
11 November 2015

Mapping of Euler Hermes Rating's credit assessments under the Standardised Approach

1. Executive summary

1. This report describes the mapping exercise carried out by the Joint Committee to determine the 'mapping'¹ of the credit assessments of Euler Hermes Rating (EHR).
2. The methodology applied to produce the mapping is the one specified in the Implementing Technical Standards on the mapping of ECAIs' credit assessments under Article 136(1) and (3) of Regulation (EU) No 575/2013 (Capital Requirements Regulation – CRR). These ITS employ a combination of the provisions laid down in Article 136(2) of Regulation (EU) No 575/2013.
3. 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 entity² nor should be understood as a comparison of the rating methodologies of EHR with those of other ECAIs. This mapping should however be interpreted as the correspondence of the rating categories of EHR 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.
4. As described in Recital 12 of the Implementing Technical Standards on the mapping of ECAIs' credit assessments under Article 136(1) and (3) of Regulation (EU) No 575/2013, in order to avoid causing undue material disadvantage on those ECAIs which, due to their more recent entrance in the market, present limited quantitative information, with the view to balancing prudential with market concerns, two mappings apply for these ECAIs, with the first mapping for a limited period of three years. Both mappings should take into account quantitative and qualitative factors. Compared to the second mapping, the quantitative factors for deriving the first mapping should be relaxed. This solution would allow ECAIs which present limited

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 In this regard please consider http://www.esma.europa.eu/system/files/esma__2015-1473_report_on_the_possibility_of_establishing_one_or_more_mapping....pdf.

quantitative information to enter the market and would positively stimulate them to collect a sufficient number of quantitative information.

5. In accordance with the previous paragraph for a subset of ECAIs two mappings are applicable, one applicable until 31.12.2018 and one applicable from 01.01.2019. EHR belongs to the subset of ECAIs that are provided two mappings. Updates to the mapping should be made whenever this becomes necessary, including in relation to the mapping to be applied after the three years, to reflect quantitative information collected during the three year-period. Nevertheless, in the absence of such a review, for the ECAIs that are provided two mappings the one applicable from 01.01.2019 shall operate after the three years phase-in period.
6. The resulting mapping tables have been specified in Annex III of the Implementing Technical Standards on the mapping of ECAIs' credit assessments under Article 136(1) and (3) of Regulation (EU) No 575/2013. Figure 1 below shows the result for the only ratings scale of EHR, the Global long-term rating scale, displaying the mapping applicable until 31.12.2018 and the one applicable starting from 01.01.2019.

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

Credit assessment	Credit quality step Applicable until 31.12.2018	Credit quality step Applicable from 01.01.2019
AAA	1	2
AA	1	2
A	2	2
BBB	3	3
BB	4	4
B	5	5
CCC	6	6
CC	6	6
C	6	6
SD	6	6
D	6	6

2. Introduction

7. This report describes the mapping exercise carried out by the Joint Committee (JC) to determine the 'mapping' of the credit assessments of Euler Hermes Rating (EHR).
8. EHR is a credit rating agency that has been registered with ESMA in 16 November 2010 and therefore meets the conditions to be an eligible credit assessment institution (ECAI)³. EHR focuses on ratings of mid-size companies, project finance and real estate ratings as well as structured finance ratings.⁴
9. The methodology applied to produce the mapping is the one specified in the Implementing Technical Standards on the mapping of ECAIs' credit assessments under Article 136(1) and (3) of Regulation (EU) No 575/2013 (Capital Requirements Regulation – CRR). These ITS employ a combination of the provisions laid down in Article 136(2) of Regulation (EU) No 575/2013. The information base used to produce the mapping is the same that has been employed when performing the first mapping proposal which was disclosed during the consultation period to these ITS. Two sources of information have been used. Firstly, the quantitative and qualitative information available in ESMA Central Repository (CEREP⁵) has been used to obtain an overview of the main characteristics of this ECAI and an initial estimate of the default rates of its credit assessments. Secondly, since the available data in CEREP for EHR is scarce, specific information has also been directly requested to the ECAI for the purpose of the mapping, especially the list of relevant credit assessments and detailed information regarding the default definition.
10. The following sections describe the rationale underlying the mapping exercise carried out by the Joint Committee (JC) to determine the mappings for both the applicable time periods. With respect to the quantitative requirements used to perform the mappings, in case of ECAIs for which limited quantitative information is available the same methodology has been applied across the two applicable time periods, although with two different levels of prudence. Section 3 describes the relevant ratings scales of EHR for the purpose of the mapping. Section 4 contains the methodology applied to derive the mapping of EHR's ratings scale. The mapping tables are shown in Appendix 4 of this document and have been specified in Annex III of the Implementing Technical Standards on the mapping of ECAIs' credit assessments under Article 136(1) and (3) of Regulation (EU) No 575/2013.

