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Amended Draft Mapping of S&P Global Ratings' 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 Standard & Poor's Global Ratings (S&P's), 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 (ITS) by the JC to the European Commission. Regarding qualitative developments, the qualitative factors described in the Implementing Regulation remain unchanged. Furthermore, the Fund credit quality ratings scale has been discontinued, as under the Regulation (EC) No 1060/2009 (Credit Rating Agencies Regulation - CRA), this type of credit assessment is not considered a valid credit rating.
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

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

specific rated entity³ nor should be understood as a comparison of the rating methodologies of S&P's with those of other ECAs. This mapping should however be interpreted as the correspondence of the rating categories of S&P's with a regulatory scale which has been defined for prudential purposes.

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 ratings scale of S&P's, the Long-term issuer ratings scale.

Figure 1: Mapping of S&P's Long-term issuer credit ratings scale

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

2. Introduction

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.

7. This report describes the mapping exercise carried out by the JC to propose an amended 'mapping' report of the credit assessments of Standard & Poor's Global Ratings (S&P's), with respect to the version published on 11 November 2015
8. S&P Global Ratings is a credit rating agency that has been registered with ESMA since 31 October 2011 and therefore meets the conditions to be an eligible credit assessment institution (ECAI)⁴. S&P's is an international credit rating agency that has been assigning credit ratings since 1916. The credit rating activities of S&P's are conducted globally through various affiliated entities that operate in accordance with policies and procedures and criteria that are generally globally applicable. S&P's shares a globally integrated operating structure.
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. The quantitative information is drawn from data available in the ESMA's central repository (CEREP⁵) 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 JC. Section 3 describes the relevant ratings scales of S&P's for the mapping. Section 4 contains the methodology applied to derive the mapping of S&P's 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 revised 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 S&P's carried out by ESMA.

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

3. S&P credit ratings and rating scales

11.S&P's 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)⁶:

- **Long-term issuer credit ratings⁷.** An S&P's issuer credit rating is a forward-looking opinion about an obligor's overall creditworthiness. This opinion focuses on the obligor's capacity and willingness to meet its financial commitments as they come due. It does not apply to any specific financial obligation, as it does not take into account the nature of and provisions of the obligation, its standing in bankruptcy or liquidation, statutory preferences, or the legality and enforceability of the obligation.
- **Short-term issuer credit ratings⁴.** Similar to Long-term issuer credit ratings, but are generally assigned to those obligations considered short-term in the relevant market. Short-term ratings are also used to indicate the creditworthiness of an obligor with respect to put features on long-term obligations.
- **Long-term issue credit ratings.** An S&P's issue credit rating is a forward-looking opinion about the creditworthiness of an obligor with respect to a specific financial obligation, a specific class of financial obligations, or a specific financial program (including ratings on medium-term note programs and commercial paper programs). It takes into consideration the creditworthiness of guarantors, insurers, or other forms of credit enhancement on the obligation and takes into account the currency in which the obligation is denominated. The opinion reflects S&P's view of the obligor's capacity and willingness to meet its financial commitments as they come due, and may assess terms, such as collateral security and subordination, which could affect ultimate payment in the event of default.
- **Short-term issue credit ratings.** Similar to Long-term issue credit ratings, but are generally assigned to those obligations considered short-term in the relevant market. Short-term ratings are also used to indicate the creditworthiness of an obligor with respect to put features on long-term obligations.
- **Insurer financial strength ratings (FSR).** S&P's insurer financial strength rating is a forward-looking opinion about the financial security characteristics of an insurance organization with respect to its ability to pay under its insurance policies and contracts in accordance with their terms. Insurer financial strength ratings are also assigned to health maintenance organizations and similar health plans with respect to their ability to pay under their policies and contracts in accordance with their terms.

⁶ As explained in recital 4 of the 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.

⁷ S&P's issuer credit ratings make a distinction between foreign currency ratings and local currency ratings. An issuer's foreign currency rating will differ from its local currency rating when the obligor has a different capacity to meet its obligations denominated in its local currency, vs. obligations denominated in a foreign currency.

- **Mid-market evaluation ratings.** An S&P's Mid-Market Evaluation (MME) rating is a forward-looking opinion about the creditworthiness of a mid-market company relative to other mid-market companies. It assesses a mid-market company's relative capacity and willingness to meet its financial obligations as they come due. S&P assigns the MME rating at an obligor level, but can assign it at a debt instrument level as well.

12.S&P's 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:

- **Long-term issuer credit ratings scale.** The specification of this rating scale is described in Figure 3 of Appendix 1.
- **Long-term issue credit ratings scale.** The specification of this rating scale is described in Figure 4 of Appendix 1.
- **Short-term issuer credit ratings scale.** The specification of this rating scale is described in Figure 5 of Appendix 1.
- **Short-term issue credit ratings scale.** The specification of this rating scale is described in Figure 6 of Appendix 1.
- **Insurer financial strength ratings scale.** The specification of this rating scale is described in Figure 7 of Appendix 1.
- **Mid-Market Evaluation ratings scale.** The specification of this rating scale is described in Figure 8 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 ITS.

14.The mapping of the Short-term issuer credit 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 S&P's between these two scales, as specified in Article 13 of the ITS. This internal relationship is shown in Figure 9 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 and short-term rating scales, as explained in Section 6. In these cases, however, the relationship with the Long-term issuer credit ratings scale (or Short-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 S&P's Long-term issuer credit ratings scale

16. The mapping of the Long-term issuer credit ratings 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 Implementing Regulation.
- The *short run default rates* of a rating category have been compared with the benchmarks specified in point (b) of Article 14 of the Implementing Regulation, 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 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 calculated with the pools of items rated from 1 January 2000 to 1 July 2015, based on the information contained in CEREP and according to the provisions laid down in the Implementing Regulation. The following aspects should be highlighted:

- For AAA and AA rating categories, the number of credit ratings cannot be considered to be sufficient for the calculation of the short 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 17 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 R, SD and D rating categories, no calculation of default rates has been made since they already reflect a ‘default’ situation.
- For the remaining rating categories, 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. The result of the calculation of the short run and long run default rates for each rating category is shown in Figure 12 of Appendix 3.

