

Amended Mapping of Qivalio credit assessments under the Standardised Approach

1. Executive summary

1. This report describes the mapping exercise carried out by the Joint Committee (JC) to propose an amended 'mapping'¹ report of the credit assessments of Qivalio (former Spread Research), with respect to the version published in May 2017.
2. The methodology applied to produce the mapping is the one specified in the Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016 (the Implementing Regulation)² laying down implementing technical standards with regard to the mapping of credit assessments of external credit assessment institutions for credit risk in accordance with Articles 136(1) and 136(3) of Regulation (EU) No 575/2013 of the European Parliament and of the Council (Capital Requirements Regulation – CRR). This Implementing Regulation employs a combination of the provisions laid down in Article 136(2) of the CRR.
3. The information base used to produce this mapping report reflects additional quantitative information collected after the submission of the draft Implementing Technical Standards by the JC to the European Commission. Regarding qualitative developments, the qualitative factors described in the Implementing Regulation remain unchanged, while Qivalio introduced changes to the rating category symbols of their Global short-term rating scale.
4. The mapping neither constitutes the one which ESMA shall report on in accordance with Article 21(4b) of Regulation (EC) No 1060/2009 (Credit Rating Agencies Regulation - CRA) with the objective of allowing investors to easily compare all credit ratings that exist with regard to a specific rated entity³ nor should be understood as a comparison of the rating methodologies of Qivalio with those of other ECAs. This mapping should however be interpreted as the correspondence of the rating categories of Qivalio with a regulatory scale which has been defined for prudential purposes. This implies that an appropriate degree of prudence may have been applied wherever not sufficient evidence has been found with regard to the degree of risk underlying the credit assessments.

¹ According to Article 136(1), the 'mapping' is the correspondence between the credit assessments of and ECAI and the credit quality steps set out in Regulation (EU) No 575/2013 (Capital Requirements Regulation – CRR).

² OJ L 275, 12.10.2016, p. 3-18

³ In this regard please consider [ESMA's Report on the possibility of establishing one or more mapping](#).

5. As described in Recital 12 of the Implementing Regulation, it is necessary to avoid causing undue material disadvantage on those ECAs which, due to their more recent entrance in the market, present limited quantitative information, with the view to balancing prudential with market concerns. Updates to the mapping should be made wherever this becomes necessary to reflect quantitative information collected after the entry into force of the Implementing Regulation.
6. The resulting mapping tables have been specified in Annex III of the revised draft ITS on the mapping of ECAs' credit assessments under Article 136(1) and (3) of Regulation (EU) No 575/2013. Figure 1 below shows the result for the main rating scale of Qivalio, the Global long-term rating scale.

Figure 1: Mapping of Qivalio's Global long-term rating scale

Credit assessment	Credit quality step
AAA	1
AA	1
A	2
BBB	3
BB	4
B	5
CCC	6
CC	6
C	6
D	6

2. Introduction

7. This report describes the mapping exercise carried out by the JC to propose an amended 'mapping' report of the credit assessments of Qivalio, with respect to the version published in May 2017.
8. Created in 2017, Qivalio is part of the Qivalio SAS group that resulted from the merger between the rating agencies Spread Research and Ethifinance, both founded in 2004. Qivalio previously operated as Spread Research, which is a credit rating agency that has been registered with ESMA on 1 July 2013 and therefore meets the conditions to be an eligible credit assessment institution (ECAI).⁴
9. The methodology applied to produce the mapping is the one specified in the Implementing Regulation. This Implementing Regulation employs a combination of the provisions laid down in Article 136(2) of the CRR.
10. The information base used to produce this mapping report reflects additional quantitative information collected after the submission of the draft Implementing Technical Standards by the JC to the European Commission. Regarding qualitative developments, the qualitative factors described in the Implementing Regulation remain unchanged while the symbols of the credit rating categories for the Global Short-Term Rating Scale were changed.
11. The quantitative information is drawn from data available in the ESMA's central repository (CEREP⁵) and RADAR⁶ based on the credit rating information submitted by the ECAIs as part of their reporting obligations.
12. The following sections describe the rationale underlying the mapping exercise carried out by the JC. Section 3 describes the relevant ratings scales of Qivalio for the mapping. Section 4 contains the methodology applied to derive the mapping of Qivalio's Global long-term rating scale. Section 5 refers to the mapping of the short-term credit rating scale. The mapping tables are shown in Appendix 4 of this document and have been specified in Annex III of the revised draft ITS on the mapping of ECAIs' credit assessments under Article 136(1) and (3) of Regulation (EU) No 575/2013.

