Mapping of the FERI EuroRating Services AG credit assessments under the Standardised Approach

1. Executive summary

1. This report describes the mapping exercise carried out by the Joint Committee to determine the 'mapping'[1] of the credit assessments of the FERI EuroRating Services AG (Feri).

2. The methodology applied to produce the mapping is a combination of the provisions laid down in Article 136(2) Regulation (EU) No 575/2013 (Capital Requirements Regulation – CRR) and those proposed in the Consultation paper on draft Implementing Technical Standards on the mapping of ECAIs' credit assessments under Article 136(1) and (3) of Regulation (EU) No 575/2013 published on 5 February 2014 (draft ITS).

3. The mapping neither constitutes the one which ESMA shall report on in accordance with Article 21(4b) of Regulation (EC) No 1060/2009 (Credit Rating Agencies Regulation - CRA) with the objective of allowing investors to easily compare all credit ratings that exist with regard to a specific rated entity nor should be understood as a comparison of the rating methodologies of FERI with those of other ECAIs. This mapping should however be interpreted as the correspondence of the rating categories of the FERI with a regulatory scale which has been defined for prudential purposes. This implies that an appropriate degree of prudence may have been applied wherever not sufficient evidence has been found with regard to the degree of risk underlying the credit assessments.

4. The resulting mapping tables have been specified in Annex III of the addendum to the draft ITS published today. Figure 1 below shows the result for the main Feri ratings scale, the Feri EuroRating rating scale, together with a summary of the main reasons behind the mapping proposal for each rating category. The results for the remaining ratings scales can be found in Appendix 4 of this document.

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[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).

Figure 1: Mapping of Feri EuroRating rating scale

Credit assessment	Credit quality step	Main reason
AAA	1	The quantitative factors are representative of the final CQS.
AA	1	
A	2	The quantitative factors are representative of the final CQS.
BBB	4	The quantitative factors are representative of the final CQS. The mapping has been reinforced by the expected downgrade probability of BBB-rated items.
BB	4	The quantitative factors are representative of the final CQS.
B	5	The meaning and relative position of the rating category is representative of the final CQS. The quantitative factors reinforce the final CQS after accounting for the missing observation period.
CCC	6	The meaning and relative position of the rating category is representative of the final CQS. The quantitative factors reinforce the final CQS.
CC	6	
D	6	The meaning and relative position of the rating category is representative of the final CQS.

2. Introduction

5. This report describes the mapping exercise carried out by the Joint Committee (JC) to determine the 'mapping' of the credit assessments of the FERI EuroRating Services AG (Feri).

6. Feri is a credit rating agency that has been registered with ESMA in 14 April 2013 and therefore meets the conditions to be an eligible credit assessment institution (ECAI)[2]. Feri is a European rating agency active in the rating business since nearly 20 years, specialized in investment market and product ratings, debt issuance credit ratings and also an economic research and forecasting institute.

7. The methodology applied to produce the mapping is a combination of the provisions laid down in Article 136(2) CRR and those proposed in the Consultation paper on draft Implementing Technical Standards on the mapping of ECAIs' credit assessments under Article 136(1) and (3) of Regulation (EU) No 575/2013 published on 5 February 2014 (draft ITS). Two sources of information have been used. On the one hand, since Feri has not reported rating information to CEREP based on the new rating scale by the time this analysis has been made, a database with the relevant historical rating information has been directly requested to the ECAI. On the other hand, due to the scarcity of default data typically expected from Feri's rated population, the credit assessments produced by a group of benchmark ECAIs has been used to infer the long run default rates of its credit assessments and to compare Feri's rating methodology with the rating methodology of other benchmark ECAIs

8. 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 nor should be understood as a comparison of the rating methodologies of Feri with those of other ECAIs. This mapping should however be interpreted as the correspondence of the rating categories of FERI 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.

9. Section 3 describes the relevant ratings scales of Feri for the purpose of the mapping. Section 4 contains the methodology applied to derive the mapping of Feri's ratings scale. The mapping table is shown in Appendix 4 of this document and have been specified in Annex III of the addendum to the draft ITS published today.

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[2] It is important to note that the mapping does not contain any assessment of the registration process of Feri carried out by ESMA.

3. Feri credit ratings and rating scales

10. Feri 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)[3]:

- **FERI Country Rating-** evaluates a country's sovereign creditworthiness from the perspective of a lender. This credit rating is determined both by the ability and the willingness of the borrower to settle its debts

- **FERI Corporate Rating** – determines whether a prospective corporate entity will be able to meet its financial obligations, i.e. an assessment of the creditworthiness of a corporate and the credit risk associated with investing in the corporate

- **FERI Corporate Bond Rating-** FERI assigns corporate bond ratings for debt instruments in the form of corporate bonds or credits/ certificates of indebtedness, which will be issued by mid-cap corporates.

