



Methodology for Ex-Ante Funding Contribution Calculations – Gibraltar Deposit Guarantee Scheme

Gibraltar Resolution and Compensation Unit

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List of Abbreviations

ARS	Aggregate Risk Score	ARW	Aggregate Risk Weight
CD	Covered Deposits	CET1	Common Equity Tier 1
CR	Contribution Rate	DGS	Deposit Guarantee Scheme
DGSD	Deposit Guarantee Scheme Directive	EBA	European Banking Authority
FSRCC	Financial Services Resolution and Compensation Committee (“the Delegated Authority”)	GFSC	Gibraltar Financial Services Commission (“the Competent Authority”)
IRS	Individual Risk Scores	LCR	Liquidity Coverage Ratio
NPL	Non-Performing Loan	NSFR	Net Stable Funding Ratio
RoA	Return on Assets	RCU	Resolution and Compensation Unit
RWA	Risk Weighted Assets	SREP	Supervisory Review and Evaluation Process

Introduction

The Gibraltar Deposit Guarantee Scheme (“GDGS”) provides depositors protection in the event of a Credit Institution authorised by the Gibraltar Financial Services Commission (“GFSC”) being unable to repay deposits. A DGS is of significant importance and achieves a number of objectives:

1. A DGS enhances the protection of depositor’s.
2. The increased trust and confidence from depositor’s assists with the stabilisation of the economy and decreases the risk of mass withdrawals by depositors if a bank were to fail.
3. DGS’s ensure the taxpayer does not suffer if a bank were to fail.

Directive 2014/49/EU was introduced to further harmonise and improve DGS’s within the European Union, mainly stemming from the financial crisis. Prior to the introduction of this, many Member States did not have pre-financed DGS’s or there were significant differences in DGS funding throughout the EU. In order to harmonise DGS funding methods, to provide a similar level of protection for depositors, and to ensure that costs are primarily borne by Member Institutions, the Directive introduced the requirement for DGS’s to raise ex-ante contributions annually through a risk-based methodology from members in order to reach a target level by 3 July 2024. As well as at a European level, there is guidance internationally on the area, making its importance a globally accepted concept.

The Financial Services Resolution and Compensation Committee (“FSRCC”) is the ‘Designated Authority’ for the GDGS and is required to calculate risk-based DGS contributions into the fund in accordance with the EBA guidelines “on methods for calculating contributions to DGS” (“the Guidelines”). The ex-ante fund is held in a segregated account with the Bank of England (“BoE”), classified as a Special fund, which can only be used for its intended purpose.

This document outlines the methodology and approach taken with regards to the calculation of GDGS contributions for Gibraltar DGS institutions, with the intention of providing increased clarity and transparency for firms.

Contribution calculation stages

Contributions are mandatory for all Gibraltar DGS institutions and are calculated based on:

- the amount of covered deposits (indicates the maximum potential exposure of the DGS to that member); and
- the risk profile of the respective member firm (provides an indication of the “probability of default” of a given member), vis-a-vis other firms.

The calculation method described in this document is based on a number of principles, as summarised as followed:

1. The calculation method should, as far as possible, reflect the business risk and the size of the firm.
2. The calculation method should be consistent with the build-up period envisaged in Directive 2014/49/EU i.e. no more than 10 years and contributions spread out as evenly as possible until the target level is reached.
3. The calculation method should take into account specific characteristics of the banking sector, and should be compatible with the regulatory regime, and accounting and reporting practices where the DGS is established.
4. The rules for calculating contributions should be objective and transparent i.e. the aim of this paper is to ensure that the methodology is transparent, understandable and well explained to industry.
5. The required data for the calculation of contributions should not lead to excessive additional reporting requirements for firms i.e. the DGS will make use of information already available to them or requested from Member Institutions by Competent Authorities as part of their reporting obligations. A balance is to be struck between requiring information necessary for the calculation of contributions and avoiding making unduly burdensome requests for information from Member Institutions. This has been ensured

through the use of a data request template and associated guidance when the RCU requests the data from GFSC.