⁴ It is important to note that the mapping does not contain any assessment of the registration process of Qivalio carried out by ESMA.

⁵ <https://cerrep.esma.europa.eu/cerep-web/>

⁶ Commission Delegated Regulation (EU) 2015/2 RADAR RTS.

3. Qivalio credit ratings and rating scales

13. Qivalio produces a variety of credit ratings, shown in Column 2 of Figure 2 in Appendix 1. These credit ratings may be used by institutions for the calculation of risk weights under the Standardised Approach (SA)⁷:

- **Long-term issuer rating**, defined as measure of the future credit quality of an issuer that is closely linked to a Probability of Default (and not an Expected Loss).
- **Long-term obligation rating**, which is derived from the issuer long term rating on which a notching is applied to a specific debt instrument. This rating takes into consideration a recovery rate in order to capture a loss given a default rate.
- **Short-term issuer rating**, which is a measure of the future credit quality of an issuer that is closely linked to a Probability of Default within a 12 to 15 months period of time.
- **Short-term obligation rating**, which is derived from the issuer short term rating on which a notching is applied to a specific debt instrument. This rating takes into consideration a recovery rate in order to capture a loss given a default rate.

14. Qivalio assigns these credit ratings to the Global long-term rating scale and to the Global short-term rating scale, as illustrated in column 3 of Figure 2 in Appendix 1. Therefore, specific mappings have been prepared for these rating scales. The specification of the Global long-term rating scale is described in Figure 3 of Appendix 1 and that of the Global short-term rating scale is described in Figure 5 of Appendix 1.

15. The mapping of the Global long-term rating scale is explained in Section 4 and it has been derived in accordance with the quantitative factors, qualitative factors and benchmarks specified in the ITS.

16. The mapping of the Global short-term rating scale is explained in Section 5 and it has been indirectly derived from the mapping of the Global long-term ratings scale and the internal relationship established by Qivalio between these two scales, as specified in Article 13 of the Implementing Regulation. This internal relationship is shown in Figure 6 of Appendix 1.

4. Mapping of Qivalio's Global long-term rating scale

17. The mapping of the Global long-term rating scale has consisted of two differentiated stages where the quantitative and qualitative factors as well as the benchmarks specified in Article 136(2) CRR have been taken into account.

⁷ As explained in recital 4 ITS, Article 4(1) CRA allows the use of the credit assessments for the determination of the risk-weighted exposure amounts as specified in Article 113(1) CRR as long as they meet the definition of credit rating in Article 3(1)(a) CRA.

18. In the first stage, the quantitative factors referred to in Article 1 of the Implementing Regulation have been taken into account to differentiate between the levels of risk of each rating category. The *long run default rate* of a rating category has been calculated in accordance with Article 6 of the Implementing Regulation, as the number of credit ratings cannot be considered to be sufficient.

19. In a second stage, the qualitative factors proposed in Article 7 of the Implementing Regulation have been considered to challenge the result of the previous stage.

4.1. Initial mapping based on the quantitative factors

20. This mapping report reflects additional quantitative information collected after the submission of the draft ITS by the JC to the Commission.

4.1.1. Calculation of the long-run default rates

21. The short run and long run default rates of each rating category have been computed with pools of items rated from 1 January 2014 to 31 July 2021 and according to the provisions laid down in the Implementing Regulation:

- For rating category B, the number of ratings cannot be considered sufficient for the calculation of the short and long run default rates specified in Articles 3 – 5 of the ITS. In this case the allocation of the CQS has been made in accordance with Article 6 of the ITS. However, the size of the pools is too large⁸ to be evaluated by a small pool methodology. In this situation Article 6 is applied by considering the number of defaulted and not defaulted items through the computation of short run default rates and a proxy for the long run default rate (see Figure 10 in Appendix 3). Thus, the computed proxy of the long run default rate is considered as a first indicator to perform the allocation to each CQS, together with the prior expectation of the equivalent rating category of the international rating scale. However, in this case the result needs to be confirmed by the qualitative factors given that only a proxy of the long run default rate has been achieved.
- For the remaining rating categories, the number of credit ratings cannot be considered to be sufficient for the calculation of the short run and long run default rates specified in Articles 3 – 5 of the Implementing Regulation. Therefore, the allocation of the CQS has been made in accordance with Article 6 of the Implementing Regulation, as shown in Figure 9 of Appendix 3. In these cases, the long run default rate benchmark associated with the equivalent category in the international rating scale is a key qualitative factor that has been used for the mapping proposal.

