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Guidelines

on methods for calculating contributions to deposit guarantee schemes

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1. Executive Summary

Pursuant to Article 13(3) of the Directive 2014/49/EU of the European Parliament and of the Council of 16 April 2014 on deposit guarantee schemes (Directive 2014/49/EU), these guidelines specify methods for calculating contributions to deposit guarantee schemes (DGSs).

In a context where, until now, many Member States did not have pre-financed DGSs, these guidelines set out principles for technically sound methods for calculating contributions to ensure that costs of deposit insurance are borne primarily by the banking sector and that the available financial means reach the target level within the time horizon envisaged in Directive 2014/49/EU.

These guidelines, which will apply both to *ex-ante* and *ex-post* contributions, will contribute to providing incentives to institutions to operate under a less risky business model. To that end, these guidelines set out principles on the risk component of the calculation method. In addition, they capture various aspects of the institutions' risk profile by specifying a number of core risk indicators pertaining to capital, liquidity and funding, asset quality, business model and management, and potential losses for the DGS.

In line with the principle of proportionality, the guidelines allow authorities to take into account the diversity of institutions and business models while respecting a number of safeguards inherent in the need for harmonisation and comparability within the Single Market. The guidelines allow authorities to set aside, with regard to a given type of institution, a core risk indicator that is unavailable due to the legal characteristics of such institutions or supervisory regime in which they operate. The authorities may introduce additional risk indicators, provided that the minimum weights specified for the remaining core indicators and risk categories are respected. The authorities also have a margin of flexibility allowing them to reshuffle up to 25% of indicators' weights in order to increase the importance of risk indicators which better capture differences in risk profiles. In any event, the weight of any additional indicator, or any increase in the weight of a core indicator, may not exceed 15%, except for qualitative indicators in the risk category 'Business model and management' where full flexibility is allowed in order to properly reflect the diverse characteristics of member institutions.

The guidelines will offer the EBA a basis on which to assess progress in the convergence of national practices in calculating contributions to DGSs before the review in 2017 as required by Directive 2014/49/EU.

These guidelines have been drafted with reference to internationally agreed principles, such as the BIS-IADI Core Principles for Effective Deposit Insurance Systems and the IADI General Guidance for developing differential premium systems.

2. Background and rationale

1. Directive 2014/49/EU of the European Parliament and of the Council of 16 April 2014 on deposit guarantee schemes (Directive 2014/49/EU), recasting Directive 94/19/EC and its subsequent amendments, was published in the Official Journal on 12 June 2014¹.
2. Prior to this recast, there had been significant differences in DGS funding throughout the EU. In some Member States, deposit guarantee schemes (DGSs) were funded by contributions from deposit-taking institutions made in advance on a regular basis (the *ex-ante* model). In other Member States, institutions only contributed once the DGS was required to repay depositors (the *ex-post* model). When the financial crisis struck in autumn 2008, some DGSs turned out to be underfinanced and had to resort to public support to repay depositors. In order to harmonise DGS funding methods, to warrant a similar level of protection of depositors, and to ensure that costs are primarily borne by member institutions rather than taxpayers, the new Directive 2014/49/EU introduced an obligation for the DGSs to raise *ex-ante* contributions annually from their members in order to reach, in principle, a target level of 0.8% of covered deposits by 3 July 2024².
3. In addition, the new Directive 2014/49/EU introduced a requirement for contributions to be risk-based. The rationale was that if *ex-ante* DGS contributions were to be calculated as a fixed percentage of deposits of member institutions without taking into account the risk profile of these entities it could lead to moral hazard. In such cases, other things being equal, risky institutions would pay the same amount of contributions as less risky ones, causing cross-subsidisation among institutions and discouraging sound risk practices.
4. Article 13 of Directive 2014/49/EU lays down a number of criteria for the calculation of contributions to DGSs, and notably that:
 - contributions are compulsorily based on the amount of covered deposits and the risk profile of each member institution;
 - DGSs are allowed to develop and use their own calculation methods in order to tailor contributions to market circumstances and risk profiles;
 - Member States may provide for lower contributions from institutional protection scheme (IPS) members and low-risk sectors regulated under national law.
5. To ensure consistent application of Directive 2014/49/EU across Member States the EBA was mandated to issue guidelines to specify methods for calculating contributions to DGSs in accordance with Article 13(1) and (2) of that Directive.

¹ Directive 2014/49/EU of the European Parliament and of the Council of 16 April 2014 on deposit guarantee schemes, OJ L 173, 12.6.2014, p. 149–178.

² Article 10 of Directive 2014/49/EU.

6. These EBA guidelines aim to increase the harmonisation of practices of national DGSs, enhance the level playing field and contribute to greater comparability of risk-based contributions to DGSs across Member States. Pursuant to Article 13(3) second subparagraph, the guidelines are to include ‘a calculation formula, specific indicators, risk classes for members, thresholds for risk weights assigned to specific risk classes, and other necessary elements’.
7. From February to April 2014, the EBA conducted a test exercise among Member States on three different systems for calculating risk-based contributions to DGSs. The test systems were developed so that Member States could verify how different combinations of mandatory elements of calculation methods could be applied to their national banking sectors. Each of the three test systems used a fixed set of risk indicators and proposed calibration of thresholds for particular risk indicators and risk classes to be applied in all Member States.
8. Taking into account the results of the test exercise and choices made by EU co-legislators, these guidelines specify the objectives and principles for DGS contributions, and provide guidance on specific elements that should be taken into account in developing and assessing the methods for calculating risk-based contributions.
9. These guidelines specify five categories of risk indicators in order to ensure that a sufficiently wide range of key aspects of institutions’ operations are reflected in the risk classification. The selection of risk categories reflects the minimum elements specified in Article 13 of Directive 2014/49/EU, such as capital adequacy, asset quality, liquidity, but also the business model and management, and the need to take into account the potential loss to the DGS.
10. In order to strike the right balance between the need for flexibility required given the diversity of institutions on the one hand, and the need for harmonisation and comparability within the Single Market on the other, the guidelines specify core risk indicators and provide guidance for assigning weights to the risk categories and indicators. Within each risk category, there are compulsory core risk indicators which should be used in order to promote comparable treatment of institutions. However, competent authorities may exclude, with regard to any type of institutions, a core risk indicator upon justification that this indicator is unavailable due to the legal characteristics of such institutions or supervisory regime in which they operate.
11. In addition, competent authorities may introduce additional risk indicators if they consider that the core indicators do not sufficiently take into account the characteristics of the member institutions, for example in order to reflect the presence of an IPS, or of institutions in low-risk sectors regulated under national law. A minimum weight is assigned to each core indicator. The sum of all minimum weights equals 75% of the total aggregate weight, which means that authorities and DGSs are able to allocate the remaining 25%, either by increasing the weights of some core indicators above the minima, or by introducing additional risk indicators. In any event, the weight of any additional indicator, or any increase in the weight of a core indicator, may not exceed 15%, except for qualitative risk indicators from the risk category ‘Business model and management’ representing the outcome of a comprehensive assessment of the member institution’s risk profile and management.
12. These guidelines acknowledge the option given in Article 13(2) of Directive 2014/49/EU to DGSs to use their own risk-based methods and to take into account the asset side of the

balance sheet of an institution. In that case competent authorities will ensure that the guidelines are respected when approving those methods.

13. These guidelines have been drafted with reference to internationally agreed principles, such as the BIS-IADI Core Principles for Effective Deposit Insurance Systems³ and the IADI General Guidance for developing differential premium systems⁴. This reference is particularly reflected in the goal of reducing the risk of DGS insolvency and the principle whereby the criteria used in the risk adjustment system should be transparent to market participants⁵.
14. In parallel with these guidelines, the European Commission has adopted, pursuant to Article 103(7) of the Bank Recovery and Resolution Directive⁶, a delegated act on *ex-ante* contributions to resolution financing arrangements⁷. The DGS funds and resolution funds, while constituting two essential components of the European crisis management framework, pursue different goals and have different contribution bases and target levels. Therefore, the risk indicators and calculation methods should reflect the specific characteristics of each contribution scheme. These guidelines ensure that the two contribution schemes do not create conflicting incentives in terms of risk behaviour of banks, and strive to avoid unnecessary reporting burden for institutions by using similar indicators, where appropriate.
15. In line with Article 10(1) of Directive 2014/49/EU, DGSs will have to collect contributions at least annually from the transposition deadline (3 July 2015). From that date, in accordance with Article 13 of Directive 2014/49/EU, contributions will have to be risk-based, unless the appropriate authorities of a Member State have availed themselves of the option envisaged in Article 20(1), subparagraph 3 of Directive 2014/49/EU on the grounds that a DGS is not yet in a position to comply with Article 13. In that case, the risk-based requirement will have to be introduced no later than by 31 May 2016. Similarly, in order to make possible the implementation of these guidelines, the risk-based contributions to be collected from member institutions by DGSs should comply with these guidelines by the end of 2015, or as from the later date set pursuant to Article 20(1) subparagraph 3 of Directive 2014/49/EU.
16. In line with Article 13(3) of Directive 2014/49/EU, the EBA will review these guidelines by 3 July 2017 and at least every 5 years thereafter. These guidelines will provide a basis on which to assess the progress achieved by competent and designated authorities in converging towards sound and harmonised practices, and to compare the results obtained across Member States when applying the calculation methods described in these guidelines. The data gathered by the EBA for the purpose of conducting this review will be used to review the proposed list of core risk indicators and to potentially recalibrate minimum weights assigned to these indicators.

³ The revised 'Core principles', International Association of Deposit Insurers (IADI), November 2014.

⁴ http://www.iadi.org/docs/IADI_Diff_prem_paper_FINAL_updated_Oct_31_2011_clean_version.pdf

⁵ Those two requirements are laid down in principle 9 of the revised Core Principles.

⁶ Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms, OJ L 173, 12.6.2014, p. 190–348.

⁷ Commission regulation supplementing Directive 2014/59/EU of the European Parliament and the Council of 15 May 2014 with regard to ex ante contributions to resolution financing arrangements, Document C(2014) 7674/3. Available on the European Commission's website, not yet published in the official journal.

3. EBA guidelines on methods for calculating contributions to deposit guarantee schemes

Status of these guidelines

1. This document contains guidelines issued pursuant to Article 16 of Regulation (EU) No 1093/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Banking Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/78/EC (the EBA Regulation). In accordance with Article 16(3) of the EBA Regulation, competent authorities and financial institutions must make every effort to comply with the guidelines.
2. Guidelines set out the EBA's view of appropriate supervisory practices within the European System of Financial Supervision or of how Union law should be applied in a particular area. The EBA, therefore, expects all competent authorities and financial institutions to which guidelines are addressed to comply with guidelines. Competent authorities to whom guidelines apply should comply by incorporating them into their supervisory practices as appropriate (for example, by amending their legal framework or their supervisory processes), including where guidelines are directed primarily at institutions.

Reporting requirements

3. According to Article 16(3) of the EBA Regulation, competent authorities must notify the EBA as to whether they comply or intend to comply with these guidelines, or otherwise with reasons for non-compliance, by [2 months after publication of the final translation]. In the absence of any notification by this deadline, competent authorities will be considered by the EBA to be non-compliant. Notifications should be sent by submitting the form provided at Section 5 to compliance@eba.europa.eu with the reference 'EBA/GL/2015/10'. Notifications should be submitted by persons with appropriate authority to report compliance on behalf of their competent authorities.
4. Notifications will be published on the EBA website, in line with Article 16(3).

Title I - Subject matter, scope and definitions

Subject matter

5. The new Directive 2014/49/EU of the European Parliament and of the Council of 16 April 2014 on deposit guarantee schemes (Directive 2014/49/EU), recasting Directive 94/19/EC and its subsequent amendments, was published in the Official Journal on 12 June 2014⁸. Directive 2014/49/EU harmonises the funding mechanisms of deposit guarantee schemes (DGSs) and mandates the collection of risk-based contributions. Pursuant to Article 13 of Directive 2014/49/EU, the contributions to DGSs shall be based on the amount of covered deposits and the degree of risk incurred by the respective members. The DGSs may develop and use their own methods for calculating the risk-based contributions from their members. Each method shall be approved by the competent authority in cooperation with the designated authority. The EBA shall be informed about the approved methods.
6. Article 13(2) of Directive 2014/49/EU stipulates that the calculation of contributions shall be proportional to the risk of the members and shall take due account of the risk profiles of the various business models. Those methods may also take into account the asset side of the balance sheet and risk indicators, such as capital adequacy, asset quality and liquidity.
7. These guidelines fulfil the mandate given to the EBA under Article 13(3) of Directive 2014/49/EU, to issue guidelines to specify methods for calculating contributions to DGSs, and in particular, that such guidelines, are to include a calculation formula, specific indicators, risk classes for members, thresholds for risk weights assigned to specific risk classes, and other necessary elements.
8. These guidelines specify the objectives and principles governing DGS contribution schemes. They also provide guidance on specific elements that should be taken into account in developing and assessing the methods for calculating risk-based contributions, while properly addressing the characteristics of national banking sectors and business models of member institutions.

Definitions

9. In addition to the definitions referred to in Article 2 of Directive 2014/49/EU, the following definitions apply for the purpose of these guidelines:
 - a. 'DGS contribution scheme' means the DGS financing arrangement which is entitled to raise from its member institutions both the *ex-ante* contributions and extraordinary *ex-post* contributions;

⁸ Directive 2014/49/EU of the European Parliament and of the Council of 16 April 2014 on deposit guarantee schemes, OJ L 173, 12.6.2014, pp. 149–178.

- b. 'calculation method' means the method for calculating contributions of member institutions to a DGS;
- c. 'member institution' means a credit institution, as defined in point (1) of Article 4(1) of Regulation (EU) No 575/2013⁹, affiliated to a particular DGS;
- d. 'annual target level' means the amount of contributions that a DGS plans to collect in a specific year from its member institutions;
- e. 'SREP' means the supervisory review and evaluation process as defined in Article 97 of Directive 2013/36/EU¹⁰ and further specified in the EBA guidelines on the common procedures and methodologies for SREP developed in accordance with Article 107 of Directive 2013/36/EU.

Abbreviations:

- a. DGS – deposit guarantee scheme;
- b. IPS – institutional protection scheme.

Scope and level of application

- 10. These guidelines are addressed to competent authorities and designated authorities as defined respectively in Article 2(1)(17) and (18) of Directive 2014/49/EU.
- 11. Competent authorities and designated authorities should ensure that these guidelines are applied by DGSs when developing methods for calculating risk-based contributions by their members, and are used when approving these calculation methods in accordance with Article 13(2) of Directive 2014/49/EU.
- 12. Where the competent authorities or designated authorities are responsible for developing the calculation method, they should apply the provisions of these guidelines.
- 13. The calculation methods should be applicable both to *ex-ante* contributions and extraordinary *ex-post* contributions. *Ex-post* contributions should thus be calculated on the basis of the same risk categorisation as the one applied for the purpose of the last annual *ex-ante* contributions.
- 14. DGSs should seek approval from the competent authorities before the initial implementation of a calculation method. The DGSs should obtain renewal of the competent authorities' approval at a frequency which competent authorities deem appropriate and, in any event, before introducing any material changes to an already approved calculation method. Non-material changes should be notified to the competent authorities on a yearly basis.

⁹ Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012, OJ L 176, 27.06.2013, p. 1.

¹⁰ Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC Text with EEA relevance, OJ L 176, 27.06.2013, p. 338.

15. According to Article 15(1) of Directive 2014/49/EU, Member States are to check that branches established in their territory by a credit institution which has its head office outside the Union have protection equivalent to that prescribed in Directive 2014/49/EU. If protection is not equivalent, Member States may, subject to Article 47(1) of Directive 2013/36/EU, stipulate that those branches must join a DGS in operation within the Member State territories. In any event, the DGSs are bound by the obligations to raise risk-based contributions from their members pursuant to Articles 10 and 13 of Directive 2014/49/EU.
16. According to Article 47 of Directive 2013/36/EU, the prudential requirements and supervisory treatment of branches of third-country credit institutions fall under the responsibility of Member States. Many of the risk adjustment metrics provided for by these guidelines do not apply to these branches and, consequently, it is appropriate to leave to Member States the power to specify the risk adjustment for such branches in a consistent manner with the treatment afforded to them under national law. Therefore, the branches of third-country credit institutions should not fall within the scope of these guidelines.

Title II- Guidance on developing methods for calculating contributions to DGSs

Part I - Objectives for DGS contribution schemes

17. Contribution schemes should:

- a. ensure that the cost of financing DGSs is, in principle, borne by credit institutions themselves, and that the financing capacity of the DGSs is proportionate to their liabilities;
- b. ensure that the target level is reached within the build-up period laid down in Article 10 of Directive 2014/49/EU;
- c. help to mitigate incentives for excessive risk-taking by member institutions by collecting higher contributions from riskier institutions; this should also ensure that failed institutions have properly contributed in advance.

Part II - Principles for developing the calculation methods

18. DGSs, competent authorities and designated authorities, while developing or approving the methods for calculating contributions to DGSs, should comply with the principles listed in the following paragraphs.

Principle 1: calculation methods should, as far as possible, reflect an increased liability incurred by a DGS as a result of a member's participation

19. The contribution of each member institution should, as far as possible, reflect:

- the likelihood of the institution's failure (i.e. whether the institution is failing or is likely to fail within the meaning of Article 32 of Directive 2014/59/EU¹¹ on the recovery and resolution of credit institutions and investment firms (Directive 2014/59/EU);
- the potential losses stemming from a DGS intervention, on a net basis after potential recoveries from the bankruptcy estate of the failed institution.

Principle 2: calculation methods should be consistent with the build-up period envisaged in Directive 2014/49/EU

20. The build-up period for the target level envisaged in Article 10(2) of Directive 2014/49/EU will be no more than 10 years. It may be extended by additional 4 years if there is cumulative disbursement exceeding 0.8% of covered deposits. Within that time horizon, contributions should be spread out as evenly as possible over time until the target level is reached, but with due account of the phase of the business cycle and the pro-cyclical impact that contributions may have on the financial position of member institutions.

21. In any event, Directive 2014/49/EU does not prevent Member States from setting a higher target level or providing that a DGS may request member institutions to make *ex-ante* contributions even after the target level is reached in order to fulfil the objective mentioned in paragraph 17(c).

Principle 3: incentives provided by contributions to the DGSs should be aligned with prudential requirements

22. In order to mitigate moral hazard the incentives provided by the DGS contribution scheme should be compatible with prudential requirements (i.e. capital and liquidity requirements reflecting the risk of the member institution).

23. In particular, if calculation methods are developed and calibrated using statistical and econometric tools, the outcome of the methodology regarding the riskiness of member institutions should be consistent with the prudential requirements applicable to the institutions.