6. Confidential information will be protected i.e. when information is otherwise not publically disclosed.

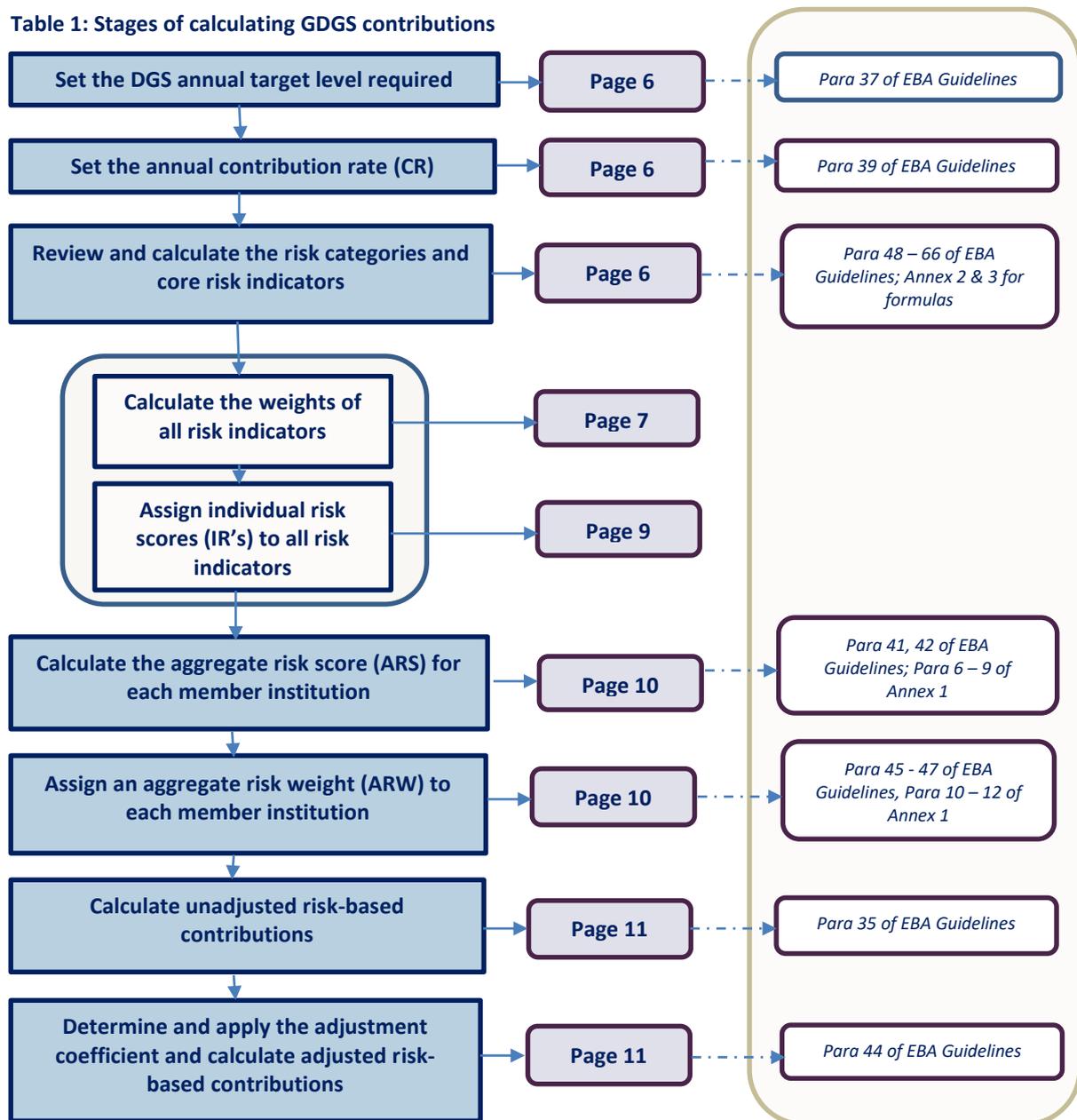
Calculation methods should be consistent with relevant historical data e.g. data about institutions’ failures and events where an institution has been likely to fail.

To calculate the values of risk indicators for a given period, the following financial information has been used:

- For positions from the income statement – the value at the end of the period i.e. as at 31 December 2016
- For positions from the balance sheet (excluding covered deposits) – the average value between the beginning and the end of the reporting period e.g. quarterly average value of total assets from 1 January to 31 December 2016.
- Covered deposits as at 31 December 2016.