⁸ If the total number of rated items over a 5 years period is larger than 10 times the number representing the inverse of the long run default rate benchmark associated with the equivalent rating category in the international rating scale, but at the same time this pool of ratings does not satisfy Article 3 ITS, then this pool of ratings is considered to be too large for the application of a small pool methodology.

22. For D rating category, no calculation of default rate has been made since it already reflects a 'default' situation.

4.1.2. Mapping proposal based on the long run default rate

23. As illustrated in the second column of Figure 12 in Appendix 4, the assignment of the rating categories to credit quality steps has been initially made in accordance with Article 6 of the ITS. Therefore, the numbers of defaulted and non-defaulted rated items have been used together with the prior expectation of the equivalent rating category of the international rating scale.

- **AAA/AA/A/BBB/BB:** the number of rated items in each of these categories is equal or larger than the respective minimum required number of observed items given the number of defaulted items in the rating category. Thus, the credit quality step associated with the AAA/AA, A, BBB, BB rating categories in the international rating scale (CQS 1, CQS 2, CQS 3 and CQS 4 respectively) can be assigned.
- **B:** The proxy long run default rates are considered as a first indicator to perform the allocation to each CQS, together with the prior expectation of the equivalent rating category of the international rating scale. It is noted that comparing the short run default rates experienced for rating category B with the short run benchmarks "monitoring" and "trigger" levels of CQS 4 specified in Annex I of the Implementing Regulation, the short-run default rates breach in two periods the monitoring level and additionally in one period the trigger level. In accordance with these factors, B can be assigned with CQS 5.
- **CCC-C:** since the CQS associated with the equivalent rating category of the international rating scale is 6, the proposed mapping for these rating categories is also CQS 6.

4.2. Final mapping after review of the qualitative factors

24. The qualitative factors specified in Article 7 of the Implementing Regulation have been used to challenge the mapping proposed by the default rate calculation. Qualitative factors acquire more importance in the rating categories where quantitative evidence is not sufficient to test the default behavior,⁹ as it is the case for all Qivalio's rating categories.

25. Qivalio has not registered any change in the quantitative factors since the draft Implementing Technical Standards submitted by the JC to the Commission. Regarding rating category B, the meaning and the relative position of the rating category as well as the equivalent rating category of the international rating scale, suggest a mapping to CQS 5.

5. Mapping of Qivalio's Global Short-Term rating scale

26. Qivalio also produces short-term corporate ratings and assigns them to the Global short-term rating scale (see Figure 5 in Appendix 1). Given that the default information referred to these

⁹ The default behavior of a rating category is considered to be properly tested if the quantitative factors for that rating category are calculated under Articles 3 – 5 ITS.

rating categories cannot be comparable with the 3-year time horizon that characterizes the benchmarks established in the Implementing Regulation, the internal relationship established by Qivalio between these two rating scales (described in Figure 6 of Appendix 1) has been used to derive the mapping of the Global short-term rating scale. This should ensure the consistency of the mappings proposed for Qivalio. Qivalio recently updated the rating category symbols (Figure 4 in Appendix 1) and applied changes to the internal mapping between the Global short-term rating scale and the Global long-term rating scale.

27. More specifically, as each short-term issuer rating can be associated with a range of long-term issuer ratings, the CQS assigned to the short-term rating category has been determined based on the most frequent CQS assigned to the related long-term rating categories. In case of draw, the most conservative CQS has been considered. If the most frequent step is identified as CQS 5 or CQS 6, CQS 4 is allocated, as the risk weights assigned to CQS 4 to CQS 6 are all equal to 150% according to Article 131 CRR.