Principle 4: calculation methods should take into account specific characteristics of the banking sector, and should be compatible with the regulatory regime, and accounting and reporting practices in the Member State where the DGS is established

24. Calculation methods should be appropriate for the structure of the banking sector in a Member State. Therefore, DGSs established in Member States with a large number of heterogeneous institutions should develop more sophisticated calculation methods, applying

¹¹ Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms, J L 173, 12.6.2014, p. 190–348.

an appropriately large number of risk classes (or a sliding scale approach) in order to properly differentiate institutions according to their risk profile. DGSs established in Member States with a more homogenous banking sector should use simpler calculation methods. In any case, the risk indicators selected for the calculation method should enable the DGS to adequately capture differences in the risk profile of the institutions while taking due account of their business model.

Principle 5: the rules for calculating contributions should be objective and transparent

25. Risk-based contribution systems should be objective and ensure that deposit taking institutions with similar characteristics (in particular in terms of risk, systemic importance and business model) are categorised similarly.
26. DGS contribution schemes should be transparent, understandable and well explained. As a minimum, the basis and criteria used to calculate contributions should be transparent to member institutions. Transparency will help the member institutions understand the purpose of applying risk-based contributions and will make the scheme predictable for them.

Principle 6: the required data for the calculation of contributions should not lead to excessive additional reporting requirements

27. For the purpose of calculating contributions DGSs should, as far as possible, make use of information already available to them or requested from member institutions by competent authorities as part of their reporting obligations. A balance should be struck between requiring information necessary for the calculation of contributions and avoiding making unduly burdensome requests for information from the member institutions.
28. The DGSs should only require data that is not already reported on a regular basis if such information is needed for determining the risk that member institutions pose to the DGS.
29. In cases where the DGS does not gather information directly from member institutions but relies on the information provided by the competent authority, either statutory provisions or formal arrangements should be in place so that the information required for administering the contributions is collected and transmitted on a timely basis.

Principle 7: confidential information should be protected

30. DGSs should keep confidential the information used for calculating contributions which is not otherwise publicly disclosed. However, the DGSs should disclose to the public at least the description of the calculation method and the parameters of the calculation formula, including risk indicators but not necessarily their respective weights. In contrast, the results of the risk classification and its components for a particular member institution should be disclosed to that institution and not to the public.

Principle 8: calculation methods should be consistent with relevant historical data

31. Where the DGS has access to the relevant historical data of financial institutions it should use that data when calibrating and re-calibrating the parameters of the calculation methods. For this purpose historical data may include: (i) data about institutions' failures and events where an institution has been likely to fail but its failure has been avoided by actions of public authorities, or other events when risks posed by the member institutions to the DGS have materialised; and (ii) data about recovery rates of the DGS from such events.
32. Appropriate corrections to the calculation methods should be made in cases where regulatory or institutional changes have occurred (for example, a change in the minimum levels of regulatory capital requirements).
33. In advance of the 2017 review of these guidelines, competent authorities should compare the results obtained in applying calculation methods with their risk assessment performed under the SREP. This comparison should be made in a holistic manner (for example, using samples). The competent authorities should inform the EBA of the holistic outcome of this comparison and the discrepancies observed.

Part III - Mandatory elements of the calculation methods

34. The essential elements for each calculation method of risk-based contributions to DGSs should encompass: (i) the calculation formula; (ii) thresholds for aggregate risk weights; (iii) risk categories and core risk indicators. These elements are described in the following paragraphs.

Element 1. Calculation formula

35. Annual contributions to a DGS by individual member institutions should be calculated using the formula provided below.

$$C_i = CR \times ARW_i \times CD_i \times \mu$$

Where:

C_i	=	Annual contribution from member institution 'i'
CR	=	Contribution rate (identical for all member institutions in a given year)
ARW_i	=	Aggregate risk weight for member institution 'i'
CD_i	=	Covered deposits for member institution 'i'
μ	=	Adjustment coefficient (identical for all institutions in a given year)

(a) Contribution rate (CR)

36. The contribution rate is the percentage rate that should be paid by a member institution with an aggregate risk weight (ARW) that equals 100% (i.e. assuming no risk differentiation) in order to reach the annual target level. During the initial period, the calibration of the contribution rate should ensure that the target level is reached and that the annual contributions are spread out as evenly as possible over time.

37. The annual target level should be established, at a minimum, by dividing the amount of financial means that the DGS still needs to collect in order to meet the target level, by the remaining build-up period (expressed in years) for reaching the target level. This formula is, however, without prejudice to the discretion left to Member States to foresee that DGSs continue collecting *ex-ante* contributions even after reaching the target level.
38. In line with the fourth subparagraph of Article 10(2) of Directive 2014/49/EU, when establishing the annual target level, the DGS or designated authority must also take into account the phase of the business cycle and the pro-cyclical impact that contributions may have on the financial position of member institutions. The cyclical adjustment achieved via an increased or decreased annual target level should be established so as to avoid collecting excessive contributions during economic downturns, and to allow for a faster build-up of the DGS fund in economic upturns. The cyclical adjustment should take into account the risk analysis undertaken by the relevant designated macroprudential authorities and reflect current economic conditions as well as medium-term perspectives, as persistent economic difficulties may not justify low contributions indefinitely. Competent authorities that have approved an own risk-based method pursuant to Article 13(2) of Directive 2014/49/EC may require an amendment of the calculation method to properly reflect developments in the business cycle that have occurred since the initial approval of the method. The cyclical adjustment may also take into account the expected evolution in the covered deposits base.
39. The contribution rate should be established by the DGS on a yearly basis by dividing the annual target level by the sum of covered deposits of all its member institutions.
40. Where, subsequently to a call for contributions, data related to some institutions would require an update (for example, in order to correct accounting errors) the DGS should be able to postpone the adjustment to the next call for contributions.

Box 1 – Example: Effect of changes in the amount of covered deposits (CD) on the target level, annual target level and contribution rate (CR)

The following table presents the evolution of amounts of covered deposits over four consecutive years for all member institutions affiliated to a particular DGS. It shows corresponding target levels for DGS funds calculated on the basis of the current amount of covered deposits.

Year	Covered deposits (CD)(million EUR)	Target level (CD × 0.8%)(million EUR)
Year 20X1	1,000,000	8,000
Year 20X2	1,200,000	9,600
Year 20X3	1,300,000	10,400
Year 20X4	1,100,000	8,800

For each year, calculation of the annual target level and contribution rate (CR) should be conducted as described below, under the following assumptions:

- in Year 20X1 the DGS starts collecting *ex-ante* contributions from its member institutions with the aim of reaching the target level within 10 years;

- the contributions need to be spread out over 10 years as evenly as possible; and
- each year, contributions collected by the DGS equal to the annual target level established for that year.

Year 20X1

Annual target level₁ = 1/10 × Target level₁ = 1/10 × EUR 8,000 = EUR 800

CR₁ = Annual target level₁/CD₁ = EUR 800/EUR 1,000,000 = 0.00080 = 0.080%

At the end of year 20X1 the funds available to the DGS amount to EUR 800.

Year 20X2

Annual target level₂ = 1/9 × (Target level₂ – Funds already available in the DGS) =
= 1/9 × (EUR 9,600 – EUR 800) = EUR 8,800/9 = EUR 978

CR₂ = Annual target level₂/CD₂ = EUR 978/EUR 1,200,000 = 0.00081 = 0.081%

At the end of year 20X2 the funds available to the DGS amount to EUR 1,778 (= EUR 800 + EUR 978)

Year 20X3

Annual target level₃ = 1/8 × (Target level₃ – Funds already available in the DGS) =
= 1/8 × (EUR 10,400 – EUR 1,778) = EUR 8,622/8 = EUR 1,078

CR₃ = Annual target level₃/CD₃ = EUR 1,078/EUR 1,300,000 = 0.00083 = 0.083%

At the end of year 20X3 the funds available to the DGS amount to EUR 2,856 (= EUR 1,778 + EUR 1,078)

Year 20X4

Annual target level₄ = 1/7 × (Target level₄ – Funds already available in the DGS) =
= 1/7 × (EUR 8,800 – EUR 2,856) = EUR 5,944/7 = EUR 849

CR₄ = Annual target level₄/CD₄ = EUR 849/EUR 1,100,000 = 0.00077 = 0.077%

At the end of year 20X4 the funds available to the DGS amount to EUR 3,705 (= EUR 2,856 + EUR 849)

(b) Aggregate risk weight (ARW)

41. The aggregate risk weight for a member institution 'i' (ARW_i) should be assigned on the basis of the aggregate risk score for that institution (ARS_i).
42. The ARS_i is calculated by summing up all individual indicators' risk scores adjusted for appropriate indicator weights. Two different methods for calculating the ARS_i and assigning the ARW_i to the member institution on the basis on its ARS_i are the 'bucket' method and the 'sliding scale' method, laid down in more detail in Annex 1. The DGSs should choose the calculation method after taking into consideration the characteristics of the national banking sector, and the degree of heterogeneity among institutions.

(c) Adjustment coefficient (μ)

43. According to Article 10(2) of Directive 2014/49/EU, the available financial means of a DGS must at least reach the target level specified in Directive 2014/49/EU within a 10-year period. In line with the principle laid down in paragraph 20, these contributions should be spread out as evenly as possible over time until the target level is reached, but with due account of the phase of the business cycle and the pro-cyclical impact of contributions on the institutions' financial position.

44. If the sum of annual contributions from all member institutions is based only on the CD_i , the ARW_i and the fixed contribution rate (CR), the amount of contributions in a given year might be higher or lower than the annual target level established for that year. In order to remedy this discrepancy, an adjustment coefficient (μ) should be used. The coefficient should adjust the amount of total contributions (C) so as to reach the annual target level where otherwise the total contributions would be too high or too low.

Box 2 – Example of application of the calculation formula

For illustration purposes, calculations in this example are carried out for a Member State A in year 2X01. There are only three credit institutions and one DGS in that Member State and the total amount of deposits covered by the DGS is EUR 1,500,000. It is assumed that year 2X01 is the first year when the DGS in Member State A starts collecting *ex-ante* contributions from deposit-taking institutions in order to reach a target level of 0.8% of covered deposits in 10 years (i.e. by year 2X11). Therefore, in line with the requirement to spread contributions as evenly as possible, the annual target level, representing total annual contributions (C) from all institutions in Member State A in year 2X01, should be approximately 1/10 of the target level. The contribution rate (CR) in this case amounts to 0.0008 ($CR = 1/10 \times 0.8\%$). The total annual contributions for year 2X01 should be calculated as follows: $C = \text{EUR } 1,500,000 \times (0.0008) = \text{EUR } 1,200$.

The table below shows the breakdown of the total covered deposits and the respective risk-unadjusted contributions by the institutions in Member State A in year 2X01.

Risk-unadjusted contributions in Member State A in year 2X01

Institution	Covered deposits (EUR)	Risk-unadjusted contributions (EUR)
Institution 1	200,000	160 (= 200,000 × 0.0008)
Institution 2	400,000	320 (= 400,000 × 0.0008)
Institution 3	900,000	720 (= 900,000 × 0.0008)
Total	1,500,000	1,200 (= 1,500,000 × 0.0008)

The method for calculating risk-based contributions adopted in Member State A relies on four different risk classes, with different aggregate risk weights (ARW) assigned to each risk class as follows: 75% for the institution with the lowest risk profile, 100% for institutions with the average risk profile, 120% for risky institutions, and 150% for the most risky institutions.

The following formula is used to calculate annual contributions for individual institutions 'i':

$$C_i = CR \times ARW_i \times CD_i \times \mu$$

Scenario 1: relatively high-risk institutions in year 2X01

Under Scenario 1, the ARW_i for institutions 1, 2, and 3 are 75%, 150% and 120%, respectively. After applying only the risk-adjusting factor based on the ARW, the amount of total annual contributions from all institutions in Member State A is EUR 1,464, which is higher than the planned total annual contribution level (EUR 1,200), as illustrated in the table below.

Risk-adjusted contributions in Member State A in year 2X01 under Scenario 1

Institution	CD_i (EUR)	ARW_i	Risk-adjusted contributions (EUR)
Institution 1	200,000	75%	120 (= 200,000 × 0.0008 × 0.75)
Institution 2	400,000	150%	480 (= 400,000 × 0.0008 × 1.50)
Institution 3	900,000	120%	864 (= 900,000 × 0.0008 × 1.20)
Total	1,500,000		1,464

Therefore, an adjustment coefficient μ should be used to ensure that the total annual contributions (i.e. the sum of all individual contributions) would equal 1/10 of the target level. In this case, the adjustment coefficient to be applied for all institutions can be calculated as $\mu_1 = \text{EUR } 1,200 / \text{EUR } 1,464 = 0.82$. The estimates for the risk-adjusted contributions after the application of the adjustment coefficient μ_1 are presented in the table below.

Corrected risk-adjusted contributions in Member State A in year 2X01 under scenario 1

Institution	CD_i (EUR)	ARW_i	Risk-adjusted contributions (EUR)	Adjustment coefficient μ_i	Final risk-adjusted contributions (EUR)
Institution 1	200,000	75%	120	0.82	98 (= 120 × 0.82)
Institution 2	400,000	150%	480	0.82	394 (= 480 × 0.82)
Institution 3	900,000	120%	864	0.82	708 (= 864 × 0.82)
Total	1,500,000		1,464		1,200

Scenario 2: relatively low-risk institutions in year 2X01

Under Scenario 2, the ARW_i for institutions 1, 2, and 3 are 75%, 120% and 75%, respectively. When only the risk-adjusting factor (ARW) is applied, the total annual contribution from all institutions in the Member State A is EUR 1,044 and it is lower than the planned total annual contribution level of EUR 1,200.

Risk-adjusted contributions in Member State A in year 2X01 under scenario 2

Institution	CD_i (EUR)	ARW_i	Risk-adjusted contributions (EUR)
Institution 1	200,000	75%	120 (= 200,000 × 0.0008 × 0.75)
Institution 2	400,000	120%	384 (= 400,000 × 0.0008 × 1.20)

Institution 3	900,000	75%	540 (= 900,000 × 0.0008 × 0.75)
Total	1,500,000		1,044

The adjustment coefficient μ is applied so that the total annual contribution equals 1/10 of the target level. Under this scenario, the adjustment coefficient to be applied for all institutions can be calculated as $\mu_2 = \text{EUR } 1,200 / \text{EUR } 1,044 = 1.15$. As the sum of the risk-adjusted contributions is lower than the annual target level, the adjustment coefficient is greater than 1.

Corrected risk-adjusted contributions in Member State A in year 2X01 under scenario 2

Institution	CD _i (EUR)	ARW _i	Risk-adjusted contributions (EUR)	Adjustment coefficient μ_i	Final risk-adjusted contributions (EUR)
Institution 1	200,000	75%	120	1.15	138 (= 120 × 1.15)
Institution 2	400,000	120%	384	1.15	442 (= 384 × 1.15)
Institution 3	900,000	75%	540	1.15	620 (= 540 × 1.15)
Total	1,500,000		1,044		1,200

Scenario 3: annual target level adjusted to reflect macroprudential environment

Under Scenario 3, the ARW_i for institutions 1, 2, and 3 are 75%, 150% and 120%, respectively. The financial market in Member State A is experiencing volatility which has led to an increase in credit losses for institutions, not only in a specific segment but throughout the banking system. It is decided to lower the annual target level in order to avoid spreading contagion to the rest of the DGS members. It is decided that in year 2X01 the annual target level will be 75% of the 1/10 of the overall target level and so will be EUR 900 (EUR 1,200 × 0.75). Therefore, the contribution rate in this case amounts to 0.0006 (CR = (1/10 × 0.75) × 0.8%).

Risk-adjusted contributions in Member State A in year 2X01 under scenario 3

Institution	CD _i (EUR)	ARW _i	Risk-adjusted contributions (EUR)
Institution 1	200,000	75%	90 (= 200,000 × 0.0006 × 0.75)
Institution 2	400,000	150%	360 (= 400,000 × 0.0006 × 1.50)
Institution 3	900,000	120%	648 (= 900,000 × 0.0006 × 1.20)
Total	1,500,000		1,098

Adjustment coefficient μ is applied to ensure that the total annual contribution equals 75% of the 1/10 of the target level. Under this scenario, the adjustment coefficient to be applied for all institutions can be calculated as $\mu_3 = \text{EUR } 900 / \text{EUR } 1,098 = 0.82$. The estimates for the risk-adjusted contributions after the application of the adjustment coefficient μ_3 are presented in the table below.

Corrected risk-adjusted contributions in Member State A in year 2X01 under scenario 3

Institution	CD _i (EUR)	ARW _i	Risk-adjusted contributions (EUR)	Adjustment coefficient μ_i	Final risk-adjusted contributions (EUR)

Institution 1	200,000	75%	90	0.82	74 (= 90 × 0.82)
Institution 2	400,000	150%	360	0.82	295 (= 360 × 0.82)
Institution 3	900,000	120%	648	0.82	531 (= 648 × 0.82)
Total	1,500,000		1,098		900

The adjustment coefficient μ can be determined after all member institutions are categorised into risk classes and are assigned aggregate risk weights (reflecting their risk profile). If upon performing calculations by the DGS, some institutions would update the data used for risk classification (for example, to correct accounting errors from the previous reporting periods), the DGS should be able to postpone the adjustment until the next call for contributions. In effect, this will mean that, for example where an institution contributed too little because of using incorrect data, its next contribution will include the missing amount from the previous year (year 1) and the correct amount for the current year (year 2). In this scenario, in year 1 all the other institutions would have contributed more than they should have and their contributions in year 2 will be adjusted to account for the overpayment in year 1.

Element 2. Thresholds for aggregate risk weights (ARW)

45. In order to help mitigate moral hazard the ARWs should reflect the differences in risk incurred by different member institutions. Where the calculation method uses risk classes with different ARWs assigned to them (the ‘bucket’ method), it should set specific values of ARW applicable to each risk class. Where the calculation method follows the ‘sliding scale’ approach instead of a fixed number of risk classes, the upper and lower limits of ARWs should be set.
46. The lowest ARW should range between 50% and 75% and the highest ARW between 150% and 200%. A wider interval could be set upon justification that the interval limited to 50%-200% does not sufficiently reflect the differences in business models and risk profiles of member institutions, and would create moral hazard by artificially grouping together member institutions with very different risk profiles.
47. The DGS should strive to map the ARW to the aggregate risk scores (ARS) in such a way that it is possible for member institutions to be assigned to the lowest and highest ARW, and for the various risk classes to be populated. In particular, the DGS should avoid calibrating the model in such a way that almost all member institutions, despite having significantly different risk profiles, would be assigned to only one risk class (for example, the risk class for institutions with an average risk profile). However, this does not imply that in each year the DGS should necessarily use the full interval and assign institutions to the ARW corresponding to the lowest and the highest points of the interval.