There are a number of stages in calculating the contributions to the DGS, which are summarised in Table 1 below.

Table 1: Stages of calculating GDGS contributions



1. Set the DGS annual target level required

DGS's are required by DGSD to reach a specific target level of 0.8% of covered deposits by **3 July 2024**. This means that contributions should be collected regularly until that target level has been reached. In order to do this, the level of funds still required to be collected is divided by the number of years remaining to reach that level.

In exceptional circumstances, the DGS has the discretion to adjust the annual target level and contributions, if deemed necessary in specific scenarios.

2017 workings (Gibraltar DGS ex-ante fund):

Years remaining: 8 years

Therefore: $1/8 \times (0.8\% \text{ of covered deposits as at 31 December 2016 less amounts already collected})$

Covered deposits as at 31 December 2016: £1.194 billion

Target Level: $0.8\% \text{ of } £1.194 \text{ billion} = £9.5 \text{ million}$

Amounts already collected in 2016 = £912k

Therefore, **annual target level:** $(£9.5 \text{ million} - £912\text{k})/8 \text{ years} = \text{£1 million}$

2. Set the annual contribution rate (CR)

The annual contribution rate is the percentage of how much money is to be raised in contributions in a given contribution period. This rate is the same for all Member Institutions. This is to be calculated every year and represents the target level for that contribution period. The calibration of the contribution rate ensures that the target level is reached and that the annual contributions are spread out as evenly as possible over time.

The contribution rate is calculated by the DGS by dividing the annual target level by the covered deposits.

2017 workings (CR):

Annual Target Level (as above): £1 million

Covered Deposits as at 31 December 2016: £1.194 billion

Therefore, **annual contribution rate:** $£1 \text{ million}/£1.194 \text{ billion} = \text{0.09\%}$

3. Review and calculate the risk categories and core risk indicators

In order to ensure that a sufficiently wide range of aspects of institutions' operations are reflected in the risk classification, five risk categories are used in the calculation, as stipulated by the EBA.

1. Capital

Reflects the level of loss-absorbing capacity of the Institution. Higher amounts of capital held by an Institution indicate that it has a better ability to absorb losses internally, thus decreasing its likelihood of failure. Therefore, Institutions with higher values of capital indicators should contribute less to the DGS ex-ante fund.

2. Liquidity and Funding

Measures the ability of an Institution to meet its short and long term obligations as they become due without adversely affecting its financial condition i.e. low liquidity ratios indicates the risk that the Institution may be unable to meet its current and future cash-flow obligations.

3. Asset Quality

This demonstrates the extent to which the Institution is likely to experience credit losses. Large credit losses may cause financial problems and therefore increase the likelihood of failure.

4. Business Model and Management

Takes into account the risk related to the Institutions current business model and strategic plans, and reflects the quality of the Institutions internal governance and internal controls.

5. Potential losses for the DGS

Reflects the risk of losses for the DGS if a Member Institution fails. The extent to which the Institutions assets are encumbered will have a particular impact as encumbrance will reduce the prospect of the DGS recovering the pay-out amount from the Institutions bankruptcy estate.

Within each of the above risk categories, there are compulsory core risk indicators used in order to promote comparable treatment of institutions and capture a sufficiently wide spectrum of sources of risk. These are stipulated by the EBA. The Competent Authority/RCU then has the discretion to exclude 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. In addition, the Competent Authority/RCU may introduce additional risk indicators if they consider that the core indicators do not sufficiently take into account the characteristics of the member institutions and for determining the risk profile of member institutions.

Table 2 on page 8 shows the risk categories and the core risk indicators used by the GDGS.

- Calculate the weights of all risk indicators

Each risk indicator within the risk categories is assigned a weight for the purposes of the contribution calculation. The sum of all of the weights of the core indicators, and as shown in Table 2, should equal 75%. The remaining 25% weighting is allocated by the GDGS, either by increasing the weights of some core indicators above the minimum, or by introducing additional risk indicators (as has been the case for the GDGS).

The weights for the various risk indicators used by the DGS are also outlined in Table 2 on page 8.