- **FERI Covered Bond Rating** – – evaluates senior secured debt instruments typically issued by banks, where in addition to the recourse to the issuer an investor also has a preferential claim to a separate cover pool of mortgage loans or high quality cover pool assets meant to be isolated from the issuer in an insolvency (dual recourse)

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

12. The rating categories of the FERI EuroRating rating scale, its letter grades and descriptive characteristics of all rating scales are similar to those of the large international ECAIs. However, they are not necessarily comparable due to the following:

- The methodology for country ratings is derived from model-based forecasts of the countries' continuing economic and structural development, which is analysed on a monthly basis and results in detailed forecasts for the next 10 years[4];

- Feri's ratings methodology is mostly model-determined, as opposed to the mostly judgment-determined ratings of five benchmark ECAI's;

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[3] As explained in recital 2 draft 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.

[4] Source: Feri

- Feri's rating methodology may be considered more dynamic than those of the larger ECAIs. This, together with the monthly review of credit assessments may explain why the transition probabilities computed for Feri's ratings are higher than for the benchmark agencies.

- Feri does not solicit or otherwise accept input in any form from companies, governments, institutions or any other service outside of the same statistical information available to everyone. [5]

13. The differences between FERI ratings and those of the three international ECAIs are further explained in Appendix 2.

14. The mapping of the Feri EuroRating rating scale is explained in Section 4 and it has been derived in accordance with the quantitative factors, qualitative factors and benchmarks specified in the draft ITS.

4. Mapping of Feri EuroRating rating scale

15. At the end of June 2013 Feri has introduced a new Feri EuroRating rating scale. For the purpose of the mapping, Feri has provided a recalculation under its new rating scale of all ratings that were assigned between 2004 and 2012 under its old rating scale (described in Figure 4 of Annex 1). [6]

16. The mapping of Feri EuroRating rating scale has consisted of two differentiated stages where the quantitative and qualitative factors as well as the benchmarks specified in Article 136(2) CRR have been taken into account. Figure 19 in Appendix 4 illustrates the outcome of each stage.

17. In the first stage, the quantitative factors referred to in Article 1 draft ITS 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 Article 15(2) draft ITS.

- The *time evolution of the long run default rates* of a rating category have been compared with the benchmarks specified in Article 15(2) draft ITS, and more specifically with their upper bounds, which represent the maximum value allowed for the long run default rate within a CQS.

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[5] Source: Feri

[6] It should also be noted that due to a change in Feri Country Rating methodology at the end of 2008, the ratings belonging to the period 2004 – 2008 have been simulated under the new methodology.

18. In a second stage, the qualitative factors proposed in Article 8 draft ITS have been considered to challenge the result of the previous stage, especially in those ratings categories where less default data has been available.

4.1. Initial mapping based on the quantitative factors

4.1.1. Calculation of the long run default rates

19. The long run default rate cannot be calculated based on the default behaviour of the items rated by Feri, because it currently does not have sufficient 'Corporate' ratings, as is required in point (a) of Article 2 draft ITS.

20. However, a sufficient number of items assigned a different measure of creditworthiness is available, namely the credit ratings assigned by a group of benchmark ECAIs to Feri's rated population (benchmark ratings)[7]. Thus, in accordance with point (a) of Article 6(1) draft ITS, the long-run default rates of all Feri's rating categories have been calculated as the weighted average of the long run default rate benchmarks associated with the related categories of the benchmark ratings.

21. Figure 7 contains the relationship observed between FERI and Benchmark ratings during the period 2004 – 2013 (i.e. 10 years). Given that the rating methodologies of FERI and the benchmark ECAIs are different, the calculation of the long run default rate would be biased unless all this information is used to measure the relationship between FERI and benchmark ratings.

22. The result of the calculation of the long run default rates for each rating category is shown in Figure 10 and Figure 11 of Appendix 3[8].

4.1.2. Mapping proposal based on the long run default rate

23. As illustrated in the second column of Figure 19 in Appendix 4, the rating categories of the Feri EuroRating rating scale have been initially allocated to each CQS based on the comparison of the long run default rates (see Figure 11 in Appendix 3) and the long run default rate benchmark intervals established in Article 15(2) draft ITS.

24. In the case of rating categories B and CCC-C, the comparison between the ratings assigned by Feri and the benchmark ECAIs is not available for the complete 2004 – 2013 period. Therefore, no mapping proposal can be made at this stage.