Element 3. Risk categories and core risk indicators

Categories of risk indicators

48. The calculation of the aggregate risk weight (ARW) for an individual member institution should be based on a set of risk indicators from each of the following risk categories:

- a. Capital
- b. Liquidity and funding
- c. Asset quality
- d. Business model and management
- e. Potential losses for the DGS

49. Within each category, the calculation method should include the core risk indicators specified in Table 1. As an exception, competent authorities may exclude or allow the DGS to exclude, with regard to specific types of institutions, a core indicator upon justification that this indicator is unavailable because of the legal characteristics or supervisory regime of such institutions.

50. Where competent authorities or the DGS remove a core risk indicator for a specific type of institution, they should strive to use the most appropriate proxy for the removed indicator. They should ensure that the risks posed by the institution to the system are reflected in other indicators used. They should also take into account the need for a level playing field with other institutions for which the excluded indicator is available.

51. Risk categories and core indicators are described in Table 1 below. The core risk indicators are also described in more detail in Annex 2.

Table 1. Risk categories and core risk indicators

Risk category	Description of the risk categories and core risk indicators
A. Likelihood of failure	
1. Capital	<p>Capital indicators reflect the level of loss-absorbing capacity of the institution. Higher amounts of capital held by the institution indicate that it has a better ability to absorb losses internally (mitigating the risks arising from the institution's high-risk profile), thus decreasing its likelihood of failure. Therefore, institutions with higher values of capital indicators should contribute less to the DGS.</p> <p>Core indicators:</p> <ul style="list-style-type: none"> - Leverage ratio¹², and - Capital coverage ratio or common equity tier 1 ratio (CET1)

¹² Tier 1 capital/Total assets ratio should be used until a definition of a leverage ratio determined according to Regulation (EU) No 575/2013 is fully operational.

2. Liquidity and funding	<p>The liquidity and funding indicators measure the institution's ability to meet its short- and long-term obligations as they come due without adversely affecting its financial condition. Low liquidity levels indicate the risk that the institution may be unable to meet its current and future, expected or unexpected, cash-flow obligations and collateral needs.</p> <p>Core indicators:</p> <ul style="list-style-type: none"> - liquidity coverage ratio¹³ (LCR), and - net stable funding ratio¹⁴ (NSFR)
3. Asset quality	<p>Asset quality indicators demonstrate the extent to which the institution is likely to experience credit losses. Large credit losses may cause financial problems that increase the likelihood of failure of the institution. For instance, a high non-performing loan ratio (NPL) indicates that the institution is more likely to incur substantial losses and consequently require a DGS intervention; therefore, this justifies higher contributions to the DGSs.</p> <p>Core indicator:</p> <ul style="list-style-type: none"> - non-performing loans ratio (NPL)
4. Business model and management	<p>This risk category takes into account the risk related to the institution's current business model and strategic plans, and reflects the quality of the institution's internal governance and internal controls.</p> <p>Business model indicators can, for instance, include indicators related to profitability, balance sheet development and exposure concentration:</p> <ul style="list-style-type: none"> - Profitability indicators provide information on the ability of the member institution to generate profits. Low profitability or losses incurred by the institution indicate that it may face financial problems that could lead to its failure. However, high and unsustainable profits may also indicate elevated risk. In order to avoid point-in-time measurements, the profitability indicators should be calculated as average values over a period of at least 2 years. This will mitigate pro-cyclical effects and better reflect the sustainability of the income sources. For institutions which have restrictions on their level of profitability due to provisions under national law or in their statutes, this indicator may be set aside or calibrated in relation to the institution's peer group that has similar restrictions. - Balance sheet development indicators can provide information on potential excessive growth in total assets, certain portfolios or segments. These indicators may also include the relative measure of risk-weighted assets to total assets. - Concentration indicators can provide information on excessive sectoral or geographical concentrations of institution's exposures. <p>Other potential types of risk indicators in this category include: indicators measuring economic efficiency or sensitivity to market risk, or market-based</p>

¹³ If available, a national definition of the liquidity ratio, such as Liquid assets/Total assets should be used until the Regulation (EU) No 575/2013 measures are fully operational.

¹⁴ The NSFR ratio should be applied once its definition as determined in Regulation (EU) No 575/2013 is fully operational.

	<p>indicators.</p> <p>The management indicators introduce qualitative factors into the risk classification of the institutions in order to reflect the quality of their internal governance arrangements. In particular, qualitative indicators can be based on off-site and on-site inspections performed by the DGSs; on special questionnaires designed for this purpose by the DGSs and/or on the comprehensive assessment of the institutions' internal governance reflected in the SREP.</p> <p>Core indicators:</p> <ul style="list-style-type: none"> - Risk-weighted assets/Total assets, and - Return on assets (RoA)
B. Potential losses for the DGS	
5. Potential losses for the DGS	<p>This risk category reflects the risk of losses for the DGS if a member institution fails. The extent to which the institution's assets are encumbered¹⁵ will have a particular impact as encumbrance will reduce the prospect of the DGS recovering the pay-out amount from the institution's bankruptcy estate.</p> <p>Core indicator:</p> <ul style="list-style-type: none"> - Unencumbered assets / Covered deposits

Additional risk indicators

52. In addition to the core risk indicators, DGSs may include additional risk indicators that are relevant for determining the risk profile of member institutions.

53. The additional risk indicators should be classified into appropriate risk categories according to Table 1. Only in cases where additional indicators do not fall into the description of any other risk category, should they be classified into the 'Business model and management risk' category.

54. Each DGS should define its own set of risk indicators in order to reflect the differences in risk profiles of its member institutions. Annex 3 provides a list of examples of additional quantitative and qualitative risk indicators with a detailed description.

Weights for risk indicators and categories

55. The sum of weights assigned to all risk indicators in the method for calculating contributions to DGSs should be equal to 100%.

¹⁵ Definition of encumbered assets for the purpose of the EBA guidelines on disclosure of encumbered and unencumbered assets is determined in the following way: 'an asset should be treated as encumbered if it has been pledged or if it is subject to any form of arrangement to secure, collateralise or credit-enhance any on-balance-sheet or off-balance-sheet transaction from which it cannot be freely withdrawn (for instance, to be pledged for funding purposes)'.

56. When assigning weights to particular risk indicators, the minimum weights for the risk categories and core risk indicators, as specified in Table 2, should be preserved.

Table 2. Minimum weights for risk categories and core risk indicators

Risk categories and core risk indicators	Minimum weights
1. Capital	18%
1.1. Leverage ratio	9%
1.2. Capital coverage ratio or CET1 ratio	9%
2. Liquidity and funding	18%
2.1. LCR	9%
2.2. NSFR	9%
3. Asset quality	13%
3.1 NPL ratio	13%
4. Business model and management	13%
4.1. RWA / Total assets	6.5%
4.2. RoA	6.5%
5. Potential losses for the DGS	13%
5.1. Unencumbered assets / Covered deposits	13%
Sum	75%

57. The sum of the minimum weights specified in these guidelines for risk categories and core risk indicators amounts to 75% of total weights. DGSs should distribute the remaining 25% among the risk categories laid down in Table 1.

58. The DGS should allocate the flexible 25% of weights by distributing them among the additional risk indicators and/or by increasing the minimum weights of the core risk indicators provided that the following conditions are met:

- the minimum weights of risk categories and core risk indicators are preserved;
- where only core risk indicators are used in the calculation method, the flexible 25% weight should be allocated among the risk categories in the following way: 'Capital' - 24%; 'Liquidity and funding' - 24%; 'Asset quality' - 18%; 'Business model and management' - 17%; and 'Potential use of DGS funds' - 17%;
- the weight of any additional indicator, or the increase in the weight of a core risk indicator, should not be higher than 15%, except for additional qualitative risk indicators representing the outcome of a comprehensive assessment of the member institution's risk profile and management (included in the risk category 'Business model and management') and cases specified in paragraph [▼C1 59](#). [▼O](#)

59. Where a core indicator is not used, the minimum weight of the remaining core indicator from the same risk category should amount to the full minimum weight for this risk category.

60. Where there is only one core indicator in a category, and this core indicator is not used, it should be replaced by a proxy with the same minimum weight as the core indicator.

Box 3 – Example of using the flexibility in assigning 25% weights among risk categories and core risk indicators

Scenario 1

All core risk indicators are used and no additional indicators are included in the calculation method. The flexible 25% of weights is distributed among core risk indicators in such a way that the proportions between minimum weights for risk categories and core risk indicators are retained (for example, additional weight for capital amounts to $6\% = 25\% \times (18\%/75\%)$).

Risk indicator	Minimum weights (1)	Flexible weights (2)	Final weights (1) + (2)
1. Capital	18%	+ 6%	24%
1.1. Leverage ratio	9%	+ 3%	12%
1.2. Capital coverage ratio OR CET1 ratio	9%	+ 3%	12%
2. Liquidity and funding	18%	+ 6%	24%
2.1. LCR	9%	+ 3%	12%
2.2. NSFR	9%	+ 3%	12%
3. Asset quality	13%	+ 5%	18%
3.1 NPL ratio	13%	+ 5%	18%
4. Business model and management	13%	+ 4%	17%
4.1. RWA / Total assets	6.5%	+ 2%	8.5%
4.2. RoA	6.5%	+ 2%	8.5%
5. Potential losses for the DGS	13%	+ 4%	17%
5.1. Unencumbered assets / Covered deposits	13%	+ 4%	17%
Sum	75%	+ 25%	100%

Scenario 2

One of the core risk indicators is not available (NSFR) during a transitional period and no additional risk indicators are included in the calculation method. The minimum weight assigned to the LCR ratio would amount to 18% - the total weight for the risk category 'Liquidity and funding' (9% + 9%) increased by further 6% up to 24% - the maximum weight for this category as per paragraph 57. The other weights would be distributed among the risk indicators in a similar way as under Scenario 1.

Risk indicator	Minimum weights (1)	Flexible weights (2)	Final weights (1) + (2)
1. Capital	18%	+ 6%	24%
1.1. Leverage ratio	9%	+ 3%	12%
1.2. Capital coverage ratio OR CET1 ratio	9%	+ 3%	12%
2. Liquidity and funding	18%	+ 6%	24%
2.1. LCR	9%	+ (6% + 9%)	24%

2.2. NSFR	9%	- 9%	N/A
3. Asset quality	13%	+ 5%	18%
3.1 NPL ratio	13%	+ 5%	18%
4. Business model and management	13%	+ 4%	17%
4.1. RWA / Total assets	6.5%	+ 2%	8.5%
4.2. RoA	6.5%	+ 2%	8.5%
5. Potential losses for the DGS	13%	+ 4%	17%
5.1. Unencumbered assets / Covered deposits	13%	+ 4%	17%
Sum	75%	+ 25%	100%

Scenario 3

All core risk indicators are used in the calculation method but the DGS would like to increase (by 5%) the weight of one core indicator ('Leverage ratio') because it considers this indicator to be highly effective in predicting distress among its member institutions. Moreover, the DGS intends to include two additional risk indicators (one with a weight of 3% in the risk category 'Asset quality', and the second one with a weight of 5% in the risk category 'Business model and management'). The remaining 12% of flexible weights will be distributed among all the other core risk indicators in such a way that preserves the relationship of the minimum weights assigned to these indicators.

Risk indicator	Minimum weights (1)	Flexible weights (2)		Final weights (1) + (2)
1. Capital	18%	+ 5%	+3%	26%
1.1. Leverage ratio	9%	+ 5%		14%
1.2. Capital coverage ratio or CET1 ratio	9%		+ 3%	12%
2. Liquidity and funding	18%		+ 3%	21%
2.1. LCR	9%		+ 1.5%	10.5%
2.2. NSFR	9%		+ 1.5%	10.5%
3. Asset quality	13%	+ 3%	+ 2%	18%
3.1 NPL ratio	13%		+ 2%	15%
3.2. Additional risk indicator (1)	N/A	+ 3%		3%
4. Business model and management	13%	+ 5%	+ 2%	20%
4.1. RWA / Total assets	6.5%		+ 1%	7.5%
4.2. RoA	6.5%		+ 1%	7.5%
4.3. Additional risk indicator (2)	N/A	+ 5%		5%
5. Potential losses for the DGS	13%		+ 2%	15%
5.1. Unencumbered assets / Covered deposits	13%		+ 2%	15%
Sum	75%	+ 13%	+ 12%	100%

Scenario 4

All core risk indicators are used in the calculation method but the DGS would also like to include additional five indicators (one indicator in risk categories 'Capital', 'Asset quality' and 'Potential losses for the DGS', and two indicators in risk category 'Business model and management'). The weights assigned to risk indicators are presented in the last column in the table below.

Risk indicator	Minimum weights	Flexible weights	Final weights
1. Capital	18%	+ 5%	23%
1.1. Leverage ratio	9%		9%
1.2. Capital coverage ratio or CET1 ratio	9%		9%
1.3. Additional risk indicator (1)	N/A	+ 5%	5%
2. Liquidity and funding	18%		18%
2.1. LCR	9%		9%
2.2. NSFR	9%		9%
3. Asset quality	13%	+ 5%	18%
3.1 NPL ratio	13%		13%
3.2. Additional risk indicator (2)	N/A	+ 5%	5%
4. Business model and management	13%	+ 10%	23%
4.1. RWA / Total assets	6.5%		6.5%
4.2. RoA	6.5%		6.5%
4.3. Additional risk indicator (3)	N/A	+ 5%	5%
4.4. Additional risk indicator (4)	N/A	+ 5%	5%
5. Potential losses for the DGS	13%	+ 5%	18%
5.1. Unencumbered assets / Covered deposits	13%		13%
5.3. Additional risk indicator (5)	N/A	+ 5%	5%
Sum	75%	+ 25%	100%

Requirements for risk indicators

61. The risk indicators used in the calculation method should capture a sufficiently wide spectrum of sources of risk.
62. The selection of the risk indicators should be aligned with the best practices in risk management and with the existing prudential requirements.
63. For each member institution the values of risk indicators should be calculated on a solo basis.
64. However, the value of risk indicators should be calculated at a consolidated level where the Member State exercises the option given in Article 13(1) of Directive 2014/49/EU to allow the central body and all credit institutions permanently affiliated to the central body, as referred

to in Article 10(1) of Regulation (EU) 575/2013, to be subject as a whole to the risk weight determined for the central body and its affiliated institutions on a consolidated basis.

65. Where a member institution has received a waiver from meeting capital and/or liquidity requirements on a solo basis pursuant to Articles 7, 8 or 21 of Regulation (EU) 575/2013, the corresponding capital/liquidity indicators should be calculated at the consolidated or semi-consolidated level.

66. To calculate values of risk indicators for a given period the DGS should use:

- the value at the end of the period (for example, net income as reported on 31 December for the annual income statement) for positions from the income statement;
- the average value between the beginning and the end of the reporting period (for example, average value of total assets from 1 January to 31 December in a given year) for positions from the balance sheet.

Part IV - Optional elements of the calculation methods

(i) *Minimum contribution*

67. According to Article 13(1) of Directive 2014/49/EU, Member States may decide that credit institutions should pay a minimum contribution irrespective of the amount of their covered deposits.

68. Where a Member State exercises the option to have member institutions paying a minimum contribution (MC) irrespective of the amount of their covered deposits, the following modified calculation formula should be used to calculate the individual contributions:

- a. In cases where the minimum contributions are paid by each member institution in addition to its risk-based contributions:

$$C_i = MC + (CR \times ARW_i \times CD_i \times \mu)$$

- b. In cases where the minimum contributions are paid only by those member institutions for which their annual risk-based contributions calculated according to the standard formula (as specified in paragraph 35) would be lower than the amount of the minimum contribution:

$$C_i = \text{Max} \{MC ; (CR \times ARW_i \times CD_i \times \mu)\}$$

Where:

C_i	=	Annual contribution for a member institution 'i'
MC	=	Minimum contribution
CR	=	Contribution rate (applied for all member institutions in a given year)
ARW_i	=	Aggregate risk weight for a member institution 'i'
CD_i	=	Covered deposits for a member institution 'i'
μ	=	Adjustment coefficient (applied for all institutions in a given year).

69. When setting a minimum contribution, competent authorities and designated authorities should take due care of the risk of moral hazard inherent in setting fixed contributions and the risk of creating barriers to entering the market for banking services.

(ii) *Reduced contributions for members of an IPS that is separate from the DGS*

70. According to Article 13(1) of Directive 2014/49/EU, Member States may decide that members of an IPS pay lower contributions to the DGS. As reflected in recital 12 of Directive 2014/49/EU, this option has been introduced in order to recognise ‘schemes which protect the credit institution itself and which, in particular, ensure its liquidity and solvency’.

71. Where a Member State avails itself of this option, the aggregated risk weight (ARW) of an institution which is also a member of a separate IPS may be reduced to take into account the additional safeguard provided by the IPS. In this case, the reduction should be implemented by including an additional risk indicator, related to IPS membership, in the risk category ‘Business model and management’ of the calculation method. The IPS membership indicator should reflect the additional solvency and liquidity protection provided by the scheme to the member, taking into account whether the amount of the IPS *ex-ante* funds, which are available without delay for both recapitalisation and liquidity funding purposes in order to support the affected entity if there are problems, is sufficiently large to allow for credible and effective support of that entity. Additional funding commitments callable upon request and backed by liquidity reserves held by IPS members in IPS central institutions may also be taken into account. The level of the IPS funding should be examined in relation to the total assets of the IPS member institution.

(iii) *Use of DGS funds for failure prevention*

72. Where a Member State allows a DGS, including an IPS officially recognised as a DGS, to use the available financial means for alternative measures in order to prevent the failure of a credit institution, this DGS may include an additional factor in its own risk-based calculation based on the risk-weighted assets of the institution. In this case, the formula is as follows:

$$C_i = CR \times ARW_i \times (CD_i + A) \times \mu$$

Where A is the amount of risk-weighted assets in institution ‘i’.

73. Before the implementation of this additional factor by a DGS, competent authorities should assess, as part of the approval procedure referred to in paragraph 14, whether its introduction is commensurate with the risk of having to intervene in order to prevent the failure of institutions beyond the protection of covered deposits.

(iv) *Low-risk sectors*

74. According to Article 13(1) of Directive 2014/49/EU, Member States may provide for lower contributions from institutions belonging to low-risk sectors which are regulated under national law.

