Amended Draft Mapping of AM Best Europe Rating Services 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 AM Best Europe Rating Services (AMBERS), with respect to the version published on 11 November 2015. The resulting mapping tables have remained unchanged with respect to the afore-mentioned version.

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 the short-term rating scale has been broken down into "Short-term issuer rating scale" and "Short-term issue rating scale" with the meaning of rating category AMB-4 revised. The short-term and long-term rating scales provide further differentiation for the categories in default and the wording of the "long-term debt rating scale" changed to "long-term issue 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 entity[3] nor should be understood as a comparison of the rating methodologies of

[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 https://www.esma.europa.eu/sites/default/files/library/esma_2015-1473_report_on_the_possibility_of_establishing_one_or_more_mapping.pdf.

AMBERS with those of other ECAIs. This mapping should however be interpreted as the correspondence of the rating categories of AMBERS 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.

5. As described in Recital 12 of the Implementing Regulation, it is necessary 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. 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 ECAIs' credit assessments under Article 136(1) and (3) of Regulation (EU) No 575/2013. Figure 1 below shows the result for the main ratings scale of AMBERS, the Long-term issuer ratings scale.

Figure 1: Mapping of AMBERS's Long-term issuer credit ratings scale[4]

Credit assessment	Credit quality step
aaa	1
aa+ to aa-	1
a+ to a-	2
bbb+ to bbb-	3
bb+ to bb-	4
b+ to b-	5
ccc+ to ccc-	6
cc	6
c	6
d	6
e	6
f	6
s	6

[4] Please note that designations 'd', 'e', 'f' and 's' are non-rating designations. These have been mapped to CQS 6 due to the events they are assigned to:

d - status assigned to entities (excluding insurers) that are in default or when a bankruptcy petition or similar action has been filed and made public

e - status assigned to insurers that are publicly placed under a significant form of regulatory supervision, control or restraint - including cease and desist orders, conservatorship or rehabilitation, but not liquidation - that prevents conduct of normal ongoing operations; an impaired entity

f - status assigned to insurers that are publicly placed in liquidation by a court of law or by a forced liquidation; an impaired entity

s - status assigned to rated entities to suspend the outstanding ICR when sudden and significant events impact operations and rating implications cannot be evaluated due to a lack of timely or adequate information; or in cases where continued maintenance of the previously published rating opinion is in violation of evolving regulatory requirements

2. Introduction

7. This report describes the mapping exercise carried out by the JC to propose an amended 'mapping' report of the 'mapping' of the credit assessments of AM Best Europe Rating Services (AMBERS) , with respect to the version published on 11 November 2015.

8. AMBERS has been registered with ESMA since 8 September 2011 in the UK and meets the conditions to be an eligible credit assessment institution (ECAI)[5]. Further, a registration in the Netherlands on 3 December 2018 took place, maintaining the same scope and methodology for credit assessments. AMBERS provides insurance-related credit rating services in the European, Middle Eastern and African regions

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. 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 short-term rating scale has been broken down into "Short-term issuer rating scale" and "Short-term issue rating scale" with the meaning of rating category AMB-4 revised. The short-term and long-term rating scales provide further differentiation for the categories in default and the wording of the "long-term debt rating scale" changed to "long-term issue rating scale". The quantitative information is drawn from data available in the ESMA's central repository (CEREP[6]) based on the credit rating information submitted by the ECAIs as part of their reporting obligations.

10. The following sections describe the rationale underlying the mapping exercise carried out by the Joint Committee (JC) to determine the applicable mapping. Section 3 describes the relevant ratings scales of AMBERS for the purpose of the mapping. Section 4 contains the methodology applied to derive the mapping of AMBERS' main ratings scale whereas Sections 5 and 6 refer to the mapping of its remaining relevant ratings scales. 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.

[6] https://cerep.esma.europa.eu/cerep-web/

3. AMBERS credit ratings and rating scales

11. AMBERS produces a variety of credit ratings. Column 2 of Figure 2 in Appendix 1 shows the relevant credit ratings that may be used by institutions for the calculation of risk weights under the Standardised Approach (SA)[7]:

- **Long-term issuer credit ratings (ICR) for insurances**, defined as an independent opinion of an entity's ability to meet its ongoing senior financial obligations. An ICR is an opinion regarding the relative future credit risk of an entity. An ICR does not address any other risk.

- **Long-term issuer credit ratings (ICR) for non-insurances**, defined as an independent opinion of an entity's ability to meet its ongoing senior financial obligations. The rating is an opinion regarding the relative future credit risk of an entity, a credit commitment or a debt or debt-like security. It does not address any other risk.

- **Financial strength ratings (FSR)**, defined as an independent opinion of an insurer's financial strength and ability to meet its ongoing insurance policy and contract obligations. They are not assigned to specific insurance policies or contracts and do not address any other risk, including, but not limited to, an insurer's claims-payment policies or procedures; the ability of the insurer to dispute or deny claims payment on grounds of misrepresentation or fraud; or any specific liability contractually borne by the policy or contract holder.

- **Long-term issue ratings**, an independent opinion of credit quality assigned to issues that gauges the ability to meet the ongoing terms of the financial obligation to security holders when due. These credit ratings do not address any other risk, including but not limited to liquidity risk, market value risk or price volatility of rated obligations.

- **Short-term issue ratings**, defined as an opinion gauging the ability to meet the terms of an obligation with a maturity generally less than one year.

- **Short-term issuer credit ratings**, defined as an opinion of an entity's ability to meet its ongoing financial obligations with original maturities generally less than one year.

  The list below outlines the specific ratings in this area along with the associated descriptions.

12. AMBERS assigns these credit ratings to different rating scales as illustrated in column 3 of Figure 2 in Appendix 1. Therefore, a specific mapping has been prepared for the following rating scales:

[7] As explained in recital 4 of the Implementing Regulation, 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.

- **Long-term issuer credit ratings scale.** The specification of this rating scale is described in Figure 3 of Appendix 1.

- **Financial strength ratings scale.** The specification of this rating scale is described in Figure 4 of Appendix 1.

- **Long-term issue ratings scale.** The specification of this rating scale is described in Figure 5 of Appendix 1.

- **Short-term issuer ratings scale.** The specification of this rating scale is described in Figure 6 of Appendix 1.

- **Short-term issue ratings scale.** The specification of this rating scale is described in Figure 7 of Appendix 1.

13. The mapping of the Long-term issuer credit ratings scale is explained in Section 4 and it has been derived in accordance with the quantitative factors, qualitative factors and benchmarks specified in the Implementing Regulation.