4.1.3. Reviewed mapping based on the time evolution of the long run default rate

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[7] Appendix 2 describes the relationship between FERI and benchmark ratings over a common sample of rated items.

[8] In the case of C and D, the long run default rates have not been calculated because there are no rated items in these categories.

25. As shown in Figure 12 to Figure 18 in Appendix 3, the time evolution of the long run default rates of rating categories AAA to CCC-CC have been compared with the upper bound benchmark values specified established in Article 15(2) draft ITS, which represents the maximum value allowed for the long run default rate within a CQS[9].

26. The objective is to assess, for each rating category, whether the observed long 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. However, it should be noted that any result should be cautiously considered because the default rates are not based on the own default behaviour of FERI ratings.

27. The result of this comparison can be found in the third column of Figure 19 in Appendix 4:

- **AAA and BBB:** no long run default rate has breached the upper bound benchmark values. In the case of BBB, where it could be argued that CQS 3 would have been more representative (and not CQS 4 as derived from section 4.1.2), the long run default rate estimates have remained in the area of CQS3 only during the recessionary period. During the rest of the observation period, the long run default rate estimates are consistently representative of CQS 4. Therefore, the initial mapping based on the long run default rate is confirmed at this stage.

- **AA and A:** the long run default rate has breached the upper bounds of these categories occasionally. However, during most of the observation period, the estimate of the long run default rate has remained significantly below these bounds. Therefore, the initial mapping based on the long run default rate is confirmed at this stage.

- **BB:** the estimates of the long run default rate have shown a significant volatility over time, ranging from values above 12% (i.e. CQS 5) in the initial and final years of the period to values close to 6% (i.e. CQS 4) during the most recessionary period. This behavior illustrates the dynamics of Feri's rating methodology, which reflects to a larger extent the economic conditions prevailing at each point in time. Although the average value of long run default rate estimates suggest that BB should be mapped of CQS 4, this should be reinforced by qualitative factors.

4.2. Final mapping after review of the qualitative factors

28. The qualitative factors specified in Article 8 draft ITS have been used to challenge the mapping proposed by the default rate calculation. Qualitative factors acquire more importance in the rating categories where quantitative evidence regarding the default behavior is less clear, as it is the case of A, BB and B rating categories.

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[9] In the case of rating category D, the review of the long run default rate would not be necessary since it can be mapped to CQS6 based on its meaning and relative positions (see qualitative factor).

29. The **definition of default** applied by Feri is not used for the calculation of the quantitative factors. Therefore it is not relevant for the analysis and no specific adjustment has been proposed based on this factor.

30. Regarding **the meaning and relative position of the credit assessments**, this factor reinforces all mappings proposed based on the quantitative factor, except in the case of BBB. Regarding the remaining categories:

- **BB**: its meaning and relative position suggest CQS 4, reinforcing the proposal based on the quantitative factor.

- **B**: its meaning and relative position suggest CQS 5. Although the available long run default rate estimates indicate CQS 4 (see Figure 11 in Appendix 3), the missing observation period (2004 - 2008) and the pattern observed in BBB and BB categories also suggest that the average value of the long run default rate would be in the range of CQS 5.

- **CCC-CC**: its meaning and relative position suggest CQS 6. This is consistent with the estimated long run default rates available between 2011 and 2013 (see Figure 11 in Appendix 3).

- **D**: the meaning of this category makes reference to a default status of the rated item. Therefore, it can be assumed on the basis of this qualitative factor that this rating category should be mapped to CQS 6.

31. Regarding the **time horizon,** due to the dynamic of their rating methodology and frequent rating updates, the transitions matrices in Figure 8 and Figure 9 should be analysed to identify a potential worsening of the credit quality of any rating category over the 3-year time horizon (which is the relevant one for mapping purposes):

- **BBB:** the downgrade probability is 30.2%, larger than typically observed for investment grade categories. Therefore, the mapping to CQS 4 is reinforced.

- **BB**: the upgrade probability is 37.5%, lower than the probability of keeping the same rating (50.4%). Therefore it is proposed to maintain an allocation to CQS 4 instead of CQS 5.

- **B**: the probability of an upgrade after 3 years is 100, suggesting CQS 4. However, this evidence is not robust because B ratings have only been observed since 2009. Therefore, CQS 5 is maintained.

