i + \beta_8 \times PIM_i + \beta_9 \times IFRS_i + \beta_{10} \times AT_i + \beta_{11} \times BE_i + \dots + \dots + \beta_{29} \times UK_i + \varepsilon_i$$

where AT_i , BE_i and UK_i are dummy variables that equal one if undertaking i is under supervision in Austria, Belgium or the United Kingdom respectively. For the sake of brevity, dummy variables for the other jurisdictions are omitted from the equation above, but they are included in the regression analysis.

¹⁹ The applicable tax rate is assumed to be zero for undertakings that did not report any DTA or DTL on their Solvency II balance sheet; it is assumed that these undertakings are tax-exempt.

355. Table 12 presents the outcomes of the three regressions when applied to the Day One reports as at 1 January 2016. The tax rate, the size, the net DTL on the balance sheet and the ratio of an undertaking explain 37.4 % of the variation in LAC DT. The coefficient of 41.0 % for the tax rate implies that a 1 % higher applicable tax rate implies on average a 0.41 % higher LAC DT. The estimated coefficient of 15.0 % for the net DTL implies that a 1 % higher net DTL as percentage of the SCR excluding LAC DT is accompanied by a 0.15 % higher LAC DT. The coefficient of 0.8 % for size, measured by the $\log_{10}$ of the total assets, means that an undertaking that is 10 times larger has on average a LAC DT that is 0.8 % higher; the average difference between two identical undertakings with total assets of 10 million euros and 10 billion euros would be a 2.4 % higher LAC DT for the larger undertaking.
356. The regression coefficient for size is, rounded, close to zero and insignificant at the 10% level. This is in line with the relatively small correlations between the bSCR* ratio and LAC DT.
357. The second regression equation indicates that by including the additional variables on the SCR method as well as the type of business and the accounting standard the variation in LAC DT that is being explained increases from 37.4 % to 38.4 %.
358. The last column in Table 12 shows the coefficients and R-squared when the regression equation has a dummy variable added to represent every jurisdiction. These variables increase the variation explained in LAC DT to 73.6 %. The interpretation of the coefficients is as follows: the -12.1 % and the -4.7 % of Belgium and Austria respectively imply that, all else equal, an undertaking in Belgium has a 7.4 % smaller LAC DT than in Austria. This 7.4 % difference is for similar undertakings, but corrected for differences in the tax rate and the net DTA/DTL on the Solvency II balance sheet. EIOPA concludes that this increase in the explained variation in LAC DT arises from differences between the jurisdictions: differences in the tax regimes other than the tax rate, such as differences in ability to carry-back and carry-forward losses, and other differences in risks and jurisdictional characteristics not yet captured by the explanatory variables. Another source of difference between the jurisdictions may be differences in supervisory approaches; the next section summarises the supervisory practices across the EEA.

Table 12. Regression analysis of the variation in LAC DT across the EEA

	BASIC		UNDERTAKING TYPE		JURISDICTION	
INTERCEPT	-6.6%***	1.5%	-9.8%***	1.7%		
SISE; LOG(TOTAL ASSETS)	0.8%***	0.2%	1.4%***	0.2%	1.2%***	0.2%
TAX RATE	41.0%***	1.7%	40.6%***	1.7%	37.9%***	2.2%
NET DTL	15.0%***	0.6%	14.7%***	0.6%	11.3%***	0.6%
RATIO	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LIFE UNDERTAKINGS			-1.0%**	0.5%	-0.6%*	0.5%
UNDERTAKINGS PURSUING LIFE AND NON-LIFE			-2.6%***	0.5%	-1.4%***	0.5%
FULL INTERNAL MODEL			-3.0%***	1.1%	-2.0%**	1.0%
PARTIAL INTERNAL MODEL			-1.6%*	1.0%	-1.6%**	0.9%
IFRS			-0.9%**	0.4%	0.6%	0.5%
AUSTRIA					-4.7%**	2.1%
BELGIUM					-12.1%***	1.9%
BULGARIA					-8.5%***	2.0%
CROATIA					-2.3%	2.3%
CYPRUS					-9.8%***	2.1%
CZECH REPUBLIC					-6.7%***	2.2%
DENMARK					-11.7%***	1.9%
ESTONIA					-14.2%***	2.9%
FINLAND					-4.8%***	2.0%
FRANCE					-11.6%***	1.6%
GERMANY					-3.2%**	1.7%
GREECE					-17.8%***	2.1%
HUNGARY					-9.8%***	2.2%
IRELAND					-9.3%***	1.6%
ITALY					-6.0%***	1.8%
LATVIA					-10.3%***	3.6%
LIECHTENSTEIN					-9.3%***	2.0%
LITHUANIA					-11.9%***	3.2%
LUXEMBOURG					-3.4%**	1.5%
MALTA					-6.4%***	2.0%
NETHERLANDS					-7.7%***	1.7%
NORWAY					-12.1%***	1.8%
POLAND					-8.2%***	1.8%
PORTUGAL					-12.8%***	2.0%
ROMANIA					-8.8%***	2.0%
SLOVAKIA					-5.3%**	2.7%
SLOVENIA					-10.1%***	2.6%
SPAIN					-1.6%	1.7%
SWEDEN					-8.8%***	1.7%
UNITED KINGDOM					-11.7%***	1.6%
R-SQUARED	37.4%		38.3%		73.6%	

Estimated coefficients and standard errors as well as the R-squared from regressing LAC DT per 1 January 2016 of 2799 undertakings on different sets of explanatory variables. *** indicates that the coefficient is significant at the 1% level, ** implies significance at the 5% level and * indicates significance at the 10% level. In the first column LAC DT has been regressed on the applicable tax rate, the size (measured by $\log_{10}$ of the total assets), the net DTL on the balance sheet and the bSCR* ratio (Eligible own funds divided by the SCR excluding LAC DT). In the second column dummies for various undertaking specific characteristics are added; if an undertaking pursues life business, if an undertaking pursues both life and non-life business, if an undertaking has a full internal model, if an undertaking has a partial internal model and if an undertaking uses IFRS as accounting standard. The last column presents the estimated coefficients when dummy variables are added for every jurisdiction.

359. EIOPA has also run regressions with four parameters for the additional characteristics of the tax regimes in the different jurisdictions. Since there is little variation in the other characteristics of the tax regime, i.e. they do not really make a distinction between the different tax regimes, the variance explained would increase from 73.6 % to 73.8 % for the regression with a dummy variable for every jurisdiction. When adding these four variables to the basic regression the variation explained in LAC DT increases from 37.4 % to 38.9 %.

360. EIOPA has used Ordinary Least Squares (OLS)²⁰ to estimate the three regression equations. This provides general insights in the importance of aspects, like tax rate, net DTL on the balance sheet, bSCR* ratio, size and the jurisdiction for the amount of LAC DT. However, the percentage of LAC DT is a "censored variable", in that it is bounded from below by zero and bounded from above by the applicable tax rate. Applying OLS to censored variables generally provides biased results and censored, Tobit, models should be applied to reflect the behaviour of the dependent variable, LAC DT in this case. Nevertheless, EIOPA deems that the results provide sufficient evidence for their purpose: indicating drivers and their importance for differences in the amount of LAC DT across the EEA.

8.5. Supervisory practices

361. In this section EIOPA discusses supervisory practices regarding LAC DT. To inform on this, EIOPA asked all NSAs to respond to a range of questions regarding their supervisory review process on LAC DT. It divided the supervisory practices into three main topics:

- Net DTL
- Carry-back
- Future profits

362. When discussing the different supervisory approaches EIOPA speaks in general terms about NSAs; statements like "NSAs allow carry-back as a source to demonstrate LAC DT" or " some NSAs allow..." implies that the statement holds for at least one, but possibly all, NSAs. Moreover, the statement may hold for just one or a few NSAs if the statement concerns an aspect that is not applicable in every jurisdiction, as is the case, for example, for carry-back, or where the specific aspect is not being addressed by all NSAs, which is for example the case for the compliance with the MCR and SCR after the shock loss.

8.5.1. Net DTL

363. Supervisors in all jurisdictions accept the net DTL on the Solvency II balance sheet as a source for the demonstration likely utilisation of LAC DT. Some NSAs require undertakings to provide evidence that the timing of the net DTL after the shock loss is such that they are available on the right time to utilise the DTA, taking account of the applicable tax regime regarding carry-back and carry-forward. Other NSAs do not require such evidence.

²⁰ EIOPA has used the LINEST() function in Microsoft Excel to estimate the regression equations.

8.5.2. Carry-back

364. In those jurisdictions with tax regimes which allow carry-back, NSAs allow its use to demonstrate likely utilisation of LAC DT. As there are jurisdictions which do not allow carry back, this might be a source of differences in the ways undertakings prove likely utilisation. In those tax regimes that permit carry back, part or all of the tax impact of the shock loss can be utilised by reclaiming taxes paid to the tax authority in previous year(s).
365. Given the volatility in taxable profits and losses, the extent to which carry-back can be used to demonstrate likely utilisation of LAC DT will also be volatile.
366. Throughout this advice, in particular in the previous section, carry-back has been treated as a part of future profits in the numbers EIOPA presents since it has not been able to distinguish between the part of LAC DT where likely utilisation has been demonstrated by future profits and by carry-back; these are not separately reported in the QRT. However, the approaches for carry-back and future profits differ as carry-back is factual in nature and does not require any projections to demonstrate likely utilisation of LAC DT.
367. For those jurisdictions where carry back is not allowed, undertakings may be more inclined to rely more on projecting future profits.

8.5.3. Future profits

368. The part of LAC DT that demonstrates likely utilisation by reference to future profits is likely to be the part where NSAs, as well as undertakings, may use different approaches. This is because this involves subjective assumptions regarding the scenarios underlying these future profits. EIOPA distinguishes three main aspects for the projection of future profits to demonstrate likely utilisation of net DTA after the shock loss:
- Compliance with the MCR and/or SCR after the shock loss
 - New business
 - Returns on existing assets and liabilities
369. For the latter two aspects, the projection horizon is also relevant.
370. In some jurisdictions, NSAs do not allow undertakings to demonstrate likely utilisation of LAC DT by means of future profits or NSAs provide a formula that sets out for undertakings how much future profits they may use to demonstrate likely utilisation of LAC DT. Undertakings and NSAs in these jurisdictions do not have to consider these three aspects further. This is also likely to be the case if the net DTL and carry-back are sufficient to demonstrate likely utilisation of all available LAC DT.
371. A key requirement for demonstrating future profits to utilise DTA is if carry-back and carry-forward allow matching the fiscal losses with future profits and DTL. NSAs agree that undertakings are required to provide evidence that the timing of the DTA, DTL and additional future profits is

possible within the carry-back and carry-forward possibilities of the applicable tax regime.