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

22. The default definition applied by S&P's, 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. As illustrated in the second column of Figure 18 in Appendix 4, the rating categories of the Long-term issuer credit rating scale of S&P's have been initially allocated to each CQS based on the comparison of the long run default rates (see Figure 12 in Appendix 3) and the long run default rate benchmark intervals established in point (a) of Article 14 of the Implementing Regulation. Considering the additional data collected since the mapping was produced rating categories A, BBB, BB and B remain allocated to CQS 2, 3, 4 and 5 based on the comparison of the long run default.

24. In the case of rating categories AAA and AA, where the number of credit ratings cannot be considered to be sufficient, this comparison has been made according to Article 6 of the Implementing Regulation, see Figure 17 of Appendix 3. The analysis of the 2001h1 – 2005h2 period reveals that no defaults were observed during those years and that CQS 1 should be proposed, while the analysis for the 2006h1 – 2010h2 period suggests a mapping to CQS2. When considering the additional data collected since the original mapping was produced, the absence of defaults is consistent with CQS1 as the number of rated items is equal or larger than the respective minimum required number of observed items given the number of defaulted items in the rating category. This reinforces the existing mapping.

4.1.3. Reviewed mapping based on the short run default rates

25. As shown in Figures 13 to 16 in Appendix 3, the short run default rates of rating categories A to B have been compared with the short run default rate benchmark values established in point (b) of Article 14 of the Implementing Regulation⁸.

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. The result of this comparison can be found in the third column of Figure 18 in Appendix 4.

27. The additional short-run default rates available after the mapping was produced do not breach neither the monitoring nor the trigger level, which confirms the existing mapping.

⁸ 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. In the case of rating categories CCC to C, the review of the short run default rates is not necessary since they have been mapped to CQS 6.

4.2. Final mapping after review of the qualitative factors

28. The qualitative factors specified in Article 7 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 behavior⁹, as it is the case of AAA and AA rating categories.

29. S&P 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. In particular, the meaning and relative position of rating categories AAA and AA are in line with CQS 1. In the case of RS and SD/D rating categories, their meaning is consistent with the one of CQS 6 stated in Annex II of the Implementing Regulation.

5. Mapping of S&P's Short-Term issuer credit rating scale

30. S&P's also produces short-term credit ratings and assigns them to the Short-term issuer credit ratings scale (see Figure 5 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 ITS, the internal relationship established by S&P's between these two rating scales (described in Figure 9 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 S&P's.

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 19 of Appendix 4:

- **A-1+.** This rating category indicates a strong capacity to meet its financial commitment on the obligation is extremely strong. It is internally mapped to long-term categories AAA to AA-, which are mapped to CQS 1. Therefore, CQS 1 is the proposed mapping.
- **A-1.** This rating category indicates a strong capacity to meet its financial commitment on the obligation is strong. It is internally mapped to the long-term category A+ and A, which are mapped to CQS 2. Therefore, CQS 2 is the proposed mapping.

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 of the ITS.

- **A-2.** This rating category indicates a satisfactory capacity to repay short-term debt obligations. It is internally mapped to long-term categories A to BBB, which are mapped to CQS 2 and 3. Since the long-term categories are mapped to CQS 2 and 3 in an equal number of cases, the most conservative CQS has been considered. Therefore, CQS 3 is the proposed mapping.
- **A-3.** This rating category indicates a weakened capacity to repay short-term debt obligations. It is internally mapped to long-term categories BBB to BB+, which are mapped to CQS 3 and 4, but mostly CQS 3. Therefore, CQS 3 is the proposed mapping.
- **B.** This rating category is regarded as vulnerable. It is internally mapped to long-term categories BB+ to CC, which are mapped to CQS 4 to 6. 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 B rating category is CQS 4.
- **C.** This rating category is regarded as vulnerable and dependent upon favourable conditions, consistent with the meaning and relative position representative of CQS 5 and 6. In addition, it is internally mapped to long-term categories CC to B, which are mostly mapped to CQS 5. 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 C rating category is CQS 4.
- **R.** This category refers to issuers who that are under regulatory supervision owing to its financial condition and the regulators may have the power to favour one class of obligations over others or pay some obligations and not others. This category is consistent with category R of the Long-term issuer credit rating scale corresponding to CQS 6. 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 C rating category is CQS 4.
- **D.** A short-term obligation rated 'D' is in payment default, consistent with the meaning and relative position representative of CQS 6. In addition, it is internally mapped to long-term categories D and SD, which are mapped to CQS 6. Since the risk weights assigned to CQS 4 to 6 are equal to 150% according to Article 131 CRR, the mapping proposed for the D/SD rating category is CQS 4.

6. Mapping of other S&P's credit rating scales

33.As mentioned in Section 3, S&P's 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 or Short-term issuer credit ratings scale. More specifically, as each rating can be associated with one or a range of long-term (or short-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 20 to Figure 23 of Appendix 4:

- **Long-term issue credit ratings scale** (see Figure 4 in Appendix 1). The rating categories can be considered comparable to those of the Long-term issuer credit ratings 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 20 of Appendix 4.
- **Short-term issue credit rating scale** (see Figure 6 in Appendix 1). The rating categories can be considered comparable to those of the Short-term issuer credit ratings scale. Therefore the mapping of each rating category has been derived by the JC 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 21 of Appendix 4.
- **Insurer financial strength ratings scale** (see Figure 7 in Appendix 1). The rating categories can be considered comparable to those of the Long-term issuer credit rating scale. Even though the definitions of the rating categories refer to insurance companies, the mapping has been derived from the meaning and relative position of the rating categories 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 22 of Appendix 4.
- **Mid-Market Evaluation rating scale** (see Figure 8 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 by the JC from its meaning and relative position and the mapping of the corresponding categories of the Long-term issuer credit rating scale. The result of the mapping of this scale is shown in Figure 23 of Appendix 4.