32. Finally, **estimates of the long run default rate** cannot be used, as Feri does not have a model or tool whereby the underlying default risk of each credit assessment could be estimated.[10]

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[10] Source: Feri

Appendix 1: Credit ratings and rating scales

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

SA exposure classes	Name of credit rating	Credit rating scale
Long-term ratings		
Central governments / Central banks	FERI Country Rating	FERI EuroRating rating scale
Institutions	FERI Corporate Rating	FERI EuroRating rating scale
	FERI Corporate Bond Rating	FERI EuroRating rating scale
Corporates	FERI Corporate Rating	FERI EuroRating rating scale
	FERI Corporate Bond Rating	FERI EuroRating rating scale
Covered bonds	FERI Covered Bond Rating	FERI EuroRating rating scale

Source: Feri

Figure 3: FERI EuroRating rating scale

Credit assessment	Meaning of the credit assessment
AAA	lowest default risk
AA	very low default risk
A	low default risk
BBB	moderate default risk
BB	elevated default risk
B	high default risk
CCC	very high default risk
CC	highest default risk
D	default

Source: Feri

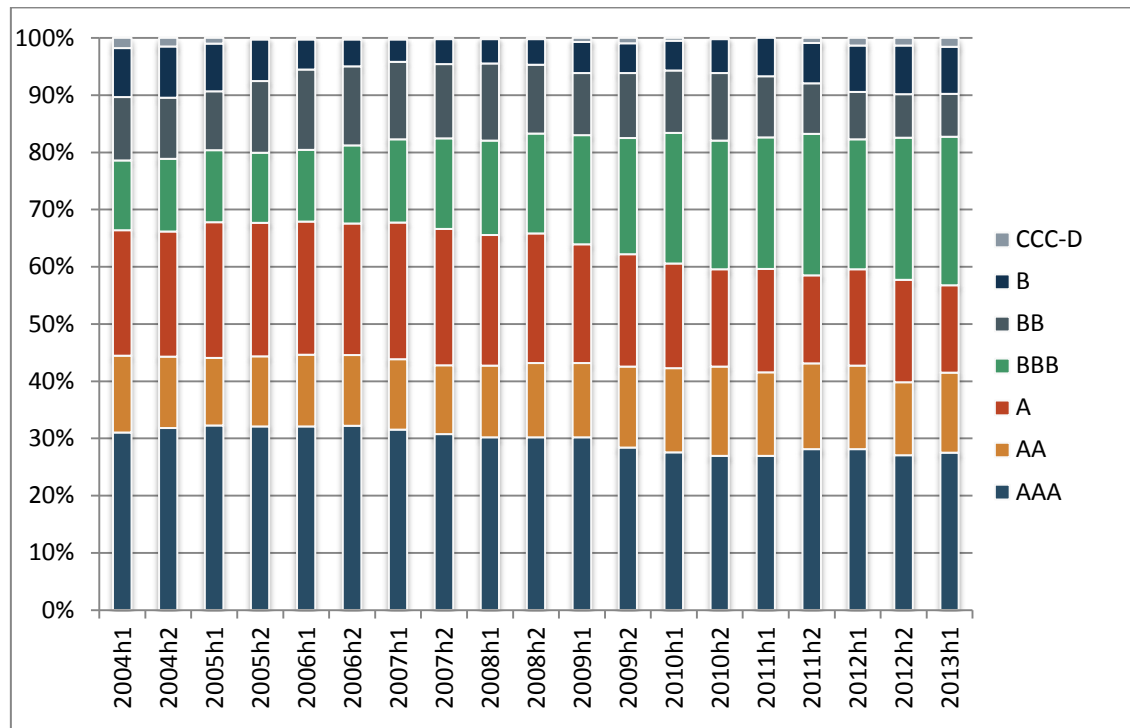## Figure 4: FERI EuroRating rating scale (valid before 31 December 2012)