28. The results are shown in Figure 13 of Appendix 4.

- **EF 1+.** This rating category denotes very low short-term risk and very strong ability to reimburse short term debt. It is internally mapped to long-term categories AAA, AA+, AA, AA-, A+ and A, which are mapped to CQS 1, 1, 1, 1, 2 and 2 respectively. The proposed mapping is CQS 1 as it is the most frequent step.
- **EF 1.** This rating category denotes low short-term risk linked to the issuer's ability to anticipate short term funding risks. It is internally mapped to the long-term category A, A-, BBB+ and BBB which are mapped to CQS 2, 2, 3 and 3 respectively. As there is a draw between CQS2 and 3, the most conservative mapping has been applied.
- **EF 2.** This rating category indicates moderate short-term risk linked to potential external risks. It is internally mapped to long-term categories BBB, BBB- and BB+, which are mapped to CQS 3, 3 and 4. The proposed mapping is CQS 3 as it is the most frequent step.
- **EF 3.** This rating category indicates medium short-term risk. The issuer's ability to reimburse its short-term debt may be hampered by external or specific risks. It is internally mapped to long-term categories BB+, BB, BB- and B+, which are mapped to CQS 4, 4, 4 and 5. The proposed mapping is CQS 4 as it is the most frequent step.
- **EF 4.** This rating category denotes high short-term risk. It is internally mapped to long-term categories BB, BB-, B+, B, B-, CCC+ and CCC which are mapped to CQS 4, 4, 5, 5, 5, 6 and 6, respectively. Since the risk weights assigned to CQS 4 to CQS 6 are all equal to 150% according to Article 131 CRR, the mapping proposed for the EF 4 rating category is CQS 4.
- **EF 5.** This rating category indicates very high short-term risk or in-or out- court restructuring. It is internally mapped to long-term categories CCC+ to C, which are mapped to CQS 6. Since the risk weights assigned to CQS 4 to CQS 6 are all equal to 150% according to Article 131 CRR, the mapping proposed for the EF 5 rating category is CQS 4.

- **EF D.** This category indicates default on the short-term debt. It corresponds to the D category of the long-term issuer rating, which is mapped to CQS 6. Since the risk weights assigned to CQS 4 to CQS 6 are all equal to 150% according to Article 131 CRR, the mapping proposed for the EF D rating category is CQS 4.

Appendix 1: Credit ratings and rating scales

Figure 2: Qivalio's relevant credit ratings and rating scales

SA exposure classes	Name of credit rating	Credit rating scale
Long-term ratings		
Corporates	Long-term issuer rating	Global long-term rating scale
Corporates	Long-term obligation rating	Global long-term rating scale
Short-term ratings		
Corporates	Short-term issuer rating	Global short-term rating scale
Corporates	Short-term obligation rating	Global short-term rating scale

Source: Qivalio

Figure 3: Global long-term rating scale

Credit assessment	Meaning of the credit assessment
AAA	Highest credit quality and extremely low business and financial risk.
AA	Very large scale and very high level of diversification, very low-risk business (proven resilience through economic crisis), very high FCF and very low leverage ratio.
A	Large scale and high level of diversification, low-risk business (proven resilience through economic cycles), high FCF and very low leverage ratio.
BBB	Large scale and high level of diversification, low-risk business (proven resilience through economic cycles), positive FCF and/or low leverage ratio.
BB	Medium/low-risk business (stable and predictable cash flows), positive FCF and/or low leverage ratio.
B	High-risk business, negative FCF and/or high leverage ratio.
CCC	Very high leverage, negative FCF, weak liquidity and/or restructuring/probable default.
CC	Out-of-court consensual restructuring
C	In-court restructuring without failure to fulfil financial obligations.
D	Missed payment on interest or principal (post-grace period), or in-court restructuring with a failure to fulfil financial obligations, or liquidation.