Appendix 1: Credit ratings and rating scales

Figure 2: S&P's relevant credit ratings and rating scales

SA exposure classes	Name of credit rating	Credit rating scale
Long-term ratings		
Central governments/ Central banks	Long-term issuer credit ratings	Long-term issuer credit ratings scale
	Long-term issue credit ratings	Long-term issue credit ratings scale
Regional and local governments and PSEs	Long-term issuer credit rating	Long-term issuer credit ratings scale
	Long-term issue credit ratings	Long-term issue credit ratings scale
Institutions	Long-term issuer credit rating	Long-term issuer credit ratings scale
	Long-term issue credit ratings	Long-term issue credit ratings scale
Corporates	Long-term issuer credit rating	Long-term issuer credit ratings scale
	Long-term issue credit ratings	Long-term issue credit ratings scale
	Insurer financial strength ratings (FSR)	Insurer financial strength ratings scale
	Mid-market evaluation ratings (MME)	Mid-market evaluation ratings scale
Covered bonds	Long-term issue credit ratings	Long-term issue credit ratings scale
Short-term ratings		

SA exposure classes	Name of credit rating	Credit rating scale
Central governments/ Central banks	Short-term issuer credit ratings	Short-term issuer credit ratings scale
	Short-term issue credit ratings	Short-term issue credit ratings scale
Regional and local governments and PSEs	Short-term issuer credit ratings	Short-term issuer credit ratings scale
	Short-term issue credit ratings	Short-term issue credit ratings scale
Institutions	Short-term issuer credit ratings	Short-term issuer credit ratings scale
	Short-term issue credit ratings	Short-term issue credit ratings scale
Corporates	Short-term issuer credit ratings	Short-term issuer credit ratings scale
	Short-term issue credit ratings	Short-term issue credit ratings scale
Covered bonds	Short-term issue credit ratings	Short-term issue credit ratings scale

Source: S&P

Figure 3: Long-term issuer credit ratings scale

Credit assessment	Meaning of the credit assessment
AAA	An obligor rated 'AAA' has extremely strong capacity to meet its financial commitments. 'AAA' is the highest issuer credit rating assigned by S&P's.
AA	An obligor rated 'AA' has very strong capacity to meet its financial commitments. It differs from the highest-rated obligors only to a small degree.
A	An obligor rated 'A' has strong capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligors in higher-rated categories.
BBB	An obligor rated 'BBB' has adequate capacity to meet its financial commitments. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitments.
BB	An obligor rated 'BB' is less vulnerable in the near term than other lower-rated obligors. However, it faces major ongoing uncertainties and exposure to adverse business, financial, or economic conditions that could lead to the obligor's inadequate capacity to meet its financial commitments.
B	An obligor rated 'B' is more vulnerable than the obligors rated 'BB', but the obligor currently has the capacity to meet its financial commitments. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitments.
CCC	An obligor rated 'CCC' is currently vulnerable, and is dependent upon favourable business, financial, and economic conditions to meet its financial commitments.
CC	An obligor rated 'CC' is currently highly vulnerable. The 'CC' rating is used when a default has not yet occurred, but S&P's expects default to be a virtual certainty, regardless of the anticipated time to default.

R

An obligor rated 'R' is under regulatory supervision owing to its financial condition. During the pendency of the regulatory supervision the regulators may have the power to favour one class of obligations over others or pay some obligations and not others.

SD/D

An obligor rated 'SD' (selective default) or 'D' is in default on one or more of its financial obligations including rated and unrated financial obligations but excluding hybrid instruments classified as regulatory capital or in non-payment according to terms. An obligor is considered in default unless S&P's believes that such payments will be made within five business days of the due date in the absence of a stated grace period, or within the earlier of the stated grace period or 30 calendar days. A 'D' rating is assigned when S&P's believes that the default will be a general default and that the obligor will fail to pay all or substantially all of its obligations as they come due. An 'SD' rating is assigned when S&P's believes that the obligor has selectively defaulted on a specific issue or class of obligations but it will continue to meet its payment obligations on other issues or classes of obligations in a timely manner. An obligor's rating is lowered to 'D' or 'SD' if it is conducting a distressed exchange offer.

Source: S&P

Figure 4: Long-term issue credit ratings scale

Credit assessment	Meaning of the credit assessment
AAA	An obligation rated 'AAA' has the highest rating assigned by S&P's. The obligor's capacity to meet its financial commitment on the obligation is extremely strong.
AA	An obligation rated 'AA' differs from the highest-rated obligations only to a small degree. The obligor's capacity to meet its financial commitment on the obligation is very strong.
A	An obligation rated 'A' is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher-rated categories. However, the obligor's capacity to meet its financial commitment on the obligation is still strong.
BBB	An obligation rated 'BBB' exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.
BB	An obligation rated 'BB' is less vulnerable to non-payment than other speculative issues. However, it faces major ongoing uncertainties or exposure to adverse business, financial, or economic conditions which could lead to the obligor's inadequate capacity to meet its financial commitment on the obligation.
B	An obligation rated 'B' is more vulnerable to non-payment than obligations rated 'BB', but the obligor currently has the capacity to meet its financial commitment on the obligation. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitment on the obligation.
CCC	An obligation rated 'CCC' is currently vulnerable to non-payment, and is dependent upon favourable business, financial, and economic conditions for the obligor to meet its financial commitment on the obligation. In the event of adverse business, financial, or economic conditions the obligor is not likely to have the capacity to meet its financial commitment on the obligation.
CC	An obligation rated 'CC' is currently highly vulnerable to non-payment. The 'CC' rating is used when a default has not yet occurred, but S&P's expects default to be a virtual certainty, regardless of the anticipated time to default.