8.5.3.1. Compliance with MCR and/or SCR after the shock loss

372. When assessing the future profits as a means of the demonstration of the likely utilisation of net DTA (thus beyond the part that is being demonstrated by net DTL) after the shock loss, some NSAs consider it appropriate to assess the extent to which undertakings comply with the MCR and SCR after the shock loss.

373. Those NSAs argue that, 1) in order to comply with the going concern assumption, undertakings need to show that they can take measures to restore compliance in order to remain a going concern and that 2) in order to generate future profits after the shock loss an undertaking needs to have Solvency II authorisation and thus needs to comply with all Solvency II requirements, including the compliance with the MCR and SCR.

374. Other NSAs argue that the SCR, and thus also LAC DT, is being calculated on a going concern assumption; the assumption of compliance with the MCR and SCR after the shock loss is automatically required as a result of the Solvency II going concern assumption.

375. NSAs that do not require routine consideration of compliance with the MCR and SCR after the shock loss do however look into the MCR and SCR ratio as part of their regular supervisory review process on a case-by-case basis if, for example, LAC DT depends to a large extent on future profits and solvency ratios prior shock are already low.

376. Where NSAs require undertakings to show how they comply with the MCR and SCR after the shock loss, or how they would restore compliance, the following issues may be considered:

- i. Likelihood of being able to recapitalise
- ii. Implications of derisking on future profits
- iii. Impact of UFR and VA
- iv. Impact of Risk margin

i. Likelihood of being able to recapitalise

377. Some NSAs that consider the likelihood of recapitalisation in the calculation of LAC DT, argue that if an undertaking would no longer comply with its MCR or SCR after the shock loss it could restore that compliance through recapitalisation. NSAs who consider post-stress MCR and SCR coverage may permit undertakings to propose recapitalisation as a means to restore this compliance.

378. Some NSAs accept the full recognition of future profits if the undertaking can demonstrate that recapitalisation is probable after the shock loss; thus either full or no recognition of future profits for the demonstration of LAC DT. Other NSAs weight the future profits in multiple scenarios by the likelihood of the different scenarios; the part of LAC DT demonstrated by future profits

beyond the net DTL thus changes the likelihood of recapitalisation. In turn, the likelihood of recapitalisation is considered lower for firms that have lower post-stress SCR coverage than the likelihood of recapitalisation for undertakings with relatively stronger SCR coverage ratios post-stress.

379. NSAs have argued that allowing for recapitalisation in the calculation of LAC DT is unique in the full calculation of the SCR; in no other module of the SCR recapitalisation plays a role. Allowing recapitalisation in other modules would imply that the current SCR can be lowered by means of a possible, yet uncertain, future recapitalisation: following this argument to its logical conclusion no capital requirements would be needed under Solvency II because undertakings would always be able to recapitalise when the financial situation of the undertaking deteriorates; for example, the interest rate shock would have no impact as the undertaking could recapitalise to the extent of the impact of the interest rate shock.

380. Some NSAs argue that recapitalisation should only be allowed if it meets the requirements of future management actions or if the recapitalisation measure already meets the requirements for tier 1, 2 or 3 eligibility of own funds. The latter is an admissible source of recapitalisation in, for example, the following circumstance: an undertaking that has 100 % tier 1 eligible capital, 100 % tier 2 available capital (being ancillary own fund items) and 50 % tier 3 available capital, (also ancillary own fund items).

381. The SCR before the shock loss would be 150% (100% Tier 1 and 50% Tiers 2 and 3). Assume in the stress that the tier 1 would all be lost, eligible own funds drops to 50% (being tier 2 and tier 3). Now, if the undertaking calls the Ancillary Own Funds, its ratio would increase back to 150% (100% tier 2 becomes 100% tier 1 and 50% tier 3 becomes 50% tier 2). In this example, the surplus of available, but not yet eligible, tier 2 and tier 3 own funds is being considered as a means to recapitalise to restore compliance with the MCR and SCR. Finally, in this respect account should be taken of recital 72 of the Delegated Regulation that states that undertakings should not take account of future management actions in the scenario-based calculations of the SCR at the time the stress occurs.

382. Some NSAs require the uncertainty involved in the recapitalisation, as the undertaking depends on the situation in the financial markets after the shock loss as well as its solvency ratio, to be reflected by weighting the outcome of the LAC DT scenario by the likelihood of being able to recapitalise in that particular scenario. For example, if the likelihood of recapitalisation is 80 %, the undertaking's total LAC DT is its full net DTL and full carry back plus 80 % of the LAC DT that relies on the demonstration of likely utilisation with future profits.

ii. Implications of derisking on future profits

383. Under this approach, rather than recapitalisation, undertakings may derisk their balance sheet after the shock loss to restore the compliance with the MCR and SCR. NSAs requiring compliance with the SCR and MCR after the shock loss accept derisking as a way to do so, on condition that the derisking

is reflected consistently in the projected returns arising from new business and the returns projected from assets and liabilities after the shock loss.

iii. Impact of UFR and VA

384. The financial situation after the shock loss of an undertaking depends, among other things, on the value of the technical provisions. Part of the valuation of the technical provisions is discounting the best-estimate cash-flows. The value of the technical provisions after the loss described in Article 207(1) of the Delegated Regulation is already set by discounting the best-estimate cash-flows using the shocked basic risk-free interest rate term structure. Applying the UFR extrapolation to this shocked basic risk-free interest rate term structure would change this prescribed loss and is as such not allowed by NSAs. The same holds for the VA after the shock loss; although the VA may change due to credit spread changes in a situation with losses stemming from the spread risk sub-module, changes in the VA would alter the loss prescribed in Article 207(1) of the Delegated Regulation. Moreover, Article 77d(6) of the Solvency II Directive implies that the Standard Formula calculation of the SCR does not reflect changes in the VA at all.

iv. Impact of Risk margin

385. When calculated using the standard formula, the SCR assumes the risk margin remains constant during the calculations. In practice after different shocks, the risk margin may very well change. Reflecting a change of the risk margin to determine the financial situation after the shock loss is thus neither allowed nor necessary. Similarly as in the previous subsection on the impact of the UFR and VA, recalculating the risk margin after the shock loss would change the loss prescribed in Article 207(1) of the Delegated Regulation.

8.5.3.2. New business

386. Another source to demonstrate the likelihood of future profits after the shock loss is to project new business. NSAs have considered the following aspects as regards such projections:

- i. Horizon
- ii. Derisking
- iii. Underlying assumptions

387. An argument expressed by NSAs is that new business beyond the contract boundaries of the existing technical provisions cannot be taken into account at all in demonstrating future profits for the utilisation of net DTA after the shock loss. Although Article 9(1) of the Delegated Regulation states that international accounting standards should be the basis, Article 9(2) states that these accounting standards should be followed to the extent that they comply with the general valuation principles of Solvency II in Article 75 of the Directive. Given that the Solvency II regulation does not recognise future profits and losses beyond the contract boundaries of the technical provisions, it would be inconsistent to recognise new business beyond the contract

boundaries in the valuation of deferred tax assets. The accounting standards on deferred taxes, IAS12, explicitly allows for new business to demonstrate deferred taxes; any undertaking demonstrating net DTA without the use of new business still complies with IAS12. IAS12 allows new business, but does not require it, to demonstrate future profits for the utilisation of DTA. This argument would also hold for demonstrating future profits for the utilisation of net DTA on the balance sheet.

i. Horizon

388. NSAs have distinguished between the horizon used for new business beyond the contract boundaries and the horizon used for returns on assets and liabilities.
389. More specifically for new business there are two different horizons which can potentially be very different: 1) the horizon over which projections of new business are made and 2) the horizon over which profits on this new business (and on existing business) can contribute to the Solvency II and fiscal profits. With respect to the horizon over which profits on the new business runs, most NSAs allow the full life span of the existing and new business being sold. In contrast, the time period over which new business can be contracted is usually restricted.
390. NSAs have recognised that the effect of future taxable profits, emerging from both existing assets and new business, depends on the time horizon taken into account for the recoverability testing and that a suitable time horizon needs to be determined.
391. With respect to the horizon over which future taxable profits from new business being sold can be considered when demonstrating future profits for the utilisation of LAC DT, NSAs have stated concerns of future profits emerging beyond 5-7 years. Some NSAs have addressed this issue by stating that undertakings should take account of the uncertainty involved in the estimation.
392. NSAs have introduced standard haircuts (increasing over time) to be applied to future profits for years after the official planning horizon to take into account the uncertainty resulting from longer time horizons and that no future profits may be considered after 7 years.²¹
393. Others also stated that after a shock loss new business sold should be, as a starting point, significantly lower than the new business sold in the recent years and the current business plan, and take account of the trend in new business sold in the recent years.

²¹ One NSA has set minimum haircut parameters for profits emerging after the first 3 years (i.e. 20%, 40%, 60%, 80%, 100%, 100%...), adopting an approach which is in line with the examples outlined in the CRO Forum paper on LAC DT (October 2016). This is not a "hard limit", as undertakings may derogate from the general requirement in exceptional circumstances if documented evidence of the increased reliability of the own assessments is available.

394. NSAs require taking account of the uncertainty in new business sold to be addressed by averaging over a scenario where no new business is assumed and a scenario where new business is assumed.

ii. Derisking

395. NSAs explicitly requiring undertakings to restore compliance with the MCR and SCR after the shock loss expect these undertakings to take account of new business sold on the capital requirements. If new business sold implies an increase of the MCR and SCR these NSAs expect that these undertakings comply with these higher MCR and SCR.

iii. Underlying assumptions

396. Assumptions regarding new business typically rely on the amount and profitability of new business sold in the recent years and/or the new business projections in the medium term/strategic business plans, once revised to take account of shock loss occurred. NSAs expect that the assumptions used for the demonstration of future profits for the utilisation of LAC DT are, as a starting point, lower than in the recent years and the business plans.