75. If a Member State has, through regulation, imposed restrictions on institutions within a certain subsector in a manner that substantially reduces the likelihood of failure, DGS contributions from these institutions may be proportionately reduced on the basis of adequate motivation.
76. Reductions in contributions from institutions belonging to low-risk sectors should be allowed based on empirical evidence indicating that within these low-risk sectors the occurrence of failure has been consistently lower than in other sectors. Agreement on reduced contributions should be made by the competent authority in cooperation with the designated authority, after consulting the DGS.
77. Such reductions should be implemented in the calculation method by including an additional risk indicator into the risk category 'Business model and management'.

Title III - Final Provisions and Implementation

78. Competent authorities and designated authorities should implement these guidelines by incorporating them in their supervisory processes and procedures by the end of 2015. From that date on, contributions to be raised by DGSs should comply with these guidelines.
79. However, where, according to the third subparagraph of Article 20(1) of Directive 2014/49/EU, appropriate authorities establish that a DGS is not yet in a position to comply with Article 13 of Directive 2014/49/EU by 3 July 2015, these guidelines should be implemented by the new date set by these authorities, and in any case no later than by 31 May 2016.

Annex 1 - Methods to calculate Aggregate Risk Weights (ARW) and determine risk classes

(i) The 'bucket' method

Individual risk indicators

1. In the 'bucket' method, a fixed number of buckets should be defined for each risk indicator by setting upper and lower boundaries for each bucket. The number of buckets for each risk indicator should be at least two. The buckets should reflect different levels of risk posed by the member institutions (for example, high, medium, low risk) assessed on the basis of particular indicators.
2. There should be an individual risk score (IRS) assigned to each bucket. If the value of the risk indicator is higher (lower) than the upper (lower) boundary of the highest (lowest) bucket, it should be assigned the IRS of the highest (lowest) bucket.
3. The buckets' boundaries should be determined either on a relative or absolute basis, where:
 - when using the relative basis, the IRSs of member institutions depends on their relative risk position vis-à-vis other institutions; in this case, institutions are distributed evenly between risk buckets, meaning that institutions with similar risk profiles may end up in different buckets;
 - when using the absolute basis, the buckets' boundaries are determined to reflect the riskiness of a specific indicator; in this case, all institutions may end up in the same bucket if they all have a similar level of riskiness.
4. For each risk indicator the boundaries of buckets determined on the absolute basis should ensure there is sufficient and meaningful differentiation of member institutions. The calibration of the boundaries should take into account, where available, the regulatory requirements applicable to the member institutions and historical data on the indicator's values. The DGS should avoid calibrating the boundaries in such a way that all member institutions, despite representing significant differences in the area measured by a particular risk indicator, would be classified into the same bucket.
5. For each risk indicator, the IRSs assigned to buckets should range from 0 to 100, where 0 indicates the lowest risk and 100 the highest risk.

Box 4 - Examples of bucket-scoring by type of risk indicator

The following examples illustrate how the individual risk scores (IRSs), from a range of 0 to 100, should be assigned to various buckets for different types of risk indicators.

Scenario 1

Five buckets; a risk indicator for which higher values indicate higher risk (for example, NPL ratio)

Buckets	Boundaries	IRS
Bucket 1	< 2%	0
Bucket 2	≤ 2 – 3.5% <	25
Bucket 3	≤ 3.5 – 5% <	50
Bucket 4	≤ 5 - 7% <	75
Bucket 5	≥ 7%	100

Scenario 2

Three buckets; a risk indicator for which higher values indicate higher risk (for example, NPL ratio)

Buckets	Boundaries	IRS
Bucket 1	< 2%	0
Bucket 2	≤ 2 - 7% >	50
Bucket 3	≥ 7%	100

Scenario 3

Four buckets; a risk indicator for which higher values indicate lower risk (for example, liquidity ratio)

Buckets	Boundaries	IRS
Bucket 1	> 60%	0
Bucket 2	< 40 – 60% ≤	33
Bucket 3	< 20 - 40% ≤	66
Bucket 4	≤ 20%	100

Scenario 4

Two buckets; a risk indicator with binary values that can be either neutral or negative to the risk profile assessment (for example, Excessive balance sheet growth ratio)

Buckets	Boundaries	IRS
Bucket 1	< 15%	50
Bucket 2	≥ 15%	100

Scenario 5

Two buckets; risk indicator with binary values that can be either positive or neutral to the risk profile assessment (for example, institution belonging to the low-risk sector regulated under the national law should be regarded as less risky, whereas the institutions not belonging to the low-risk sectors should be considered as posing an average risk).

Buckets	Boundaries	IRS
Bucket 1	Institution belonging to a low-risk sector	0
Bucket 2	Institution not belonging to the low-risk sector	50

Scenario 6

Three buckets; risk indicator with non-standard interpretation of results (for example, RoA) where both negative values (losses) as well as the excessive values of the indicator may indicate that the institution has a high risk profile.

Buckets	Boundaries	IRS
Bucket 1	$\leq 0 - 2\% \leq$	0
Bucket 2	$< 2 - 15\% \leq$	50
Bucket 3	$< 0\% \text{ or } > 15\%$	100

Please note that in examples under Scenarios 1-4 the mapping of the individual risk scores (IRS) to buckets is linear (for example, 0 – 33 – 66 – 100). This is not the general requirement and for some risk indicators applying a non-symmetrical allocation of the IRS within the range of 0-100 (for example, 0 – 25 – 50 – 90 – 100) may be warranted in order to properly reflect the cases where the institution becomes significantly more risky when the indicator's value reaches a specific threshold.

Aggregate risk score (ARS)

- Each IRS for an institution 'i' should be multiplied by an indicator weight (IW_i) assigned to a specific risk indicator. It should then be summed up to an aggregate risk score (ARS_i) using an arithmetic average.
- The weights assigned to each indicator 'i' (IW_i) should be the same for all institutions and calibrated by using supervisory assessment and/or historical data on failures of institutions.
- The structure of the described model could be as follows:

Risk indicator	Indicator weight	Buckets	Individual risk scores (IRS)
Indicator A_1	IW_1	A_1	IRS_{A_1}
		B_1	IRS_{B_1}
	
		M_1	IRS_{M_1}
Indicator A_2	IW_2	A_2	IRS_{A_2}
		B_2	IRS_{B_2}
	
		M_2	IRS_{M_2}
...
Indicator A_n	IW_n	A_n	IRS_{A_n}
		B_n	IRS_{B_n}
	
		M_n	IRS_{M_n}

9. The aggregate risk score (ARS_i) for institution 'i' should be calculated for each institution according to the following formula:

$$ARS_i = \sum_{j=1}^n IW_j * IRS_j$$

Where:

$$\sum_{j=1}^n IW_j = 100\%, \text{ and}$$

$$IRS_j = IRS_{X_j}, \text{ for some } X \text{ in } \{A, B, \dots, M\} \text{ (i.e. the bucket corresponding to indicator } A_j)$$

Aggregate risk weight (ARW)

10. Every ARS_i should have a corresponding aggregate risk weight (ARW_i), which should be used to calculate the contribution of an individual member institution (C_i) according to the contribution formula specified in paragraph 35 of these guidelines.

Risk classes

11. The ARW may be calculated via a bucketing method, where ranges for the ARS are defined in such a way that they correspond to a particular risk class and ARW (see table below).

Risk Class	Aggregate risk score (ARS) boundaries		Aggregate risk weight (ARW)
1	a_1	$\leq a_2$	ARW_1
2	a_3	$\leq a_4$	ARW_2
3	a_5	$\leq a_6$	ARW_3
...

12. The number of risk classes should be proportionate to the number and variety of DGS member institutions. However, the number of risk classes should be four as a minimum. There should be at least one risk class for member institutions with an average risk, at least one risk class for low-risk members, and at least two risk classes for high-risk institutions.

Box 5 - Example – application of aggregate risk weights to institutions

The following example illustrates how the aggregate risk weight (ARW) might be assigned to the member institutions on the basis of the values of the aggregate risk scores and assuming that there are four risk classes with risk weights (75%, 100%, 125% and 150%) assigned to each class in the following manner:

Risk class	Boundaries for ARS	ARW
1	< 40	75%
2	$\leq 40 - 55 <$	100%
3	$\leq 55 - 70 <$	125%
4	≥ 70	150%

For instance, if the ARS for a given institution is 62 this institution should be classified into the third risk class and the ARW of 125% should be assigned to it.

(ii) The 'sliding scale' method

Individual risk indicators

13. In this method, for each institution, an Individual Risk Score (IRS_j) will be calculated for each risk indicator A_j . Each indicator should have an upper and a lower boundary, a_j and b_j defined. When a higher indicator value indicates a riskier institution and the indicator is above the upper boundary, the IRS_j will be a fixed value of 100. Similarly, when the indicator's value is below the lower boundary, the IRS_j will be 0. Analogously, if a lower indicator indicates a riskier situation and the indicator is below the lower boundary, the IRS_j will be a fixed value of 100. Correspondingly, when the indicator value is above the upper boundary, the IRS_j will be 0.
14. If the indicator's value is between the defined boundaries, the IRS_j will lie between 0 and 100. Each IRS_j has a pre-determined risk-weight which is used to calculate the aggregate risk score for each institution 'i' (ARS_i). By design, in this model the ARS_i will always be a value between 0 and 100.
15. For each risk indicator a determination of the upper and lower boundaries a_j and b_j should ensure there is sufficient and meaningful differentiation of member institutions. The calibration of these boundaries should take into account, where available, the regulatory requirements applicable to the member institutions and historical data on the indicator's values. The DGS should avoid calibrating the upper and lower boundaries in such a way that all member institutions, despite significant differences in the area measured by a particular risk indicator, will persistently fall either below the lower or above the upper boundary.
16. The structure of the described model could be as follows:

Risk indicator	Indicator weight	Upper boundary	Lower boundary	Individual risk scores (IRS)
Indicator A_1	IW_1	a_1	b_1	IRS_1
Indicator A_2	IW_2	a_2	b_2	IRS_2
...
Indicator A_n	IW_n	a_n	b_n	IRS_n

Where:

$$\sum_{j=1}^n IW_j = 100\%.$$

17. For each risk indicator A_j , its value will correspond to an output score (IRS_j), defined as follows:

$$IRS_j = \begin{cases} 100 & \text{if } A_j > a_j \\ 0 & \text{if } A_j < b_j \\ \frac{A_j - b_j}{a_j - b_j} \times 100, & \text{if } b_j \leq A_j \leq a_j \end{cases}, \text{ where } j = 1 \dots n$$

or

$$IRS_j = \begin{cases} 0 & \text{if } A_j > a_j \\ 100 & \text{if } A_j < b_j \\ \frac{a_j - A_j}{a_j - b_j} \times 100, & \text{if } b_j \leq A_j \leq a_j \end{cases}, \text{ where } j = 1 \dots n$$

Aggregate risk score (ARS)

18. The aggregate risk score (ARS_i) for an institution 'i' will be calculated as $ARS_i = \sum_{j=1}^n IW_j * IRS_j$.

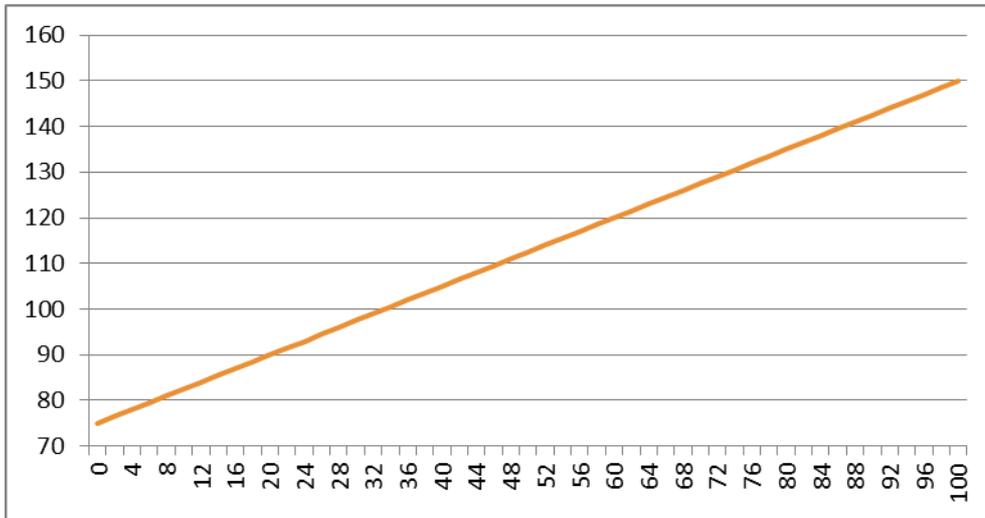
Aggregate risk weight (ARW)

19. The ARS_i might be translated into an aggregate risk weight (ARW_i) by using a 'sliding scale' method based either on a linear or exponential formula.

20. The following linear formula can be used to translate ARS_i into the ARW_i :

$$ARW_i = \beta + (\alpha - \beta) * ARS_i / 100$$

In this method, the ARW_i associated to the ARS_i is linear, with an upper and lower boundary, α and β , for example, 150% and 75%, respectively. For a given institution where the ARS_i is 100 (the riskiest score), the corresponding risk weight will be α , the highest risk weight. Similarly, if the ARS_i is 0, the corresponding risk weight will be β , the lowest risk weight. The graph below illustrates the linear behaviour of the suggested formula.



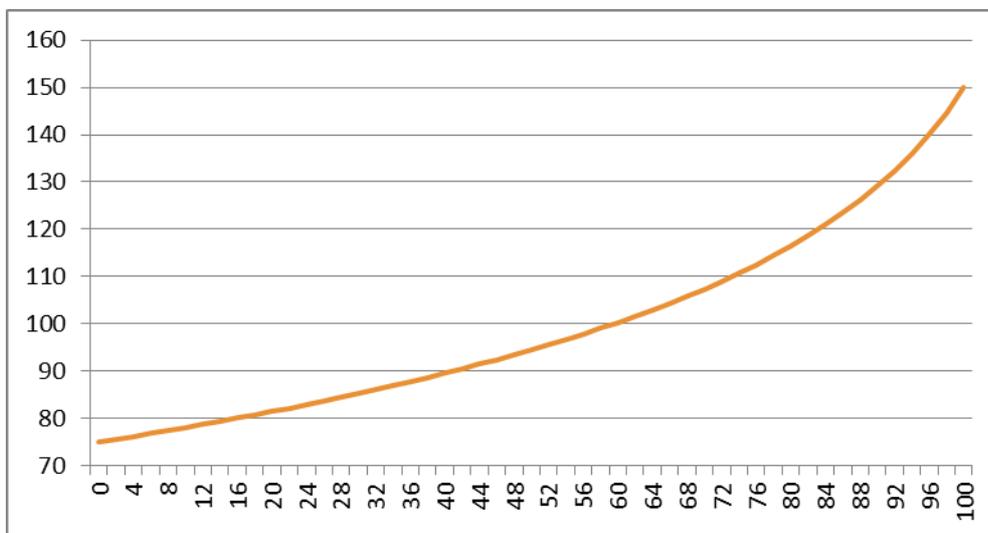
21. The following exponential formula can be used to translate ARS_i into the ARW_i

✓C1

$$ARW_i = \beta + (\alpha - \beta) * (1 - \log_{10}(10 - 9 * (\frac{ARS_i}{100})))$$

✓O

In this method, the **ARW_i** associated to the **ARS_i** is exponential, with an upper and lower boundary, **α** and **β**, for example, 150% and 75%. For a given institution where the **ARS_i** is 100 (the riskiest score), the corresponding risk weight will be **α**, the highest risk weight. Similarly, if the **ARS_i** is 0, the corresponding risk weight will be **β**, the lowest risk weight. The graph below illustrates the non-linear behaviour of the suggested formula so that there is a higher increase in the contribution when an institution lies on the higher end of the risk scale. This formula presents a stronger incentive for institutions to have a lower risk score, when compared to a linear method. The calculation method may also include non-linear methods other than the logarithmic one presented in this annex.



Annex 2 - Description of core risk indicators

Indicator name	Formula / Description	Comments	Sign
1. Capital			
1.1. Leverage ratio	$\frac{\text{Tier 1 Capital}}{\text{Total Assets}}$ <p>This formula should be replaced by the leverage ratio as defined in Regulation (EU) No 575/2013 once it becomes fully operational.</p>	The aim of the leverage ratio is to measure the capital position regardless of the risk weighting of the assets.	(-) A higher value indicates lower risk
1.2. Capital coverage ratio	$\frac{\text{Actual CET1 ratio}}{\text{Required CET1 ratio}}$ <p>or</p> $\frac{\text{Actual own funds}}{\text{Required own funds}}$	Capital coverage ratio measures the actual capital held by a member institution in excess of the total capital requirements applicable to that institution, including additional own funds required pursuant to Article 104(1)(a) of Directive 2013/36/EU.	(-) A higher value indicates lower risk
1.3. Common Equity Tier 1 ratio (CET1 ratio)	$\frac{\text{Common Equity Tier 1 Capital}}{\text{Risk Weighted Assets}}$ <p>Where: 'risk-weighted assets' means the total risk exposure amount as defined in Article 92(3) of Regulation (EU) No 575/2013.</p>	The CET1 ratio expresses the amount of capital held by an institution. A high ratio indicates good loss-absorption capacity which can mitigate risks from the institution's business activities.	(-) A higher value indicates better risk mitigation
2. Liquidity and funding			
2.1. Liquidity Coverage Ratio (LCR)	LCR ratio as defined in Regulation (EU) No 575/2013 once it becomes fully operational.	The aim of the LCR ratio is to measure an institution's ability to meet its short-term debt obligations as they come due. The higher the ratio, the larger the safety margin to meet obligations and unforeseen liquidity shortfalls.	(-) A higher ratio indicates lower risk

2.2. Net stable funding ratio (NSFR)	NSFR ratio as defined in Regulation (EU) No 575/2013 once it becomes fully operational.	The aim of the NSFR ratio is to measure an institution's ability to match the maturity of its assets and liabilities. The higher the ratio, the better the maturity match and the lower the funding risk.	(-) A higher ratio indicates lower risk
2.3. Liquidity ratio (national definition)	<p><u>Liquid Assets</u> <u>Total Assets</u></p> <p>Where:</p> <p>'liquid assets' as defined in the national regulations for supervising credit institutions (to be replaced with the LCR ratio when in force).</p>	Transitional indicator. The aim of the liquidity ratio is to measure an institution's ability to meet its short term debt obligations as they become due. The higher the ratio, the larger the safety margin to meet obligations and unforeseen liquidity shortfalls.	(-) A higher value indicates lower risk
3. Asset quality			
3.1 Non-performing loans ratio (NPL ratio)	<p><u>Non Performing Loans</u> <u>Total Loans and Debt Instruments</u></p> <p>or alternatively, in cases where national accounting or reporting standards do not impose on institutions an obligation to report data on debt Instruments:</p> <p><u>Non Performing Loans</u> <u>Total Loans</u></p> <p>Where (in both cases): 'non-performing loans' as defined in the national regulations for the purpose of supervising credit institutions. 'Non-performing loans' should be reported gross of provisions.</p>	The NPL ratio gives an indication of the type of lending an institution engages in. A high degree of credit losses in the loan portfolio indicates lending to high-risk segments / customers.	(+) A higher value indicates higher risk
4. Business model and management			

4.1. Risk-weighted assets (RWA) / Total assets ratio	<p><u>Risk Weighted Assets</u> <u>Total Assets</u></p> <p>Where: 'risk-weighted assets' means the total risk exposure amount as defined in Article 92(3) of Regulation (EU) No 575/2013</p>	<p>The level of RWA gives an indication of the type of lending an institution engages in. A high ratio indicates that an institution engages in risky activities.</p> <p>For this ratio, the guidelines permit use of different calibration for institutions using advanced methods (for example, IRB) or standardised methods for calculating minimum own funds requirements.</p>	<p>(+) A higher value indicates higher risk</p>
4.2 Return on assets (RoA)	<p><u>Net Income</u> <u>Total Assets</u></p>	<p>RoA measures an institution's ability to generate profits. A business model which is able to generate high and stable returns indicates lower risk. However, unsustainably high levels of RoA also indicate higher risk. Institutions which have restrictions on their level of profitability due to provisions under national law or in their statutes, should not be disadvantaged by the calculation method.</p> <p>To avoid including one-off events and avoid pro-cyclicality in contributions, an average of at least 2 years should be used.</p>	<p>(+)/(-) Negative values indicate higher risk but too high values can also indicate high risk</p>
5. Potential losses for the DGS			
5.1. Unencumbered assets / covered deposits	<p><u>Total Assets – Encumbered Assets</u> <u>Covered Deposits</u></p> <p>Where: 'encumbered assets' is defined in the EBA guidelines on disclosure of encumbered and unencumbered assets</p>	<p>This ratio measures the degree of expected recoveries from the bankruptcy estate of the institution which was resolved or put into normal insolvency proceedings. An institution with a low ratio exposes the DGS to higher expected loss.</p>	<p>(-) A higher value indicates lower risk</p>

Annex 3 - Description of additional risk indicators

1. The following list of additional risk indicators is provided for illustration purposes only.
2. Where data on specific items used in the formulas presented below is not covered by the national financial or regulatory reporting templates, the DGS may use equivalent items from its national templates.