14. The mapping of the short-term issuer ratings scale is explained in Section 5 and it has been indirectly derived from the mapping of the long-term issuer credit ratings scale and the internal relationship established by AMBERS between these two scales, as per Article 13 of the Implementing Regulation. This internal relationship is shown in Figure 8 of Appendix 1.

15. The indirect mapping approach described in the previous paragraph has also been applied In the case of the other long-term rating scales and the short-term issue rating scale, as explained in Section 6. In these cases, however, the relationship with the Long-term issuer credit ratings scale has been assessed, for the purpose of the mapping, by the JC based on the comparison of the meaning and relative position of the rating categories.

4. Mapping of AMBERS Long-term issuer credit ratings (ICR) scale

16. The mapping of the Long-term issuer credit ratings (ICR) 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.

17. 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 used to arrive at an initial mapping proposal by comparing its value with the benchmark specified in point (a) of Article 14 of the ITS.

- The *short run default rates* of a rating category have been compared with the benchmarks specified in point (b) of Article 14 of the ITS, which represent the maximum expected deviation of a default rate from its long-term value within a CQS.

18. 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, especially in those ratings categories where less default data has been available.

4.1. Initial mapping based on the quantitative factors

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

4.1.1. Calculation of the short-run and long-run default rates

20. The short run and long run default rates of each rating category have been based on the information contained in CEREP and according to the provisions laid down in the Implementing Regulation[8]:

- For rating categories aaa and aa the number of credit ratings cannot be considered to be sufficient for the calculation of the short and long run default rates specified in the Articles 3 – 5 of the Implementing Regulation 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 Implementing Regulation, as shown in Figure 16 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.

- For the non-rating designations ‘d’, ‘e’ and ‘f’, no calculation of default rates has been made since they already reflect a ‘default’ situation and are therefore assigned to CQS 6.

- For rating categories ‘a’, ‘bbb’, ‘bb’, ‘b’, ‘ccc’, ‘cc’ and ‘c’ the number of credit ratings can be considered to be sufficient and therefore the calculation has followed the rules established in Articles 3 to 5 of the Implementing Regulation[9]. The result of the calculation of the short run and long run default rates for each rating category is shown in Figure 11 of Appendix 3.

[8] The quantitative analysis of the mapping report published in November 2015 did not draw from CEREP data, available at the time from 2002H1 to 2013H1 for Ambers, but rather on historical rating data bilaterally submitted by Ambers of ‘Financial strength ratings’ for insurance companies. The rationale was that the time series for financial strength ratings was somewhat longer (2000 to 2012) and the rating pool was larger, allowing for the calculation of quantitative factors under Articles 3 to 5 of the Implementing Regulation (large pool methodology) except for rating categories aaa/aa. For the monitoring exercise, which focuses on the additional data collected since the mapping was produced; we reply on the CEREP database built from the rating information submitted by Ambers to ESMA as part of its reporting obligations. It should be noted that CEREP data for Ambers allows for the calculation of quantitative factors under the large pool methodology from 2006, so it is suitable for monitoring purposes.

[9] In the case of categories BB and B, the perceived risk profile considered to assess the sufficiency of ratings is given by the long run benchmark underlying their homonymous categories in the international rating scale, i.e. 7.50% and 20.00% respectively.

21. Withdrawn ratings have been weighted by 50% as indicated in Article 4(3) of the Implementing Regulation.

22. The default definition applied by AMBERS, 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

23. For rating categories 'aaa' and 'aa', the number of credit ratings cannot be considered to be sufficient for the calculation of the short and long run default rates specified in the Articles 3 – 5 of the Implementing Regulation, as it was the case in the original mapping report. Therefore the calculation of the long run default rate has been made in accordance with Article 6, as shown in Figure 16. 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. The number of rated items is equal or larger than the minimum required number of observed items for CQS 1 given the number of defaulted items in the rating category.

24. Based on the comparison of their long-run default rates (see Figure 11 in Appendix 3) and the long-run default rate benchmark intervals established in point (a) of Article 14 of the Implementing Regulation, rating categories 'a', 'bbb', 'bb' and 'b' have been initially allocated to CQS 1, 3, 4 and 4 respectively. Rating categories 'ccc', 'cc' and 'c' are assigned to CQS5.

4.1.3. Reviewed mapping based on the short run default rates

25. As shown in Figures 12 to 15 in Appendix 3, the short run default rates of rating 'a', 'bbb', 'bb' and 'b' have been compared with the short run default rate benchmark values established in point (b) of Article 14 of the Implementing Regulation 10.

26. The objective is to assess, for each rating category, whether the short-run default rates have deviated from their corresponding benchmark values and whether any observed deviation has been caused by a weakening of the assessment standards. Therefore short run default rates experienced within a rating category have been confronted with the short run benchmarks "monitoring" and "trigger" levels specified in Annex I of the Implementing Regulation.

27. For rating categories 'a', 'bbb' and 'bb' the short run default rate does not breach the trigger nor the monitoring level during the observation period. Therefore the initial mapping based on the long run default rate is confirmed at this stage. For rating category 'b' the monitoring and trigger benchmarks are breached in a number period (2006H1, 2006H2 and 2010H2) but this cannot be considered as systematic as it not observed for at least 4 consecutive dates. In this case the qualitative factors acquire more importance. Similarly for rating categories 'ccc', 'cc' and 'c', where the trigger benchmark is breached in two periods so the qualitative factors acquire more importance.

[10] For 'aaa' and 'aa' rating categories, the number of credit ratings cannot be considered to be sufficient and therefore no calculation of the short run default rate has been made.

4.2. Final mapping after review of the qualitative factors

28. 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, as it is the case of 'aaa' and 'aa' rating categories.

29. AMBERS has not registered any change in the quantitative factors since the draft Implementing Technical Standards submitted by the JC to the Commission. Therefore the qualitative considerations remain unchanged with respect to the original mapping report, which means that the meaning and relative position of the credit assessments is the only qualitative factor that suggests an adjustment of the mapping proposal resulting from the quantitative factors.

- The meaning and relative position of rating categories 'aaa' and 'aa' are consistent with CQS1.
- The meaning and relative position of rating category 'a' is consistent with CQS2.
- In the case of rating category 'bbb', where the quantitative evidence was very close to CQS 2, its meaning and relative position confirm the proposed mapping to CQS 3.
- For rating category 'bb', where the quantitative evidence was very close to CQS 3, its meaning and relative position confirm the proposed mapping to CQS 4.
- For rating category 'b', its meaning and relative position refer to CQS 5.
- For rating categories 'ccc', 'cc' and 'c' the meaning and relative position refer to CQS 6.