8.5.3.3. Returns on technical provisions, assets and other liabilities

397. The third aspect of demonstrating future profits is the returns on technical provisions, assets and other liabilities. NSAs have mentioned the following topics when assessing these returns for the demonstration of future profits for the utilisation of LAC DT:

- i. Horizon
- ii. Pull-to-par
- iii. Derisking
- iv. UFR and VA
- v. Underlying assumptions
- vi. Risk margin

398. Similar to the argument for no new business there is an argument made by NSAs for no returns over the risk-free interest rates. For the valuation of other balance sheet items and modules of the capital requirements, best estimate risk-free scenarios are assumed. These NSAs refer to guideline 9 of the Guidelines on the Valuation of Assets and Liabilities other than Technical Provisions that states that *"When making projections of taxable profits and assessing the likelihood that sufficient taxable profits will arise in the future, an undertaking should ensure that when making projections of taxable profits, these projections are both credible and broadly consistent with the assumptions made for other projected cash flows. In particular, the assumptions underlying the projections should be consistent with those underlying the valuations of technical provisions and assets on the solvency balance sheet"*. When valuing technical provisions, equity options etc. on the balance sheet and for the purpose of SCR calculations, the risk-free rates are considered over the horizon of these items, no returns above the risk-free rate are used. Although IAS12 allows for real-world returns higher than the

risk-free rates, undertakings are not required to use these real-world returns; a scenario using risk-free rates as returns for the assets and liabilities also complies with IAS12. This would be using IAS12 in line with Article 9(2) of the Delegated Regulation that states to follow the accounting standards to the extent that they comply with the Solvency II valuation principles.

399. Some other NSAs have not set specific provisions for “returns on assets” after the shock loss because they consider that the standard formula provisions are enough to guarantee that post-shock management actions are set appropriately. Those NSAs believe that any valuation connected with LAC DT should be consistent with the calculation of the standard formula and its assumptions. Those NSAs do not expect undertakings to envisage “extraordinary measures” just for the purpose of the LAC DT.

400. Some NSAs do not allow for returns on technical provisions, assets and other liabilities for existing business at the calculation date in the demonstration of future profits as they argue that those returns are already taken into account in the valuation of the economic balance sheet through the best estimate liabilities calculation and the market value of assets. Thus, allowing for them in the demonstration of future profits would be double-counting them.

i. Horizon

401. NSAs allow the returns on assets and other liabilities to run over the full life span of the technical provisions. The longer the horizon of the projections of the returns over the risk-free rates the larger the uncertainty involved. Some NSAs require the undertakings to take account of the uncertainty of returns above the risk-free rate by averaging their LAC DT scenario with a scenario with returns equal to the risk-free rate including no new business.

ii. Pull-to-par

402. Pull-to-par, in this context of the calculation of LAC DT, can be defined as a reversion of the post-stress credit spreads due to the credit spread risk shock to their pre-stress levels. This considers the credit spread shock as a temporary phenomenon that reverses; both fiscal and economic Solvency II losses associated with the credit spread shock will under this assumption not materialise over time.

403. Some NSAs accept pull-to-par to some extent; either from the starting point of no pull-to-par where undertakings have to provide evidence that part of the credit spread shock will not result in actual market value losses over time or from the starting point of full pull-to-par where undertakings have to correct for actual market value losses.

404. Another argument mentioned by NSAs for no pull-to-par at all is that allowing pull-to-par would not be in line with Article 207(1) of the Delegated Regulation that prescribes the size of the loss for the calculation of LAC DT. Allowing pull-to-par implies that the part of the losses due the credit spread shock does not materialise to the full extent. It would be inconsistent with

the credit spread shocks themselves in the calculation of the basic SCR that also do not take account of any pull-to-par.

iii. Derisking

405. NSAs explicitly requiring undertakings to restore compliance with the MCR and SCR after the shock loss expect that these undertakings take account of the impact of derisking to restore this compliance; lower risks also imply lower expected returns over the risk-free rate.

iv. UFR and VA

406. With respect to the UFR and the VA the argument was raised by some NSAs that in order to generate economic profits undertakings should first have to earn the difference between the Solvency II interest rate term structure and the risk-free market interest rates as well as the VA, if applied by the undertaking. Undertakings should take this so-called UFR and VA “drag” explicitly into account in the projections of future profits for the utilisation of LAC DT.

v. Underlying assumptions

407. Key underlying assumption for the returns on assets, liabilities and technical provisions is the actual return above the risk-free rate. Some NSAs assess these returns through benchmarking the returns between the different undertakings. However, NSAs find it difficult to understand why equity returns would differ from one undertaking to another and that this would result in different amounts in LAC DT and capital requirements.
408. As already stated when discussing the horizon some NSAs expect the undertakings to take account of the uncertainty involved in the future returns by averaging over the LAC DT scenario with a scenario where the returns are set equal to the risk-free rate.

vi. Risk margin

409. Some NSAs consider the risk margin and its associated DTA as an accrual that does not require any additional demonstration, both on the balance sheet and after the shock loss. This implies that the DTA associated with the risk margin after the shock loss for the demonstration of LAC DT is the same than the DTA on the balance sheet, since in the Standard Formula in the calculation of the bSCR* shock the risk margin is kept constant; thus, there would be no need to consider the risk-margin for the calculation of LAC DT in this case. None of the NSAs consider the risk margin as a source of future profits to demonstrate DTA’s associated with other balance sheet items as this would result in double counting of the risk margin.
410. Other NSAs consider the DTA associated with the risk margin as a valid DTA if DTL or other fiscal future profits are available to utilise the DTA. This holds under a risk-neutral valuation/projection of the taxable profits and

losses; as tax regimes do not consider the risk-margin in the valuation of the technical provisions, the risk-margin is a fiscal loss that will materialise over the life span of the technical provisions. These fiscal losses can be considered as a DTA if a DTL or other future profits are available for its utilisation.

411. Another argument made by some NSAs is that there would be no DTA at all for the risk margin. This is the case if one assumes a risk-free/best-estimate projection/valuation of the taxable profits and losses. If that is the case the risk margin is a prudential adjustment which has no fiscal effect; if no fiscal losses will arise from the risk margin there is by definition no DTA available. However, other NSAs have argued that in this scenario, although no fiscal losses arise, there is a potential fiscal advantage as the Solvency II profit in the risk margin in this scenario will not be taxed.

9. Impact Assessment

9.1. Procedural issues and consultation of interested parties

412. In July 2016 and February 2017 the European Commission has requested EIOPA to provide technical advice on the review of specific items in the Delegated Regulation. In particular, the European Commission seeks EIOPA's technical advice regarding the review of the methods, assumptions and standard parameters used when calculating the Solvency Capital Requirement (hereinafter, SCR) with the standard formula.
413. According to the European Commission's request, EIOPA should justify its advice by identifying, where relevant, a range of technical options and by undertaking evidence-based assessment of the costs and benefits of each. Where administrative burdens and compliance costs on the side of the industry could be significant, EIOPA should where possible quantify these costs.
414. The analysis of costs and benefits is undertaken according to an Impact Assessment methodology.
415. The European Commission has requested EIOPA to provide sufficient factual data backing the analyses gathered during its assessment. The request highlights the importance of the presentation of the advice produced by EIOPA making maximum use of the data gathered and enabling all stakeholders to understand the overall impact of the options presented by EIOPA.
416. The European Commission's request takes into account the input from stakeholders to the Call for evidence on the EU regulatory framework for financial services, launched in September 2015. Comments received on the Solvency II requirements contributed to identify the areas to be reviewed.
417. Between December 2016 and March 2017, EIOPA published a discussion paper in order to get stakeholders' views on the scope of the review and to collect relevant evidence. Comments received during that first public consultation have been taken into account in the development of the draft technical advice.
418. The draft technical advice and its impact assessment will also be subject to public consultation. Stakeholders' responses to the public consultation will be duly analysed and serve as a valuable input for the revision of the draft technical advice and its impact assessment. Additionally, the opinion from the Insurance and Reinsurance Stakeholder Group, provided in Article 37 of EIOPA Regulation, will be considered.
419. EIOPA will provide its technical advice to the Commission following a staggered approach according to the availability of evidence needed to support its proposals, in particular, evidence from annual regular supervisory reporting of (re)insurance undertakings.

420. This impact assessment refers to a first set of advice that EIOPA intends to submit to the Commission by October 2017. It contains items for which the analysis of annual reporting data of undertakings is less relevant. In particular it contains the following: simplified calculations, look-through approach, reducing reliance on external credit ratings, treatment of guarantees and exposures to regional governments and local authorities, risk-mitigation techniques and undertaking specific parameters. With respect to loss-absorbing capacity of deferred taxes, the technical advice focuses on the request for information from the European Commission and it does not include at this stage any advice on possible changes in the Delegated Regulation; consequently, a costs and benefits analysis of policy options is not applicable for the referred item under this impact assessment.

421. A second set of advice will be developed and subject to public consultation together with the respective impact assessment and submitted to the European Commission by February 2018. The second set includes advice for which the analysis of annual reporting data is needed and includes all other items arising from the calls for technical advice: risk margin, premium and reserve risks, catastrophe risks, mortality and longevity risks, counterparty default risk, currency risk at group level, interest rate risk, own funds, unrated bonds and loans, unlisted equity and strategic participations.

9.2. Problem definition

422. Article 111(3) of the Solvency II Directive provides that *'by 31 December 2020, the Commission shall make an assessment of the appropriateness of the methods, assumptions and standard parameters used when calculating the Solvency Capital Requirement standard formula'*. The outcome of this assessment shall be presented to the European Parliament and to the Council, proposing amendments of the Directive or of the implementing measures.

423. Recital 150 of the Delegated Regulation defined a new timeline for the review of the SCR standard formula, which should be done by the European Commission before December 2018.

424. In preparation of such review the European Commission requested EIOPA's technical advice in three areas where the current requirements can be improved or need to be amended:

- proportionate and simplified application of the SCR standard formula requirements;
- removal of unintended technical inconsistencies, i.e. recalibration of certain parameters and other technical issues; and
- removal of unjustified constraints to financing, in the context of Capital Market Union.

425. When analysing the impact from proposed policies, the impact assessment methodology foresees that a baseline scenario is applied as the basis for comparing policy options. This helps to identify the incremental impact of each policy option considered. The aim of the baseline scenario is to explain

how the current situation would evolve without additional regulatory intervention.

426. For the analysis of the potential related costs and benefits of the proposed technical advice, EIOPA has applied as a baseline scenario the effect from the application of the Solvency II Directive requirements, the Delegated Regulation and the relevant implementing measures as they currently stand.