³ It is important to note that the mapping does not contain any assessment of the registration process of EHR carried out by ESMA.

⁴ Euler Hermes

⁵ CEREP is the central repository owned by ESMA to which all registered/certified CRAs have to report their credit assessments. <http://cerep.esma.europa.eu/cerep-web/>.

3. EHR credit ratings and rating scales

11. EHR produces several credit ratings, which may be used by institutions for the calculation of risk weights under the Standardised Approach (SA)⁶, as shown in column 2 of Figure 2 in Appendix 1:

- **Long-term rating (issuer):** The issuer rating is through the cycle and forward looking opinion on the overall creditworthiness of a corporate or institution and its ability to satisfy its financial obligations in due time.
- **Long-term rating (issue):** The issue rating reflects a through the cycle and forward looking assessment of the probability of default and loss given default for a specific financial instrument issued by a corporate or institution.
- **Long-term covered bond rating:** The covered bond rating is a through the cycle and forward looking opinion on the probability of default and the loss given default of a covered bond issue.
- **Long-term credit portfolio rating:** The credit portfolio rating is the through the cycle and forward looking consideration of the probability of the nominal amount of the portfolio becoming defaulted and the agreed interest payments, if any, being made in due time (index PFR).

12. EHR assigns these credit ratings to a single rating scale, **Global long-term rating scale**, as illustrated in column 3 of Figure 2 in Appendix 1. Therefore, a specific mapping has been prepared for this scale. The specification of the Global long-term rating scale is described in Figure 3 of Appendix 1.

13. 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.

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

14. The mapping of the Global long-term rating scale has consisted of two differentiated stages where the quantitative and qualitative factors were considered. In addition, the benchmarks specified in Article 136(2) CRR have been taken into account.

15. In the first stage, the quantitative factors referred to in Article 1 of the ITS have been taken into account to differentiate between the levels of risk of each rating category. More

⁶ 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.

specifically the *long run default rate* of a rating category has been calculated in accordance in Article 6 of the ITS, as the number of credit ratings cannot be considered to be sufficient.

16. In a second stage, the qualitative factors proposed in Article 7 of the ITS have been considered to challenge the result of the previous stage, especially in those ratings categories where less default data has been available.

4.1. Initial mapping based on the quantitative factors

4.1.1. Calculation of the long-run default rates

17. The short run and long run default rates of each rating category have been calculated with the pools of public ratings from 1 July 2002 to 1 July 2010, based on the information provided by EHR, on ratings and default data, shown in Figure 4 and Figure 5 in Appendix 3, and according to the provisions laid down in the ITS:

- The information provided by EHR on rating categories AAA/AA, A, BBB, BB and B cannot be considered sufficient for the calculation of the short and long run default rates specified in the Articles 3 – 5 of the ITS since the number of rated items is below the required minimum. As a result, the allocation of the CQS for these rating categories has been made in accordance with Article 6 of the ITS, as shown in Figure 6 and in Figure 7 of Appendix 3. 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.
- For SD and D rating categories, no allocation has been made based on this methodology since these rating categories already reflects a ‘default’ situation.

18. As post withdrawal data on defaults is included in the dataset provided by EHR, no withdrawal adjustment has been applied as indicated in Article 4(3) of the ITS.

19. The default definition applied by EHR, described in Appendix 2, has been used for the calculation of default rates.

4.1.2. Mapping proposal based on the long run default rate

20. As illustrated in the second column of Figure 12 and Figure 13 in Appendix 4, the assignment of the rating categories to the 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.

Mapping Tables applicable until 31.12.2018:

- **AAA/AA/A/BBB/BB/B:** 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 steps associated with the AAA/AA, A, BBB, BB, B rating categories in the international rating scale (CQS 1, CQS 2, CQS 3, CQS 4 and CQS 5 respectively) can be assigned.

- **CCC/CC/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.