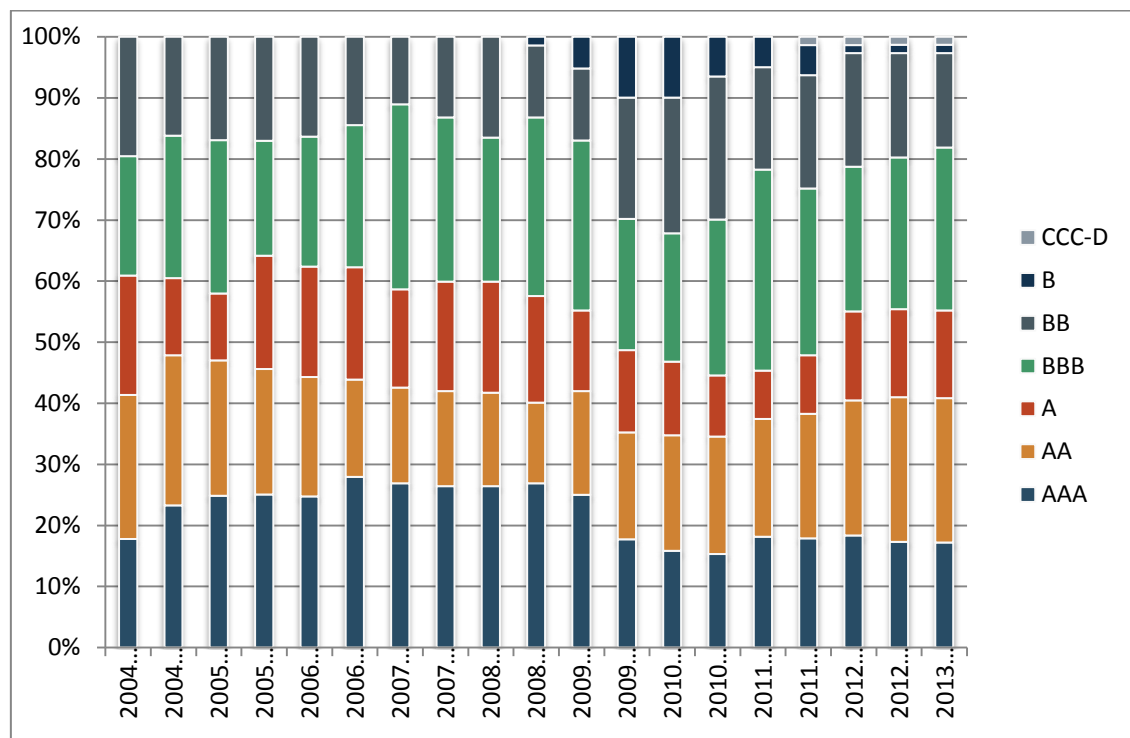| Credit assessment	Meaning of the credit assessment
AAA	Extremely Low Credit Risk
AA	Very Low Credit Risk
A	Low Credit Risk
B	Reduced credit risk
C	Slightly increased credit risk
D	Increased Credit Risk
E	Very High Credit Risk
Default	Default

Source: Feri

Appendix 2: Relationship between Feri and Benchmark ratings

Figure 5: Distribution of Benchmark ratings

Source: Joint Committee analysis based on CEREP data

Figure 6: Distribution of Feri ratings

Source: Joint Committee analysis based on Feri data

At the start of the observation period in 2004, the world economy was enjoying a period of sustained, non-inflationary growth. As can be seen in Figure 5 and Figure 6, during this period (2004 – 2008), Feri ratings were more dynamic than benchmark ECAIs and only slightly more optimistic, as evidenced by the absence of B ratings. Following 2009 Feri has started downgrading its ratings what resulted in a set of ratings significantly more conservative than those assigned by the benchmark ECAIs. However it should be emphasized that rating information of 2004h1 – 2012h2 is based on assessments produced with an old rating scale mapped to the current scale and thus should be interpreted with caution.

Figure 7: Observed relationship between Feri and Benchmark ratings. 10-year average (2004 - 2013)

Rating Benchmark	AAA	AA	A	BBB	BB	B	CCC-D
Rating Feri							
AAA	1440	266	20	0	0	0	0
AA	804	408	307	19	0	0	0
A	105	270	651	131	4	0	0
BBB	10	107	543	869	373	76	2
BB	0	11	81	381	452	366	33
B	0	0	21	65	56	58	2
CCC-D	0	0	0	0	0	4	20

Source: Joint Committee analysis based on CEREP and Feri data

Figure 7 shows the ratings assigned by Feri and the benchmark ECAIs to a common set of countries (59 in total). It should be noted that each of the 59 countries rated by Feri during this period might appear in the table as many times as it has been rated by any of the benchmark ECAIs. For example, if country X has only been rated by Feri and S&P at a specific date, this will give rise to only 1 observation at that specific date. However, if it has been rated by Feri, S&P, Moody's and Fitch, there will be 3 different observations, each one reflecting the comparison of Feri's rating with the benchmark rating.

Since considerable amount of cells in the upper and bottom triangles are not equal to zero, it can be concluded that during the observed period Feri's rating opinion often deviated from the benchmark ECAIs. For example, countries rated BBB by Feri could have received any rating assessment in the same time period from the benchmark ECAIs. However it is worth mentioning that most of Feri's rating opinions are either consistent or deviate not greater than by one band from the benchmark ECAIs.

Figure 8: Transition matrix for Benchmark ratings

3-year transition matrices, 7-year average (2004 - 2013)

Rating end period	AAA	AA	A	BBB	BB	B	CCC-CC
Rating start period							
AAA	93.3	4.8	0.2	1.4	0.2	0.0	0.0
AA	3.4	80.9	8.4	5.0	2.4	0.0	0.0
A	0.0	8.4	76.5	11.7	1.8	0.2	1.4
BBB	0.0	0.0	8.0	83.9	6.6	1.2	0.3
BB	0.0	0.0	0.1	32.7	53.4	12.5	1.3
B	0.0	0.0	0.0	0.0	35.4	62.8	1.8
CCC-CC	0.0	0.0	0.0	0.0	0.0	100.0	0.0

Source: Joint Committee analysis based on CEREP data. Only items rated both at the beginning and at the end of the time horizon have been considered in the calculation.