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|-------|---|
| C | An obligation rated 'C' is currently highly vulnerable to non-payment, and the obligation is expected to have lower relative seniority or lower ultimate recovery compared to obligations that are rated higher. |
| <hr/> | |
| D | An obligation rated 'D' is in default or in breach of an imputed promise. For non-hybrid capital instruments, the 'D' rating category is used when payments on an obligation are not made on the date due, unless S&P's believes that such payments will be made within five business days in the absence of a stated grace period or within the earlier of the stated grace period or 30 calendar days. The 'D' rating also will be used upon the filing of a bankruptcy petition or the taking of similar action and where default on an obligation is a virtual certainty, for example due to automatic stay provisions. An obligation's rating is lowered to 'D' if it is subject to a distressed exchange offer. |
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Source: S&P

Figure 5: Short-term issuer credit ratings scale

Credit assessment
A-1
A-2
A-3
B
C
R
SD/D

Source: S&P

Figure 6: Short-term issue credit ratings scale

Credit assessment	Meaning of the credit assessment
A-1	A short-term obligation rated 'A-1' is rated in the highest category by S&P's. The obligor's capacity to meet its financial commitment on the obligation is strong. Within this category, certain obligations are designated with a plus sign (+). This indicates that the obligor's capacity to meet its financial commitment on these obligations is extremely strong.
A-2	A short-term obligation rated 'A-2' is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher rating categories. However, the obligor's capacity to meet its financial commitment on the obligation is satisfactory.
A-3	A short-term obligation rated 'A-3' exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.
B	A short-term obligation rated 'B' is regarded as vulnerable and has significant speculative characteristics. The obligor currently has the capacity to meet its financial commitments; however, it faces major ongoing uncertainties which could lead to the obligor's inadequate capacity to meet its financial commitments.
C	A short-term obligation rated 'C' is currently vulnerable to non-payment and is dependent upon favourable business, financial, and economic conditions for the obligor to meet its financial commitment on the obligation.
D	A short-term obligation rated 'D' is in default or in breach of an imputed promise. For non-hybrid capital instruments, the 'D' rating category is used when payments on an obligation are not made on the date due, unless S&P's believes that such payments will be made within any stated grace period. However, any stated grace period longer than five business days will be treated as five business days. The 'D' rating also will be used upon the filing of a bankruptcy petition or the taking of a similar action and where default on an obligation is a virtual certainty, for example due to automatic stay provisions. An obligation's rating is lowered to 'D' if it is subject to a distressed exchange offer.

Source: S&P

Figure 7: Insurer financial strength ratings scale

Credit assessment	Meaning of the credit assessment
AAA	An insurer rated 'AAA' has extremely strong financial security characteristics. 'AAA' is the highest insurer financial strength rating assigned by S&P's.
AA	An insurer rated 'AA' has very strong financial security characteristics, differing only slightly from those rated higher.
A	An insurer rated 'A' has strong financial security characteristics, but is somewhat more likely to be affected by adverse business conditions than are insurers with higher ratings.
BBB	An insurer rated 'BBB' has good financial security characteristics, but is more likely to be affected by adverse business conditions than are higher-rated insurers.
BB	An insurer rated 'BB' has marginal financial security characteristics. Positive attributes exist, but adverse business conditions could lead to insufficient ability to meet financial commitments.
B	An insurer rated 'B' has weak financial security characteristics. Adverse business conditions will likely impair its ability to meet financial commitments.
CCC	An insurer rated 'CCC' has very weak financial security characteristics, and is dependent on favorable business conditions to meet financial commitments.
CC	An insurer rated 'CC' has extremely weak financial security characteristics and is likely not to meet some of its financial commitments.
SD/D	An insurer rated 'SD' (selective default) or 'D' is in default on one or more of its insurance policy obligations but is not under regulatory supervision that would involve a rating of 'R'. The 'D' rating also will be used upon the filing of a bankruptcy petition or the taking of similar action if payments on a policy obligation are at risk. A 'D' rating is assigned when S&P's believes that the default will be a general default and that the obligor will fail to pay substantially all of its obligations in full in accordance with the policy terms. An 'SD' rating is

assigned when S&P's believes that the insurer has selectively defaulted on a specific class of policies but it will continue to meet its payment obligations on other classes of obligations. A selective default includes the completion of a distressed exchange offer. Claim denials due to lack of coverage or other legally permitted defences are not considered defaults.

R

An insurer rated 'R' is under regulatory supervision owing to its financial condition. During the pendency of the regulatory supervision, the regulators may have the power to favour one class of obligations over others or pay some obligations and not others. The rating does not apply to insurers subject only to nonfinancial actions such as market conduct violations.