Table 2: Risk Categories and Core Risk Indicators

Risk Category	Indicators	Core Indicator or additional	Applied in the calculation	Minimum Weights	Final Weights Applied
<u>A. Likelihood of Failure</u>					
1. Capital	Leverage Ratio; and Capital Coverage ratio	CORE	Yes	9.0%	9.0%
	Common Equity Tier 1 Ratio	ADDITIONAL	Yes	-	7.0%*
2. Liquidity and Funding	Liquidity Coverage Ratio; and	CORE	Yes	9.0%	18.0%
	Net Stable Funding Ratio	CORE	<i>No - In line with EBA, to be applied once the definition determined by the EU is fully operational</i>	9.0%	-
3. Asset Quality	Non-performing loans ratio	CORE	Yes	13.0%	13.0%
4. Business Model and Management	Risk Weighted Assets/Total Assets; and Return on Assets	CORE	Yes	6.5%	6.5%
	SREP	ADDITIONAL	Yes	-	18.0%*
<u>B. Potential Losses for the DGS</u>					
5. Potential Losses for the DGS	Unencumbered assets/covered deposits	CORE	Yes	13%	13.0%
				75.0%	100.0%

* 25% distributed between the two additional indicators.

- Assign individual risk scores (IRS's) to all risk indicators

The GDGS uses the 'bucket method', as allowed by the EBA. For each risk indicator, upper and lower boundaries are applied to arrive at a number of different buckets. The buckets reflect different levels of risk posed by the Member Institutions e.g. high, medium and low risk, assessed on the basis of particular indicators. An individual risk score (IRS) is then assigned to each bucket.

For each risk indicator, the IRS's assigned to buckets should range from 0 to 100, where 0 indicates the lowest risk and 100 the highest risk. Each of the values of the risk indicators for each firm are assigned an IRS according to which bucket they fall into.

To assist firms, the risk indicators and the corresponding IRS's are shown below. The RCU are happy to advise firms individually which boundary they fall into for the purposes of the annual calculation. Details on the SREP score should, however, be requested from the Competent Authority.

The risk indicators and buckets get reviewed for the purposes of the calculation on a periodic basis, or when specific additional information is obtained during the year.

Bucket	Boundaries	IRS
1	>5	0
2	<3 to <=5	50
3	<0 to <=3	100

Bucket	Boundaries %	IRS
1	>10	0
2	<5 to <=10	33
3	<2 to <=5	66
4	<=2	100

Bucket	Boundaries %	IRS
1	>25	0
2	<15 to <=25	33
3	<8 to <=15	66
4	<=8	100

Bucket	Boundaries %	IRS
1	>130	0
2	>110 to <=130	33
3	>=100 to <=110	66
4	<100	100

Bucket	Boundaries %	IRS
1	<=3	0
2	>3 to <=6	33
3	>6 to <=10	66
4	>10	100

Bucket	Boundaries %	IRS
1	<=0.2	0
2	>0.2 to <=0.6	33
3	<0.6 to <=0.10	66
4	>0.10	100

Bucket	Boundaries %	IRS
1	>=0 to <=2	0
2	>2 to <=10	50
3	<0 or >10	100

Bucket	Boundaries	IRS
1	4	0
2	3	33
3	2	66
4	1	100

Bucket	Boundaries	IRS
1	>2	0
2	>1 to <=2	50
3	<=1	100

4. Calculate the aggregate risk score (ARS) for each member institution

Each IRS for an Institution is multiplied by the weight assigned to the specific risk indicator. These weights are included in table 2 on page 8. This is then summed up to an ARS, using an arithmetic average.

See Table 13 below for ARS calculation example.

5. Assign an aggregate risk weight (ARW) to each member institution

Each Member Institutions ARS is then mapped to an ARW. The ARW has been 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.

Bucket	Boundaries	ARW
1	<=2	75%
2	>2 to <=3	100%
3	>3 to <=4	125%
4	>4	150%

e.g. if a Member Institution has an ARS of 3.89, they would be classified into the third bucket and the ARW of 125% would be assigned to it.

See Table 13 below for calculation example.