427. In particular the baseline will include:

- Articles 100 to 111 of the Solvency II Directive;
- Articles 83 to 221 of the Delegated Regulation;
- the following implementing technical standards (ITS):
 - ITS with regard to the supervisory approval procedure to use undertaking-specific parameters (Commission Implementing Regulation (EU) 2015/498 of 24 March 2015);
 - ITS with regard to the lists of regional governments and local authorities, exposures to whom are to be treated as exposures to the central government (Commission Implementing Regulation (EU) 2015/2011 of 11 November 2015);
 - ITS with regard to the adjusted factors to calculate the capital requirement for currency risk for currencies pegged to the euro (Commission Implementing Regulation (EU) 2015/2017 of 11 November 2015);
- the following EIOPA's guidelines:
 - Guidelines on application of outwards reinsurance;
 - Guidelines on basis risk;
 - Guidelines on health catastrophe risk sub-module;
 - Guidelines on look-through approach;
 - Guidelines on the application of life underwriting risk module;
 - Guidelines on the loss-absorbing capacity of technical provisions and deferred taxes;
 - Guidelines on the treatment of market and counterparty risk exposures in the standard formula;
 - Guidelines on undertaking-specific parameters; and
 - Guidelines on group solvency.

9.3. Objective pursued

428. The specific objectives of the review can be summarised as follows:

- simplify where possible and ensure the proportionate application of the SCR standard formula, in particular for small undertakings;
- ensure the methods, assumptions and parameters to be used in the SCR standard formula remain appropriate and compliant with the Solvency II Directive;
- reduce the risk of overreliance on rating agencies;

- increase consistency across sectorial rules to the extent possible; and
- avoid pro-cyclicality.

429. In order to reach the mentioned objectives the following set of more detailed operational objectives has been considered:

- provide new simplified calculations for more modules of the SCR standard formula, in addition to the existing simplifications;
- simplify the design of some modules (counterparty default and catastrophe risk modules);
- update the parameters for underwriting risks taking into account the recent experience;
- assess if inconsistencies with banking framework on common topics (guarantees, RGLA, own funds) should be removed;
- adjust the requirements where necessary taking into account recent market development; and
- extend the use of alternative credit assessments.

430. The mentioned objectives for the review are connected to the general objectives of the Solvency II framework (deepen the integration of the EU insurance market, enhance the protection of policyholders and beneficiaries and promote better regulation) and in particular they are connected to:

- the establishment of risk-sensitive harmonised solvency standards;
- the introduction of proportionate requirements for small undertakings; and
- the promotion of compatibility of prudential supervision of insurance and banking.

431. The objectives of the review are also consistent with the following objectives of EIOPA, as reflected in the Regulation of the Authority²²:

- ensure a sound, effective and consistent level of regulation and supervision;
- ensure the taking of risks related to (re)insurance activities is appropriately regulated and supervised; and
- consumer protection.

9.4. Simplified calculations

9.4.1. Policy options

432. During the development of the advice on simplified calculations, EIOPA has identified two main policy issues for which different options have been considered and debated:

- policy issue 1: assessment of proportionality; and
- policy issue 2: list of simplified calculations.

²² See Article 1.6 of EIOPA Regulation

Policy issue 1: Assessment of proportionality

433. Article 88 of the Delegated Regulation currently requires undertakings to perform an assessment to justify their choice of SCR standard formula calculation. This assessment is the cornerstone of the proportionality principle applied to the SCR standard formula.

434. This assessment is twofold. There is first an assessment of the nature, scale and complexity of the risks; and second, there is 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 underlying assumptions and the specific risk profile.

435. As an outcome of this assessment, (re)insurance undertakings should determine whether the simplified calculation being considered is proportionate to the nature, scale and complexity of their risks.

436. In this respect the following options have been considered:

- a. Option 1.1 – No change: in this option it is considered that Article 88 allows for sufficient and appropriate use of simplified calculations.
- b. Option 1.2 – Establishment of a threshold: under this option there should be a threshold defined in terms of volume measure or SCR below which all simplified calculations would be allowed.

Policy issue 2: List of simplified calculations

437. The Delegated Regulation specifies a list of simplified calculations that may be used by (re)insurance undertakings if it is proportionate. This list is closed. In order to further simplify the calculation of the SCR under the standard formula the following options have been considered:

- Option 2.1 - Extended list of simplifications: under this option new simplified calculations would be provided for more modules of the SCR standard formula, in addition to the existing simplifications.
- Option 2.2. Non-listed simplified calculations: under this option undertakings would be allowed to use their own simplifications.

9.4.2. Analysis of impacts

Policy issue 1: Assessment of proportionality

Option 1.1 - No change

438. On the side of benefits, it is possible to detect the following effects:

- Policyholders – the assessment currently requested to undertakings is intended to promote good risk management, which benefits policyholders. Where simplified calculations are applied, the implementing cost for the industry is lower hence benefiting potentially policyholders via lower prices;

- Industry – the assessment is fully integrated in the system of governance and in line with the ORSA: it contributes to good risk management and, at the same time, it does not discourage the use of simplifications by undertakings.
- Supervisors – they can apply their judgment and knowledge of the (re)insurance undertaking to assess whether the simplified calculation is appropriate and challenge the undertaking's own assessment, where necessary.

439. On the side of costs, it is possible to detect the following effects:

- Policyholders – none as long as simplified calculations are effectively used. The information collected by EIOPA indicates this would be the case. Further statistics will be derived once the annual QRT are received.
- Industry – the assessment requires undertakings to dedicate some resources for the analysis of a risk that is not material. If supervisors are not consistent in their supervision, it can lead to unlevelled playing field.
- Supervisors – need to apply more resources to supervise the assessment. The supervision would mainly be done on-site or via specific reporting.

Option 1.2 Establishment of a threshold

440. On the side of benefits, it is possible to detect the following effects:

- Policyholders – Where the level of the threshold further encourages the use of simplified calculations by undertakings, the implementing cost for the industry would be lower hence benefiting potentially policyholders via lower prices.
- Industry – Certainty and less time is spent on performing the assessment: the use of a simplified calculation is the result of a simple "yes or no" question.
- Supervisors – easier to supervise, for instance via the regular reporting.

441. On the side of costs, it is possible to detect the following effects of option 2:

- Policyholders – simplified calculations may be applied because the "scale" of the risk is limited, but the nature and complexity are not enough taken into account. Consequently, there is a risk of simplifications resulting in an inadequate calculation of the SCR, which might reduce policyholder protection.
- Industry – larger insurance undertakings may not be benefiting from simplified calculations although some risks are not material.
- Supervisors – need to perform themselves an assessment of the nature and complexity of the risks to ensure that the simplified calculation is used appropriately.

Policy issue 2: List of simplified calculations

Option 2.1 - Extended list of simplifications

442. On the side of benefits, it is possible to detect the following effects:

- Policyholders – their protection by supervisors is made easier.
- Industry – A longer list of simplifications compared to the baseline would reduce the resources devoted by undertakings to the SCR calculation; a closed list would imply higher certainty on the supervisor's expectations
- Supervisors – supervision is easier and more efficient since there is a benchmark and the calculation is clearly set out.

443. On the side of costs, it is possible to detect the following effects of option 1:

- Policyholders – none.
- Industry – some other simplified calculations may be appropriate but are not applied, which does not contribute to reducing costs.
- Supervisors – none.

Option 2.2 Non-listed simplified calculations

444. On the side of benefits, it is possible to detect the following effects:

- Policyholders – none.
- Industry – more flexibility since undertakings could derive tailor-made simplified calculations.
- Supervisors – none.

445. On the side of costs, it is possible to detect the following effects:

- Policyholders – there would be a higher risk that inappropriate amount of SCR is held, which does not contribute to their protection.
- Industry – undertakings would need to justify the SCR amount derived from the simplifications applied by proving to supervisors why it is appropriate; higher uncertainty whether the supervisor will allow the use of certain simplifications.
- Supervisors – greater burden to assess whether undertaking specific simplified calculations are appropriate.

9.4.3. Comparison of options

446. Regarding policy issue 1 (assessment of proportionality) the preferred option is **option 1.1 (no change)**. Article 88 of the Delegated Regulation should remain principle-based. Information gathered shows that simplified calculations are being used and more detailed statistics should be derived once the annual QRTs are available at EIOPA. The alternative to set a

threshold does not take properly into account the nature and complexity of the risks and could be of detriment for large insurance undertakings which have immaterial risks.

447. Regarding policy issue 2 (list of simplified calculations) the preferred option is **option 2.1 (extended list of simplifications)**. The list of simplified calculations should be kept as a closed list, extending it to those sub-modules where the calculation is most complex. Alternative where undertakings could use their own simplified calculation would have as consequences a greater burden in terms of documentations and justifications towards supervisors.

9.5. Reducing reliance on external credit ratings in the standard formula

9.5.1. Policy options

448. With the aim to reduce the reliance on external credit ratings for the purpose of the SCR standard formula calculation, possible alternatives to the use of ECAs have been discussed.

449. In particular the following options have been considered:

- a. Option 1 - use of internal credit assessments: the (re)insurance undertaking assesses itself the credit quality of its exposures;
- b. Option 2 - use of market implied ratings: the credit quality of the exposures is derived through information available on financial markets;
- c. Option 3 - use of accountancy-based measures: the credit quality of the exposures is derived through information available in financial or accounting statements;
- d. Option 4 - use of a simplification: the risk charge for the standard formula is calculated for certain types of exposures without distinguishing between their credit qualities.

9.5.2. Analysis of impacts

Option 1 - use of internal credit assessments

450. On the side of benefits, it is possible to detect the following effects:

- Policyholders – this option would reduce systemic risk and would result in a more accurate calculation of the SCR (better reflecting the undertaking's investment risks) if sufficient resources are allocated to the assessment, therefore providing higher policyholder protection;
- Industry – the development of a risk assessment would be fully in line with the asset-liability management. Such internal assessments could be applied to all asset classes.
- Supervisors – none.

451. On the side of costs, it is possible to detect the following effects:
- Policyholders – higher costs for undertakings could be passed on to policyholders via higher prices;
 - Industry – such kind of assessments do not correspond to the core business of most of (re)insurance undertakings and their development would be very costly;
 - Supervisors – burdensome to supervise, in particular if there is a specific approval process.