Figure 9: Transition matrix for Feri ratings

3-year transition matrices, 7-year average (2004 - 2013)

Rating end period	AAA	AA	A	BBB	BB	B	CCC-CC
Rating start period							
AAA	73.9	24.1	0.5	1.4	0.0	0.0	
AA	19.6	51.7	23.4	5.3	0.0	0.0	
A	0.0	22.0	39.3	27.1	10.2	1.4	
BBB	0.0	0.0	10.6	59.3	23.4	6.8	
BB	0.0	0.0	4.5	33.0	50.4	12.2	
B	0.0	0.0	16.7	22.2	61.1	0.0	
CCC-CC							

Source: Joint Committee analysis based on Feri data. Only items rated both at the beginning and at the end of the time horizon have been considered in the calculation.

The difference in the rating dynamic of Feri and the benchmark ECAIs in the assignment of ratings can be easily observed in the transition matrices shown in Figure 8 and Figure 9. In order to ensure comparability of both data bases, only countries rated by Feri were considered in the calculation of benchmark transition probabilities. Although the time horizon of Feri country ratings is supposed to be equal to 10 years, credit assessments are being updated monthly. The benchmark ECAIs, which apply more traditional through-the-cycle ratings, are not that frequently updated. Furthermore, Feri ratings rely to a larger extent on the automatic result of its underlying model, in contrast to the judgment-determined system of the benchmark ECAIs. As a result of these methodological differences, the transition probabilities of the ratings produced by Feri are significantly higher than those of the benchmark ECAIs.

Appendix 3: Default rates of each rating category

Figure 10: Calculation of the long run default rate 20013h1

Rating Benchmark	AAA	AA	A	BBB	BB	B	CCC-CC	Weighted average long run benchmark (%)
Long-run benchmark (%)	*0.10*	*0.10*	*0.25*	*1.00*	*7.50*	*20.00*	*34.00*	
Rating Feri								
AAA	70	8						0.10
AA	52	39	16					0.12
A	2	12	38	13				0.37
BBB		4	15	86	16			1.74
BB				20	16	31	3	12.31
B					2	4		15.83
CCC-CC						2	4	29.33

Source: Joint Committee calculations based on CEREP and Feri data

Figure 10 shows the ratings assigned by Feri and the benchmark ECAIs to a common set of countries during the second half of 2012. It should be noted that each of the 59 countries rated by Feri at this date might appear in the table as many times as it has been rated by any of the benchmark ECAIs. For example, if country X has only been rated by Feri and S&P, there will only be 1 observation. However, if it has been rated by Feri, S&P, Moody's and Fitch, there will be 3 different observations, each one reflecting the comparison of Feri's rating with the benchmark rating.
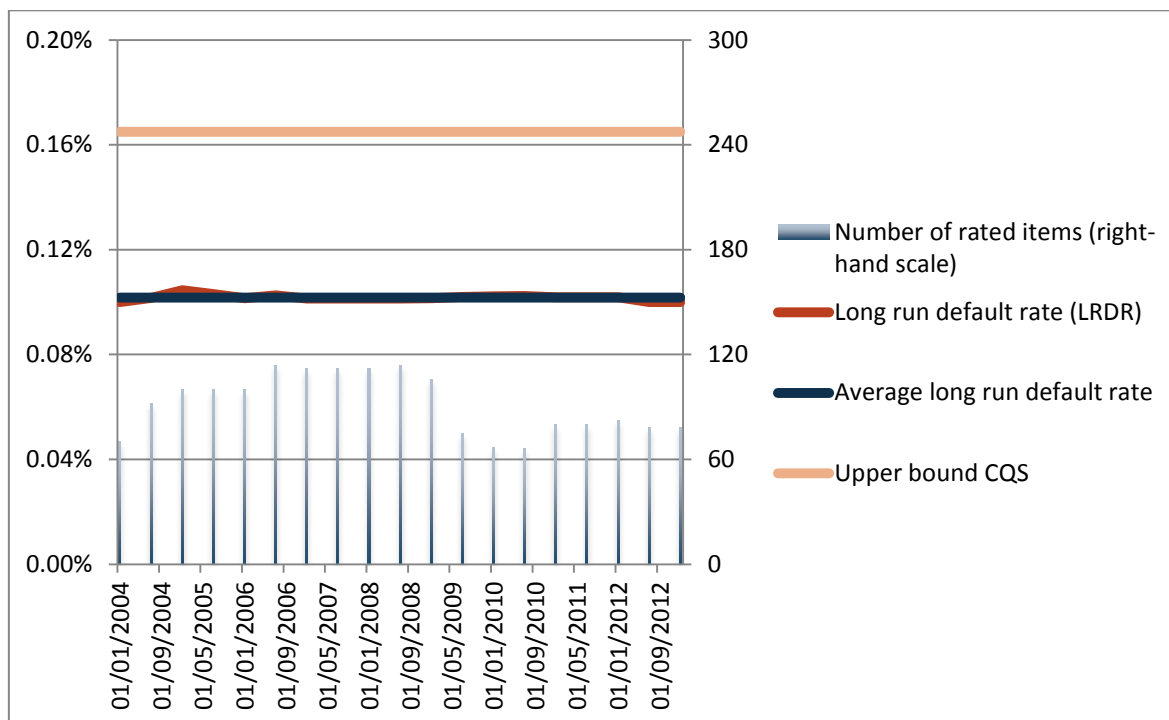
As per point (a) in Article 6(1) draft ITS, the long run default rate of each rating category of Feri has been calculated as a weighted average of the (mid-value) long run default rate benchmarks that are associated with the benchmark ratings. For example, the long run default rate of Feri's AA category is equal to 0.12% weighted by the number of external ratings that are associated with that value, i.e. AAA (52) and AA (39) plus 0.25 weighted by the number of external ratings that are associated with that value, i.e. A (16). The long run default rate estimates in the last column of Figure 10 correspond to the values in date 01/01/2013 in Figure 11.