Source: Qivalio

Figure 4: Renaming of rating categories

Previous symbols of Global short-term rating scale	New symbols of Global short-term rating scale
SR 0	EF 1+
SR 1	EF 1
SR 2	EF 2
SR 3	EF 3
SR 4	EF 4
SR 5	EF 5
SR D	EF D

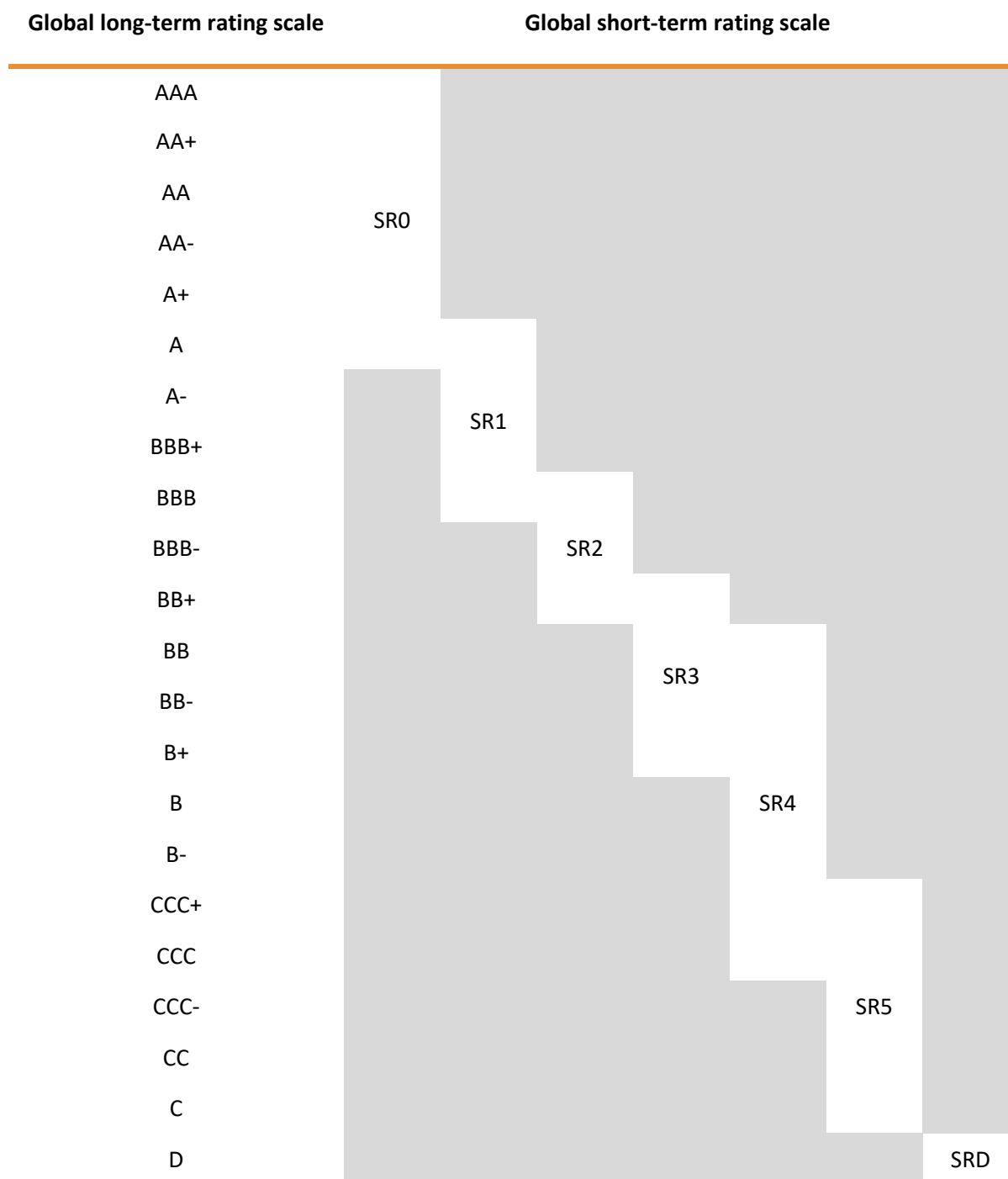
Source: Qivalio

Figure 5: Global short-term rating scale

Credit assessment	Meaning of the credit assessment
EF 1+	Very low short-term risk and very strong ability to reimburse short term debt.
EF 1	Low short-term risk linked to the issuer's ability to anticipate short term funding risks.
EF 2	Moderate short-term risk linked to potential external risks.
EF 3	Medium short-term risk. The issuer's ability to reimburse its short-term debt may be hampered by external or specific risks.
EF 4	High short-term risk
EF 5	Very high short-term risk / In- restructuring.
EF D	Default on the short-term debt

Source: Qivalio

Figure 6: Amended internal relationship between Qivalio's global long-term and short-term rating scales



Source: Qivalio

Appendix 2: Definition of default

Qivalio defines a default as either:

- (i) A missed or delayed payments on interest or principal on the due date or in the stated grace period if any, unless Spread Research considers such payments will occur during this grace period;
- (ii) An in-court restructuring leading to a failure to fulfill present or future financial obligations such as a missed payment on interest or principal or debt for equity swap;
- (iii) A liquidation.