Mapping Tables applicable starting from 01.01.2019:

- **AAA/AA:** the number of rated items in these categories is below the minimum required number of observed items so that the credit quality step associated with the AAA/AA rating categories in the international rating scale (CQS 1) cannot be assigned. Therefore, the proposed credit quality step for these rating categories is CQS 2.
- **A/BBB/BB/B:** 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 steps associated with the A, BBB, BB and B rating categories in the international rating scale (CQS 2, CQS 3, CQS 4 and CQS 5 respectively) can be assigned.
- **CCC/CC/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

21. The qualitative factors specified in Article 7 of the ITS 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 behavior⁷, as it is the case for all rating categories of EHR's Global long-term rating scale.

4.2.1. Public and private ratings

22. As described in the previous sections, a sufficient number of credit ratings is not available for EHR's rating categories. However, EHR also assigns private ratings⁸ which could represent a different measure of creditworthiness that can be used for mapping purposes in accordance with Article 11(2) of the ITS. Figure 9 and Figure 10 show the number of rated items and

⁷ 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.

⁸ EHR provided also data on Scores. Although Scores might be used when relevant as a qualitative factor, they have not to be pooled with Public and Private Ratings, instead they would need to be analysed separately, given that they cannot be treated as ratings. Although the number of rated items derived from Scores is not large, defaults on scores occur just in 3 occasions in the whole dataset and these are related to rating categories BB and B. Thus results on scores confirm the ones on private ratings, so that are considered representative of the conclusions outlined in that section.

defaulted items for the combined private and public ratings. The weighted 3-years default rates for each rating category have been calculated based on the combined private and public ratings. The results are shown in Figure 11.

Mapping Tables applicable until 31.12.2018:

- **AAA/AA:** the default rates of the combined private and public ratings sample suggest the mapping of AAA/AA - A to CQS 1, which is consistent with the meaning and relative position of this rating category. Therefore no change is proposed to the mapping based on Article 8.
- **A:** the default rates of the combined private and public ratings sample suggest the mapping of A to CQS 1. However the meaning and relative position of this rating category suggests CQS 2. For this reason, and also due to insufficient empirical evidence from public ratings, no changes are proposed to the mapping based on Article 8.
- **BBB:** the default rates of the combined private and public ratings sample suggest the mapping of BBB to CQS 3, which is consistent with the meaning and relative position of this rating category. Therefore no change is proposed to the mapping based on Article 8.
- **BB:** the default rates of the combined private and public ratings sample suggest the mapping of BB to CQS 4, which is consistent with the meaning and relative position of this rating category. Therefore no change is proposed to the mapping based on Article 8.
- **B:** the default rates of the combined private and public ratings sample suggest the mapping of B to CQS 5, which is consistent with the meaning and relative position of this rating category. Therefore no changes are proposed to the mapping is proposed based on Article 8.
- **CCC/CC/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.

Mapping Tables applicable starting from 01.01.2019:

- **AAA/AA:** the default rates of the combined private and public ratings sample suggest the mapping of AAA/AA - A to CQS 1, which is consistent with the meaning and relative position of this rating category. However, due to insufficient empirical evidence from public ratings, no changes are proposed to the mapping based on Article 8.
- **A/BBB/BB/B/CCC/CC/C:** the conclusions based on this factor for these rating categories are equivalent to the ones described for the Mapping Tables applicable until 31.12.2018. For this reasons no changes are proposed to the mapping based on Article 8.

4.2.2. Other qualitative factors

23. The **definition of default** applied by EHR and used for the calculation of the quantitative factors has been analysed:

- The types of default events considered are shown in Appendix 2 and are the ones specified in Article 4(4) of the ITS. Both default rating categories D and SD are consistent with letters (a), (b), (c) and (d) of the benchmark definition.
- All defaults reported by EHR are either bankruptcy or financial misstatements related events.

24. Since only defaults relating to bankruptcies have been recorded and used in this mapping exercise, the mapping has been reviewed according to Article 10 of the ITS. Therefore, in accordance with the ITS, the default rates are increased by 100%, especially in cases where the default rate is close to the upper bound of the assigned CQS. Based on this factor, for those categories where there are no reported defaults, no change is proposed to the mapping based on this factor. Given that for all rating categories of EHR's Global long-term rating scale no default is experienced⁹, no change is proposed to the mapping based on this factor.