Figure 11: Evolution of long-run observed default rates

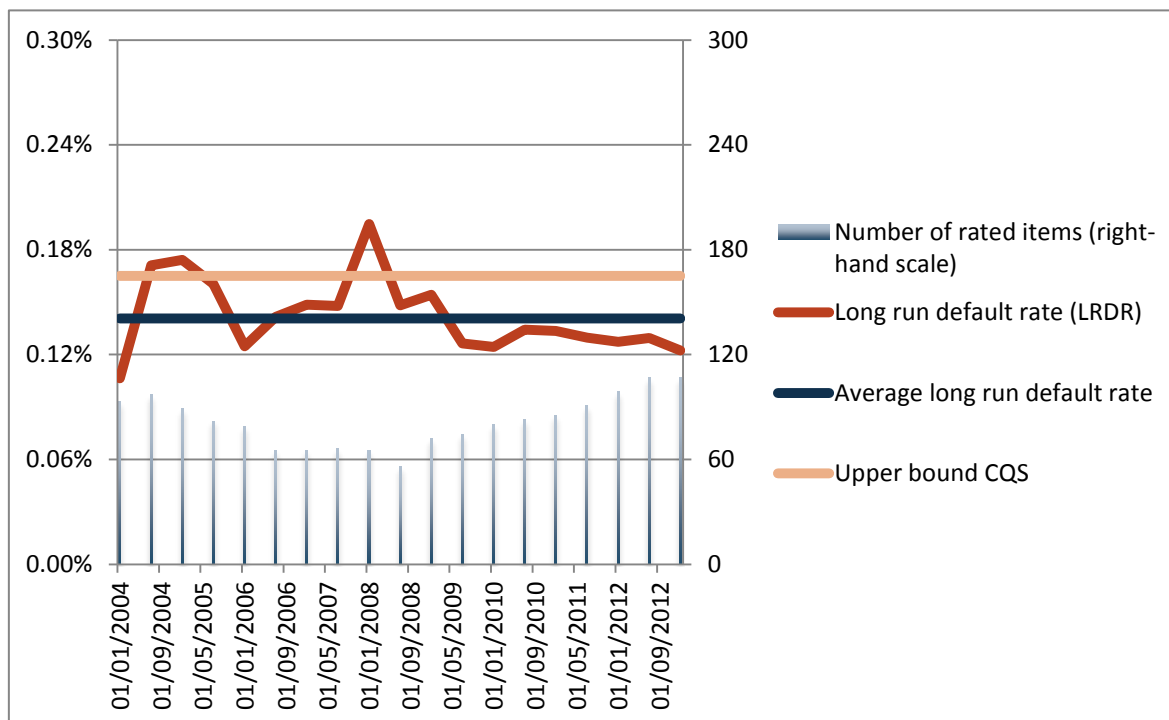| Date	AAA	AA	A	BBB	BB	B	CCC-CC
01/01/2004	0.10	0.11	0.31	2.07	14.92		
01/07/2004	0.10	0.17	0.29	3.74	14.45		
01/01/2005	0.10	0.17	0.25	3.46	12.13		
01/07/2005	0.10	0.16	0.33	4.48	10.22		
01/01/2006	0.10	0.12	0.33	3.76	9.08		
01/07/2006	0.10	0.14	0.35	3.91	8.95		
01/01/2007	0.10	0.15	0.31	3.04	10.91		
01/07/2007	0.10	0.15	0.31	3.39	9.42		
01/01/2008	0.10	0.19	0.26	3.56	7.63		
01/07/2008	0.10	0.15	0.22	3.78	8.09	0.63	
01/01/2009	0.10	0.15	0.77	4.70	5.05	7.09	
01/07/2009	0.10	0.13	0.21	2.64	5.84	7.16	
01/01/2010	0.10	0.12	0.22	1.70	5.80	7.16	
01/07/2010	0.10	0.13	0.21	1.26	5.87	10.11	
01/01/2011	0.10	0.13	0.22	1.38	9.08	7.41	
01/07/2011	0.10	0.13	0.22	1.31	7.26	10.27	29.33
01/01/2012	0.10	0.13	0.34	1.58	10.02	15.83	34.00
01/07/2012	0.10	0.13	0.34	1.49	11.14	15.83	34.00
01/01/2013	0.10	0.12	0.37	1.74	12.31	15.83	29.33
Weighted Average	**0.10**	**0.14**	**0.31**	**2.73**	**9.25**	**n.a.**	**n.a.**