In addition, the C rating of Qivalio corresponds to an in-court restructuring without a failure to fulfil present or future financial obligations such as a missed payment on interest or principal or debt for equity swap. This rating event does not happen often and Qivalio never experienced it.

Source: Qivalio

Appendix 3: Default rates of each rating category

Figure 7: Number of rated items, with relevant weights¹⁰

	A	BBB	BB	B	CCC	CC	C
01 Jan 2014		2.0	4.0	4.0	2.0		
01 Jul 2014		4.0	15.0	12.0	0.5	1.5	1.5
01 Jan 2015		4.0	16.5	15.5	2.0	0.5	
01 Jul 2015		2.5	11.5	16.0	2.5		0.5
01 Jan 2016		2.5	11.5	14.5	2.0		1.0
01 Jul 2016		3.0	12.0	10.5	1.5	0.5	
01 Jan 2017		4.0	14.0	11.0	2.0	0.5	
01 Jul 2017		3.5	13.5	8.5	2.0	1.0	
01 Jan 2018		5.5	12.5	8.0	1.0		
01 Jul 2018		5.5	8.5	9.0	0.5		
01 Jan 2019		4.0	7.5	5.5			1.0
01 Jul 2019		3.5	8.5	4.0	0.5		0.5
01 Jan 2020	1.5	6.0	10.0	3.5	1.0		
01 Jul 2020	2.0	4.5	10.5	3.0	1.5		
01 Jan 2021	2.0	3.5	10.5	2.5	1.0		

Source: Joint Committee calculations based on CEREP and RADAR data

Figure 8: Number of defaulted rated items

	A	BBB	BB	B	CCC	CC	C
01 Jan 2014		0	0	0	1		
01 Jul 2014		0	0	0	0	1	0
01 Jan 2015		0	0	0	1	0	
01 Jul 2015		0	0	0	1		0
01 Jan 2016		0	0	0	1		0
01 Jul 2016		0	0	0	1	0	
01 Jan 2017		0	0	0	1	0	
01 Jul 2017		0	0	1	1	0	
01 Jan 2018		0	0	1	0		
01 Jul 2018		0	0	1	0		
01 Jan 2019		0	0	0			1
01 Jul 2019		0	0	0	0		0
01 Jan 2020	0	0	0	0	0		
01 Jul 2020	0	0	0	0	0		
01 Jan 2021	0	0	0	0	0		

Source: Joint Committee calculations based on CEREP and RADAR data

¹⁰ Withdrawn ratings have been weighted by 50% as indicated in Article 4(3) of the ITS.

Figure 9: Mapping proposal for rating categories with a non-sufficient number of credit ratings

	AAA/AA	A	BBB	BB
CQS of equivalent international rating category	CQS 1	CQS 2	CQS 3	CQS 4
N. observed defaulted items	0	0	0	0
Minimum N. rated items	0	0	0	0
Observed N. rated items	0	0	36.5	119
Mapping proposal	CQS 1	CQS 2	CQS 3	CQS 4