25. Regarding the **meaning and relative position of the credit assessments**, in case of the Mapping Tables applicable starting from 01.01.2019, it suggests a more favourable mapping of AAA and AA rating categories. However, the absence of enough empirical evidence does not allow a significant use of this factor to modify the proposed mappings. In the case of the D and SD rating categories, its meaning is consistent with the one of CQS 6 stated in Annex II ITS.

26. Regarding the **time horizon** reflected by the rating category, EHR applies a through the cycle and forward looking rating approach with a long term rating outlook. The three-year transition probabilities are very low and ratings are relatively stable in most of the rating categories (except BB, which has a high upgrade probability), as shown in Figure 8 of Appendix 3. Therefore, no change is proposed to the mapping based on this factor.

27. Finally, it should be highlighted the use of the long run default rate benchmark associated with the equivalent category in the international rating scale as the **estimate of the long run default rate** for the calculation of the quantitative factor of all rating categories under Article 6 of the ITS.

⁹ Based on data provided by Euler Hermes.

Appendix 1: Credit ratings and rating scales

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

SA exposure classes	Name of credit rating	Credit rating scale
Long-term ratings		
Institutions	Long-term rating (issuer)	Global long-term rating scale
	Long-term rating (issue)	Global long-term rating scale
Corporates	Long-term rating (issuer)	Global long-term rating scale
	Long-term rating (issue)	Global long-term rating scale
Covered Bonds	Long-term covered bond rating	Global long-term rating scale
CIUs (that primarily refer to the credit quality of the underlying assets)	Long-term credit portfolio rating	Global long-term rating scale

Source: EHR

Figure 3: Global long-term rating scale

Credit assessment	Meaning of the credit assessment
AAA	AAA rated companies demonstrate an excellent credit quality. Such companies are characterized by an extremely positive future outlook and are viewed as being “first class” business partners. Although the various security elements can certainly change, such changes – to the extent this can be assessed – are highly unlikely to adversely affect the fundamentally strong position of such companies.
AA	AA rated companies demonstrate very high quality with respect to future security. Along with the AAA rated companies, this group forms the so-called “quality class.” Security margins may, however, be comparatively thinner, the solidity of the security elements may fluctuate more or individual assessment components may indicate a greater long-term risk than is the case for AAA rated companies.
A	A rated companies demonstrate high quality with respect to future security. They show many favourable features which secure their future. Nevertheless, there may be isolated factors which reveal a slightly increased susceptibility to the worsening of circumstances and general economic conditions in the future.
BBB	BBB rated companies demonstrate reasonable quality with respect to future security. Compared to A rated companies, however, it is more likely that worsening of general economic conditions could weaken the capability of fulfilling financial obligations.
BB	BB rated companies still have structures adequate to secure their future. Yet they are subject to greater insecurities. Negative business developments or changes in the general financial and economic conditions can make it impossible for them to fulfil their financial obligations in a suitable manner.
B	B rated companies lack the usual structures to secure their future. Negative business developments or changes in the general financial and economic conditions will most likely make it impossible for them to fulfil their financial obligations in a suitable manner.
CCC	CCC rated companies have structures which greatly endanger the security of their future. Capital service is in jeopardy. Such a company is dependent on a favourable development of general economic conditions if it is to be able to meet its financial obligations in the long

term.

CC	Companies receiving a CC rating have very little security for their future. Capital service is in great jeopardy.
C	C rated companies have the least future security of all. The basic conditions enabling such debtors to fulfil their financial obligations are extremely poor. Default is imminent.
SD	If an issuer defaults with respect to a certain financial liability or class of liabilities but is still able to honour its payment obligations under other financial liabilities or classes of liabilities within the requisite period, it is assigned SD (selective default) status.
D	Companies with a D rating are already in default of payment or have filed for bankruptcy. The D rating is irrelevant for the future; it documents solely the bankruptcy of the company.

Source: EHR

Appendix 2: Definition of default

A rated entity is deemed to be in default (D) if it is no longer able to or has failed to meet its debt servicing obligations and EHR takes the view that the rated entity will not be meeting its remaining payments obligations within the requisite period. Moreover, a default is deemed to occur if the rated entity becomes the subject of insolvency proceedings or a settlement in court or out of court or a petition for the commencement of insolvency or title execution proceedings is lodged.

If a rated entity defaults with respect to a certain financial instrument or class of instruments but is still able to meet its payment obligations under other financial instruments or classes of instruments, the rated entity is assigned a SD (selective default) status.