Indicator name	Formula / Description	Comments	Sign
3. Asset quality			
Level of forbearance	$\frac{\text{Exposures with forbearance measures}}{\text{Total corresponding instrument on the balance sheet}}$ <p>Where: 'exposures with forbearance measures' as defined in the EBA guidelines on supervisory reporting on forbearance and non-performing exposures</p>	This ratio measures the extent to which counterparties of the institution have been granted modification of terms and conditions of their loan contracts. The ratio gives information on the forbearance policy of the institution and it may be compared to the level of default itself. A high value of this ratio indicates known problems in the loan portfolio of the institutions or potential low quality of other assets.	(+) A higher value indicates higher risk
4. Business model and management			
Sector concentrations in loan portfolio	$\frac{\text{Exposures from the sector with the highest concentrations}}{\text{Total loan portfolio}}$	The aim of this indicator is to measure the risk of incurring substantial credit losses as a result of a downturn in a specific sector of the economy to which an institution is highly exposed.	(+) A higher value indicates higher risk
Large exposures	$\frac{\text{Large exposures}}{\text{Eligible capital}}$ <p>Where: 'large exposures' as defined in Regulation (EU) No 575/2013; and 'eligible capital' as defined in point 71 in Article 4(1) of Regulation (EU) No 575/2013</p>	The aim of this indicator is to measure the risk of incurring substantial credit losses as a result of the failure of an individual counterparty or group of connected counterparties.	(+) A higher value indicates higher risk

Excessive balance sheet growth ratio	$\frac{[\text{Total Assets in year T} - \text{Total Assets in year (T - 1)}]}{\text{Total Assets in year (T - 1)}}$	<p>This indicator measures the growth rate of the institution's balance sheet. Unsustainably high growth might indicate higher risk. Off-balance-sheet items and their growth should also be included. When setting thresholds for this indicator it is necessary to determine what level of growth is considered too risky. This should take due account of the growth of the economy in a given Member State or national banking sector. When using this indicator special rules should be defined for new institutions and for entities which have been involved in mergers and acquisitions over the last few years.</p> <p>To avoid including one-off events in calculating contributions, an average growth observed during the last 3 years should be used.</p>	<p>(+) Values exceeding a predefined level of excessive growth indicate higher risk</p>
Return on equity (RoE)	$\frac{\text{Net Profit}}{\text{Total Equity}}$	<p>This ratio measures institutions' ability to generate profits to shareholders from the capital these have invested in the institution. A business model which is able to generate high and stable returns indicates reduced likelihood of failure. However, unsustainably high levels of RoE also indicate higher risk. Some institutions may have restrictions on their level of profitability based on their ownership structure so they should not be disadvantaged by the calculation method.</p> <p>To avoid including one-off events and avoid pro-cyclicality in calculating contributions, an average of at least 2 years should be used.</p>	<p>(-)/(+) Negative values indicate higher risk. However, too high values can also indicate high risk</p>

Core earnings ratio	$\frac{\text{Core earnings}}{\text{Total loan portfolio}}$ <p>Where: 'core earnings' may be calculated as (interest income + fee and commission income + other operating income) - (interest expenses + fee and commission expenses + other operating expenses + administrative expenses + depreciation)</p>	<p>The core earnings ratio measures an institution's ability to generate profits from its core business lines. A business model which is able to generate high and stable earnings indicates reduced likelihood of failure.</p> <p>To avoid including one-off events and avoid pro-cyclicality in calculating contributions, an average of at least 2 years should be used.</p>	<p>(-) A higher value indicates lower risk</p>
Cost-to-income ratio	$\frac{\text{Operating costs}}{\text{Operating income}}$	<p>This ratio measures an institution's cost efficiency. An unusually high ratio may indicate that the institution's costs are out of control, especially if represented by the fixed costs (i.e. higher risk). A very low ratio may indicate that operating costs are too low for the institution to have the required risk and control functions in place (i.e. this also indicates higher risk).</p>	<p>(+)/(-) Values of the ratio that are too high indicate higher risk; however values that are too low may also indicate higher risk</p>
Off-balance-sheet liabilities / Total assets	$\frac{\text{Off balance sheet liabilities}}{\text{Total Assets}}$	<p>Large off-balance-sheet exposures indicate that an institution's exposure to risk may be larger than that reflected in their balance sheet.</p>	<p>(+) A higher value indicates higher risk</p>

Qualitative assessment of the quality of management and internal governance arrangements	<p>Depending on data availability and operational capacity of the DGS, the assessment of qualitative aspects of its member institutions may be based on the following sources of information:</p> <ul style="list-style-type: none"> - questionnaires designed by the DGSs to assess the quality of management and internal governance arrangements of its member institutions; accompanied by on-site and/or off-site inspections performed by the DGSs; - comprehensive assessment of institutions internal governance reflected in the SREP scores; - external ratings assigned to all member institutions by a recognised external credit assessment institution. 	<p>Good quality management and robust internal governance practices may mitigate risks faced by member institutions and reduce the likelihood of failure.</p> <p>Qualitative indicators are more forward looking than accounting ratios and they provide relevant information on the institution's risk management and risk mitigation techniques. In order to be used in the calculation method the qualitative indicators need to be available for all member institutions of the DGS. Moreover, the DGS should strive to ensure fair and objective treatment of its member institutions and that the qualitative assessment is based on pre-defined criteria. The DGS methodology for assessing the quality of management and internal governance arrangements should include a list of criteria that should be examined with regard to each member institution.</p>	<p>(+)/(-) Qualitative judgment can be both positive and negative</p>
IPS membership where the IPS is separate from the DGS	$\frac{\text{Available ex ante funds in the IPS}}{\text{Total assets of the individual IPS member}}$	<p>The IPS membership indicator measures the level of <i>ex-ante</i> funding of the IPS.</p> <p>IPS membership, other things being equal, should reduce the risk of the institution's failure because the scheme insures the entire liability side of the balance sheet for its members. However, in order for the IPS protection to be fully recognised it should fulfil additional conditions related to the level of its <i>ex-ante</i> funding. This indicative additional indicator maybe further refined to reflect, besides <i>ex-ante</i> funds, additional available funding commitments callable upon request and backed</p>	<p>(-) Membership in the IPS with a higher level of <i>ex-ante</i> funding indicates lower risk</p>

Systemic role in an IPS scheme officially recognised as a DGS	<p>The indicator can have two values:</p> <ul style="list-style-type: none"> (i) the institution has a systemic role in the IPS; or (ii) the institution does not have a systemic role in the IPS 	<p>The fact that an institution has a systemic role in the IPS, for example by providing other IPS members with critical functions, implies that its failure can have a negative impact on the viability of other IPS members. Therefore, the systemic member of the IPS should pay higher contributions to the DGS in order to reflect the additional risk it poses to the system.</p>	<p>(+)</p> <p>Only binary values are possible:</p> <ul style="list-style-type: none"> (i) indicates higher risk; (ii) does not indicate higher risk.
Low-risk sectors	<p>The indicator can have two values:</p> <ul style="list-style-type: none"> (i) the institution belongs to a low-risk sector regulated under national law; or (ii) the institution does not belong to a low-risk sector regulated under national law 	<p>This indicator allows the calculation method to reflect the fact that some institutions belong to low-risk sectors regulated under national law. The rationale is that such institutions should be regarded as less risky for the purpose of calculating contributions to DGSs.</p>	<p>(-)</p> <p>Only binary values are possible:</p> <ul style="list-style-type: none"> (i) indicates lower risk; (ii) indicates average risk.
5. Potential losses for the DGS			
Own funds and eligible liabilities held by institution in excess of MREL	$\left[\frac{\text{Own funds and eligible liabilities}}{\text{Total liabilities including own funds}} \right] - MREL$ <p>Where:</p> <p>‘own funds’ means the sum of tier 1 and tier 2 capital in accordance with the definition in point (118) of Article 4(1) of Regulation (EU) No 575/2013;</p> <p>‘eligible liabilities’ are the sum of liabilities referred to in point (71) of Article 2(1) of the BRRD;</p> <p>‘MREL’ means the minimum requirement for own funds and eligible liabilities as defined in Article 45(1) of the BRRD.</p>	<p>This indicator measures the loss absorbing capacity of the member institution. The higher the loss absorbing capacity of the institution, the lower the potential losses to the DGS.</p>	<p>(-)</p> <p>A higher value indicates lower risk</p>

Annex 4 - Steps to calculate annual contributions to the DGS

Upon collecting data from its member institutions, the DGS should take the following steps in order to calculate annual contributions of all its members.

Step	Step description	Relevant provisions from the guidelines
Step 1	Define the annual target level	Paragraph 37 of the guidelines
Step 2	Define the contribution rate (CR) applicable to all member institutions in a given year	Paragraphs 39 of the guidelines
Step 3	Calculate values of all risk indicators	Paragraphs 48-77 of the guidelines (requirements for indicators); Annex 2 and Annex 3 (formulas for indicators)
Step 4	Assign individual risk scores (IRs) to all risk indicators for each member institution	Paragraphs 1-5 and 13-17 of Annex 1
Step 5	Calculate the aggregate risk score (ARS) for each institution by summing up all its IRs (using an arithmetic average)	Paragraphs 41, 54-56 of the guidelines (requirements for weights of indicators); Paragraphs 6-9 and 18 of Annex 1
Step 6	Assign an aggregate risk weight (ARW) to each member institution (categorising the institution into a risk class) based on its ARS	Paragraphs 43-45 of the guidelines; Paragraphs 10-12, 19-21 of Annex 1
Step 7	Calculate unadjusted risk-based contributions for each member institution by multiplying the contribution rate (CR) by institution's covered deposits (CD) and its ARW	Paragraphs 35 of the guidelines
Step 8	Sum up the unadjusted risk-based contributions of all member institutions and determine the adjustment coefficient (μ)	Paragraphs 44 of the guidelines
Step 9	Apply the adjustment coefficient (μ) to all member institutions and calculate adjusted risk-based contributions	Paragraphs 44 of the guidelines

4. Accompanying documents

4.1 Impact Assessment

Introduction

Article 13(3) of Directive 2014/49/EU requires the EBA to develop guidelines to specify methods for calculating contributions to DGSs in accordance with paragraphs 1 and 2 of the same Article.

As per Article 16(2) of the EBA Regulation (Regulation (EU) No 1093/2010 of the European Parliament and of the Council), any guidelines developed by the EBA shall be accompanied by an analysis of 'the potential related costs and benefits'. This analysis should provide the reader with an overview of the findings as regards the problem identification, the options identified to remove the problem and their potential impacts.

This annex therefore presents an Impact Assessment (IA) with cost-benefit analysis of the provisions included in these guidelines.

Problem definition

Currently, in the majority of Member States the contributions of member institutions to DGSs are not risk-adjusted, i.e. institutions pay their contributions to DGS as a fixed percentage of deposits. It is reasonable to expect that the market is exposed to the following problems when the contributions to the DGS are not risk-adjusted:

- Competitive disadvantage for risk-averse institutions and unfair competition: risk-averse members of the DGS can be worse off if they are pooled in the DGS with institutions with high probability of default but their contributions are not differentiated according to the risk profile. Where the contributions are homogenous, the member institutions with low-risk profile subsidise the institutions with high-risk profile.
- Moral hazard and insufficient incentives for sound risk management: in the absence of risk-adjusted contributions the institutions may not have sufficient incentives to optimise their risk level *ex-ante*. Institutions under the DGS scheme may take high risk and increase their probability of default without bearing the marginal cost of additional risk, i.e. increasing their contributions to the scheme. Overall, this practice could make the entire banking system more vulnerable.

A second important issue that the guidelines aim to address is represented by variations across Member States in the application of practices in the DGS which cannot be justified by structural differences in national banking sectors, and may lead to:

- an uneven playing field where institutions of similar risk profile but located in different Member States are subject to unequal treatment if the DGS contributions are based on completely divergent calculation criteria.

Objectives

The guidelines firstly aim to establish a framework for calculating risk-based contributions to DGSs that would be used in all Member States. This framework should be based on risk indicators reflecting institutions' risk-profile and ensuring a fair treatment of institutions in calculating DGS contributions. In order to ensure there is objective risk assessment, the indicators should reflect a sufficiently wide spectrum of aspects of institutions' operations.

Secondly, the guidelines aim to ensure that the elements fundamental to the effective functioning of the DGS contribution schemes are consistent across Member States. Table 1 summarises the objectives of the guidelines.

Table 1 Objectives of the guidelines

Operational objectives	Specific objectives	General objectives
Ex-ante contributions to DGSs are calculated as a function of risk parameters.	Institutions fully internalise the cost associated with risk-taking.	Reduce moral hazard and promote fairness among institutions in calculating DGS contributions.
Common methods and criteria are set for risk-based contributions to DGSs.	Methods and criteria in the DGS contributions framework are consistent and comparable across Member States.	Create a level playing field and information symmetry across Member States.

Baseline scenario

There are ten Member States¹⁶ (DE, EL, FR, IT, LV, PL, PT, FI, NO¹⁷ and SE) where DGSs apply risk-based contributions¹⁸. In addition, some Member States (HU, RO) do not have a risk-based contribution system in place but they make slightly different use of risk-based information in the DGS framework. Therefore, in terms of transition to risk-based contributions, the guidelines are expected to have an impact on the majority of Member States.

The remainder of the section will focus on the current practices in Member States in relation to the technical options considered in the IA.

¹⁶ Member States throughout the IA refer to the Member States of the European Economic Area (EEA).

¹⁷ The system in Norway is based on RWA and covered deposits.

¹⁸ All data in this part of the IA is based on the following sources of information: European Commission, Joint Research Centre Unit, 'Risk-based contributions in EU Deposit Guarantee Schemes: current practices', June 2008; Calculating risk-based contributions for a DGS: Result of the EFDI Research Working group, June 2014; IADI General Guidance for Developing Differential Premium Systems, October 2011.

Categories, indicators and the weights of the indicators

Risk-based contributions are calculated on the basis of a single or several risk indicators (mostly quantitative) that aim to reflect the risk profile of each institution. The indicators that DGSs use in the calculation methods vary across Member States. While some Member States use single indicators (FI, NO, PT, SE), other Member States use several indicators (AT, DE, EL, FR, IT, NL¹⁹). Where multiple indicators are used, the number varies from 2 (EL) to 12 (DE²⁰). Table 2 presents a summary of the indicators used in Member States with risk-based contributions to DGSs.

Table 2 Indicators applied in Member States

Indicators	Member States
Capital indicators	DE, EL, FR, IT, NO, PT, SE
Liquidity indicators	DE, EL, FR, IT
Asset quality indicators	DE, IT
Income/profitability indicators	DE, IT
Qualitative indicators	DE, EL

Source: European Commission, Joint Research Centre Unit, 'Risk-based contributions in EU Deposit Guarantee Schemes: current practices', June 2008; Calculating risk-based contributions for a DGS: Result of the EFDI Research Working group, June 2014.

While the indicators used in Member States vary, the categories that the DGSs use are relatively homogenous. Most DGSs in Member States focus on the CAMELS²¹ approach. Accordingly, capital, liquidity, asset quality and profitability ratios are the core quantitative components utilised in most Member States. Qualitative elements are not used widely. Only two Member States (DE and EL) use qualitative indicators in addition to quantitative indicators.

In terms of weights of the indicators, current practices can be classified under three categories, including those which use: (i) differential weights determined by expert judgement and/or exact calibration (DE, IT, NL); (ii) equal weights for all risk categories (FR); and (iii) only one risk indicator with a weight of 100% (FI, PT, SE). For example, in Germany the methodology is based on common statistical procedures, such as discriminate analysis, used in order to determine the weights of the indicators. Table 3 indicates the risk categories/indicators with their respective weights in the calculation of risk-based contributions in Member States.

Table 3 Weights for risk categories/indicators used in Member States

¹⁹ NL planned to introduce the risk-based contribution system in 2015. The system will include several indicators.

²⁰ This is the statutory DGS for private banks.

²¹ C: capital adequacy, A: asset quality, M: management quality, E: earnings, L: liquidity, S: sensitivity to market risk.