Option 2 - use of market implied ratings

452. On the side of benefits, it is possible to detect the following effects:
- Policyholders – none.
 - Industry – the market information is easily available; for instance it is needed to calculate the spread risk sub-module.
 - Supervisors – the market information is easily available, therefore supervisors can produce their own assessments as well.
453. On the side of costs, it is possible to detect the following effects:
- Policyholders – this option would entail pro-cyclical risk and possibly risk of moral hazard, reducing policyholder protection.
 - Industry – the market information is strongly influenced by the volatility of the market and market participants may be selling or buying financial instruments for the purpose of increasing their immediate return. Therefore the volatility of the ratings (and the SCR calculation) would increase. The short-term nature of the credit risk of the exposures outweighs the long-term nature of the credit risk exposure since market participants react more strongly to latest information available.
 - Supervisors – since the option would increase the volatility of the SCR, it would be more difficult to supervise (re)insurance undertakings and assess the soundness of their financial position.

Option 3 - use of accountancy-based measures

454. On the side of benefits, it is possible to detect the following effects:
- Policyholders – none;
 - Industry – the information may be more stable. Financial ratios are already applied in some cases to derive the credit quality step.
 - Supervisors – none.
455. On the side of costs, it is possible to detect the following effects:
- Policyholders – accountancy-based measures are more backward-looking than forward-looking. It is difficult to derive automatic triggers on financial ratios for the allocation of exposures to credit quality steps since individual situations need a qualitative assessment (e.g. for (re)insurance undertakings, the solvency ratio may be interpreted differently should long-term guarantees measures be used or not).

- Industry – this option penalises new entrants which do not have a history of financial statements available. It is difficult to derive automatic triggers on financial ratios for the allocation of exposures to credit quality steps since individual situations need a qualitative assessment (e.g. for (re)insurance undertakings, the solvency ratio may be interpreted differently should long-term guarantees measures be used or not).
- Supervisors – this option is more backward looking which is not in line with the forward looking supervisory approach (will (re)insurance undertakings be able to pay the future benefits?).

Option 4 - use of a simplification

456. On the side of benefits, it is possible to detect the following effects:

- Policyholders – lower costs for undertakings could potentially benefit policyholders via lower prices;
- Industry – this option would reduce costs.
- Supervisors – none.

457. On the side of costs, it is possible to detect the following effects:

- Policyholders – this option would be less risk-sensitive and could reduce policyholder protection in case the credit risk of undertakings were underestimated;
- Industry – This option would not incentivise granular credit risk management.
- Supervisors –none.

9.5.3. Comparison of options

458. All options considered have the benefit of reducing the reliance on external ratings. However, there are severe cons for each of the option considered (as outlined above).

459. The internal credit assessment option seems the most promising option in terms of reducing systemic risk and pro-cyclicality. However at this stage, requiring for all (re)insurance undertakings to develop a complex framework for the assessment of credit for all of their exposures would be disproportionate. That is why we have chosen to provide guidance to help further developing this approach.

460. The preferred option is **option 4 (use of simplification)**. Using a simplification for all (re)insurance undertakings would increase the credit risk of (re)insurance undertakings. On the other hand, it is simple and may be proportionate in some cases. That is why it was chosen to consider a simplified calculation within the framework of Article 88 on proportionality: by making it an option and restricting the use to specific cases, the aim is to counterbalance the cons.

9.6. Treatment of guarantees, exposure guaranteed by a third-party and exposures to regional governments and local authorities (RGLA)

9.6.1. Policy options

461. During the development of this advice on the treatment of guarantees, exposure guaranteed by a third-party and exposures to RGLAs, EIOPA has identified four main policy issues for which different options have been considered and debated:

- policy issue 1: Alignment of the treatment of guarantees by Member States' central governments and RGLA with the same risk in the market risk module
- policy issue 2: Introduction of an intermediate treatment for Member States' RGLA with a risk different from Member States' central governments
- policy issue 3: Recognition of guarantees by Member States' central governments and RGLA with the same risk for mortgages compliant with Article 191 of the Delegated Regulation
- policy issue 4: Recognition of the risk-mitigating effect from a partial guarantee for mortgages defined in Article 191 of the Delegated Regulation

Policy issue 1: Alignment of the treatment of guarantees by Member States' central governments and RGLA with the same risk in the market risk module

462. During the analysis the following main options have been considered:

- Option 1.1 – Alignment of the treatment for guarantees by RGLA listed in ITS (EU) 2015/2011 in the market risk module to the treatment for guarantees by Member States' central government
- Option 1.2 – No alignment (i.e. no change to the Delegated Regulation).

Policy issue 2: Introduction of an intermediate treatment for Member States' RGLA with a risk different from Member States' central governments

463. During the analysis the following main options have been considered:

- Option 2.1 – Alignment of the treatment for exposures to RGLA not listed in ITS (EU) 2015/2011 with the treatment of exposures to non-EEA central governments and central banks denominated and funded in their domestic currency with credit quality step 2.
- Option 2.2 – No alignment (i.e. no change to the Delegated Regulation).

Policy issue 3: Recognition of guarantees by Member States' central governments and RGLA with the same risk for mortgages compliant with Article 191 of the Delegated Regulation

464. During the analysis the following main options have been considered:

- Option 3.1 – Recognition of guarantees by Member States’ central governments and RGLA listed in ITS (EU) 2015/2011 for mortgage loans that meet the requirements in Article 191 of the Delegated Regulation.
- Option 3.2- No recognition (i.e. no change to the Delegated Regulation)

Policy issue 4: Recognition of the risk-mitigating effect from a partial guarantee for mortgages defined in Article 191 of the Delegated Regulation

465. During the analysis the following main options have been considered:

- Option 4.1 Recognition of partial guarantees for unconditional and irrevocable partial guarantees on mortgage loans that meet the requirements in Article 191 of the Delegated Regulation provided by Member States’ central governments or by RGLA listed in ITS (EU) 2015/2011.
- Option 4.2: No recognition (i.e. no change to the Delegated Regulation).

9.6.2. Analysis of impacts

Policy issue 1: Alignment of the treatment of guarantees by Member States’ central governments and RGLA with the same risk in the market risk module

Option 1.1 – Alignment

466. On the side of benefits, it is possible to detect the following effects:

- Policyholders – Level playing field with the banking sector. Consistent treatment of the guarantees issued by RGLA in all modules of the standard formula.
- Industry – Level playing field with the banking sector. Consistent treatment of the guarantees issued by RGLA in all modules of the standard formula.
- Supervisors – Level playing field with the banking sector. Consistent treatment of the guarantees issued by RGLA in all modules of the standard formula.

467. On the side of costs, it is possible to detect the following effects:

- Policyholders – Minimal implementation costs (according to stakeholders).
- Industry – Minimal implementation costs (according to stakeholders).
- Supervisors – None

Option 1.2 – No alignment

468. On the side of benefits, it is possible to detect the following effects:

- Policyholders – None.
- Industry – None.
- Supervisors – None.

469. On the side of costs, it is possible to detect the following effects:

- Policyholders – No level playing field with the banking sector. No consistent treatment of the guarantees issued by RGLA in all modules of the standard formula.
- Industry – No level playing field with the banking sector. No consistent treatment of the guarantees issued by RGLA in all modules of the standard formula.
- Supervisors – No level playing field with the banking sector. No consistent treatment of the guarantees issued by RGLA in all modules of the standard formula.

Policy issue 2: Introduction of an intermediate treatment for Member States' RGLA with a risk different from Member States' central governments

Option 2.1 – Intermediate treatment

470. On the side of benefits, it is possible to detect the following effects:

- Policyholders – Level playing field with the banking sector. More accurate reflection of the risk of RGLA not listed in ITS (EU) 2015/2011.
- Industry – Level playing field with the banking sector. More accurate reflection of the risk of RGLA not listed in ITS (EU) 2015/2011. An analysis based on quantitative reporting templates (QRTs) for individual undertakings from EEA countries indicates that investments in RGLA with a volume of 42 bn EUR would be affected.
- Supervisors – Level playing field with the banking sector. More accurate reflection of the risk of RGLA not listed in ITS (EU) 2015/2011.

471. On the side of costs, it is possible to detect the following effects:

- Policyholders – Minimal implementation costs (according to stakeholders).
- Industry – Minimal implementation costs (according to stakeholders).
- Supervisors – None.

Option 2.2 – No intermediate treatment

472. On the side of benefits, it is possible to detect the following effects:

- Policyholders – None.
- Industry – keeps the current structure of the standard formula which may be seen as simpler.
- Supervisors – keeps the current structure of the standard formula which may be seen as simpler.

473. On the side of costs, it is possible to detect the following effects:

- Policyholders – No level playing field with the banking sector. The reflection of the risk of RGLA not listed in ITS (EU) 2015/2011 is not more accurate.
- Industry – No level playing field with the banking sector. The reflection of the risk of RGLA not listed in ITS (EU) 2015/2011 is not more accurate.
- Supervisors – No level playing field with the banking sector. The reflection of the risk of RGLA not listed in ITS (EU) 2015/2011 is not more accurate..

Policy issue 3: Recognition of guarantees by Member States' central governments and RGLA with the same risk for mortgages compliant with Article 191 of the Delegated Regulation

Option 3.1 – Recognition

474. On the side of benefits, it is possible to detect the following effects:

- Policyholders – More accurate reflection of the risk, . Level playing field with the banking sector. Consistent treatment of guarantees within the counterparty default risk module.
- Industry – More accurate reflection of the risk. Level playing field with the banking sector. Consistent treatment of guarantees within the counterparty default risk module and the spread risk sub-module.
- Supervisors – More accurate reflection of the risk. Level playing field with the banking sector. Consistent treatment of guarantees within the counterparty default risk module and the spread risk sub-module.

475. On the side of costs, it is possible to detect the following effects:

- Policyholders – Minimal implementation costs (according to stakeholders).
- Industry – Minimal implementation costs (according to stakeholders).
- Supervisors – None.

Option 3.2 – No Recognition

476. On the side of benefits, it is possible to detect the following effects:

- Policyholders – None.
- Industry – None.
- Supervisors – None.

477. On the side of costs, it is possible to detect the following effects:

- Policyholders – Reflection of the risk is not more accurate. No level playing field with the banking sector. No consistent treatment of

guarantees within the counterparty default risk module and the spread risk sub-module.