5. Mapping of AMBERS Short-Term ratings scale

30. AMBERS also produces short-term credit ratings and assigns them to the Short-term issuer credit ratings scale (see Figure 6 in Appendix 1). Given that the default information referred to these 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 AMBERS between these two rating scales (described in Figure 8 of Appendix 1) has been used to derive the mapping of the Short-term issuer rating scale. This should ensure the consistency of the mappings proposed for AMBERS.

31. 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 credit rating category has been determined based on the most frequent CQS assigned to the related long-term credit rating categories. In case of draw, the most conservative CQS has been considered. If the most frequent step is identified as CQS 5 or 6, CQS 4 is allocated, as the risk weights assigned to CQS 4 to 6 are all equal to 150% according to Article 131 CRR.

32.The result is shown in Figure 18 of Appendix 4:

- **AMB-1+.** This rating category indicates the strongest ability of the rated entity to meet its senior financial commitments on obligations maturing in generally less than one year. It is internally mapped to long-term categories 'aaa' to 'a+', which are predominantly mapped to CQS 1. Therefore, CQS 1 is the proposed mapping.

- **AMB-1.** This rating category indicates an outstanding ability of the rated entity to meet its senior financial commitments on obligations maturing in generally less than one year. It is internally mapped to long-term categories 'a+' to 'a-', which are mapped to CQS 2. Therefore, CQS 2 is the proposed mapping.

- **AMB-2.** This rating category indicates a satisfactory ability of the rated entity to meet its senior financial commitments on obligations maturing in generally less than one year. It is internally mapped to long-term categories 'a' to 'bbb', which are mapped to CQS 2 and CQS3, respectively. As the mapping is done via a different rating scale and taking into account the meaning and relative position of the rating category the more conservative credit quality step has been chosen for AMB-2. Therefore, CQS 3 is the proposed mapping.

- **AMB-3.** This rating category indicates an adequate ability of the rated entity to meet its senior financial commitments on obligations maturing in generally less than one year; however, adverse industry or economic conditions likely will reduce capacity to meet financial commitments. It is internally mapped to long-term categories 'bbb' and 'bbb-', which are mapped to CQS 3. Therefore, CQS 3 is the proposed mapping.

- **AMB-4.** This rating category is assigned to entities that have questionable credit quality and are vulnerable to adverse economic or other external changes, which could have a marked impact on their ability to meet their financial commitments. It is internally mapped to long-term categories 'bb+' and below. Since the risk weights assigned to CQS 4 to 6 are all equal to 150% according to Article 131 CRR, the mapping proposed for the AMB-4 rating category is CQS 4.

6. Mapping of other AMBERS credit rating scales

33.As mentioned in Section 3, AMBERS produces a number of additional credit ratings that are assigned to different credit rating scales.

34.Based on the methodology described in the previous section, the mapping of each rating scale has been derived from the relationship established by the JC with the relevant Long-term issuer credit ratings scale. More specifically, as each rating can be associated with one or a range of long-term rating categories, its CQS has been determined based on the most frequent CQS assigned to the related rating categories. In case of draw, the most conservative CQS has been considered.

35.The results are shown in Figures 19 to 21 of Appendix 4:

- **Financial strength ratings scale** (see Figure 4 in Appendix 1). The ratings of this rating scale and the close relationship with the long-term issuer credit ratings scale have been used to develop the mapping for the long-term issuer credit rating scale. Therefore the mapping for the financial strength rating can be derived by using the same relationship. The result of the mapping of this scale is shown in Figure of Appendix 4.

- **Long-term issue ratings scale** (see Figure 5 in Appendix 1). The rating categories can be considered comparable to those of the Long-term issuer credit rating scale. Therefore the mapping of each rating category has been derived from its meaning and relative position and the mapping of the corresponding categories of the Long-term issuer rating scale. The result of the mapping of this scale is shown in Figure of Appendix 4.

- **Short-term issue ratings scale** (see Figure 7 in Appendix 1). The rating categories can be considered comparable to those of the Short-term issuer credit rating scale. Therefore the mapping of each rating category has been derived from its meaning and relative position and the mapping of the corresponding categories of the Short-term issuer rating scale. The result of the mapping of this scale is shown in Figure of Appendix 4.

Appendix 1: Credit ratings and rating scales

Figure 2: AMBERS' relevant credit ratings and rating scales

SA exposure classes	Name of credit rating	Credit rating scale
Long-term ratings		
Corporates	Long-term issuer credit rating	Long-term issuer credit ratings scale
	Financial strength rating	Financial strength ratings scale
	Long-term issue rating	Long-term issue ratings scale
Short-term ratings		
Corporates	Short-term issuer rating	Short-term issuer ratings scale
	Short-term issue credit ratings	Short-term issue ratings scale

Source: AMBERS

Figure 3: Long-term issuer credit ratings scale

Credit assessment	Meaning of the credit assessment
aaa	Assigned to entities that have, in AMBERS' opinion, an exceptional ability to meet their ongoing senior financial obligations.
aa+ to aa-	Assigned to entities that have, in AMBERS' opinion, a superior ability to meet their ongoing senior financial obligations.
a+ to a-	Assigned to entities that have, in AMBERS' opinion, an excellent ability to meet their ongoing senior financial obligations.
bbb+ to bbb-	Assigned to entities that have, in AMBERS' opinion, a good ability to meet their ongoing senior financial obligations.
bb+ to bb-	Assigned to entities that have, in AMBERS' opinion, a fair ability to meet their ongoing senior financial obligations. Credit quality is vulnerable to adverse changes in industry and economic conditions.
b+ to b-	Assigned to entities that have, in AMBERS' opinion, a marginal ability to meet their ongoing senior financial obligations. Credit quality is vulnerable to adverse changes in industry and economic conditions.
ccc+ to ccc-	Assigned to entities that have, in AMBERS' opinion, a weak ability to meet their ongoing senior financial obligations. Credit quality is vulnerable to adverse changes in industry and economic conditions.
cc	Assigned to entities that have, in AMBERS' opinion, a very weak ability to meet their ongoing senior financial obligations. Credit quality is very vulnerable to adverse changes in industry and economic conditions.
c	Assigned to entities that have, in AMBERS' opinion, a poor ability to meet their ongoing senior financial obligations. Credit quality is extremely vulnerable to adverse changes in industry and economic conditions.
d	Status assigned to entities (excluding insurers) that are in default or when a bankruptcy petition or similar action has been filed and made public.

e	Status assigned to insurers that are publicly placed under a significant form of regulatory supervision, control or restraint - including cease and desist orders, conservatorship or rehabilitation, but not liquidation - that prevents conduct of normal ongoing operations; an impaired entity.
f	Status assigned to insurers that are publicly placed in liquidation by a court of law or by a forced liquidation; an impaired entity.
s	Status assigned to rated entities to suspend the outstanding ICR when sudden and significant events impact operations and rating implications cannot be evaluated due to a lack of timely or adequate information; or in cases where continued maintenance of the previously published rating opinion is in violation of evolving regulatory requirements.
nr	Status assigned to entities that are not rated; may include previously rated entities or entities that have never been rated by AMBERS.