Practice	Member State	Category/ Indicator	Weight	Notes
Differential weights determined by using expert judgement and/or by exact calibration	DE	Capital structure*	35%	DGS for cooperative banks
		Income structure*	50%	
		Risk structure*	15%	
		Qualitative indicators ²²	50%	The statutory DGS for private banks
	Quantitative indicators including:	4.91%		
	Capital adequacy*	10.45%		
	Asset quality*	4.55%		
	Earning/profitability*	14.54%		
	Liquidity*	6.65%		
	Sensitivity to market risk*	8.90%		
IT	Capital adequacy			Different weights for indicators with time-series data. The more recent the data are, the higher the weight they take
	Liquidity			
	Asset quality			
	Profitability ratio (x2)			
Equal weights for all risk indicators	FI	Capital adequacy ratio	100%	Single indicator
	FR	Solvency ratio	25%	
		Uncovered exposure ratio	25%	
		Maturity transformation ratio	25%	
		Operating ratio	25%	
	PT	Core tier 1 ratio	100%	Single indicator
SE	Capital adequacy ratio	100%	Single indicator	

*Risk category that includes different indicators.

Risk classification

The current practices across DGSs that apply risk-based contributions rely on two types of risk classification. While in some Member States (FI, NO, SE) a ‘sliding scale’ is used, some other Member States (DE, FR, IT, PT) operate a ‘bucket’ approach. The main difference between the two models is that the former applies continuous scale and the latter measures the risk of the institutions on a discrete scale.

Risk classes

Where the Member States use discrete scaling (for example, the ‘bucket’ approach) for the classification of risk, they set a number of risk classes under which the institutions are classified given their risk profiles. Currently, there are Member States (DE) that use a large number of risk classes while some other Member States (FR, IT, PT) set a smaller number of risk classes to identify the risk level of the institutions. As mentioned above, there are also Member States

²² Qualitative indicators are based on the external ratings with a focus on deposit taking behavior.

(FI, NO, SE) that use a sliding scale. Table 4 indicates the number of risk classes for a sub-sample of Member States.

Table 4 Number of risk classes used in a sub-sample of Member States

Risk classification	Member State	No. of risk classes
Discrete scale (i.e. bucket approach)	DE ²³	9
	FR, PT	5
	IT, NL	4
Continuous scale (i.e. sliding scale approach)	FI, NO, SE	N/A

Risk weights

The range for the risk weights assigned to risk classes falls between 60% and 350% and the core range of risk weights is between 75% and 150%.²⁴ Most Member States [BE, DE, FI, FR, IT, NL, NO, PT, SE] apply a narrow range of risk weights that may lead to cross-subsidisation relative to actual difference in risk between the most and the least risky institutions. In Germany, the DGS for cooperative banks applies a range of 80%-140% while the statutory DGS applies a range of 75%-200%. In Italy, the DGS additional risk factor ranges between -24% and +24%. In Sweden, where the DGS does not apply risk categories but a sliding scale, the floor is 6 and the cap is 14 basis points.

Technical options

This section provides an assessment of the options considered under a set of policy areas including:

- A. Specification of risk indicators
- B. Selection of risk categories and core risk indicators
- C. Weights of risk categories / indicators
- D. Risk classification
- E. Models for calculating contributions (calculation formula).

Under each sub-section technical options will be presented first, followed by a discussion of their potential advantages and disadvantages.

A. Specification of risk indicators

²³ This is the statutory DGS for private banks.

²⁴ Calculating risk-based contributions for a DGS: Result of the EFDI Research Working group, June 2014.

Option 1a: an exhaustive list of risk indicators

Option 1a is to include in the guidelines one calculation model with a set of indicators that all national DGSs have to comply with. This option would ensure the highest level of harmonisation. Under this option, the weights assigned to risk indicators would also be fixed and national DGSs would not be able to include any additional risk indicators into their calculation methods. This approach would ensure that exactly the same indicators and the same approach are used when calculating risk-based contributions to DGSs. Moreover, it may increase certainty among the member institutions about factors that will be taken into consideration for the purposes of DGS contributions. In addition, it would be easier for the national DGSs to implement the calculation model proposed in the guidelines as they would not be obliged to determine which indicators are the most relevant to reflect risk profiles of their member institutions. The main drawback of this approach is that risk-based contribution systems with an exhaustive list of core indicators may not accommodate the characteristics of the banking sectors that are peculiar to some Member States. This may result in calculation methodology that is inappropriate for certain banking sectors. This option may be too rigid to achieve the objectives of these guidelines.

Option 1b: a generic list of indicators

This option introduces no compulsory core risk indicators for calculating contributions but establishes general guidance for national DGSs on what has to be taken into consideration when developing the models. This option gives national DGSs full flexibility in choosing risk indicators and distributing weights among them. This option would help to ensure that the method for calculation of contributions duly takes into account specific characteristics of the national banking sectors and various business models. However, this option is expected to fail to address the problems related to an uneven playing field. Furthermore, it does not effectively achieve the objectives of harmonisation and fails to establish a framework where the DGSs across the Union follow common and consistent approach to calculating risk-based contributions. In addition, this approach would not guarantee that some indicators that are crucial for the calculation of risk-based contributions are given an appropriate importance in calculating the DGSs contributions.

Option 1c: a list of core risk indicators and rules for adding additional indicators

Under this option, the guidelines would outline core risk indicators and allow flexibility to add new indicators to the calculation method (within the pre-defined risk categories and complying with rules on assigning weights to risk indicators). This approach would ensure that the core indicators play a leading role in calculating DGS contributions and that member institutions in various Member States are treated in a similar way. At the same time, this option allows national DGSs to incorporate into the method additional risk indicators in order to better accommodate the characteristics of their national banking sectors. This option would ensure that fundamental indicators are taken into account, while leaving room for flexibility to address issues which are peculiar to some Member States only. This option seems to combine the advantages of the two options discussed above.

Taking into account the argumentation presented above, Option 1c has been selected as the preferred option.

B. Selection of risk categories and core risk indicators

The selection of risk categories and core risk indicators is based mostly on the analysis of the baseline scenario and Member States' responses to the survey accompanying the EBA test exercise on three different test systems for calculating risk-based contributions, which was conducted from February to April 2014.

The three test systems were developed by the EBA with a view to allowing Member States to assess how different combinations of necessary elements of calculation methods could be applied in their national banking sectors. Each of the three test systems used a fixed set of indicators (4, 6 and 9 respectively) and proposed calibration of thresholds for these indicators. The test systems were accompanied by an Excel application (enabling Member States to calculate aggregate risk weights for the sample of institutions) and with a survey on the results of calculations (where respondents were asked to express their views on various elements of the calculation systems - including the choice of risk indicators).

Approximately 80% of all respondents to the survey (in total 24 Member States²⁵ responded) expressed specific views on at least one risk indicator included in the test exercise. The remaining respondents provided more general comments on indicators. Some of the indicators proposed in the test exercise received wide support from respondents (for example, NPL ratio, Liquid assets / Total assets) whereas dissenting views were expressed on other indicators (for example, Core earnings, Balance sheet growth ratio). The respondents also suggested adding to the calculation method some specific indicators (for example, LCR, NSFR) which could not be included in the test exercise due to lack of data; these ratios are based on new regulatory requirements and reporting obligations were not yet in place when the test exercise took place. Table 5 presents a summary of the findings from the answers to the survey.

²⁵ AT, CY, CZ, DE, DK, EE, EL, ES, FI, FR, HU, HR, IE, LU, LT, LV, MT, NL, NO, PL, PT, SE, SI, UK

Table 5 Overview of responses to the EBA Survey on DGS contributions

Risk categories	Core indicators proposed in the guidelines	Indicators used in DGS test exercise	Feedback from Member States to the test exercise	Conclusions
Capital	CET1/RWA or capital coverage ratio	Tier 1 / RWA*	Only one respondent stated that capital adequacy is not a strong risk indicator.	CET 1, as a new and more conservative capital adequacy measure (in comparison to the Tier 1 ratio), was included in the guidelines among core risk indicators. National DGSs can replace the CET1 ratio with the capital coverage ratio.
	Leverage ratio	N/A	Suggestions to include this indicator in the calculation method.	This ratio was included in the core indicators.
Liquidity and funding	Liquid assets / Total assets	Liquid assets / Total assets*	No concerns regarding the usefulness of the indicator. Differences in national definitions of liquid assets.	This indicator will be used on a temporary basis until fully harmonised EU definition of LCR is implemented.
	LCR	N/A	Suggestions to include this indicator in the calculation method.	This ratio was included in the core indicators.
	NSFR	N/A	Suggestions to include this indicator in the calculation method.	This ratio was included in the core indicators.
Asset quality	NPL ratio	NPL ratio*	No concerns regarding the usefulness of the indicator. However, some comments received indicating lack of comparability in defining NPLs across the Union.	This ratio was included in the core indicators.
Business model and management	RWA / Total assets	RWA / Total assets†	The vast majority of comments on this indicator recommended its use. One respondent pointed out unequal treatment of institutions using the IRB and STA approach for credit risk.	This ratio was included in the core indicators, with a possibility to use different calibration for institutions using advanced methods (for example, IRB) or standardised methods for calculating minimum own funds requirements.
	RoA	Core earnings*	Some respondents expressed critical views on Core earning indicator as inappropriate for various business models.	Core earnings ratio included only in the examples of additional risk indicators. Instead, the RoA ratio was included in the list of core indicators because this measure of profitability can be applied more universally among institutions.

Risk categories	Core indicators proposed in the guidelines	Indicators used in DGS test exercise	Feedback from Member States to the test exercise	Conclusions
	N/A	Interest expenses / Interest bearing liabilities [†]	Divided opinions among respondents on the usefulness of this risk indicator.	This ratio was not included in the guidelines.
	N/A	Total loans / Total deposits [¶]	Divided opinions among respondents on the usefulness of this risk indicator.	This ratio was not included in the guidelines.
	N/A	Balance sheet growth [¶]	Divided opinions among respondents on the usefulness of this risk indicator. Only excessive growth should be considered as risky.	This ratio was included only in the examples of additional risk indicators.
	N/A	Qualitative indicators based on supervisory / external rating [¶]	The majority of comments supported the use of qualitative indicators reflecting the management. Some concerns were expressed about the confidentiality of supervisory information and the availability of external ratings.	The indicator was included in the examples of additional indicators. It is not obligatory and can be used in the calculation methods subject to data availability and lack of confidentiality problems. External ratings can be used as the additional indicator if they are available for all member institutions of the particular DGS.
Potential use of DGS funds	Unencumbered assets / Covered deposits	N/A	Many respondents recommended the use asset encumbrance ratio since it directly influences the potential loss of the DGS. One respondent recommended to use an enhanced version of this ratio – i.e. Unencumbered assets / Covered deposits because it better reflects which part of the pay-out (for covered deposits) the DGS can recover from the unencumbered assets of the institution.	The ratio was included in the core indicators.

Notes: Result of the survey accompanying the EBA test exercise on DGSs.

*Indicator is used in all three test systems;

†Indicator is used in systems two and three;

¶ Indicator is used in system three only.

The baseline scenario and the results of the survey show that there is a common set of indicators (which may be grouped into risk categories) that the national DGSs currently use or consider necessary to use in the future for calculating DGS contributions. In addition, the text of Directive 2014/49/EU provides that the calculation methods ‘may take into account [...] risk indicators including capital adequacy, asset quality and liquidity’. On the other hand, the European framework of (SREP, which is equivalent to the CAMELS approach, envisages that the comprehensive assessment of the institutions’ risk profile should cover the following four areas: capital adequacy, liquidity and funding, business model and strategy, and internal governance and institution-wide controls. The risk categories were selected in order to ensure that a sufficiently wide spectrum of institution’s activities is taken into account when assessing the risk profile and that all crucial areas are reflected in the calculation method. At the same time, it was necessary to include only these risk categories that would be applicable to institutions of various business models across the Union. Finally, apart from the risk categories reflecting the likelihood of institution failure, it was important to include also an additional risk category which reflects the potential loss of the DGS. Taking into account all the considerations mentioned above, Table 6 presents the risk categories and core risk indicators included in the guidelines.

Table 6 Risk categories and core indicators proposed in the guidelines

Risk category	Core risk indicators
Capital	- Capital coverage ratio or CET 1 - Leverage ratio
Liquidity and funding	- LCR - NSFR
Asset quality	- NPL ratio
Business model and management	- RWA / Total assets - Return on assets (RoA)
Potential losses for the DGS	- Unencumbered assets / Covered deposits

C. Weights for risk categories / indicators

Option 3a: equal weights for all risk indicators or categories

The choice of applying equal weights to all risk indicators / categories would be a simple approach from an operational viewpoint. However, this would translate into assigning the same relative importance to all risk indicators, while their significance *vis-à-vis* the risk posed to the DGS could vary.

Option 3b: different weights for risk categories / indicators

In contrast to equal weights, differentiated weights could better reflect the varying significance of various risk indicators or categories. On the other hand, the assessment of this option depends on how to determine that differentiation (i.e. either by expert judgement, exact calibration based on historical data or a combination of these two approaches).

Option 3b.i: different weights determined by exact calibration only

This option may increase the predictive power of a model for calculating DGS contributions and ensure that the weights assigned to particular risk indicators represent on the probability that the institution will fail. Nevertheless, in order to conduct necessary statistical analysis it is essential to have historical data about failures of institutions and the values of the risk indicators from previous reporting periods. The number of failed institutions in a given period may not be large enough for the results of this analysis to be statistically significant. Moreover, with regard to a few risk indicators proposed in the draft guidelines the historical data is not available because they reflect new regulatory requirements which have not been measured or reported in the past. In any case, the results of the statistical analysis would need to be verified by applying expert judgement.

Option 3b.ii: different weights determined by expert judgment only

This option would be the easiest to apply and there would not be problems related to data availability. However, three drawbacks with this option might be: (i) lack of transparency in the decision-making under which some institutions may benefit from a particular weight structure in terms of lower contributions with respect to their risk levels; (ii) the autonomy of the DGS may be influenced by the competent authorities; and (iii) where full flexibility in specifying weights of risk categories / indicators is left to national DGSs, the degree of harmonisation may be relatively low and the option may fail to address the identified problems.

Option 3b.iii: different weights determined by expert judgement with the possibility of revising the results if the statistical data becomes available

An alternative option is to specify weights for risk categories by applying expert judgement and, at a later stage, when reviewing the EBA guidelines, revise the proposed weights on the basis of the statistical analysis of historical data. The proposed weights should be based on the supervisory judgement and will be re-calibrated by the EBA by 3 July 2017 as part of the first review of the guidelines on DGSs contributions, according to Article 13(3) of Directive 2014/49/EU, and at least every 5 years after this date. This option is expected to be a feasible and effective way of achieving the objectives of the guidelines; it is thus selected as the preferred option.

D. Risk classification

In order to calculate the aggregate risk weight (ARW) for each institution the aggregate risk score (ARS) shall be assigned for the purpose of classifying institutions according to their risk profiles. Two different approaches are set within the guidelines, which ought to be selected by each DGS having taken into consideration the characteristics of the national banking sector. The DGSs should also choose the appropriate calculation method after having considered all the relevant advantages and disadvantages associated with them.

Option 4a: discrete scale (the 'bucket' approach)

The first method considered for purposes of risk classification is to use a discrete scale (i.e. the ‘bucket’ approach). This method would have the advantage of setting incentives for banks to move between buckets in order to be classified in a more favourable way. However, this would carry the disadvantage of potential significant cliff-edge effects, with relatively similar institutions treated in a very different way. In addition, the calibration of buckets may be a difficult task.

Option 4b: continuous scale (the ‘sliding scale’ approach)

The second method considered for purposes of risk classification is to use a continuous scale (which would not require setting buckets). Such a method would carry the advantage of allowing for extensive differentiation among institutions, which is particularly helpful if there is a high degree of heterogeneity among institutions. This advantage is partially counterbalanced by the complexity of calibrating this method for a large number of institutions.

Taking into account the merits of the ‘bucket’ approach and the ‘sliding scale’ approach, depending on characteristics of the national banking sector, the preferred option is to include in the draft guidelines the flexibility to choose either of these approaches.

Calibration of boundaries used for risk indicators

Both in the ‘bucket’ approach and the ‘sliding scale’ approach, the calibration of boundaries established for mapping values of risk indicators to IRS has a significant influence on the risk differentiation achieved by the calculation method. Therefore, it is crucial to establish these boundaries by setting thresholds at levels which appropriately reflect differences between risk profiles of member institutions. Wrong calibration of boundaries may result in assigning the same IRS to member institutions, despite significant discrepancies in their risk profiles, and consequently hinder the risk differentiation offered by this calculation method.

Given existing differences in banking business models and structures across Member States, as well as various accounting standards, at this stage it does not appear feasible to establish in the guidelines specific thresholds for boundaries for each core risk indicator. Harmonised boundaries set at EU level could have very different consequences across national banking sectors, or even DGSs, with very different memberships (for example, sectors with a lot of small banks, or DGSs with fewer members). Therefore, at this stage, instead of proposing a harmonised Union-wide calibration of thresholds for the core risk indicators, the guidelines introduce a general requirement for DGSs or competent authorities to define boundaries for risk indicators to ensure meaningful differentiation of DGS members depending on their riskiness, taking into account the regulatory requirements applicable to the member institutions and historical data on indicators’ values. The guidelines also stipulate that DGSs should avoid calibrating the boundaries in such a way that all member institutions, despite representing significant differences in the area measured by a particular risk indicator, would be classified into the same bucket (if using the ‘bucket’ approach) or fall outside the lower/upper boundary (if using the ‘sliding scale’ approach).

E. Models for calculating contributions (calculation formula)

The objective of the assessment is to find an optimal model to calculate risk-based contributions to DGSs. This sub-section offers two models and illustrates their features with examples.

Assumptions for the illustration

For the purpose of the illustration the calculations are carried out for a Member State A in year 2X01 and the amount of total covered deposits under DGS is EUR 1.5 million.

It is assumed that year 2X01 is the first year when the DGS in Member State A starts collecting *ex-ante* contributions from deposit taking institutions in order to reach a target level of 0.8% of covered deposits in 10 years (i.e. by year 2X11). Therefore, in line with the requirement to spread contributions as evenly as possible, the annual target level, representing annual total contributions (C) from all institutions in the Member State A in year 2X01, should reach approximately 1/10 of the target level, which should be calculated as follows:

$$TC = \text{EUR } 1,500,000 \times (0.1 \times 0.008) = \text{EUR } 1,500,000 \times (0.0008) = \text{EUR } 1,200$$

Table 7 shows the breakdown of the total covered deposits and the respective risk-unadjusted contributions by these institutions.