Source: S&P

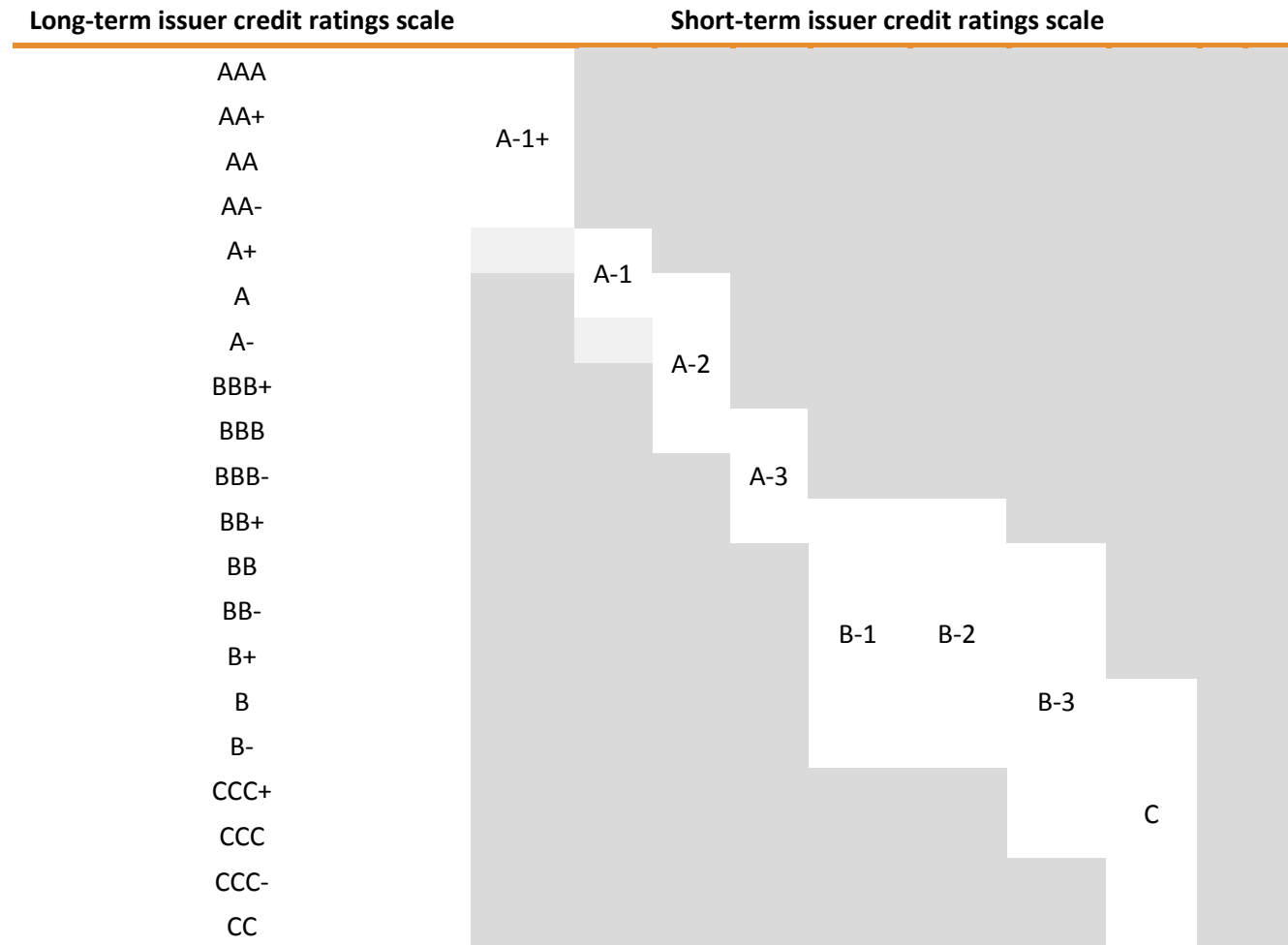
Figure 8: Mid Market Evaluation rating scale

Credit assessment	Meaning of the credit assessment
MM1	The company has a very strong capacity to meet financial commitments relative to other mid-market companies. Companies rated at this level are less susceptible to the adverse effects of changes in circumstances and economic conditions than other mid-market companies.
MM2	The company has a strong capacity to meet its financial commitments relative to other mid-market companies. However, the company is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than companies in the higher category.
MM3	The company has a good capacity to meet its financial commitments relative to other mid-market companies. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the company to meet its financial commitments.
MM4	The company has an adequate capacity to meet its financial commitments relative to other mid-market companies. However, it is more exposed to adverse economic conditions or changing circumstances than companies with a higher MME rating.
MM5	The company has reasonably adequate capacity to meet its financial commitments relative to other mid-market companies. It faces ongoing uncertainties or exposure to adverse business, financial, or economic conditions, which could result in an inadequate capacity on the part of the company to meet its financial commitments.
MM6	The company has a weak capacity to meet financial commitments, although it is less vulnerable relative to other mid-market companies with a lower MME rating. Adverse business, financial, or economic conditions are likely to impair the entity's capacity or willingness to meet its financial commitments.

MM7	The company is currently vulnerable to defaulting and is dependent upon favorable business and financial conditions to meet financial commitments. In the event of adverse business, financial, or economic conditions, the obligor is not likely to have the capacity to meet its financial commitments.
MM8	The company is currently highly vulnerable to defaulting and is dependent upon favorable business and financial conditions to meet financial commitments. We expect default to be a virtual certainty, either through a missed payment, a distressed exchange, or similar debt restructuring, or a bankruptcy filing.
MMD	The company has either failed to pay one or more of its financial obligations when due, or it has been placed into bankruptcy, or it has completed a distressed exchange or similar debt restructuring.

Source: S&P

Figure 9: Internal relationship between S&P's long-term and short-term issuer ratings scales



D
SD

D

SD

Source: S&P

Appendix 2: Definition of default

S&P's Ratings distinguishes between two different default situations: normal default and selective default, and they are assigned whenever the obligor has failed to pay one or more of its financial obligations (rated or unrated) when it came due. In addition, the obligors under regulatory supervision are also included in the default category.

Selective default ratings ('SD') are assigned when S&P's believes that the obligor has selectively defaulted on a specific issue or class of obligations but it will continue to meet its payment obligations on other issues or classes of obligations in a timely manner. A selective default includes:

- when payments on an obligation are not made on the date due even if the applicable grace period has not expired, unless S&P's believes that such payments will be made during such grace period
- filing of a bankruptcy petition or the taking of similar action if payments on an obligation are jeopardized
- the completion of a distressed exchange offer, whereby one or more financial obligation is either repurchased for an amount of cash or replaced by other instruments having a total value that is less than par.

Default ratings ('D') is assigned when S&P's believes that the default will be a general default and that the obligor will fail to pay all or substantially all of its obligations as they come due.

Regulatory supervision ratings ('R') is assigned when S&P's believes that an obligor is under regulatory supervision owing to its financial condition. During the pendency of the regulatory supervision the regulators may have the power to favour one class of obligations over others or pay some obligations and not others.