In order to identify a default, EHR relies on information from the capital market, data providers or information provided by the rated company itself. In the case of solicited ratings, the representatives of the rated entity are under a duty to disclose any default events. For unsolicited ratings, EHR is solely responsible for obtaining the necessary information. Failure to settle a trade payable does not result in the default of the rated company.

It is assumed that a default (D or SD) occurred on the earliest of the dates on which:

- The rated entity is no longer able to or has failed to meet its debt servicing obligation, or
- The rated entity became insolvent, or
- The rated entity becomes the subject of insolvency proceedings or settlement in court or out of court or a petition for the commencement of insolvency or title execution proceedings is lodged with the responsible court.

Source: EHR

Appendix 3: Default rates of each rating category

Figure 4: Number of rated items

Date	AAA	AA	A	BBB	BB	B	CCC/CC /C
01/07/2002						1	
01/01/2003			1			1	
01/07/2003			1				
01/01/2004			2			1	
01/07/2004			2		2	1	
01/01/2005			2	2	2		
01/07/2005			2	3	2		
01/01/2006			4	5	2	2	
01/07/2006			4	4	2	1	
01/01/2007			2	3	3		
01/07/2007			2	4	3		
01/01/2008			3	4	2		
01/07/2008			3	5			
01/01/2009			2	3			
01/07/2009			2	3			
01/01/2010			3	3			
01/07/2010			3	4			

Source: Joint Committee calculations based on data provided by Euler Hermes

Figure 5: Number of defaulted rated items

Date	AAA	AA	A	BBB	BB	B	CCC/CC /C
01/07/2002						0	
01/01/2003			0			0	
01/07/2003			0				
01/01/2004			0			0	
01/07/2004			0		0	0	
01/01/2005			0	0	0		
01/07/2005			0	0	0		
01/01/2006			0	0	0	0	
01/07/2006			0	0	0	0	
01/01/2007			0	0	0		
01/07/2007			0	0	0		
01/01/2008			0	0	0		
01/07/2008			0	0			
01/01/2009			0	0			
01/07/2009			0	0			
01/01/2010			0	0			
01/07/2010			0	0			

Source: Joint Committee calculations based on data provided by Euler Hermes

Figure 6: Mapping proposal for rating categories with a non-sufficient number of credit ratings, applicable until 31.12.2018

	AAA/AA	A	BBB	BB	B
CQS of equivalent international rating category	CQS 1	CQS 2	CQS 3	CQS 4	CQS 5
N. observed defaulted items	0	0	0	0	0
Minimum N. rated items	0	0	0	0	0
Observed N. rated items	0	38	43	18	7
Mapping proposal	CQS 1	CQS 2	CQS 3	CQS 4	CQS 5

Source: Joint Committee calculations based on data provided by Euler Hermes

Figure 7: Mapping proposal for rating categories with a non-sufficient number of credit ratings, applicable starting from 01.01.2019

	AAA/AA	A	BBB	BB	B
CQS of equivalent international rating category	CQS 1	CQS 2	CQS 3	CQS 4	CQS 5
N. observed defaulted items	0	0	0	0	0
Minimum N. rated items	496	0	0	10	5
Observed N. rated items	0	38	43	18	7
Mapping proposal	CQS 2	CQS 2	CQS 3	CQS 4	CQS 5

Source: Joint Committee calculations based on data provided by Euler Hermes

Figure 8: Transition matrix

3-year transition matrices, 8-year average (2002 - 2013)

Rating end period	AAA	AA	A	BBB	BB	B	CCC/CC/C
Rating start period							
AAA	0	0	0	0	0	0	0
AA	0	0	0	0	0	0	0
A	0	0	100	0	0	0	0
BBB	0	0	0	83.87	16.13	0	1.11
BB	0	0	0	66.67	33.33	0	0
B	0	0	0	0	0	0	0
CCC/CC/C	0	0	0	0	0	0	0