Table 7 Covered deposits and risk-unadjusted contributions by institutions in Member State A in year 2X01

Institution	Covered deposits (EUR)	Risk-unadjusted contributions (EUR)
Institution 1	200,000	160 (= 200,000 × 0.0008)
Institution 2	400,000	320 (= 400,000 × 0.0008)
Institution 3	900,000	720 (= 900,000 × 0.0008)
Total	1,500,000	1,200 (= 1,500,000 × 0.0008)

The method for calculating risk-based contributions adopted in Member State A uses four different risk classes, with different aggregate risk weights (ARW) assigned to each risk class as follows: 75% for the institution with lowest risk profile, 100% for institutions with the average risk profile, 120% for risky institutions, and 150% for the most risky institutions.

The assumptions apply to both models and all scenarios.

Option 6a: multiplicative model

The multiplicative model for institution 'i' in Member State A in a given year 2X01 is defined as:

$$C_i = CR \times ARW_i \times CD_i \times \mu \quad (1)$$

where:

C_i = Annual contribution of a member institution 'i';

- CR** = Contribution rate;
- ARW_i** = Aggregate risk weight for institution 'i';
- CD_i** = Covered deposits of institution 'i'; and
- μ** = Adjustment coefficient.

Notice that μ does not have 'i' subscript therefore it is constant, i.e. the same for all institutions in a given year. As the illustration shows, in practice the adjustment coefficient μ will be used to reach the annual target level. $\mu = 1$ if the sum of annual contributions equals the annual target level.

Scenario 1: relatively high-risk institutions in year 2X01

Under Scenario 1, after applying only the risk-adjusting factor, the amount of total contributions from all institutions in Member State A (EUR 1,464) is higher than the planned total annual contribution level (EUR 1,200). Table 8 shows the estimates.

Table 8 Risk-adjusted contributions by high-risk institutions in Member State A in year 2X01

Institution	CD _i (EUR)	ARW _i	Risk-adjusted contributions (EUR)
Institution 1	200,000	75%	120 (= 200,000 × 0.0008 × 0.75)
Institution 2	400,000	150%	480 (= 400,000 × 0.0008 × 1.50)
Institution 3	900,000	120%	864 (= 900,000 × 0.0008 × 1.20)
Total	1,500,000		1,464

Therefore, there is a need to use the adjustment coefficient μ to ensure that the total annual contribution (i.e. the sum of all individual contributions) equals 1/10 of the target level. In this case, the adjustment coefficient to be applied for all institutions can be calculated as $\mu_1 = \text{EUR } 1,200 / \text{EUR } 1,464 = 0.82$. Table 9 shows the estimates for risk-adjusted contributions after the application of the adjustment coefficient μ_1 .

Table 9 Corrected risk-adjusted contributions by high-risk institutions in Member State A in year 2X01

Institution	CD _i (EUR)	ARW _i	Risk-adjusted contributions (EUR)	Adjustment coefficient μ_i	Final risk-adjusted contributions (EUR)
Institution 1	200,000	75%	120	0.82	98 (= 120 × 0.82)
Institution 2	400,000	150%	480	0.82	394 (= 480 × 0.82)
Institution 3	900,000	120%	864	0.82	708 (= 864 × 0.82)
Total	1,500,000		1,464		1,200

Scenario 2: relatively low-risk institutions in year 2X01

Under Scenario 2, when just the risk-adjusting factor is applied, the total contribution from all institutions in the Member State A is EUR 1,044 and it is lower than the planned total annual contribution of EUR 1,200, as shown in Table 10.

Table 10 Risk-adjusted contributions by low-risk institutions in Member State A in year 2X01

Institution	CD _i (EUR)	ARW _i	Risk-adjusted contributions (EUR)
Institution 1	200,000	75%	120 (= 200,000 × 0.0008 × 0.75)
Institution 2	400,000	120%	384 (= 400,000 × 0.0008 × 1.20)
Institution 3	900,000	75%	540 (= 900,000 × 0.0008 × 0.75)
Total	1,500,000		1,044

The adjustment coefficient μ is applied in order to ensure that the total annual contribution equals 1/10 of the target level. Under this scenario, the adjustment coefficient to be applied for all institutions can be calculated as $\mu_2 = \text{EUR } 1,200 / \text{EUR } 1,044 = 1.15$. Because the sum of the risk-adjusted contributions is lower than the threshold, the adjustment coefficient is greater than 1 and increases the contribution by each institution. Table 11 presents the calculations.

Table 11 Corrected risk-adjusted contributions by low-risk institutions in Member State A in year 2X01

Institution	CD _i (EUR)	ARW _i	Risk-adjusted contributions (EUR)	Adjustment coefficient μ_i	Final risk-adjusted contributions (EUR)
Institution 1	200,000	75%	120	1.15	138 (= 120 × 1.15)
Institution 2	400,000	120%	384	1.15	442 (= 384 × 1.15)
Institution 3	900,000	75%	540	1.15	620 (= 540 × 1.15)
Total	1,500,000		1,044		1,200

Option 6b: additive model

The additive model for institution 'i' in Member State A and for a given year 2X01 is defined as:

$$C_i = (FR \times CD_i) + (CR \times ARW_i \times CD_i) \quad (2)$$

where:

C_i = Annual contribution from a member institution 'i';

FR = Flat rate;

CD_i = Covered deposits of a member institution 'i';

CR = Contribution rate; and

ARW_i = Aggregate risk weight of a member institution 'i'.

Note that FR and CR do not have ‘i’ subscript as they are constant. These parameters can be calibrated to reach the global threshold for the total contributions. For simplicity, the following scenarios use the initial value of 60% for FR and of 40% for CR.

Scenario 1: relatively high-risk institutions in year 2X01

Under Scenario 1, after applying only the risk-adjusting factor, the amount of total contributions from all institutions in the Member State A (EUR 1,306) is higher than the planned total annual contribution level (EUR 1,200) (Table 12).

Table 12 Risk-adjusted contributions by high-risk institutions in Member State A in year 2X01

Institution	CD _i (EUR)	ARW _i	Risk-adjusted contributions (EUR): [(60% × 0.0008 × CD _i) + (40% × 0.0008 × CD _i × ARW _i)]
Institution 1	200,000	75%	144 [= (0.00048 × 200,000) + (0.00032 × 200,000 × 0.75)]
Institution 2	400,000	150%	384 [= (0.00048 × 400,000) + (0.00032 × 400,000 × 1.50)]
Institution 3	900,000	120%	778 [= (0.00048 × 900,000) + (0.00032 × 900,000 × 1.20)]
Total	1,500,000		1,306

It is then possible to adjust the flat rate (FR) and keep the contribution rate (CR) fixed in order to ensure that the total annual contribution level equals 1/10 of the target level of EUR 1,200. For instance, if CR = 40% and C = EUR 1,200, then FR must equal 51.23%. The adjusted values for contributions are presented in Table 13.

Table 13 Corrected risk-adjusted contributions by high-risk institutions in MS A in year 2X01

Institution	CD _i (EUR)	ARW _i	Risk-adjusted contributions (EUR): [(51.23% × 0.0008 × CD _i) + (40% × 0.0008 × CD _i × ARW _i)]
Institution 1	200,000	75%	130 [= (0.00041 × 200,000) + (0.00032 × 200,000 × 0.75)]
Institution 2	400,000	150%	356 [= (0.00041 × 400,000) + (0.00032 × 400,000 × 1.50)]
Institution 3	900,000	120%	714 [= (0.00041 × 900,000) + (0.00032 × 900,000 × 1.20)]
Total	1,500,000		1,200

Scenario 2: relatively low-risk institutions in year 2X01

Under Scenario 2, after applying only the risk-adjusting factor, the aggregate value of the contributions from all institutions in the Member State A (EUR 1,138) is lower than the planned total annual contribution level (EUR 1,200). The results are presented in Table 14.

Table 14 Risk-adjusted contributions by low-risk institutions in Member State A in year 2X01

Institution	CD _i (EUR)	ARW _i	Risk-adjusted contributions (EUR): [(60% × 0.0008 × CD _i) + (40% × 0.0008 × CD _i × ARW _i)]
Institution 1	200,000	75%	144 [= (0.00048 × 200,000) + (0.00032 × 200,000 × 0.75)]
Institution 2	400,000	120%	346 [= (0.00048 × 400,000) + (0.00032 × 400,000 × 1.50)]
Institution 3	900,000	75%	648 [= (0.00048 × 900,000) + (0.00032 × 900,000 × 1.20)]
Total	1,500,000		1,138

As in the example above, in order to comply with the global cap the fixed rate must be adjusted. If the CR = 40% and C = EUR 1,200, then FR must be set to 65.16%, as shown in Table 15.

Table 15 Risk-adjusted contributions by low-risk institutions in Member State A in year 2X01

Institution	CD _i (EUR)	ARW _i	Risk-adjusted contributions (EUR): [[65.16% x 0.0008 x CD _i] + (40% x 0.0008 x CD _i x ARW _i)]
Institution 1	200,000	75%	152 [= (0.00052 x 200,000) + (0.00032 x 200,000 x 0.75)]
Institution 2	400,000	120%	362 [= (0.00052 x 400,000) + (0.00032 x 400,000 x 1.50)]
Institution 3	900,000	75%	685 [= (0.00052 x 900,000) + (0.00032 x 900,000 x 1.20)]
Total	1,500,000		1,200

As illustrated by examples in the two scenarios, the multiplicative model seems to deliver more balanced results than the additive model. Furthermore, the multiplicative model is simpler, since it does not require any specific weight to be set in order to balance the flat rate and the contribution rate. In both cases calculation results do need to be adjusted in order to reach the annual target level. However, under the multiplicative model all parameters are multiplied by the contribution rate, not only the risk-adjusted part, thus delivering more smoothed contributions.

4.2 Views of the Banking Stakeholder Group (BSG)

Overall, the BSG supports the aims of the guidelines and underlines the importance of compulsory *ex-ante* risk-based contributions to DGSs. The BSG also supports the option whereby Member States may provide for lower contributions from institutions in a regulated low-risk sector or those which are members of an IPS.

However, the BSG stresses that the calculation method must not result in excessive reporting requirements for institutions. Additionally, the BSG emphasises that even though transparency is important, it is vital that the risk classification of institutions is not revealed to anyone other than the institutions themselves.

The BSG finds that the proposed level of detail is appropriate to achieve sufficient harmonisation. It also supports the level of discretionary power in the guidelines for adjustment to specific characteristics of national banking sectors.

The BSG finds the calculation formula to be sufficiently clear and transparent. However, in order to guarantee the protection of deposits, it suggests that the adjustment factor, μ , should only be used after the 0.8% target is met.

The BSG supports the proposed minimum risk interval (75-150%). It also agrees to retaining the option of widening this interval, if national DGSs find it appropriate, in order to capture institutions' diverse risk profiles.

On the risk indicators, the BSG does not have any specific views but once again stresses that the calculation method should not lead to excessive additional reporting requirements. The BSG therefore emphasises that formal arrangements should be in place to provide the necessary information.

The BSG favours the use of the CET1 ratio as a core capital indicator.

As regards the treatment of IPSs, the BSG suggests an alternative approach to calculating contributions. Central institutions in IPSs typically hold very small amounts of covered deposits and thus the true risk that they pose to the IPS system as a whole will not be reflected in their contribution if covered deposits are the base for calculations. Therefore, the BSG suggests including in the guideline a section that regulates the 'alternative own risk-based method', allowed for in Directive 2014/49/EU. This would allow IPSs that are recognised as DGSs in accordance with Article 1(2)(c) of Directive 2014/49/EU to adjust contribution calculations with regard to the specific risk characteristics of their system. The BSG therefore suggests that IPSs should be allowed to use the amount of RWA (instead of covered deposits) as a calculation base.

The BSG considers that more guidance for calibrating thresholds, etc. for risk indicators is not necessary. Since the calibration is complex and requires careful measurement, the BSG suggests that supervisors include the measurement of calibration into their supervisory schedule.

The BSG agrees with the analysis presented in the impact assessment.

EBA feedback on the BSG's opinion

The EBA welcomes the opinion of the BSG and provides feedback on the main points raised by the group in the following section, together with the feedback on the public consultation.

4.3 Feedback on the public consultation

The EBA publicly consulted on the draft proposal contained in this paper. The consultation period lasted for 3 months and ended on 11 February 2015. The EBA received 31 responses, of which 9 were confidential and were not published on the EBA website.

This paper presents a summary of the key points and other comments arising from the consultation, the analysis and discussion triggered by these comments and the actions taken to address them, if deemed necessary.

In many cases, several industry bodies made similar comments or the same body repeated its comments in the response to different questions. In such cases, the comments, and EBA analysis are included in the section of this paper where EBA considers them most appropriate.

Changes to the guidelines have been incorporated as a result of the responses received during the public consultation.

Summary of key issues and the EBA's response

There is overall support for the draft guidelines including the calculation formula. The main points raised by the respondents with regard to the draft guidelines are as follows:

Steps towards harmonised practices

Most respondents welcome the initiative to promote harmonised practices on risk-based contributions to DGSs across Member States. In particular, respondents support the mandatory *ex-ante* collection of contributions which they think will strengthen confidence in DGSs across Member States. However, due to the variety of national banking structures throughout the Union, respondents insist on there being sufficient degree of flexibility to accommodate the specific characteristics of those structures as far as possible.

The EBA acknowledges the difficulty of developing a methodology which will cater for the specific features of banking structures of all Member States. Taking the views of the respondents into account, the EBA determined that the level of flexibility allowed in the current draft of the guidelines is sufficient.

Institutional protection schemes (IPS)

Some respondents stated that the guidelines do not appropriately reflect the specific characteristics of IPSs. In particular, the formula of the guidelines does not allow sufficient flexibility for IPSs since it is based predominately on covered deposits. Respondents thought the guidelines should better reflect elements which are important for the IPS structure.

The EBA acknowledges that the guidelines should be amended to take into account important features of IPSs (for example, their business model and risk profile). More specifically, the proposed method allows IPSs recognised as DGSs to use an extended formula to ensure that central entities systemic to the IPS contribute according to the risk they pose to the scheme. It is for competent authorities to assess, as part of the approval procedure, whether the introduction of the additional factor is commensurate with the risk of having to intervene in order to prevent the failure of institutions beyond the protection of covered deposits. This possibility is not restricted only to IPSs. Other schemes, provided the above-mentioned conditions are met, are allowed to exercise this option as well.

Risk categories/indicators

In general, there is wide support for the proposed composition of core risk indicators. However, some respondents raised concerns that:

- (i) there is no universal definition of the NPL ratio and argued that this could undermine the aim of harmonised implementation across Member States;
- (ii) the leverage ratio should not be used as it is a non-risk-weighted measure that does not take into account the riskiness of the institution. Some respondents suggested removing it entirely and argued that the other risk-weighted capital ratios must be given more prominence in the model;
- (iii) instead of using the RoA measure, a couple of respondents suggest to use RoE because it better reflects the institution's capacity to restore capital levels;
- (iv) using RWAs will favour banks that use the IRB-approach and disfavour banks that use the standardised approach when calculating RWA.

Ahead of the consultation, the EBA performed a test exercise in which Member States had an opportunity to comment on potential risk indicators. The indicators were to a large extent based on indicators currently used by Member State with risk-based contributions already in place. The vast majority of responses to the test exercise accepted the proposed indicators. Furthermore, indicators used in these guidelines are also, to a large extent, consistent with the risk indicators in the Delegated Act on contributions to resolution financing arrangements.

Finally, some stakeholders were concerned that there is ambiguity on how to apply the adjustment factor μ , in order to avoid pro-cyclicality in contributions. In particular, respondents found it unclear who should determine the business cycle.

The final guidelines provide that the cyclical adjustment should take into account the risk analysis undertaken by the relevant designated macroprudential authorities.

The guidelines preserve flexibility for Member States to determine whether macroprudential authority's approval is necessary when setting lower or higher contributions, or whether

macroprudential authority must merely be consulted, either on its own or as part of a wider consultation with other financial safety net participants.

Summary of responses to the consultation and the EBA's analysis

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Responses to questions in Consultation Paper EBA/CP/2014/35			
Question 1. Do you have any general comments on the draft guidelines on methods for calculating contributions to DGSs?	<p>Harmonisation:</p> <p>Most of respondents welcome the EBA Draft guidelines. Five of them emphasised that the guidelines will be a considerable step towards the harmonisation of practices of national deposit guarantee schemes.</p>	The EBA appreciates this positive feedback from respondents.	No amendment
	<p>Flexibility:</p> <p>Although, almost all respondents acknowledged the overall goal of harmonisation of the guidelines, nine respondents argued for more flexibility to allow the risk-based method to reflect specific characteristics of national banking structures.</p>	The EBA acknowledges the difficulty of developing a methodology which will cater to the specific features of banking structures of all Member States. Taking the views of the respondents into account, the EBA determined that the level of flexibility allowed in the current draft of the guidelines is sufficient.	No amendment
	<p>Nine respondents stated that DGSs may use their own risk-based calculation methods to determine (and calculate) the risk-based contributions.</p> <p>Two respondents argued that the guidelines do not fully allow for the option presented in Article 13(2) of Directive 2014/49/EU.</p>	<p>According to Art. 13(3) of Directive 2014/49/EU, the aim of the guidelines is to ensure consistent application of Directive 2014/49/EU. Own risk-based methods can be used, provided that they are in line with the principles and methodology of the guidelines.</p> <p>The EBA refers to the results of the second transition workshop on Directive 2014/49/EU where the European</p>	No amendment

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
		<p>Commission clarified that Article 13(1) of Directive 2014/49/EU is the general rule, and Article 13(2) of Directive 2014/49/EU is subordinated.</p>	
	<p>Eight respondents wrote that the guidelines do not appropriately reflect the specific characteristics of IPSs. In particular, the formula of the guidelines does not allow sufficient flexibility for an IPS since it is based predominately on covered deposits. Respondents thought the guidelines should better reflect elements which are important for the IPS structure.</p>	<p>The EBA agrees that the guidelines have to be amended to take into account important features of IPSs (for example, business model and the risk profile). More specifically, the proposed method allows IPSs recognised as DGSs to use an extended formula to ensure that central entities with low levels of covered deposits, but systemic to the IPS, contribute accordingly to the risk they pose to the scheme.</p>	<p>Part IV (Optional elements of the calculation methods) is amended as follows :</p> <p>Previous text of paragraph 70 is replaced by paragraphs 70-73:</p> <p>According to Article 13(1) of Directive 2014/49/EU, Member States may decide that members of an IPS pay lower contributions to the DGS. As reflected in recital 12 of Directive 2014/49/EU, this option has been introduced in order to recognise ‘schemes which protect the credit institution itself and which, in particular, ensure its liquidity and solvency’.</p> <p>Where a Member State avails itself of this option, the aggregated risk weight (ARW) of an institution which is also a member of a separate IPS may be reduced to take into account the additional safeguard provided by the IPS.</p>