Source: AMBERS

Figure 4: Financial strength ratings scale

Credit assessment	Meaning of the credit assessment
A++, A+	Assigned to insurance companies that have, in AMBERS' opinion, a superior ability to meet their ongoing insurance obligations.
A, A-	Assigned to insurance companies that have, in AMBERS' opinion, an excellent ability to meet their ongoing insurance obligations.
B++, B+	Assigned to insurance companies that have, in AMBERS' opinion, a good ability to meet their ongoing insurance obligations.
B, B-	Assigned to insurance companies that have, in AMBERS' opinion, a fair ability to meet their ongoing insurance obligations. Financial strength is vulnerable to adverse changes in underwriting and economic conditions.
C++, C+	Assigned to insurance companies that have, in AMBERS' opinion, a marginal ability to meet their ongoing insurance obligations. Financial strength is vulnerable to adverse changes in underwriting and economic conditions.
C, C-	Assigned to insurance companies that have, in AMBERS' opinion, a weak ability to meet their ongoing insurance obligations. Financial strength is very vulnerable to adverse changes in underwriting and economic conditions.
d	Assigned to insurance companies that have, in AMBERS' opinion, a poor ability to meet their ongoing insurance obligations. Financial strength is extremely vulnerable to adverse changes in underwriting and economic conditions.
e	Assigned to insurance companies publicly placed under a significant form of regulatory supervision, control or restraint - including cease and desist orders, conservatorship or rehabilitation, but not liquidation - that prevents conduct of normal, ongoing insurance operations; an impaired insurer.
f	Assigned to insurance companies publicly placed in liquidation by a court of law or by a forced liquidation; an impaired insurer.
s	Assigned to rated insurance companies to suspend the outstanding FSR when sudden and significant events impact operations and rating implications cannot be evaluated due to a lack of timely or adequate information; or in cases where continued maintenance of the previously published rating opinion is in violation of evolving regulatory requirements.

nr	Status assigned to entities that are not rated; may include previously rated entities or entities that have never been rated by AMBERS.

Source: AMBERS

Figure 5: Long-term issue ratings scale

Credit assessment	Meaning of the credit assessment
aaa	Assigned to issues where, in AMBERS' opinion, there is an exceptional ability to meet the terms of the obligation.
aa+ to aa-	Assigned to issues where, in AMBERS' opinion, there is a superior ability to meet the terms of the obligation.
a+ to a-	Assigned to issues where, in AMBERS' opinion, there is an excellent ability to meet the terms of the obligation.
bbb+ to bbb-	Assigned to issues where, in AMBERS' opinion, there is a good ability to meet the terms of the obligation; however, the issue is more susceptible to changes in economic or other conditions.
bb+ to bb-	Assigned to issues where, in AMBERS' opinion, fair credit characteristics exist, generally due to a moderate margin of principal and interest payment protection or other issue specific concerns that may be exacerbated by a vulnerability to economic changes or other conditions.
b+ to b-	Assigned to issues where, in AMBERS' opinion, marginal credit characteristics exist, generally due to a modest margin of principal and interest payment protection or other issue-specific concerns that may be exacerbated be an enhanced vulnerability to economic changes or other conditions.
ccc+ to ccc-	Assigned to issues where, in AMBERS' opinion, weak credit characteristics exist, generally due to a minimal margin of principal and interest payment protection or other issue-specific concerns that may be exacerbated by a limited ability to withstand adverse changes in economic or other conditions.
cc	Assigned to issues where, in AMBERS' opinion, very weak credit characteristics exist, generally due to an extremely minimal margin of principal and interest payment protection or other issue-specific concerns that may be exacerbated by a limited ability to withstand adverse changes in economic or other conditions
c	Assigned to issues where, in AMBERS' opinion, poor credit characteristics exist, generally due to an extremely minimal margin of principal and interest payment protection or other issue-specific concerns that may be exacerbated by an extremely limited ability to withstand adverse changes in economic or other conditions.

d	Status assigned to issues in default on payment of principal, interest or other terms and conditions, or when a bankruptcy petition or similar action has been filed and made public; or where the issuing entity has been designated as impaired (e/f [Issuer Credit] or E/F [Financial Strength] designations) or in default (d [Issuer Credit] designation).
s	Status assigned to rated issues to suspend the outstanding IR when sudden and significant events have occurred and rating implications cannot be evaluated due to a lack of timely or adequate information; or in cases where continued maintenance of the previously published rating opinion is in violation of evolving regulatory requirements.
nr	Status assigned to entities that are not rated; may include previously rated entities or entities that have never been rated by AMBERS.

Source: AMBERS

Figure 6: Short-term issuer credit ratings scale

Credit assessment	Meaning of the credit assessment
AMB-1+	Assigned to entities that have, in AMBERS' opinion, the strongest ability to repay their short-term financial obligations.
AMB-1	Assigned to entities that have, in AMBERS' opinion, an outstanding ability to repay their short-term financial obligations.
AMB-2	Assigned to entities that have, in AMBERS' opinion, a satisfactory ability to repay their short-term financial obligations.
AMB-3	Assigned to entities that have, in AMBERS' opinion, an adequate ability to repay their short-term financial obligations; however, adverse industry or economic conditions likely will reduce their capacity to meet their financial commitments.
AMB-4	Assigned to entities that have, in AMBERS' opinion, questionable credit quality and are vulnerable to adverse economic or other external changes, which could have a marked impact on their ability to meet their financial commitments.
d	Status assigned to entities (excluding insurers) that are in default or when a bankruptcy petition or similar action has been filed and made public.
e	Status assigned to insurers that are publicly placed under a significant form of regulatory supervision, control or restraint - including cease and desist orders, conservatorship or rehabilitation, but not liquidation - that prevents conduct of normal ongoing operations; an impaired entity.
f	Status assigned to insurers that are publicly placed in liquidation by a court of law or by a forced liquidation; an impaired entity.
s	Status assigned to rated entities to suspend the outstanding ICR when sudden and significant events impact operations and rating implications cannot be evaluated due to a lack of timely or adequate information; or in cases where continued maintenance of the previously published rating opinion is in violation of evolving regulatory requirements.
nr	Status assigned to entities that are not rated; may include previously rated entities or entities that have never been rated by AMBERS.