Source: S&P

Appendix 3: Default rates of each rating category

Figure 10: Number of rated items, with relevant weights¹⁰

Date	AAA	AA	A	BBB	BB	B	CCC-C
01/01/2000	234.5	843.5	1,557.5	1,615.5	1,005.0	958.0	127.5
01/07/2000	230.5	830.0	1,521.0	1,560.0	956.0	881.0	130.5
01/01/2001	219.0	852.0	1,514.5	1,599.5	937.0	856.5	144.5
01/07/2001	227.5	846.0	1,563.0	1,661.0	975.0	780.5	152.5
01/01/2002	207.0	830.5	1,594.0	1,706.5	934.0	698.5	218.5
01/07/2002	187.0	760.5	1,586.5	1,766.0	923.0	671.5	177.0
01/01/2003	154.0	687.5	1,600.5	1,692.5	935.0	708.0	176.5
01/07/2003	150.5	614.0	1,558.0	1,542.5	833.0	677.5	150.0
01/01/2004	150.0	594.0	1,567.5	1,571.5	824.5	704.5	123.0
01/07/2004	147.0	578.0	1,552.0	1,565.0	839.0	764.5	109.5
01/01/2005	146.5	584.5	1,579.0	1,540.0	872.0	774.0	91.5
01/07/2005	100.5	636.0	1,624.0	1,480.0	891.5	785.5	93.5
01/01/2006	99.0	644.0	1,670.0	1,493.0	856.5	862.5	89.0
01/07/2006	100.5	678.0	1,711.0	1,472.5	834.0	915.0	87.0
01/01/2007	112.5	717.0	1,682.5	1,469.0	861.0	942.0	90.0
01/07/2007	114.5	736.5	1,662.0	1,463.0	866.5	1032.0	76.0
01/01/2008	139.5	772.5	1,623.0	1,457.5	869.5	1035.5	81.5
01/07/2008	84.5	820.0	1,639.0	1,491.5	814.5	988.0	97.0
01/01/2009	80.0	700.5	1,713.5	1,455.5	769.0	913.5	151.5
01/07/2009	71.5	561.5	1,713.0	1,458.0	740.0	795.0	206.5
01/01/2010	69.0	548.0	1,727.5	1,443.0	724.5	834.5	186.5
01/07/2010	56.0	523.0	1,755.0	1,458.0	760.0	922.0	142.5
01/01/2011	49.5	532.0	1,737.0	1,478.0	786.5	1001.0	109.5
01/07/2011	49.5	486.5	1,746.5	1,531.5	816.5	1086.5	105.5
01/01/2012	26.0	489.5	1,686.0	1,535.0	816.0	1079.0	117.0
01/07/2012	25.0	449.0	1,683.0	1,569.0	836.5	1108.5	120.0
01/01/2013	25.0	443.0	1,661.0	1,590.5	867.5	1201.5	112.5

Source: Joint Committee calculations based on CEREP data

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

Figure 11: Number of defaulted rated items

Date	AAA	AA	A	BBB	BB	B	CCC-C
01/01/2000	0	0	15	43	104	275	63
01/07/2000	0	0	11	54	109	257	70
01/01/2001	0	0	10	51	107	241	72
01/07/2001	0	0	6	35	101	214	65
01/01/2002	0	0	3	37	53	143	110
01/07/2002	0	0	1	27	27	100	73
01/01/2003	0	0	1	5	25	69	72
01/07/2003	0	0	1	3	18	45	56
01/01/2004	0	0	0	1	17	33	36
01/07/2004	0	0	0	1	8	35	30
01/01/2005	0	0	0	2	8	34	20
01/07/2005	0	0	0	4	8	38	27
01/01/2006	0	2	6	8	14	62	25
01/07/2006	1	2	12	17	32	117	36
01/01/2007	1	4	8	24	51	150	42
01/07/2007	2	4	8	26	48	204	36
01/01/2008	2	3	10	19	38	238	46
01/07/2008	0	1	9	19	28	232	60
01/01/2009	0	0	2	17	14	175	104
01/07/2009	0	0	1	4	15	76	95
01/01/2010	0	0	0	2	9	62	63
01/07/2010	0	0	0	3	5	79	53
01/01/2011	0	0	0	2	5	85	42
01/07/2011	0	0	0	1	5	84	47
01/01/2012	0	0	0	0	8	67	56
01/07/2012	0	0	0	1	7	69	62
01/01/2013	0	0	0	0	9	91	57

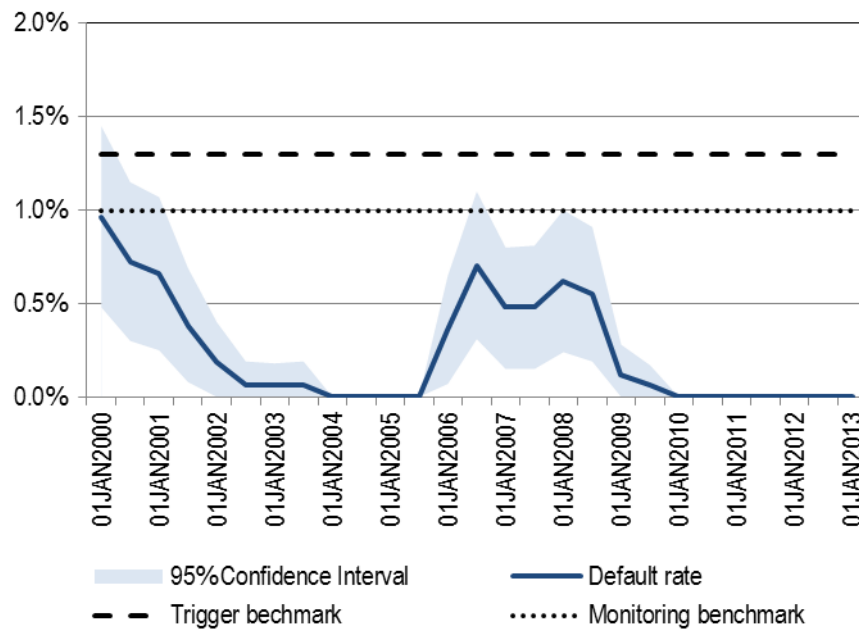
Source: Joint Committee calculations based on CEREP data