- Industry – Reflection of the risk is not more accurate. No level playing field with the banking sector. No consistent treatment of guarantees within the counterparty default risk module and the spread risk sub-module.
- Supervisors – Reflection of the risk is not more accurate. No level playing field with the banking sector. No consistent treatment of guarantees within the counterparty default risk module and the spread risk sub-module.

478. Further to this analysis, the tables below display the quantitative impact of introducing such a new asset category.

479. Table 13 provides the amount of RGLA exposures held by (re)insurance undertakings across Europe per geographical origin of the debtor, according to the classification available today in ITS (EU) 2015/2011:

Table 13. RGLA exposures held by European (re)insurance undertakings per geographical origin of debtor, according to classification of ITS (EU) 2015/2011

Issuer country	RGLA listed (million euros)	RGLA not listed (million euros)
ARGENTINA	€0	€2
AUSTRALIA	€0	€528
AUSTRIA	€818	€157
BELGIUM	€8,255	€1,402
BERMUDA	€0	€1
BRAZIL	€0	€0
CANADA	€0	€13,943
CAYMAN ISLANDS	€0	€0
CHILE	€0	€16
CHINA	€0	€196
COLOMBIA	€0	€5
CZECH REPUBLIC	€0	€162
DENMARK	€802	€0
FINLAND	€319	€462
FRANCE	€10,398	€955
GEORGIA	€0	€0
GERMANY	€97,727	€1,874
GUYANA	€0	€0
HONG KONG	€0	€117
INDIA	€0	€9
INDONESIA	€0	€14
IRELAND	€0	€6
ISLE OF MAN	€0	€8
ITALY	€0	€325
JAPAN	€0	€187

JERSEY	€0	€13
KAZAKHSTAN	€0	€8
KOREA, REPUBLIC OF	€0	€0
MALAYSIA	€0	€6
MARSHALL ISLANDS	€0	€1
MEXICO	€0	€15
NETHERLANDS	€566	€251
NEW ZEALAND	€0	€288
NORWAY	€0	€3,777
PANAMA	€0	€1
PERU	€0	€6
PHILIPPINES	€0	€3
POLAND	€178	€0
PUERTO RICO	€0	€2
QATAR	€0	€0
ROMANIA	€0	€24
SPAIN	€12,044	€47
SWEDEN	€3,887	€1,365
SWITZERLAND	€0	€54
UNITED KINGDOM	€0	€1,837
UNITED STATES	€0	€3,227
VENEZUELA, BOLIVARIAN REPUBLIC OF	€0	€13
VIRGIN ISLANDS, BRITISH	€0	€14
SUM	€134,994	€31,321

480. The next table provides the same information but following the classification of the banking framework. It also provides the impact of aligning the ITS classification with the banking framework:

Table 14. RGLA exposures held by European (re)insurance undertakings per geographical origin of debtor, according to banking framework classification and impact of alignment

Issuer country	RGLA listed (million euros)	RGLA not listed (million euros)	Impact (million euros)
ARGENTINA	€0	€2	€0
AUSTRALIA	€0	€528	€0
AUSTRIA	€818	€157	€0
BELGIUM	€8,125	€1,532	€130
BERMUDA	€0	€1	€0
BRAZIL	€0	€0	€0
CANADA	€0	€13,943	€0
CAYMAN ISLANDS	€0	€0	€0
CHILE	€0	€16	€0
CHINA	€0	€196	€0

COLOMBIA	€0	€5	€0
CZECH REPUBLIC	€0	€162	€0
DENMARK	€802	€0	€0
FINLAND	€319	€462	€0
FRANCE	€0	€11,353	€10,398
GEORGIA	€0	€0	€0
GERMANY	€97,727	€1,874	€0
GUYANA	€0	€0	€0
HONG KONG	€0	€117	€0
INDIA	€0	€9	€0
INDONESIA	€0	€14	€0
IRELAND	€0	€6	€0
ISLE OF MAN	€0	€8	€0
ITALY	€0	€325	€0
JAPAN	€0	€187	€0
JERSEY	€0	€13	€0
KAZAKHSTAN	€0	€8	€0
KOREA, REPUBLIC OF	€0	€0	€0
MALAYSIA	€0	€6	€0
MARSHALL ISLANDS	€0	€1	€0
MEXICO	€0	€15	€0
NETHERLANDS	€566	€251	€0
NEW ZEALAND	€0	€288	€0
NORWAY	€0	€3,777	€0
PANAMA	€0	€1	€0
PERU	€0	€6	€0
PHILIPPINES	€0	€3	€0
POLAND	€0	€178	€178
PUERTO RICO	€0	€2	€0
QATAR	€0	€0	€0
ROMANIA	€0	€24	€0
SPAIN	€12,044	€47	€0
SWEDEN	€3,887	€1,365	€0
SWITZERLAND	€0	€54	€0
UNITED KINGDOM	€0	€1,837	€0
UNITED STATES	€0	€3,227	€0
VENEZUELA, BOLIVARIAN REPUBLIC OF	€0	€13	€0
VIRGIN ISLANDS, BRITISH	€0	€14	€0
SUM	€124,288	€42,371	€10,706

481. The next table provides the breakdown of RGLA non-listed according to their credit quality step. The table also includes the RGLA for which no rating was reported as available by (re)insurance undertakings and for which (re)insurance undertakings did not provide any information on the credit quality step:

Table 15. Amounts of RGLA non-listed by credit quality step

Credit quality step	RGLA not listed in ITS (EU) 2015/2011 (million euros)	RGLA not listed in banking framework (million euros)
Credit quality step 0	5,302	5,358
Credit quality step 1	15,704	23,304
Credit quality step 2	3,800	4,921
Credit quality step 3	331	386
Credit quality step 4	43	43
Credit quality step 5	4	4
Credit quality step 6	1	1
No rating available	2,602	3,440
NULL	3,880	4,916
SUM	31,665	42,371

482. Using the information above, EIOPA calculated the impact in terms of SCR for spread risk. The following assumptions were used:

- Where modified duration was smaller than 1 year, it was set to 1 year (in accordance with Article 176(2) of the Delegated Regulation);
- data without information on modified duration or maturity or credit quality step were not taken into account;
- data where the credit quality step was either “no rating available” or “NULL” were excluded;
- where the modified duration was not provided but the maturity date was, the modified duration was approximated on the basis that data were reported at end 2016.

Table 16. SCR for spread risk for RGLA non-listed calculated according to Article 176 of the Delegated Regulation and according to the intermediate treatment proposed

	Current approach (Article 176 of the Delegated Regulation)	Intermediate treatment proposed
SCR for spread risk for RGLA not listed in ITS (EU) 2015/2011 (million euros)	1,655	1,611
SCR for spread risk for RGLA not listed in banking framework (million euros)	2,333	2,266

483. Should the Solvency II list be aligned with the banking list and the intermediate treatment introduced, the SCR for spread risk would increase by 611 million euros (+37 %). In comparison, the sum of all gross SCR for spread risk for (re)insurance undertakings using the standard formula is 124.9 billion euros: this would represent an increase of +0.5 % (before loss

absorbency capacity), which is considered immaterial. In comparison with the total SCR, which amounts to 652.5 billion euros, this represents an increase of +0.09 %.

Policy issue 4: Recognition of the risk-mitigating effect from a partial guarantee for mortgages defined in Article 191 of the Delegated Regulation

Option 4.1 – Recognition

484. On the side of benefits, it is possible to detect the following effects:

- Policyholders – Increased risk sensitivity. Level playing field with the banking sector.
- Industry – Increased risk sensitivity. This would affect Dutch residential mortgages which are partially guaranteed with a volume of ca. 16bn EUR. Level playing field with the banking sector.
- Supervisors – Increased risk sensitivity. Level playing field with the banking sector.

485. On the side of costs, it is possible to detect the following effects:

- Policyholders – Minimal implementation costs (according to stakeholders). Increased complexity of the standard formula.
- Industry – Minimal implementation costs (according to stakeholders). Increased complexity of the standard formula.
- Supervisors – Increased complexity of the standard formula.

Option 4.2 – No recognition

486. On the side of benefits, it is possible to detect the following effects:

- Policyholders – No increased complexity of the standard formula.
- Industry – No increased complexity of the standard formula.
- Supervisors – No increased complexity of the standard formula.

487. On the side of costs, it is possible to detect the following effects:

- Policyholders – No increased risk sensitivity. No level playing field with the banking sector.
- Industry – No increased risk sensitivity. No level playing field with the banking sector.
- Supervisors – No increased risk sensitivity. No level playing field with the banking sector.

9.6.3. Comparison of options

488. Regarding policy issue 1 (Alignment of the treatment of guarantees by Member States' central governments and RGLA with the same risk in the market risk module) the preferred option is option 1.1 (Alignment) based on a comparison of the benefits and costs.

489. Regarding policy issue 2 (Introduction of an intermediate treatment for Member States' RGLA with a risk different from Member States' central governments) the preferred option is option 2.1 (Intermediate treatment) based on a comparison of the benefits and costs.

490. Regarding policy issue 3 (Recognition of guarantees by Member States' central governments and RGLA with the same risk for mortgages compliant with Article 191 of the Delegated Regulation) the preferred option is option 3.1 (Recognition) based on a comparison of the benefits and costs.

491. Regarding policy issue 4 (Recognition of the risk-mitigating effect from a partial guarantee for mortgages defined in Article 191 of the Delegated Regulation) the preferred option is option 4.1 (Recognition) based on a comparison of the benefits and costs.

9.7. Risk-mitigation techniques

9.7.1. Policy options

492. During the development of this advice on risk-mitigation techniques, EIOPA has identified three main policy issues for which different options have been considered and debated:

- policy issue 1: frequency of exposure adjustments;
- policy issue 2: maturity of the contracts and
- policy issue 3: Recognition of reinsurance where the reinsurance undertaking ceases to comply with the SCR.

493. The first two policy issues are related to the technical advice on rolling hedges.

Policy issue 1: Frequency of exposure adjustments

494. Article 209(3) of the Delegated Regulation allows the full recognition of risk-mitigation techniques where the contractual arrangements will be in force for less than 12 months provided the replacement of the risk-mitigation technique does not take place more often than every three months (and other criteria are met). Due to the absence of a legal definition for the term "risk-mitigation technique" there is some uncertainty regarding the adjustments that are permitted under Article 209(3).

495. There can be different reasons for adjustments: First, the risk exposure of the (re)insurance undertaking may have changed. Second, contracts that were used for risk-mitigation purposes may expire. Third, other contracts or contract modifications may be more favourable.