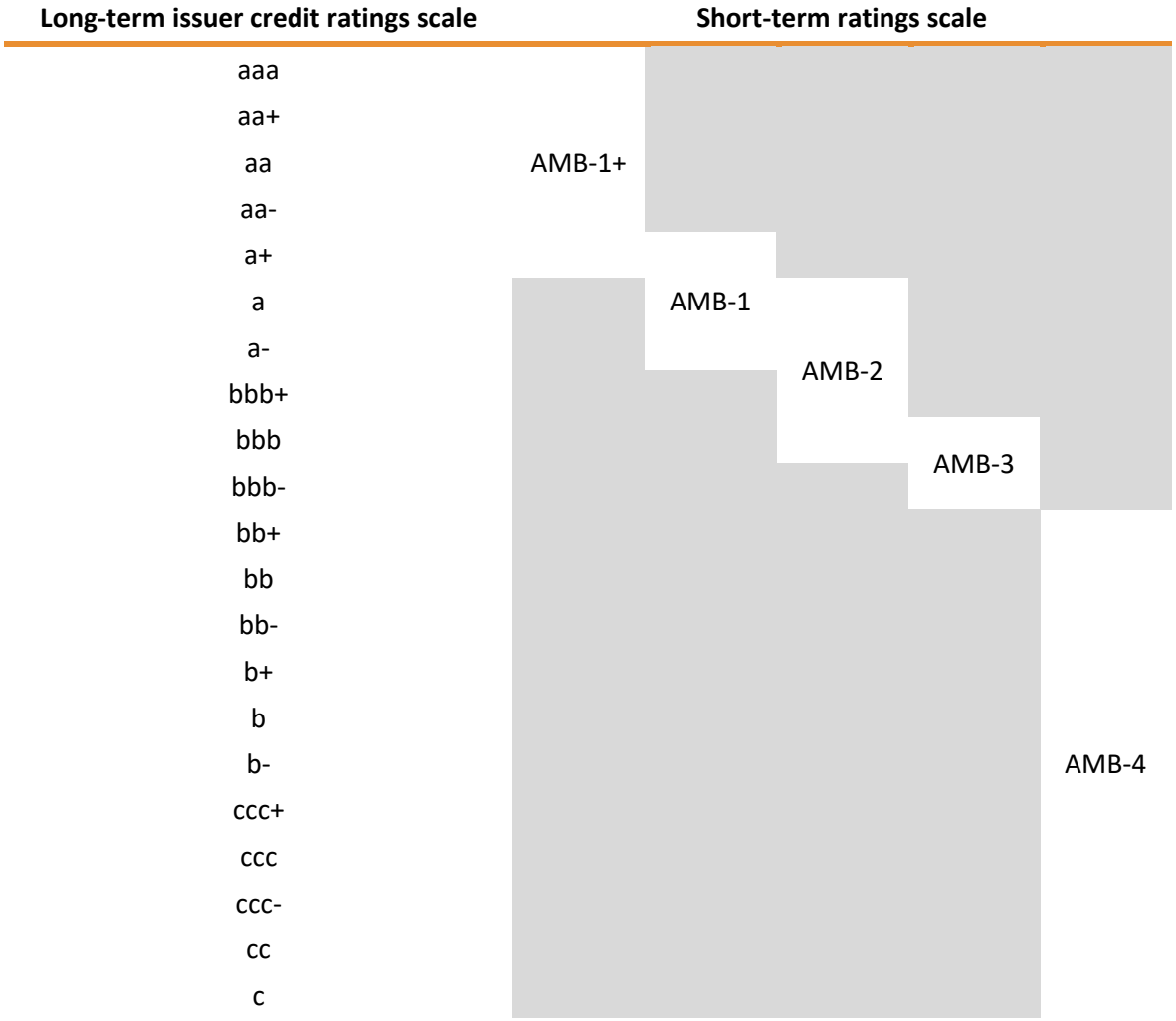
Source: AMBERS

Figure 7: Short-term issue credit ratings scale

Credit assessment	Meaning of the credit assessment
AMB-1+	Assigned to issues where, in AMBERS' opinion, the strongest ability to repay short-term debt obligations exists.
AMB-1	Assigned to issues where, in AMBERS' opinion, an outstanding ability to repay short-term debt obligations exists.
AMB-2	Assigned to issues where, in AMBERS' opinion, a satisfactory ability to repay short-term debt obligations exists.
AMB-3	Assigned to issues where, in AMBERS' opinion, an adequate ability to repay short-term debt obligations exists; however, adverse economic conditions likely will reduce the capacity to meet financial commitments.
AMB-4	Assigned to issues that, in AMBERS' opinion, contain questionable credit characteristics and are vulnerable to adverse economic or other external changes, which could have a marked impact on the ability to meet financial commitments.
d	Status assigned to issues in default on payment of principal, interest or other terms and conditions, or when a bankruptcy petition or similar action has been filed and made public; or where the issuing entity has been designated as impaired (e/f [Issuer Credit] or E/F [Financial Strength] designations) or in default (d [Issuer Credit] designation).
s	Status assigned to rated issues to suspend the outstanding IR when sudden and significant events have occurred and rating implications cannot be evaluated due to a lack of timely or adequate information; or in cases where continued maintenance of the previously published rating opinion is in violation of evolving regulatory requirements.
nr	Status assigned to entities that are not rated; may include previously rated entities or entities that have never been rated by AMBERS.

Source: AMBERS

Figure 8: Internal relationship between AMBERS long-term and short-term ratings scales



Source: AMBERS

Appendix 2: Definition of default

AMBERS applies two different definitions of default, one for the corporate sector, labelled 'default' definition, and one for the insurance sector, labelled 'financial impairment' definition.

AMBERS, along with credit markets in general, deems a non-insurer default as having occurred when an issuer misses interest or principal payments on its obligations, restructures its debt in a way that is deleterious to investors, or files for bankruptcy.

AMBERS designates an insurer as a Financially Impaired Company (FIC) upon the first official public regulatory action taken by an insurance department, whereby the insurer's: a) ability to conduct normal insurance operations is adversely affected; b) capital and surplus have been deemed inadequate to meet legal requirements; and/or c) general financial condition has triggered regulatory concern. Such publicly disseminated regulatory actions include involuntary liquidation because of insolvency, as well as other regulatory processes and procedures such as supervision, rehabilitation, receivership, conservatorship, a cease-and-desist order, suspension, license revocation, administrative order and any other action that restricts a company's freedom to conduct its insurance business as normal. Companies that enter voluntary dissolution and are not under financial duress at that time are not counted as financially impaired.