Figure 12: Short-run and long-run observed default rates

Date	A	BBB	BB	B	CCC-C
01/01/2000	1.0%	2.7%	10.3%	28.7%	49.4%
01/07/2000	0.7%	3.5%	11.4%	29.2%	53.6%
01/01/2001	0.7%	3.2%	11.4%	28.1%	49.8%
01/07/2001	0.4%	2.1%	10.4%	27.4%	42.6%
01/01/2002	0.2%	2.2%	5.7%	20.5%	50.3%
01/07/2002	0.1%	1.5%	2.9%	14.9%	41.2%
01/01/2003	0.1%	0.3%	2.7%	9.7%	40.8%
01/07/2003	0.1%	0.2%	2.2%	6.6%	37.3%
01/01/2004	0.0%	0.1%	2.1%	4.7%	29.3%
01/07/2004	0.0%	0.1%	1.0%	4.6%	27.4%
01/01/2005	0.0%	0.1%	0.9%	4.4%	21.9%
01/07/2005	0.0%	0.3%	0.9%	4.8%	28.9%
01/01/2006	0.4%	0.5%	1.6%	7.2%	28.1%
01/07/2006	0.7%	1.2%	3.8%	12.8%	41.4%
01/01/2007	0.5%	1.6%	5.9%	15.9%	46.7%
01/07/2007	0.5%	1.8%	5.5%	19.8%	47.4%
01/01/2008	0.6%	1.3%	4.4%	23.0%	56.4%
01/07/2008	0.5%	1.3%	3.4%	23.5%	61.9%
01/01/2009	0.1%	1.2%	1.8%	19.2%	68.6%
01/07/2009	0.1%	0.3%	2.0%	9.6%	46.0%
01/01/2010	0.0%	0.1%	1.2%	7.4%	33.8%
01/07/2010	0.0%	0.2%	0.7%	8.6%	37.2%
01/01/2011	0.0%	0.1%	0.6%	8.5%	38.4%
01/07/2011	0.0%	0.1%	0.6%	7.7%	44.5%
01/01/2012	0.0%	0.0%	1.0%	6.2%	47.9%
01/07/2012	0.0%	0.1%	0.8%	6.2%	51.7%
01/01/2013	0.0%	0.0%	1.0%	7.6%	50.7%
Weighted average	0.2%	1.0%	3.8%	13.7%	43.8%

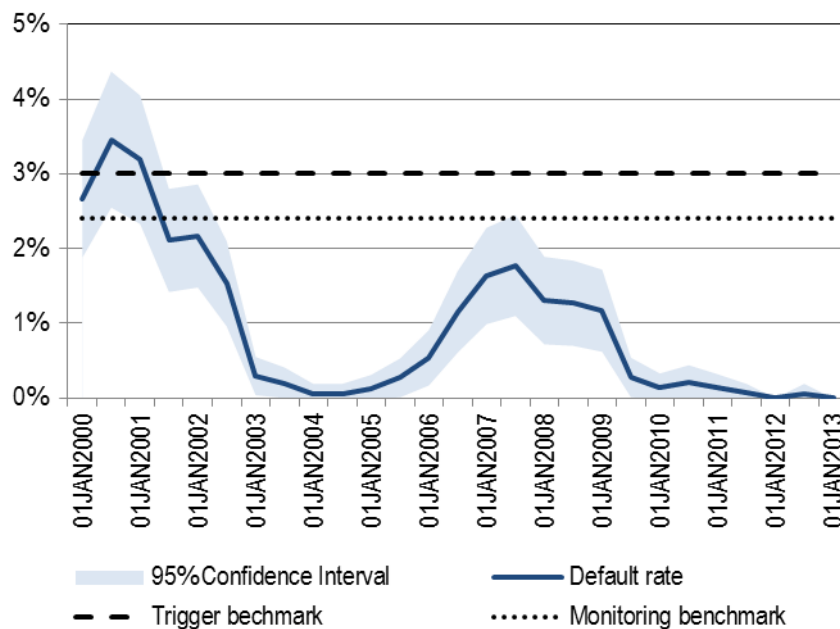
Source: Joint Committee calculations based on CEREP data

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



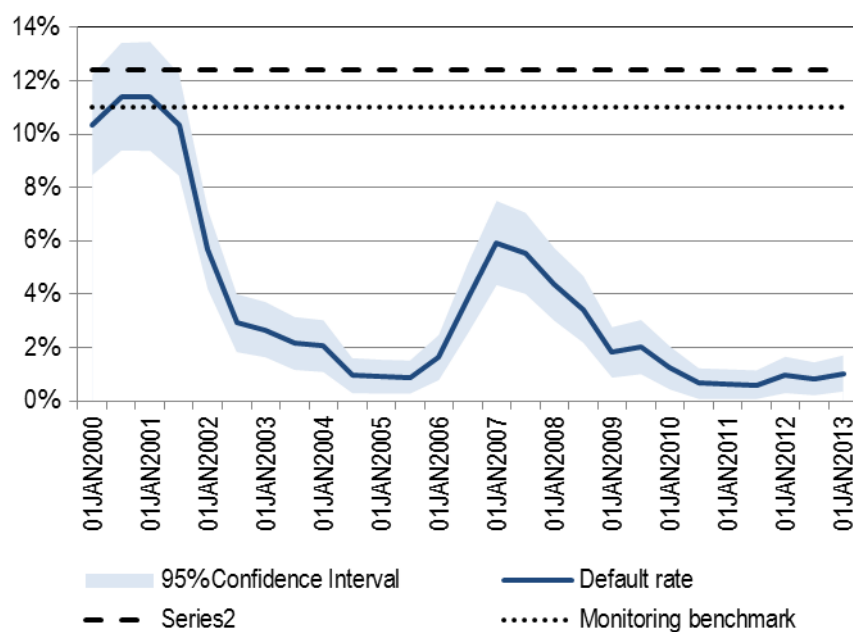
Source: Joint Committee calculations based on CERP data