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
			<p>In this case, the reduction should be implemented by including an additional risk indicator, related to IPS membership, in the risk category Business model and management of the calculation method. The IPS membership indicator should reflect the additional solvency and liquidity protection provided by the scheme to the member, taking into account whether the amount of the IPS <i>ex-ante</i> funds, which are available without delay for both recapitalisation and liquidity funding purposes in order to support the affected entity if there are problems, is sufficiently large to allow for credible and effective support of that entity. Additional funding commitments callable upon request and backed by liquidity reserves held by IPS members in IPS central institutions may also be taken into account. The level of the IPS funding should be examined in relation to the total assets of the IPS member institution.</p>

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
			<p><i>(v) Use of DGS funds for failure prevention</i></p> <p>Where a Member State allows a DGS, including an IPS officially recognised as a DGS, to use the available financial means for alternative measures in order to prevent the failure of a credit institution, such DGS may include in its own risk-based calculation an additional factor based on the risk-weighted assets of the institution. In this case, the formula is as follows:</p> $C_i = CR \times ARW_i \times (CD_i + A) \times \mu$ <p>Where A is the amount of risk-weighted assets in institution 'i'.</p> <p>Before the implementation of this additional factor by a DGS, competent authorities should assess, as part of the approval procedure referred to in paragraph 14, whether its introduction is commensurate with the risk of having to intervene in order to prevent the failure of institutions beyond the protection of covered deposits.</p>

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	One respondent requests that the guidelines should take into account every risk mitigating mechanism of an IPS that can be quantified and examined by the national competent authority.	The EBA considers that the guidelines already include sufficient flexibility to take these items into account.	No amendment
	<p>Practical application of the guidelines:</p> <p>One respondent stated that fundamental principles based on CAMEL approach and practical experience from the work of established guarantee schemes have been taken on board.</p> <p>Two respondents wrote that the guidelines should be as simple and as practical as possible.</p>	The EBA welcomes this positive feedback.	N/A
	Three respondents expressed concerns that the concepts underlying the guidelines are insufficiently solid and lack empirical validation (see also answers to Q.2.)	<p>The EBA considers that the guidelines benefited from the expert know-how and practical experiences in Member States. For this purpose, the EBA conducted a test exercise addressed to competent authorities across the EU with the cooperation of national DGSs. The responses to the test exercise and further views of various stakeholders, informed the current shape of the guidelines.</p> <p>In addition, Article 13(3) of Directive 2014/49/EU envisages further review of these guidelines once more empirical evidence is available.</p>	No amendment
	<p>Other points:</p> <p>One respondent stated that the risk classification of an institution should only be disclosed to the institution</p>	Principle 7 of the guidelines already addresses the issue of protection of	No amendment

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	itself and not to the public.	confidential information.	
	Two respondents stated that the proposed contribution calculation only takes into account the objective of building up sufficient funds.	Paragraph 17 states that the objective of a contribution scheme is not only to reach the target level, but also to ensure that the cost of financing DGSs is borne by credit institutions and to provide risk minimising incentives. Core indicators were chosen with setting the right incentives in mind.	No amendment
	One respondent argued for no minimum contributions.	Minimum contribution is only an optional element of the calculation method.	No amendment
	One respondent stated that the methodology should not be sensitive to the risk profile of banks.	Article 13(1) of Directive 2014/49/EU stipulates that the calculation of contributions to DGSs shall be based on the amount of covered deposits and the degree of incurred risk by the respective member.	No amendment
	Two respondents stated that EBA should explore synergies between DGS evaluation and SREP and that DGSs should preferably rely on SREP.	The guidelines allow the use of SREP score as an additional indicator, if this score is available to the DGS.	No amendment
Question 2. Do you consider the level of detail of these draft guidelines to be appropriate?	Eight respondents stated that the overall level of detail is acceptable.	The EBA welcomes this positive feedback.	N/A

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	One respondent pointed out that the level of detail could be especially helpful when designing a new risk-based system of contributions. However, the same respondent stated that the guidelines are too detailed for well-established and accepted systems, as they require significant modifications.	The EBA is convinced that not only new but also established systems can benefit from these guidelines. The EBA's mandate is to outline a method applicable to all Member States.	No amendment
	Two respondents are not satisfied with the level of detail due to lack of statistical data to empirically validate the proposed methods.	<p>The EBA considers that the guidelines benefited from the expert know-how and practical experiences in Member States. For this purpose, the EBA conducted a test exercise addressed to competent authorities across the EU with the cooperation of national DGSs. The responses to the test exercise and further views of various stakeholders informed the final shape of the guidelines.</p> <p>In addition, Article 13(3) of Directive 2014/49/EU envisages further review of these guidelines once more empirical evidence is available.</p>	No amendment
	One respondent suggested that for banks with multiple licences in a single DGS a report on a consolidated basis should be possible.	The scope of protection under Directive 2014/49/EU is the solo institution. Therefore, the EBA thinks that the indicators should be calculated on solo basis to ensure calculation of contributions is as institution-specific as possible.	No amendment
	One respondent noted that the guidelines could benefit from more detailed explanation of the 'sliding scale' and	The EBA has introduced minor changes to make the text clearer and thinks that the	No amendment

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	the 'bucket' method.	guidance provided in Annex 1 is sufficient.	
Question 3. Is the proposed formula for calculating contributions to DGS sufficiently clear and transparent?	<p>The majority of respondents (seventeen) find the formula to be sufficiently clear and transparent.</p> <p>Even though most respondents support the calculation formula as such, seven respondents asked for more guidance on when and how to apply the adjustment factor, μ. More specifically, they wonder who will be responsible for determining the state of the economic cycle.</p>	<p>Each year DGSs must determine the annual target level with the (optional) guidance provided in paragraph 37.</p> <p>The determination of the annual target level should take into account the objectives stated in paragraph 19. Therefore, the annual target level should be set after considering macroprudential information.</p> <p>To avoid over- or undershooting of the annual target level, contributions shall be adjusted using the adjustment factor, μ.</p>	<p>To clarify this issue, the EBA amended a paragraph discussing the adjustment of annual target level based on the business cycle and clarified that μ shall only be used to ensure the DGS does not over- or undershoots.</p> <p>Paragraph 38:</p> <p>In line with the fourth subparagraph of Article 10(2) of Directive 2014/49/EU, when establishing the annual target level, the DGS or designated authority must also take into account the phase of the business cycle and the pro-cyclical impact that contributions may have on the financial position of member institutions. The cyclical adjustment achieved via an increased or decreased annual target level should be established so as to avoid collecting excessive contributions during economic downturns, and to allow for a faster build-up of the DGS</p>

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
			<p>fund in economic upturns. The cyclical adjustment should take into account the risk analysis undertaken by the relevant designated macroprudential authorities and reflect current economic conditions as well as medium-term perspectives, as persistent economic difficulties may not justify low contributions indefinitely. Competent authorities that have approved an own risk-based method pursuant to Article 13(2) of Directive 2014/49/EC may require an amendment of the calculation method to properly reflect developments in the business cycle that have occurred since the initial approval of the method. The cyclical adjustment may also take into account the expected evolution in the covered deposits base.</p> <p>Paragraphs 43-44:</p> <p>According to Article 10(2) of Directive 2014/49/EU, the available financial means of a DGS must at least reach the</p>

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
			<p>target level specified in Directive 2014/49/EU within a 10-year period. In line with the principle laid down in paragraph 20, these contributions should be spread out as evenly as possible over time until the target level is reached, but with due account of the phase of the business cycle and the pro-cyclical impact of contributions on the institutions' financial position.</p> <p>If the sum of annual contributions from all member institutions is based only on the CD_i, the ARW_i and the fixed contribution rate (CR), in a given year the amount of contributions might be higher or lower than the annual target level established for that year. In order to remedy this discrepancy, an adjustment coefficient (μ) should be used. The coefficient should adjust the amount of total contributions (C) with the goal of reaching the annual target level when otherwise the total contributions would be too</p>

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
			high or too low.
	One respondent is of the opinion that the formula is not sufficiently clear and transparent. They stated that the weighing methodology will not be transparent to institutions.	The EBA acknowledge that the methodology is complex. Therefore, Annex 1 is provided to explain in detail each step of the methodology.	No amendment
	Three respondents pointed out that it must be ensured that by applying the adjustment factor contributions are not postponed into later periods.	Principle 2 of the guidelines states that DGSs should aim to spread the contributions as evenly as possible over the build-up period. The authorities may set the annual target level higher or lower depending on the business cycle and expected evolution in the covered deposits base.	No amendment
	Respondents requested guidance on how to adjust contributions if there is a substantial pay-out during the build-up period.	Article 10(2) of Directive 2014/49/EU states that when there is a pay-out in the build-up period an extension of maximum 4 years is allowed. The EBA considers the guidance provided in Directive 2014/49/EU and in principle 2 of the guidelines to be sufficient.	No amendment
	In the view of the BSG, in order to ensure that deposits are protected, μ should only be used after the target level is reached.	<p>The adjustment factor μ should only be used to avoid over- or undershooting of the annual target level.</p> <p>Principle 2 of the guidelines states that DGSs should aim to spread the contributions as evenly as possible over the build-up period.</p>	No amendment

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Question 4. Considering the need for sufficient risk differentiation and consistency across the EU, do you agree on the minimum risk interval (75%-150%) proposed in these guidelines?	Fifteen respondents support the proposed minimum interval. Three of which (including BSG) support allowing wider intervals. Four respondents oppose allowing wider intervals.	Considering the ambiguity in responses and the results of the test exercise, EBA deems that flexibility should be kept as it is. It will allow DGSs to use the interval in such a way that best fits national banking structures.	No amendment
	Three respondents stress that the interval should be wider and two that it should be narrower. One respondent claims that the arguments to increase contributions for institutions carrying more risk are not stronger than to reduce it for institutions with less risk and suggest a symmetric interval of 75-125%.	The results of the EBA test exercise confirmed that the proposed minimum interval offers an appropriate balance between the need for harmonisation and providing institutions with risk-mitigating incentive.	No amendment
	Two respondents state that the amount of covered deposits should be the most prominent determinant of contributions rather than the risk-weighting.	Article 13(1) of Directive 2014/49/EU states that contributions to DGSs shall be based on both the amount of covered deposits and the degree of risk incurred by each institution.	No amendment
	Three respondents put forward that it should not be compulsory to use the full interval each year.	Paragraph 47 of the guidelines establishes that the full interval must not be used each year.	No amendment
Question 5. Do you agree with the core risk indicators proposed in these guidelines? If not, please specify your reasons and suggest alternative indicators that can be applied to institutions in all Member	The BSG agree to the proposed indicators but underline that it should be ensured that it will not lead to excessive reporting requirements for institutions.	Since the indicators are based on data that is already or will be reported to competent authorities it will not lead to additional reporting requirements. This is further reinforced in Principle 6 which states that the required data for the calculation of contributions should not lead to excessive additional reporting	No amendment

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
States. Do you foresee any unintended consequences that could stem from the suggested indicators?		requirements.	
	The NPL-ratio is questioned by eight respondents because there is no uniform EU-wide definition of non-performing loans. It is argued that it may cause unequal treatment of institutions.	The results from the EBA test exercise showed that there was strong support to use the NPL-ratio even in the absence of a uniform definition.	No amendment
	One respondent wanted clarification as to whether the NPL-ratio should be net or gross of provisions.	In order to avoid misunderstanding, the wording in Annex 2 is amended to clarify that when calculating the NPL-ratio, non-performing loans gross of provisions should be used.	The following provision has been added to the table in Annex 2. 'Non-performing loans' should be reported gross of provisions.
	Eight respondents state that the Return on Assets indicator should be excluded because it is not a good predictor of default and that it may disfavour credit unions. A couple of respondents suggest to replace it with a Return on Equity indicator instead as it would better reflect the institution's ability to restore capital. Some suggest removing it entirely.	EBA deems the Return on Assets indicator to be more universal than Return on Equity and other profitability measures. It is also a widely used measure of profitability.	No amendment
	Five respondents argued that the RWA-ratio should be excluded because it favours institutions using the IRB-approach in calculating RWA. Further, it is argued that it would disfavour smaller, less complex institutions that use the standardised approach. A dual-approach regarding RWA is suggested.	The use of risk-weighted measures is well-established for regulatory capital purposes. Annex 2 of the guidelines states that different calibration approaches are allowed for institutions calculating minimum own funds requirements using advanced and standardised methods.	No amendment

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	Four stakeholders argued that leverage ratio should not constitute a core indicator as it is not risk-weighted and so is not a good measure of risk. Also, it is argued that it would disfavour institutions with low risk as they will have lower capital requirements.	The purpose of including leverage ratio as a core indicator is to provide institutions with incentives to hold more capital irrespective of risk-weighted assets.	No amendment
	Although IPS membership is not a core indicator, the treatment of IPS members is raised by five respondents. Some argue that it should be included as a core indicator.	IPSs only exist in a limited number of Member States and so should not be included as a core indicator. To ensure consistency with the Delegated Act on contributions to resolution funds, the IPS indicator will be kept as an additional indicator.	No amendment
	One respondent asked for more guidance on how to interpret the indicator values of return on assets, return on equity and cost-to-income ratio.	Since the guidelines address DGSS covering a wide variety of institutions it may be counterproductive to give too detailed instructions on how to interpret high or low indicator values as the conclusions drawn from these values may differ depending on business model and/or banking structure in a given Member State.	No amendment
	Some general comments on the core indicators include: overreliance on balance sheet items arguing that indicators from the income statement are better indicators of risk, lack of qualitative indicators such as SREP scores, institution-specific risk should not be mixed with the risk to the DGS fund.	The anticipated risk-mitigating incentives of the guidelines are, to a large extent, related to the structure of the balance sheet rather than to items in the income statement. As regards the stated lack of qualitative factors, the flexible 25% allows DGSS to add indicators of their choice, including	No amendment

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
		<p>qualitative ones.</p> <p>In addition to charging institutions for the risk that they pose to DGSs, the purpose of contributions is to provide DGSs with funds. Therefore, it is reasonable that the financial risk to the fund is an integrated factor of the overall risk weighting.</p>	
<p>Question 6. Do you agree with the option to use either capital coverage ratio or Common Equity Tier 1 ratio as a measure of capital? Would you favour one of these indicators rather than the other, and why?</p>	<p>Fifteen respondents support the use of CET1 ratio. Fourteen respondents are silent on this issue. No one objected to keeping the option of using either CET1 ratio or capital coverage ratio.</p>	<p>The CET1 ratio is a well-established capital measure and should stay as an optional core indicator.</p>	<p>No amendment</p>
	<p>Two respondents oppose the use of both risk-weighted capital indicators in favour of the leverage ratio.</p>	<p>DGSs may increase the relative weight of the leverage ratio if they consider that it would better reflect the specific characteristics of their banking sectors.</p>	<p>No amendment</p>
<p>Question 7. Are there any particular types of institutions for which the core risk indicators specified in these guidelines are not available due to the legal characteristics or supervisory regime of these institutions? Please describe the reasons why these core indicators are not available.</p>	<p>Two respondents mentioned the exemption from capital and liquidity requirements on solo basis in CRR (Article 7-8 and 21) as a possible problem. It is unclear whether in cases where institutions are subject to exemptions, they should report all indicators on a solo basis.</p>	<p>Where a member institution has received a waiver from meeting capital and/or liquidity requirements on a solo basis the corresponding capital/liquidity indicators should be calculated at consolidated or semi-consolidated level. Other indicators should be calculated on solo basis.</p>	<p>Paragraphs 63-65 amended to make this issue clearer:</p> <p>For each member institution the values of risk indicators should be calculated on a solo basis.</p> <p>However, the value of risk indicators should be calculated at a consolidated level where the Member State exercises the option given in Article 13(1) of Directive</p>

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
			<p>2014/49/EU to allow the central body and all credit institutions permanently affiliated to the central body, as referred to in Article 10(1) of Regulation (EU) 575/2013, to be subject as a whole to the risk weight determined for the central body and its affiliated institutions on a consolidated basis.</p> <p>Where a member institution has received a waiver from meeting capital and/or liquidity requirements on a solo basis pursuant to Articles 7, 8 or 21 of Regulation (EU) 575/2013 the corresponding capital/liquidity indicators should be calculated at the consolidated or semi-consolidated level.</p>
<p>Question 8. Do you think that more guidance, or specific thresholds, should be provided in these guidelines with regard to calibration of buckets for</p>	<p>The vast majority of respondents stated that no more guidance is needed.</p> <p>One respondent thinks the guidelines should give further guidance on a 'standard approach'. If DGSs choose a more advanced approach, the guidelines should not give more guidance.</p>	<p>Defining a 'standard approach' risks limiting the level of flexibility given to national authorities. The EBA considers that DGSs should be allowed a degree of flexibility to be able to accommodate national banking structures.</p>	<p>No amendment</p>

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
risk indicators, or minimum and maximum values for a sliding scale approach?	One respondent stressed that the EBA should seek to apply an evolutionary approach in the guidelines as both the EBA and Member States will gain experience from risk-based models.	In line with Article 13(3) of Directive 2014/49/EU, the guidelines already state in paragraph 16 of the 'Background' section that they will be reviewed by the EBA in 2017 and at least every 5 years thereafter.	No amendment
Question 9. Do you agree with our analysis of the impact of the proposals in this Consultation Paper? If not, can you provide any evidence or data that would explain why you disagree or might further inform our analysis of the likely impacts of the proposals?	Three respondents stated that they would benefit from more examples.	The EBA deems that the alternative approaches presented in the Impact Assessment are sufficient.	No amendment
	Two respondents disagree on the wording of the Impact Assessment which states that using the 'bucket' approach would provide banks with true incentives, implicitly saying the 'sliding scale' approach would not.	As stated in the guidelines, the EBA allows flexibility for DGSs to choose between the 'bucket' and the 'sliding scale' approach without preferring one or the other method.	The wording of Section D (Option 4a) was changed.

5. Confirmation of compliance with guidelines and recommendations

Date:

Member/EEA State:

Competent authority

Guidelines/recommendations:

Name:

Position:

Telephone number:

E-mail address:

I am authorised to confirm compliance with the guidelines/recommendations on behalf of my competent authority: Yes

The competent authority complies or intends to comply with the guidelines and recommendations: Yes No Partial compliance

My competent authority does not, and does not intend to, comply with the guidelines and recommendations for the following reasons²⁶:

Details of the partial compliance and reasoning:

Please send this notification to compliance@eba.europa.eu²⁷

²⁶ In cases of partial compliance, please include the extent of compliance and of non-compliance and provide the reasons for non-compliance for the respective subject matter areas.

²⁷ Please note that other methods of communication of this confirmation of compliance, such as communication to a different e-mail address from the above, or by e-mail that does not contain the required form, shall not be accepted as valid.