Source: AMBERS

Appendix 3: Default rates of each rating category

Figure 9: Number of rated items, with relevant weights[11]

Date	aaa/aa	a	bbb	bb	b	ccc-c
01/01/2002	0.0	1.0	0.0	0.0	0.0	0.0
01/07/2002	0.0	1.0	1.0	0.0	0.0	0.0
01/01/2003	2.0	1.0	2.0	0.0	0.0	0.0
01/07/2003	7.5	7.0	12.5	2.0	1.0	0.0
01/01/2004	17.0	36.5	39.5	9.0	2.0	0.0
01/07/2004	38.0	64.0	53.0	12.5	1.0	0.0
01/01/2005	134.5	202.5	86.5	16.5	2.0	0.5
01/07/2005	381.0	698.5	166.5	22.0	3.0	0.0
01/01/2006	505.5	902.0	213.5	44.0	5.5	0.0
01/07/2006	621.5	1,126.0	242.5	45.5	14.0	1.0
01/01/2007	643.0	1,182.0	272.0	41.0	9.0	0.0
01/07/2007	753.5	1,613.0	546.0	110.5	33.5	8.0
01/01/2008	815.5	1,839.5	646.0	151.0	51.5	10.5
01/07/2008	843.0	2,001.5	685.0	157.5	54.0	12.5
01/01/2009	787.5	2,065.5	677.0	146.0	48.5	18.5
01/07/2009	700.0	2,118.5	702.0	159.0	47.0	13.5
01/01/2010	701.5	2,117.0	649.5	137.5	21.5	8.0
01/07/2010	699.0	2,123.0	613.5	127.5	22.0	10.0
01/01/2011	716.5	2,107.5	593.5	117.0	19.5	10.5
01/07/2011	703.5	2,126.5	560.0	113.5	19.0	14.0
01/01/2012	683.5	2,124.0	564.5	109.5	17.5	7.0
01/07/2012	681.5	2,137.0	557.0	108.0	14.0	9.0
01/01/2013	688.5	2,145.0	549.5	101.5	14.0	8.0

Source: Joint Committee calculations based on AMBERS data

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

Figure 10: Number of defaulted rated items

Date	aaa/aa	a	bbb	bb	b	ccc-c
01/01/2002	0	0	0	0	0	0
01/07/2002	0	0	0	0	0	0
01/01/2003	0	0	0	0	0	0
01/07/2003	0	0	0	0	0	0
01/01/2004	0	0	0	0	1	0
01/07/2004	0	0	0	0	1	0
01/01/2005	0	0	0	0	1	0
01/07/2005	0	0	0	0	1	0
01/01/2006	0	0	0	0	1	0
01/07/2006	0	1	1	2	6	1
01/01/2007	0	0	1	3	0	0
01/07/2007	0	0	4	2	0	0
01/01/2008	0	0	5	3	1	0
01/07/2008	0	4	5	5	3	1
01/01/2009	0	5	7	3	1	4
01/07/2009	1	4	6	4	1	1
01/01/2010	1	3	4	7	2	1
01/07/2010	1	2	5	5	3	1
01/01/2011	1	3	5	5	2	2
01/07/2011	1	2	2	1	1	4
01/01/2012	1	2	1	1	1	0
01/07/2012	0	1	3	0	1	0
01/01/2013	0	1	3	0	0	0

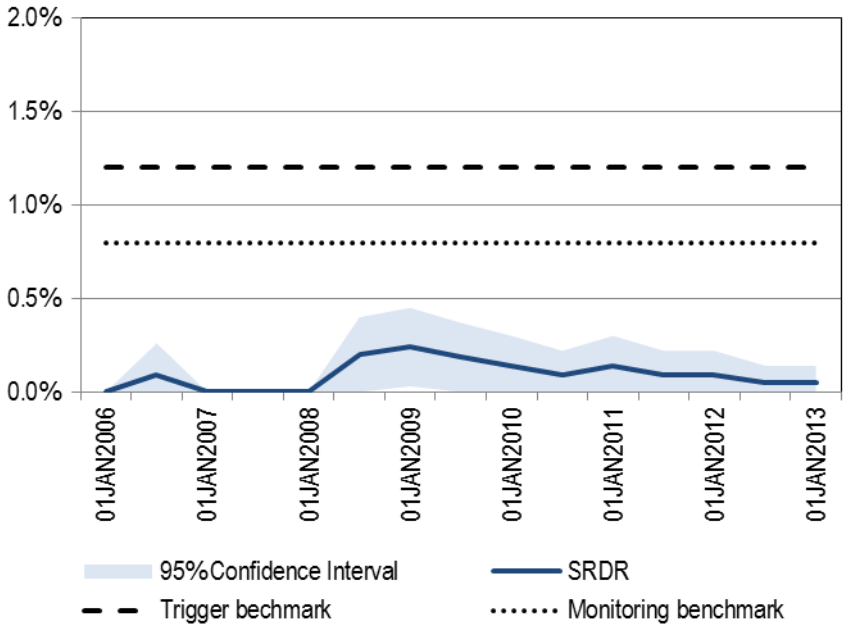
Source: Joint Committee calculations based on AMBERS data

Figure 11: Short-run and long-run observed default rates

Date	a	bbb	bb	b	ccc-c
01/01/2006	0.0%	0.0%	0.0%	18.2%	n.a.
01/07/2006	0.1%	0.4%	4.4%	42.9%	100.0%
01/01/2007	0.0%	0.4%	7.3%	0.0%	n.a.
01/07/2007	0.0%	0.7%	1.8%	0.0%	0.0%
01/01/2008	0.0%	0.8%	2.0%	1.9%	0.0%
01/07/2008	0.2%	0.7%	3.2%	5.6%	8.0%
01/01/2009	0.2%	1.0%	2.1%	2.1%	21.6%
01/07/2009	0.2%	0.9%	2.5%	2.1%	7.4%
01/01/2010	0.1%	0.6%	5.1%	9.3%	12.5%
01/07/2010	0.1%	0.8%	3.9%	13.6%	10.0%
01/01/2011	0.1%	0.8%	4.3%	10.3%	19.0%
01/07/2011	0.1%	0.4%	0.9%	5.3%	28.6%
01/01/2012	0.1%	0.2%	0.9%	5.7%	0.0%
01/07/2012	0.0%	0.5%	0.0%	7.1%	0.0%
01/01/2013	0.0%	0.5%	0.0%	0.0%	0.0%
Weighted Average	**0.0%**	**0.6%**	**2.4%**	**6.8%**	**11.5%**