496. Restrictions on the frequency of adjustments reduce the renewal risk and simplify the assessment whether the condition mentioned above is met. At the same time such restrictions may prevent insurance undertakings from adjusting their risk-mitigation to changes in their risk position on a timely basis.

497. In the following the term “Exposure adjustment” means the situation where the insurance undertakings enters into new contracts, terminates contracts (fully or partially) or enters into offsetting contracts to reflect changes in the hedged position (e.g. entering into additional short future contracts on a stock X because more stocks X were purchased).

498. One question to consider is how often exposure adjustments should be allowed. In this respect the following options have been considered:

- a. Option 1.1 – No restriction on the frequency of exposure adjustments.
- b. Option 1.2 – Possibility of exposure adjustments with a fixed maximum frequency (e.g. quarterly, monthly or weekly).
- c. Option 1.3 – Possibility of exposure adjustments with a fixed maximum frequency combined with pre-defined additional exposure adjustments.

Policy issue 2: Maturity of the contracts

499. Another question to consider is whether there should be any restrictions on the maturity of the contracts used. In this respect the following options have been considered:

- a. Option 2.1 – No restriction on the maturity of the contracts.
- b. Option 2.2 – Restrictions on the maturity of the contracts

Policy issue 3: Recognition of reinsurance where the reinsurance undertaking ceases to comply with the SCR

500. For reinsurance contracts where the reinsurance undertaking afterwards ceases to comply with the SCR, Article 211(3) of the Delegated Regulation allows an exceptional partial recognition provided certain conditions are met. Stakeholders pointed out that (re)insurance undertaking may find it difficult to demonstrate that this is the case.

501. A balance has to be struck between potential insufficient protection and possibly unnecessary negative consequences in case of a timely restoration of compliances.

502. On this basis the following options have been considered:

- Option 3.1 – No recognition in case the reinsurance undertaking ceases to comply with the SCR.
- Option 3.2. Partial recognition for a limited period unless the reinsurance undertaking ceases to comply with the MCR.

9.7.2. Analysis of impacts

Policy issue 1: Frequency of exposure adjustments

Option 1.1 - No restriction on the frequency of exposure adjustments

503. On the side of benefits, it is possible to detect the following effects:

- Policyholders – Maximum flexibility for (re)insurance undertakings in terms of arrangements for risk-mitigation. Where this results in better risk management policyholders benefit through lower risk or higher benefits;
- Industry – Maximum flexibility for (re)insurance undertakings in terms of arrangements for risk-mitigation.
- Supervisors – Maximum flexibility for (re)insurance undertakings in terms of arrangements for risk-mitigation with the potential for a better risk management. Where the outcome is better risk management this would be in line with the objectives of supervisors.

504. On the side of costs, it is possible to detect the following effects:

- Policyholders – The increasing complexity of the arrangement makes assessing compliance with the requirements in Article 209(3) of the Delegated Regulation more difficult. In addition, more frequent adjustments increase the costs and the potential for mistakes. This may lead to higher risks and an underestimation of the SCR and consequently to reduced policyholder protection.
- Industry – The assessment of compliance for full recognition requires more involvement and consequently is more costly. A possible underestimation of the SCR (see previous paragraph) may result in insufficient capital buffers. In addition, more frequent adjustments increase the costs and the potential for mistakes.
- Supervisors – The assessment of compliance for full recognition is more involved and consequently more costly. A possible underestimation of the risk may result in insufficient capital buffers.

Option 1.2 Possibility of exposure adjustments with a fixed maximum frequency

505. On the side of benefits, it is possible to detect the following effects:

- Policyholders – The assessment of the conditions set out in Article 209(3) of the Delegated Regulation is easier. This makes an erroneous recognition and the resulting possible underestimation of the SCR less likely. The lower frequency of adjustments reduces costs and the potential for mistakes.
- Industry – The assessment of compliance with the conditions for full recognition is less involved which reduces costs. The reduced potential for an underestimation of the SCR (see previous paragraph) makes insufficient capital buffers less likely. The lower frequency of adjustments reduces costs and the potential for mistakes.

- Supervisors – The assessment of compliance with the conditions for full recognition is less involved which makes supervision easier. The reduced potential for an underestimation of the SCR (see previous paragraph) makes insufficient capital buffers less likely. The lower frequency of adjustments reduces costs and the potential for mistakes.

506. On the side of costs, it is possible to detect the following effects:

- Policyholders – The restrictions may result in larger unhedged exposures than deemed desirable by the (re)insurance undertaking with the result of higher risks than necessary for policyholders.
- Industry – The restrictions may result in larger unhedged exposures than deemed desirable by the (re)insurance undertaking.
- Supervisors – The restrictions may result in larger unhedged exposures than deemed desirable by the (re)insurance undertaking with the result of higher risks.

Option 1.3 Possibility of exposure adjustments with a fixed maximum frequency combined with pre-defined additional exposure adjustments

507. On the side of benefits, it is possible to detect the following effects:

- Policyholders – Less frequent adjustments than in option 1a.1 but more flexibility than in option 1a.2 with the associated benefits.
- Industry – Less frequent adjustments than in option 1a.1 but more flexibility than in option 1a.2 with the associated benefits.
- Supervisors – Less frequent adjustments than in option 1a.1 but more flexibility than in option 1a.2 with the associated benefits.

508. On the side of costs, it is possible to detect the following effects:

- Policyholders – Less frequent adjustments than in option 1a.1 but more flexibility than in option 1a.2 with the associated costs. There is the risk that the predefined exceptional exposure adjustments do not cover all relevant situations which would result in higher risk than necessary.
- Industry – Less frequent adjustments than in option 1a.1 but more flexibility than in option 1a.2 with the associated costs. There is the risk that the predefined exceptional exposure adjustments do not cover all relevant situations which would result in higher risk than necessary. The definition of exceptional circumstances may entail costs (e.g. for discussions with supervisors).
- Supervisors – Less frequent adjustments than in option 1a.1 but more flexibility than in option 1a.2 with the associated benefits. There is the risk that the predefined exceptional exposure adjustments do not cover all relevant situations which would result in higher risk than necessary. The definition of exceptional circumstances may result in discussions with (re)insurance undertakings with the associated costs.

Policy issue 2: Maturity of the contracts

Option 2.1 - No restriction on the maturity of the contracts

509. On the side of benefits, it is possible to detect the following effects:

- Policyholders – the (re)insurance undertaking has maximal flexibility in the choice of the contract. Where this results in lower risk and/or costs policyholders benefit;
- Industry – the (re)insurance undertaking has maximal flexibility in the choice of the contract.
- Supervisors – Policyholders – the (re)insurance undertaking has maximal flexibility in the choice of the contract. Where this results in lower risk this is in line with the objectives of supervisors;

510. On the side of costs, it is possible to detect the following effects:

- Policyholders – in case the (re)insurance undertaking uses short-term contracts the renewal risk increases. Moreover, the assessment whether the conditions for full recognition are met becomes more difficult with the potential for an underestimation of the SCR. As a result the risk for the policyholder increases.
- Industry – The assessment of compliance for full recognition is more involved and consequently more costly. A possible underestimation of the SCR (see previous paragraph) may result in insufficient capital buffers.
- Supervisors – The assessment of compliance for full recognition is more involved and consequently more costly. A possible underestimation of the SCR may result in insufficient capital buffers.

Option 2.2 - Restrictions on the maturity of the contracts

511. On the side of benefits, it is possible to detect the following effects:

- Policyholders – The renewal risk decreases. The assessment whether the conditions for full recognition are met is less difficult with a reduced potential for an underestimation of the SCR.
- Industry – The assessment of compliance for full recognition is less involved and consequently less costly. There is a reduced risk of underestimating the SCR which may result in insufficient capital buffers.
- Supervisors – The assessment of compliance for full recognition is less involved and consequently less costly. There is a reduced risk of underestimating the SCR which may result in insufficient capital buffers.

512. On the side of costs, it is possible to detect the following effects:

- Policyholders – The restriction on the maturity may increase the costs of the risk-mitigation or make it too costly with the consequence of lower or more risky benefits.

- Industry – The restriction on the maturity may increase the costs of the risk-mitigation or make it unattractive.
- Supervisors – The restriction on the maturity may increase the costs of the risk-mitigation or make it too costly with the consequence of more risk than necessary.

Policy issue 3: Recognition of reinsurance where the reinsurance undertaking ceases to comply with the SCR

Option 3.1 - No recognition in case the reinsurance undertaking ceases to comply with the SCR

513. On the side of benefits, it is possible to detect the following effects:

- Policyholders – The higher level of the SCR results in a higher level of protection;
- Industry – The risk that the SCR is insufficient with the potential result of a shortfall in capital is reduced.
- Supervisors – The risk that the SCR is insufficient with the potential result of a shortfall in capital is reduced.

514. On the side of costs, it is possible to detect the following effects:

- Policyholders – In case the reinsurance undertaking can restore compliance within the prescribed timeframe the short-term “spike” in the SCR may have negative effects like short-term adjustments to the investment portfolio that are detrimental in the longer term or less new business. This could impact the level of future benefits negatively. In the worst case the insurance undertaking would no longer comply with its SCR.
- Industry – In case the reinsurance undertaking can restore compliance within the prescribed timeframe the short-term “spike” in the SCR may have negative effects like short-term adjustments to the investment portfolio that are detrimental in the longer term or less new business. In the worst case the insurance undertaking would no longer comply with its SCR.
- Supervisors – In case the reinsurance undertaking can restore compliance within the prescribed timeframe the short-term “spike” in the SCR may have negative effects like short-term adjustments to the investment portfolio that are detrimental in the longer term or less new business. In the worst case the insurance undertaking would no longer comply with its SCR.

Option 3.2 - Partial recognition for a limited period unless the reinsurance undertaking ceases to comply with the MCR

515. On the side of benefits, it is possible to detect the following effects:

- Policyholders – The negative effects in case of a temporary breach described above are avoided.
- Industry – The negative effects in case of a temporary breach described above are avoided.
- Supervisors – The negative effects in case of a temporary breach described above are avoided.