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



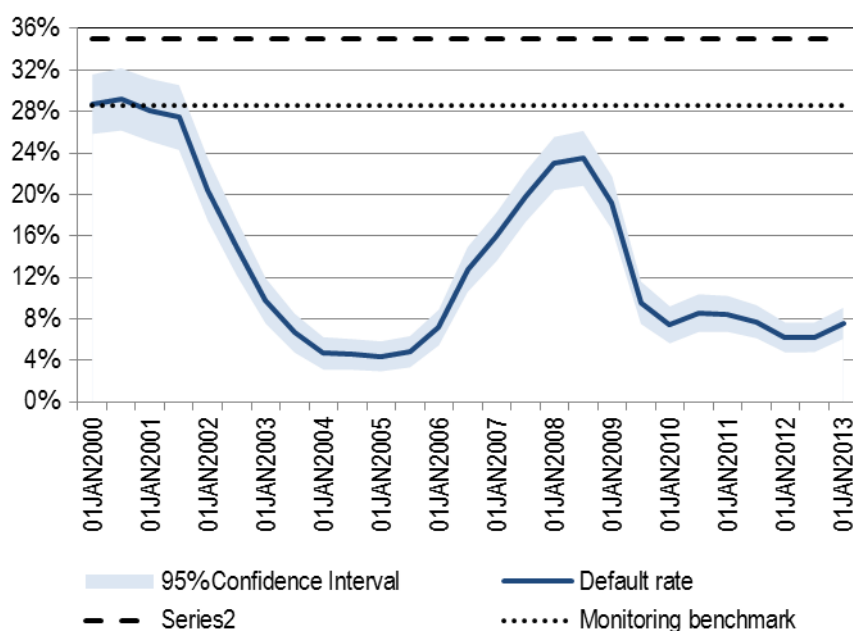
Source: Joint Committee calculations based on CERP data

Figure 15: Short-run and long-run observed default rates of BB rating category



Source: Joint Committee calculations based on CERP data

Figure 16: Short-run and long-run observed default rates of B rating category



Source: Joint Committee calculations based on CERP data

Figure 17: Mapping proposal for rating categories with a non-sufficient number of credit ratings

2001-2005	AAA/AA
CQS of equivalent international rating category	CQS 1
N. observed defaulted items	0
Minimum N. rated items	0
Observed N. rated items	8672.0
Mapping proposal	CQS 1
2006-2010	AAA/AA
CQS of equivalent international rating category	CQS 1
N. observed defaulted items	22
Minimum N. rated items	n.a.
Observed N. rated items	7628.0
Mapping proposal	CQS 2
2011-2013	AAA/AA
CQS of equivalent international rating category	CQS 1
N. observed defaulted items	0
Minimum N. rated items	0
Observed N. rated items	2575
Mapping proposal	CQS 1

Source: Joint Committee calculations based on CEREP data

Appendix 4: Mappings of each rating scale

Figure 18: Mapping of S&P's Long-term issuer credit ratings 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	n.a.	n.a.	1	Quantitative evidence is not clear. The meaning, relative position and time horizon of the rating category are representative of the final CQS.
AA	n.a.	n.a.	1	
A	2	2	2	The quantitative factors are representative of the final CQS.
BBB	3	3	3	The quantitative factors are representative of the final CQS.
BB	4	4	4	The quantitative factors are representative of the final CQS.
B	5	5	5	The quantitative factors are representative of the final CQS.
CCC	6	6	6	The quantitative factors are representative of the final CQS.
CC	6	6	6	The quantitative factors are representative of the final CQS.
R	n.a.	n.a.	6	The meaning and relative position of the rating category is representative of the final CQS.
SD/D	n.a.	n.a.	6	The meaning and relative position of the rating category is representative of the final CQS.

Figure 19: Mapping of S&P's Short-term issuer credit ratings scale

Credit assessment	Corresponding Long-term issuer credit ratings scale (established by S&P)	Range of CQS of corresponding Long-term issuer credit ratings scale	Final review <i>based on qualitative factors</i> (CQS)	Main reason for the mapping
A-1+	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-1	A	2	2	The final CQS has been determined based on the most frequent step associated with the corresponding long-term credit rating category.
A-2	A/BBB	2 - 3	3	The final CQS has been determined based on the most frequent step associated with the corresponding long-term credit rating category. As there is a draw between CQS 2 and 3, the most conservative CQS has been considered.
A-3	BBB/BB+	3 - 4	3	The final CQS has been determined based on the most frequent step associated with the corresponding long-term credit rating category.
B	BB+/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.
C	B/CC	5 - 6	4	
R	R	6	4	
SD/D	SD/D	6	4	

Figure 20: Mapping of S&P's Long-term issue credit 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	The final CQS has been determined based on the most frequent step associated with the corresponding long-term credit rating category.
AA	AA	1	1	
A	A	2	2	
BBB	BBB	3	3	
BB	BB	4	4	
B	B	5	5	
CCC	CCC	6	6	
CC	CC	6	6	
C	CC	6	6	
D	SD/D	6	6	

Figure 21: Mapping of S&P's Short-term issue credit ratings scale

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 <i>based on qualitative factors</i> (CQS)	Main reason for the mapping
A-1+	A-1+	1	1	The final CQS has been determined based on the most frequent step associated with the corresponding short-term credit rating category.
A-1	A-1	2	2	
A-2	A-2	3	3	
A-3	A-3	3	3	
B	B	4	4	
C	C	4	4	
D	R, SD/D	4	4	

Figure 22: Mapping of S&P's Insurer financial strength 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 <i>based on qualitative factors (CQS)</i>	Main reason for the mapping
AAA	AAA	1	1	The final CQS has been determined based on the most frequent step associated with the corresponding long-term credit rating category.
AA	AA	1	1	
A	A	2	2	
BBB	BBB	3	3	
BB	BB	4	4	
B	B	5	5	
CCC	CCC	6	6	
CC	CC	6	6	
SD/D	SD/D	6	6	
R	R	6	6	

Figure 23: Mapping of S&P's Mid Market Evaluation rating 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 <i>based on</i> <i>qualitative</i> <i>factors</i> (CQS)	Main reason for the mapping
MM1	AAA/AA/A	2	2	The final CQS has been determined based on the most frequent step associated with the corresponding long-term credit rating category.
MM2	BBB	3	3	
MM3	BB	4	4	
MM4	BB	4	4	
MM5	B	5	5	
MM6	B	5	5	
MM7	CCC	6	6	
MM8	CC	6	6	
MMD	SD/D	6	6	