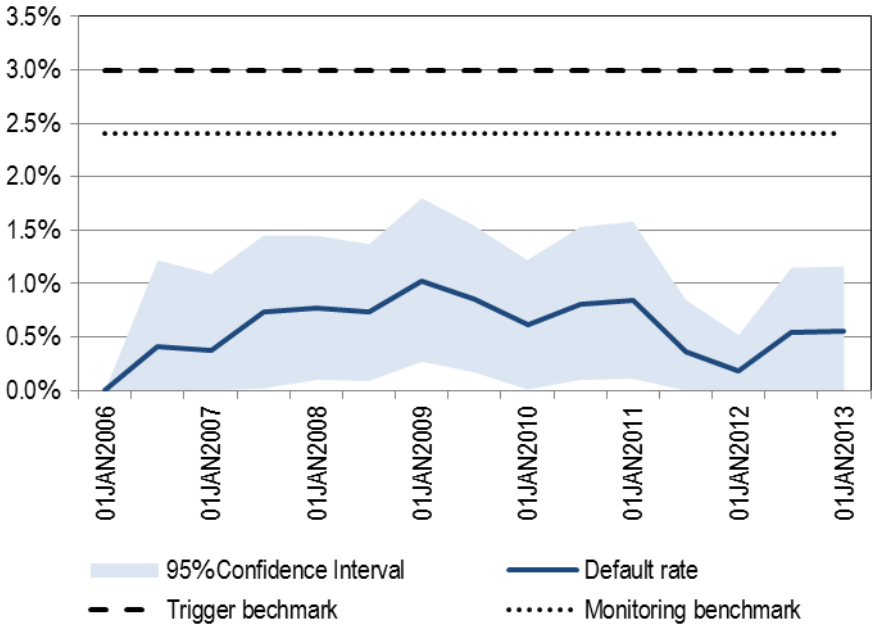
Source: Joint Committee calculations based on AMBERS data

Figure 12: Short-run and long-run observed default rates of 'a' rating category



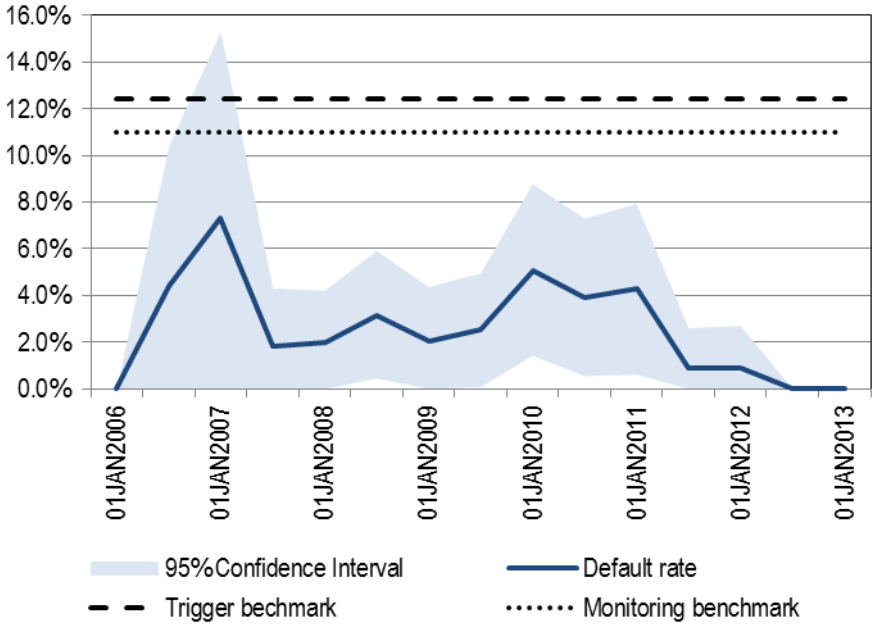
Source: Joint Committee calculations based on AMBERS data

Figure 13: Short-run and long-run observed default rates of 'bbb' rating category



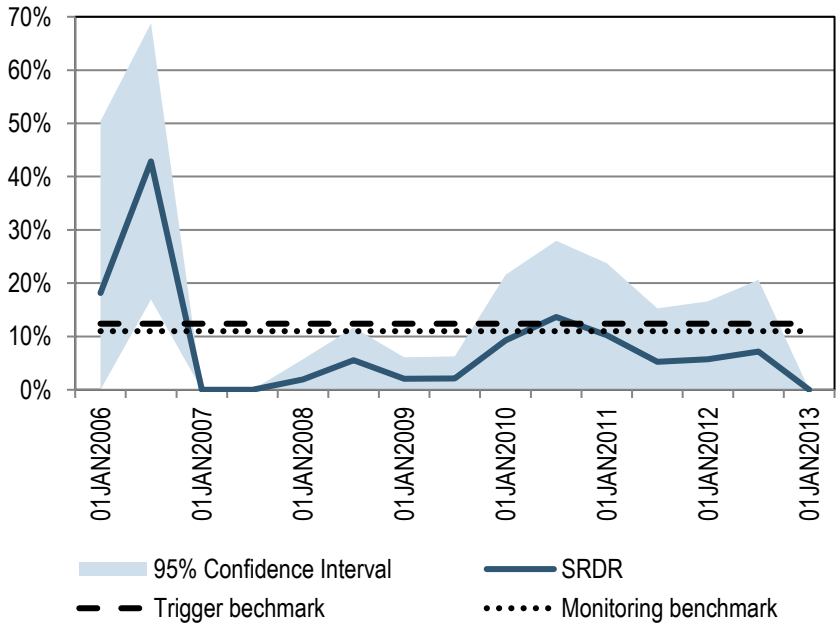
Source: Joint Committee calculations based on AMBERS data