	Firm A	Firm B	Min Weights % (Table 2)
Leverage Ratio	4.50	5.00	9
Capital Coverage ratio	5.50	4.00	9
CET Ratio	2.00	3.00	7
Liquidity Coverage Ratio	0.00	0.00	18
NPL Ratio	7.00	0.00	13
RWA Ratio	2.00	0.00	6.5
Return on Assets	0.00	5.00	6.5
SREP	4.00	4.00	18
Unencumbered assets/covered deposits	10.00	4.00	13
TOTAL RISK SCORE	35	25	100
ARS	3.89	2.77	
ARW (as per Table 12)	125%	100%	

6. Calculate unadjusted risk-based contributions

The following formula is applied in order to calculate a Member Institution's unadjusted contributions:

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

Where:

C_i = Annual contribution from member institution 'i'

CR = Contribution rate (identical for all member institutions in a given year) (step 2 on page 6)

ARW_i = Aggregate risk weight for member institution 'i' (step 5 on page 10)

CD_i = Covered deposits for member institution 'i'

2017 workings (unadjusted risk-based contributions):

CR (as per example above) = 0.09%

ARW_i (as per example above firm A) = 125%

CD_i (for firm A) = £70 million

Therefore, **unadjusted risk-based contribution** = 0.09% x 125% x £70 million = **£79,000**

7. Determine and apply the adjustment coefficient and calculate adjusted risk-based contributions

The sum of all of the unadjusted risk-based contributions can be higher or lower than the annual target level. Therefore, an adjustment coefficient is used to adjust the total amount of contributions so as to reach the annual target level where otherwise the total contributions would be too high or too low. This is identical for all Member Institutions. Therefore, adjusted risk-based contribution:

$$\text{Unadjusted risk-based contributions (as per 6 above)} \times \mu = C_i$$

Where:

C_i = Annual contribution from member institution 'i'

μ = Adjustment coefficient (identical for all institutions in a given year)

2017 workings (adjustment coefficient and adjusted risk-based contribution):

Annual Target level = £1 million

Total of unadjusted risk-based contributions = £1.5 million

In order to arrive at the annual target level, the unadjusted risk-based contributions, an adjustment coefficient of 0.67 i.e. 67%, needs to be applied i.e.

£1.5 million x 0.67 = £1 million (agrees to annual target level)

The adjustment coefficient is the same for all firms.

Therefore, for firm A, as shown in point 6 above, the **annual contribution** (prior to any administration fees) would be:

£79,000 x 0.67 = **£52,930**

Administration Fees

In addition to the GDGS contribution, an administration fee will also currently be charged to firms.

The admin fee and the ex-ante contribution are required for two different purposes:

- Ex-Ante Fund contribution: The GDGS fund will principally be used to cover the cost of resolving a failing or failed Credit Institution in Gibraltar.
- Administration fee: The running of the DGS regime for the Gibraltar DGS firms. Given the nature of the work carried out, and given that there are no costs that are forecasted to be directly attributable to any specific firm(s), total costs are evenly spread amongst BRR firms.

The FSRCC is focused on running a cost effective model for the functions under its remit and the DGS framework is deemed to be very much in its infancy both in Gibraltar and across similar jurisdictions. Administration fees include an estimate for salaries for the resourcing of the Resolution and Compensation Unit (2017: two individuals) and any legal advice and professional fees. Any unused revenue from administration fees will be held as a reserve by the FSRCC, which is distinctly separate from the GFSC



Appendix 1 - Summarised Working Example

The following example is provided for illustrative purposes:

	Covered deposits for member institution £	X	Aggregate Risk Weight from Member Institution %	X	Annual Contribution Rate %	=	Unadjusted risk-based Contribution £	X	Adjustment Coefficient (same for all firms) %	=	Annual Contribution for Member Institution £ (Ex Ante Fund)	+	Admin Fee £	=	Annual Contribution for Member Institution £ (Incl. Admin Fee)
Firm A	70,000,000		125%		0.09%		79,000		67%		52,930		9,091		62,021

Assigned on the basis of the aggregate risk score per institution.

Used in order to reach target level - same for all firms

Used when the total amount of the contribution is lower or higher than the target level established for that year - same for all firms

£100k (in line with prior year) split between all firms - same for all firms



Appendix 2 - Version Control

Version	Date
1.0/2017	October 2017
2.0/2018	August 2018