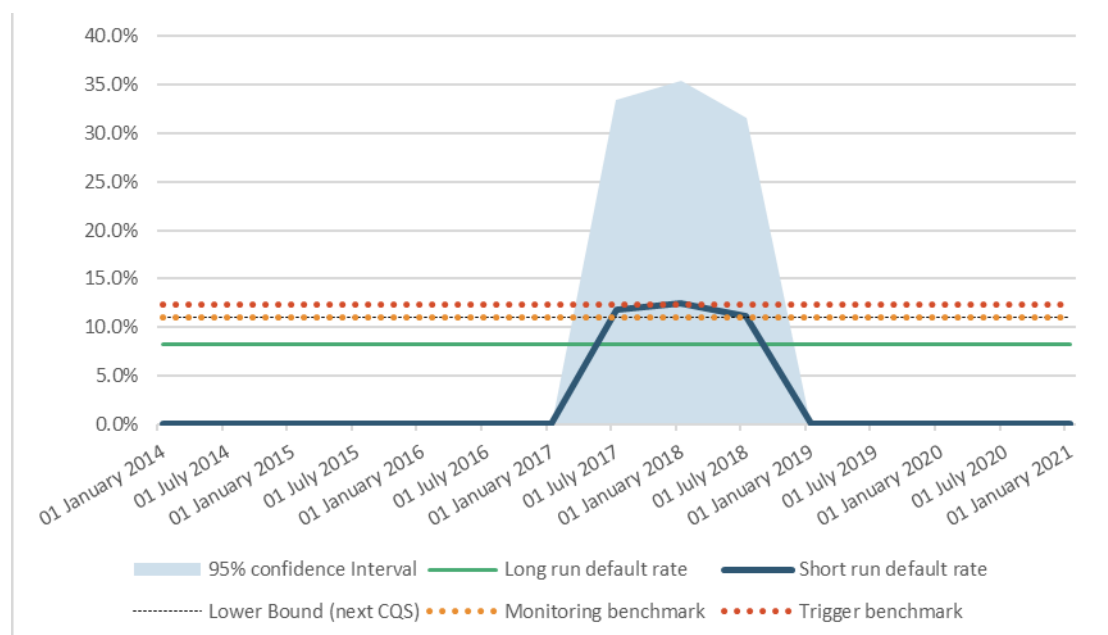
Source: Joint Committee calculation based on CEREP and RADAR data

Figure 10: Short-run and proxy of the long-run default rates

Date	B
01 Jan 2014	0.00%
01 Jul 2014	0.00%
01 Jan 2015	0.00%
01 Jul 2015	0.00%
01 Jan 2016	0.00%
01 Jul 2016	0.00%
01 Jan 2017	0.00%
01 Jul 2017	11.76%
01 Jan 2018	12.50%
01 Jul 2018	11.11%
01 Jan 2019	0.00%
01 Jul 2019	0.00%
01 Jan 2020	0.00%
01 Jul 2020	0.00%
01 Jan 2021	0.00%
Weighted Average	2.01%

Source: Joint Committee calculation based on CEREP and RADAR data

Figure 11: Short-run and long-run observed default rates of B rating category



Source: Joint Committee calculation based on CEREP and RADAR data

Appendix 4: Mappings of each rating scale

Figure 12: Mapping of Qivalio's Global long-term credit rating scale

Credit assessment	Initial mapping based on LR DR (CQS)	Review based on SR DR (CQS)	Final review based on qualitative factors (CQS)	Main reason for the mapping
AAA	1	n.a.	1	The quantitative factors are representative of the final CQS.
AA	1	n.a.	1	The quantitative factors are representative of the final CQS.
A	2	n.a.	2	The quantitative factors are representative of the final CQS.
BBB	3	n.a.	3	The quantitative factors are representative of the final CQS.
BB	4	n.a.	4	The quantitative factors are representative of the final CQS.
B	4	4	5	The quantitative factors are representative of the final CQS. The meaning and relative position of the credit assessment are representative of the final CQS.
CCC	6	n.a.	6	The quantitative factors are representative of the final CQS.
CC	6	n.a.	6	The quantitative factors are representative of the final CQS.
C	6	n.a.	6	The quantitative factors are representative of the final CQS.
D	6	n.a.	6	The meaning and relative position of the rating category is representative of the final CQS.

Figure 13: Mapping of Qivalio's Global short-term credit rating scale

Credit assessment	Corresponding long-term rating scale assessment (established by SR)	Range of CQS corresponding to long-term rating scale	Final review <i>based on qualitative factor (CQS)s</i>	Main reason for the mapping
EF1+	AAA to A	1-2	1	The final CQS has been determined based on the most frequent step associated with the corresponding long-term credit rating category. In case of draw, the most conservative CQS has been considered.
EF1	A to BBB	2-3	3	
EF2	BBB to BB+	3-4	3	
EF3	BB+ to B+	4-5	4	
EF4	BB to CCC	4-6	4	The final CQS has been determined based on the range of steps associated with the corresponding long-term credit rating category. The risk weights assigned to CQS 4 to 6 are all 150%, therefore CQS 4.
EF5	CCC+ to C	6	4	
EFD	D	6	4	