516. On the side of costs, it is possible to detect the following effects:

- Policyholders – in case the reinsurance undertaking should become insolvent the loss exceed the corresponding capital charge with possible negative effects for the solvency position of the (re)insurance undertaking. With option 2.1 the loss would have been anticipated earlier.
- Industry – in case the reinsurance undertaking should become insolvent the loss exceed the corresponding capital charge with possible negative effects for the solvency position of the (re)insurance undertaking. With option 2.1 the loss would have been anticipated earlier.
- Supervisors – in case the reinsurance undertaking should become insolvent the loss exceed the corresponding capital charge with possible negative effects for the solvency position of the (re)insurance undertaking. With option 2.1 the loss would have been anticipated earlier.

9.7.3. Comparison of options

517. Regarding policy issue 1 (Frequency of the exposure adjustments) the preferred option is option 1.3 (Combination of fixed maximum frequency with predefined triggers) for the exposure adjustments. The predefined exposure adjustments provide flexibility for exposure adjustments in exceptional circumstances while the normal fixed maximum frequency limits the complexity.

518. Regarding policy issue 2 (Maturity of the contracts) the preferred option is option 2.2 (restrictions) for the restrictions on the maturity of the contracts. This limits the renewal risk while the possible disadvantages for the chosen minimum maturity seem not very material.

519. Regarding policy issue 3 (Recognition of reinsurance where the reinsurance undertaking ceases to comply with the SCR) the preferred option is option 3.2 (Partial recognition for a limited period unless the reinsurance undertaking ceases to comply with the MCR). A temporary “spike” in the SCR could have meaningful negative consequences while the risks associated with a temporary partial recognition of the reinsurance seem acceptable.

9.8. Look-through approach: investment related vehicles

9.8.1. Policy options

520. During the development of this advice on the look-through approach, EIOPA has identified two main policy issues for which different options have been considered and debated:

- policy issue 1: scope of extension of the look-through approach; and
- policy issue 2: mandatory look through approach for related investment vehicles.

Policy issue 1 - scope of extension of the look-through approach

521. With respect to the extension of the look-through approach the following options have been considered:

- Option 1.1 - extension to all investment related undertakings (broader extension): "Investment related undertakings" are identified when the investment vehicle/entity is 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 12(1) of Directive 83/349/EEC²³.
- Option 1.2 – extension to participations (narrower extension): the look through approach should be applied to investment related vehicles which qualify as "participations". "Related investment undertakings in the form of participations" are identified when:
 - a) the insurance undertaking owns directly, or by way of control, 20% or more of the voting rights or capital of an investment entity/vehicle; or
 - b) the insurance undertaking may effectively exercise a significant influence over the investment vehicle/entity.

Policy issue 2: Mandatory look-through approach for related investment vehicles.

With respect to the mandatory extension of the look-through approach for related investment vehicles the following options have been considered:

- Option 2.1- Mandatory when higher SCR is likely: the application of the look through approach should be mandatory only when SCR resulting from its application is likely to be higher (more conservative) than the corresponding equity risk charge.
- Option 2.2 - Mandatory in all cases: The application of the look through approach should be mandatory in all cases, regardless whether it is likely to determine a lower SCR.

²³ Seventh Council Directive 83/349/EEC of 13 June 1983 based on the Article 54 (3) (g) of the Treaty on consolidated accounts

9.8.2. Analysis of impact

Policy issue 1 - scope of extension of the look-through approach

Option 1.1 - extension to all investment related undertakings (broader extension)

522. On the side of benefits, it is possible to detect the following effects:

- Policyholders – this option would be more risk sensitive, so the SCR effectively reflects the underlying risks benefiting policyholder protection.
- Industry – level playing field among entities in which the “influence” is exercised by several entities in combination and participated entities.
- Supervisors – from a prudential perspective, this approach properly covers cases in which the “influence” is exercised by several entities in combination (group structure).

523. On the side of costs, it is possible to detect the following effects:

- Policyholders – this option might generate less conservative SCR when dealing with property investment structures.
- Industry – this option would be more costly as the scope of the extension of the look through will be larger.
- Supervisors – this option might determine more effort in doing the supervision for entities belonging to groups.

Option 1.2 - extension to participations (narrower extension)

524. On the side of benefits, it is possible to detect the following effects:

- Policyholders – none
- Industry – this option would be less burdensome in terms of costs and operational tasks than option 1.1.
- Supervisors – from a prudential perspective, “control” over a related undertaking might mean effective influence on asset management. So supervision might be straightforward.

525. On the side of costs, it is possible to detect the following effects:

- Policyholders – this option would be less risk-sensitive. Some investment related undertakings are not subject to look through;
- Industry – this option would result in difference in treatment among similar entities (same type of business) in a group (i.e. if some are participated and others are not);
- Supervisors – this option would not address properly cases where a number of entities within a group hold voting rights or capital in an undertaking that when combined together, amount to 20 % or more of the undertaking’s voting rights or capital.

Policy issue 2: Look through approach for related investment vehicles: mandatory vs optional

Option 2.1 – Mandatory when higher SCR is likely

526. On the side of benefits, it is possible to detect the following effects:

- Policyholders – none;
- Industry – this option would allow insurance undertakings not to apply the full look through when it will be too costly;
- Supervisors – this option might alleviate supervisory check when SCR is conservative enough.

527. On the side of costs, it is possible to detect the following effects:

- Policyholders – SCR not always linked to underlying risks;
- Industry – this option might generate different SCR for similar investments;
- Supervisors – this approach relies upon qualitative assessment (expert judgment). It might generate different SCR for similar cases. The application of the look-through is relevant also in the context of risk management purposes. No reason why there should be a specific treatment as regards look-through for related undertakings.

Option 2.2 – Mandatory in all cases

528. On the side of benefits, it is possible to detect the following effects:

- Policyholders – SCR fully reflecting risk exposure benefiting policyholder protection;
- Industry – This option would be better from a risk management perspective
- Supervisors – this option would be more risk-sensitive.

529. On the side of costs, it is possible to detect the following effects:

- Policyholders – none;
- Industry – burden for undertakings is unavoidable;
- Supervisors – none.

9.8.3. Comparison of options

530. With respect to policy issue 1 (scope of the extension of the look through approach) the preferred option is option 1.1. (extension to all investment related undertakings). This approach is more risk-sensitive and appropriately covers cases in which the "influence" is exercised by several entities in combination.

531. With respect to policy issue 2 (mandatory look through approach for related investment vehicles) the preferred option is option 2.2 (mandatory in all cases). The alternative may be seen as a simplification but since there is no particular reason to treat investment related undertakings in a different manner than other funds where look-through is required, the general

principle should apply. In the context of EIOPA's work on simplifying the look-through, the option to make look-through mandatory only where it leads to a higher SCR may be further investigated.

9.9. Undertaking specific parameters

9.9.1. Policy options

532. During the development of the advice on USPs, EIOPA has identified the following three main policy issues:

- Policy issue 1: should the data criteria be changed;
- Policy issue 2: should the current USP methods be changed;
- Policy issue 3: should a new USP method for non-proportional reinsurance be introduced.

Policy issue 1: should the data criteria be changed

533. The proposals received by stakeholders related mainly to changing the underlying assumptions that the aggregated losses should follow a log-normal distribution. This is not possible, as explained above, given that it is an underlying assumption for the calculation of the SCR standard formula for premium and reserve risk and because the underlying assumptions of USP methods should be the same.

534. Given the number of USPs approved, it was decided not to consider this policy option anymore.

Policy issue 2: should the current USP methods be changed

535. Proposals were received for changing the methods for USP for premium risk. These proposals had cons that led not to consider this policy option further.

536. One of the main cons is that changing USP methods for premium risk means that all approved USP would need to be resubmitted and this would result in a large amount of work for undertakings and NSAs.

537. Other issues were that the methods were not compliant with the underlying assumptions of the standard formula, either because it was suggested to relax the log-normality assumption or because the methods proposed were not used when calibrating the parameters of the standard formula.

Policy issue 3: should a new USP method for non-proportional reinsurance be introduced

538. Article 218 of the Delegated Regulation provides that in the non-life premium and reserve risk sub-module, the adjustment factor for non-proportional reinsurance referred to in Article 117(3) of the Delegated Regulation may be replaced by undertaking-specific parameter.

539. A suggestion was made by stakeholders to introduce a new USP method for certain types of non-proportional reinsurance treaties that are called "stop-loss" treaties. The following options have been considered

- Option 3.1 – extend the number of methods for USP for adjustment factor for non-proportional reinsurance to stop-loss treaties.
- Option 3.2 – do not extend the number of methods for USP for adjustment factor for non-proportional reinsurance to stop-loss treaties.

9.9.2. Analysis of impacts

Policy issue 3: should a new USP method for non-proportional reinsurance be introduced

Option 3.1 – extend the number of methods for USP for adjustment factor for non-proportional reinsurance to stop-loss treaties

540. On the side of benefits, it is possible to detect the following effects:

- Policyholders – the USP would allow for appropriate recognition of stop-loss treaties which reinforce the risk management of (re)insurance undertakings and provides incentives for them to buy stop-loss treaties, which increase their financial soundness and policyholders' protection.
- Industry – the USP would allow for appropriate recognition of stop-loss treaties which reinforce the risk management of (re)insurance undertakings
- Supervisors – none.

541. On the side of costs, it is possible to detect the following effects:

- Policyholders – none.
- Industry – this increases the complexity of the SCR standard formula since (re)insurance undertakings need to make an assessment to judge whether the USP for excess-of-loss treaties or the USP for stop-loss treaties would be more appropriate.
- Supervisors – this additional method means that there may be more supervisory approvals.

Option 3.2 – do not extend the number of methods for USP for adjustment factor for non-proportional reinsurance to stop-loss treaties

542. On the side of benefits, it is possible to detect the following effects:

- Policyholders – none.
- Industry – this does not increase the complexity of the standard formula.
- Supervisors – this does not increase the complexity of the standard formula.

543. On the side of costs, it is possible to detect the following effects:

- Policyholders – appropriate and specific reinsurance transfers may not be recognised which does not provide an incentive to (re)insurance undertakings to protect themselves via reinsurance treaties and that may lead to increasing risk retained by undertakings.
- Industry – appropriate and specific reinsurance transfers may not be recognised which does not contribute to proper risk management.
- Supervisors – none.

9.9.3. Comparison of options

544. Regarding policy issue 3 (should a new USP method for non-proportional reinsurance be introduced) the preferred option is **option 3.1 (extend the number of methods for USP for adjustment factor for non-proportional reinsurance to stop-loss treaties)**. Even if the standard formula complexity is increased by the introduction of such methodology, the benefits to policyholders' protection and to the risk management of (re)insurance undertakings argue in its favour.