Figure 14: Short-run and long-run observed default rates of 'bb' rating category

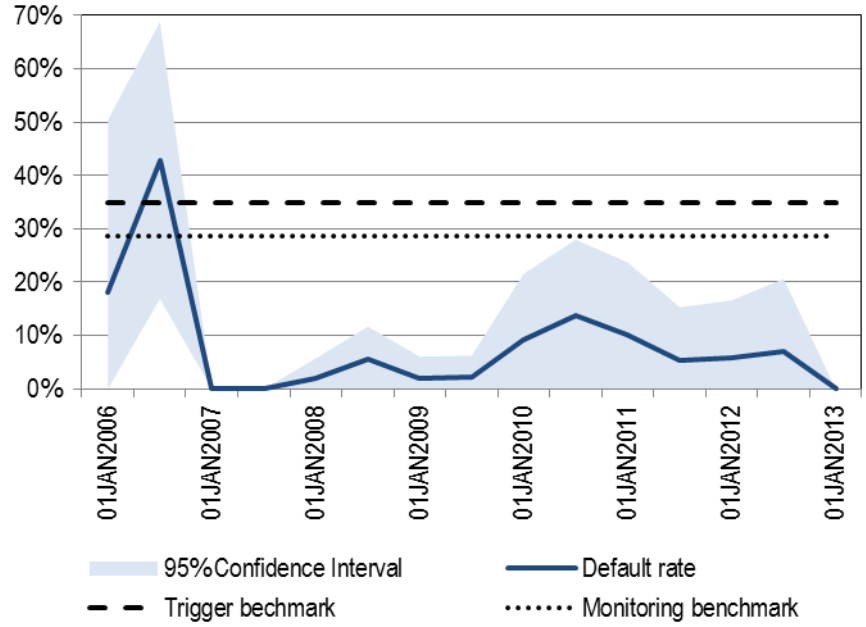


Source: Joint Committee calculations based on AMBERS data

Figure 15: Short-run and long-run observed default rates of 'b' rating category
Panel A: Short-run benchmarks associated with CQS4



Panel B: Short-run benchmarks associated with CQS5



Source: Joint Committee calculations based on AMBERS data

Figure 16: Mapping proposal for rating categories with a non-sufficient number of credit ratings

2003H2-2007H2	**aaa/aa**
CQS of equivalent international rating category	CQS 1
N. observed defaulted items	0
Minimum N. rated items	0
Observed N. rated items	3103.5
Mapping proposal	**CQS 1**

2008H1-2013H1	**aaa/aa**
CQS of equivalent international rating category	CQS 1
N. observed defaulted items	6
Minimum N. rated items	3336
Observed N. rated items	8020.0
Mapping proposal	**CQS1**

Source: Joint Committee calculations based on AMBERS data

Appendix 4: Mappings of each rating scale

Figure 17: Mapping of AMBERS's Long-term issuer credit ratings scale

Credit assessment	Initial mapping *based on LRDR* (CQS)	Review *based on SRDR* (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+ to aa-	1	n.a.	1	
a+ to a-	1	1	2	The quantitative factors suggest CQS 1. However, the meaning and the relative position of the rating category are representative of the final CQS.
bbb+ to bbb-	3	3	3	The quantitative factors are representative of the final CQS.
bb+ to bb-	4	4	4	The quantitative factors are representative of the final CQS.
b+ to b-	4	4-5	5	The quantitative factors suggest CQS 4. However, the meaning and the relative position of the rating category are representative of the final CQS.
ccc+ to ccc-	5	5-6	6	The quantitative factors suggest CQS 5. However, the meaning and the relative position of the rating category are representative of the final CQS.
cc	5	5	6	
c	5	5	6	
d	n.a.	n.a.	6	The meaning and relative position of the rating category is representative of the final CQS.
e	n.a.	n.a.	6	
f	n.a.	n.a.	6	
s	n.a	n.a	6	

Figure 18: Mapping of AMBERS's Short-term issuer ratings scale

Credit assessment	Corresponding Long-term issuer credit ratings scale assessment (established by AMBERS)	Range of CQS of corresponding Long-term issuer credit ratings scale	Final review *based on qualitative factors* (CQS)	Main reason for the mapping
AMB-1+	aaa to a+	1 - 2	1	
AMB-1	a+ to a-	2	2	The final CQS has been determined based on the most frequent step associated with the corresponding long-term credit rating category.
AMB-2	a to bbb	2 - 3	3	
AMB-3	bbb to bbb-	3	3	
AMB-4	bb+ to c	4 - 6	4	
d	d	4 - 6	4	
e	e	4 - 6	4	The final CQS has been determined based on the most frequent step associated with the corresponding long-term credit rating category. The risk weights assigned to CQS 4 to 6 are all 150%, therefore CQS 4.
f	f	4 - 6	4	
s	s	4 - 6	4	

Figure 19: Mapping of AMBERS's Financial strength ratings scale

Credit assessment	Corresponding Long-term issuer credit ratings scale assessment (established by AMBERS)	Range of CQS of corresponding Long-term issuer credit ratings scale	Final review *based on qualitative factors* (CQS)	Main reason for the mapping
A++ / A+	aaa / aa	1	1	The final CQS has been determined based on the most frequent step associated with the corresponding long-term credit rating category.
A / A-	a	2	2	
B++ / B+	bbb	3	3	
B / B-	bb	4	4	
C++ / C+	b	5	5	
C / C-	ccc / cc	6	6	
D	d	6	6	
E	e	6	6	
F	f	6	6	
S	s	6	6	

Figure 20: Mapping of AMBERS's Long-term issue ratings scale

Credit assessment	Corresponding Long-term issuer credit ratings scale assessment (assessed by JC)	Range of CQS of corresponding Long-term issuer credit ratings scale	Final review *based on qualitative factors* (CQS)	Main reason for the mapping
aaa	aaa	1	1	
aa+, aa, aa-	aa+, aa, aa-	1	1	
a+, a, a-	a+, a, a-	2	2	
bbb+, bbb, bbb-	bbb+, bbb, bbb-	3	3	
bb+, bb, bb-	bb+, bb, bb-	4	4	
b+, b, b-	b+, b, b-	5	5	The final CQS has been determined based on the most frequent step associated with the corresponding long-term credit rating category.
ccc+, ccc, ccc-	ccc+, ccc, ccc-	6	6	
cc	cc	6	6	
c	c	6	6	
d	d	6	6	
s	s	6	6	

Figure 21: Mapping of AMBERS's Short-term issue ratings

Credit assessment	Corresponding short-term issuer credit ratings scale assessment (assessed by JC)	Range of CQS of corresponding short-term issuer credit ratings scale	Final review *based on qualitative factors* (CQS)	Main reason for the mapping
AMB-1+	AMB-1+	1	1	The final CQS has been determined based on the most frequent step associated with the corresponding short-term issuer credit rating category.
AMB-1	AMB-1	2	2	
AMB-2	AMB-2	3	3	
AMB-3	AMB-3	3	3	
AMB-4	AMB-4	4	4	
d	d	4	4	
s	s	4	4	