Source: Joint Committee calculations based on data provided by Euler Hermes

Figure 9: Public and Private ratings: Number of rated items

Date	AAA	AA	A	BBB	BB	B	CCC/CC /C
01/07/2002						1	
01/01/2003			1			2	
01/07/2003			1		1	2	
01/01/2004			2	1	2	3	
01/07/2004		1	2	1	4	3	1
01/01/2005		1	5	9	8	5	1
01/07/2005			5	11	8	7	
01/01/2006			4	16	9	7	
01/07/2006		1	5	15	10	6	
01/01/2007		1	4	14	28	6	
01/07/2007			6	18	30	6	
01/01/2008			6	16	18	4	
01/07/2008		1	3	14	15	1	
01/01/2009		1	2	11	10	4	
01/07/2009			2	12	9	4	1
01/01/2010			4	6	4		2
01/07/2010		2	6	12	6	1	1

Source: Joint Committee calculations based on data provided by Euler Hermes

Figure 10: Public and Private ratings: Number of defaulted items

Date	AAA	AA	A	BBB	BB	B	CCC/CC /C
01/07/2002						0	
01/01/2003			0			0	
01/07/2003			0		0	1	
01/01/2004			0	0	0	1	
01/07/2004		0	0	0	0	0	0
01/01/2005		0	0	0	0	0	0
01/07/2005			0	0	0	1	
01/01/2006			0	0	0	0	
01/07/2006		0	0	0	0	1	
01/01/2007		0	0	1	4	1	
01/07/2007			0	1	4	0	
01/01/2008			0	0	1	0	
01/07/2008		0	0	0	1	0	
01/01/2009		0	0	0	1	1	
01/07/2009			0	0	0	1	0
01/01/2010			0	0	0		0
01/07/2010		0	0	0	0	0	0

Source: Joint Committee calculations based on data provided by Euler Hermes

Figure 11: Public and Private Ratings: Default rates

Date	AAA	AA	A	BBB	BB	B	CCC/CC /C
01/07/2002	n.a.	n.a.	n.a.	n.a.	n.a.	0.00	n.a.
01/01/2003	n.a.	n.a.	0.00	n.a.	n.a.	0.00	n.a.
01/07/2003	n.a.	n.a.	0.00	n.a.	0.00	50.00	n.a.
01/01/2004	n.a.	n.a.	0.00	0.00	0.00	33.33	n.a.
01/07/2004	n.a.	0.00	0.00	0.00	0.00	0.00	0.00
01/01/2005	n.a.	0.00	0.00	0.00	0.00	0.00	0.00
01/07/2005	n.a.	n.a.	0.00	0.00	0.00	14.29	n.a.
01/01/2006	n.a.	n.a.	0.00	0.00	0.00	0.00	n.a.
01/07/2006	n.a.	0.00	0.00	0.00	0.00	16.67	n.a.
01/01/2007	n.a.	0.00	0.00	7.14	14.29	16.67	n.a.
01/07/2007	n.a.	n.a.	0.00	5.56	13.33	0.00	n.a.
01/01/2008	n.a.	n.a.	0.00	0.00	5.56	0.00	n.a.
01/07/2008	n.a.	0.00	0.00	0.00	6.67	0.00	n.a.
01/01/2009	n.a.	0.00	0.00	0.00	10.00	25.00	n.a.
01/07/2009	n.a.	n.a.	0.00	0.00	0.00	25.00	0.00
01/01/2010	n.a.	n.a.	0.00	0.00	0.00	n.a.	0.00
01/07/2010	n.a.	0.00	0.00	0.00	0.00	0.00	0.00
Long-run default rate	n.a.	0.00	0.00	1.28	6.79	11.29	0.00

Source: Joint Committee calculations based on data provided by Euler Hermes

Appendix 4: Mappings of each rating scale

Figure 12: Mapping of EHR's Global long-term rating scale, applicable until 31.12.2018

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	
A	2	n.a.	2	
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	5	n.a.	5	The quantitative factors 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	
C	6	n.a.	6	

SD	n.a.	n.a.	6	The meaning and relative position of the rating category is representative of the final CQS.
D	n.a.	n.a.	6	The meaning and relative position of the rating category is representative of the final CQS.

Figure 13: Mapping of EHR's Global long-term rating scale, applicable starting from 01.01.2019

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	2	n.a.	2	The quantitative factors are representative of the final CQS.
AA	2	n.a.	2	
A	2	n.a.	2	
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	5	n.a.	5	The quantitative factors 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	

C	6	n.a.	6	
SD	n.a.	n.a.	6	The meaning and relative position of the rating category is representative of the final CQS.
D	n.a.	n.a.	6	The meaning and relative position of the rating category is representative of the final CQS.