Source: Joint Committee calculations based on CEREP and Feri data

Figure 12: Long-run estimated and observed default rates of AAA rating category
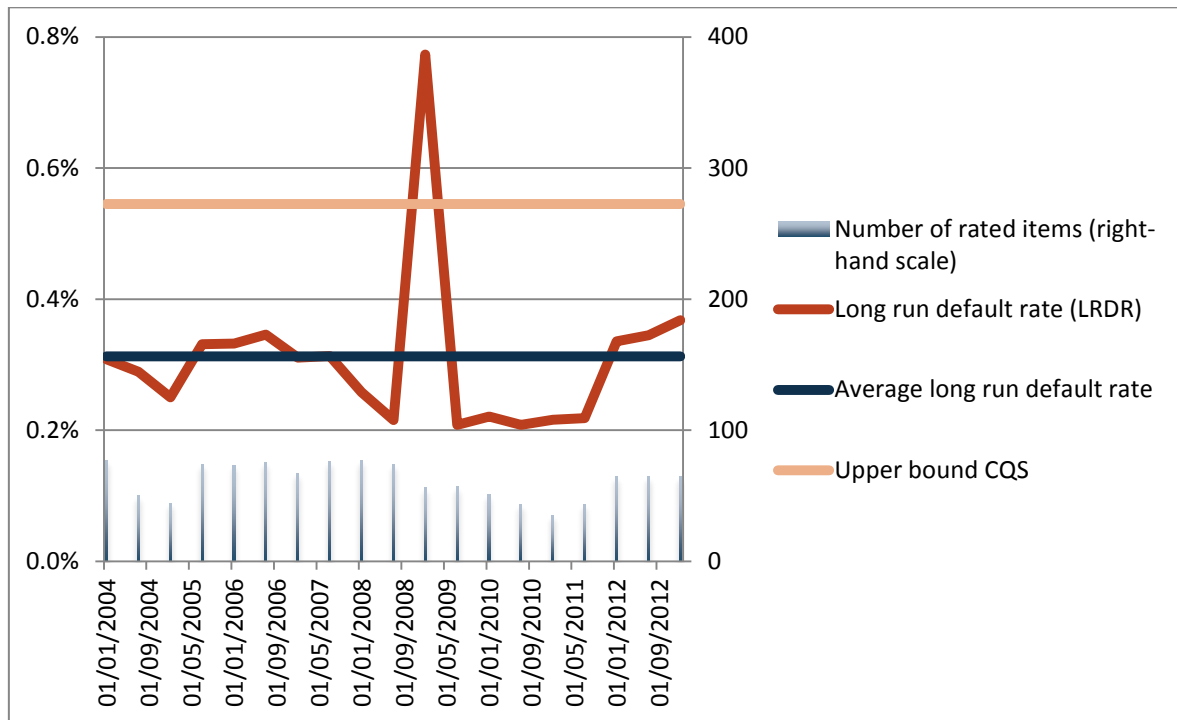

Source: Joint Committee calculations based on CEREP and Feri data

Figure 13: Long-run estimated and observed default rates of AA rating category
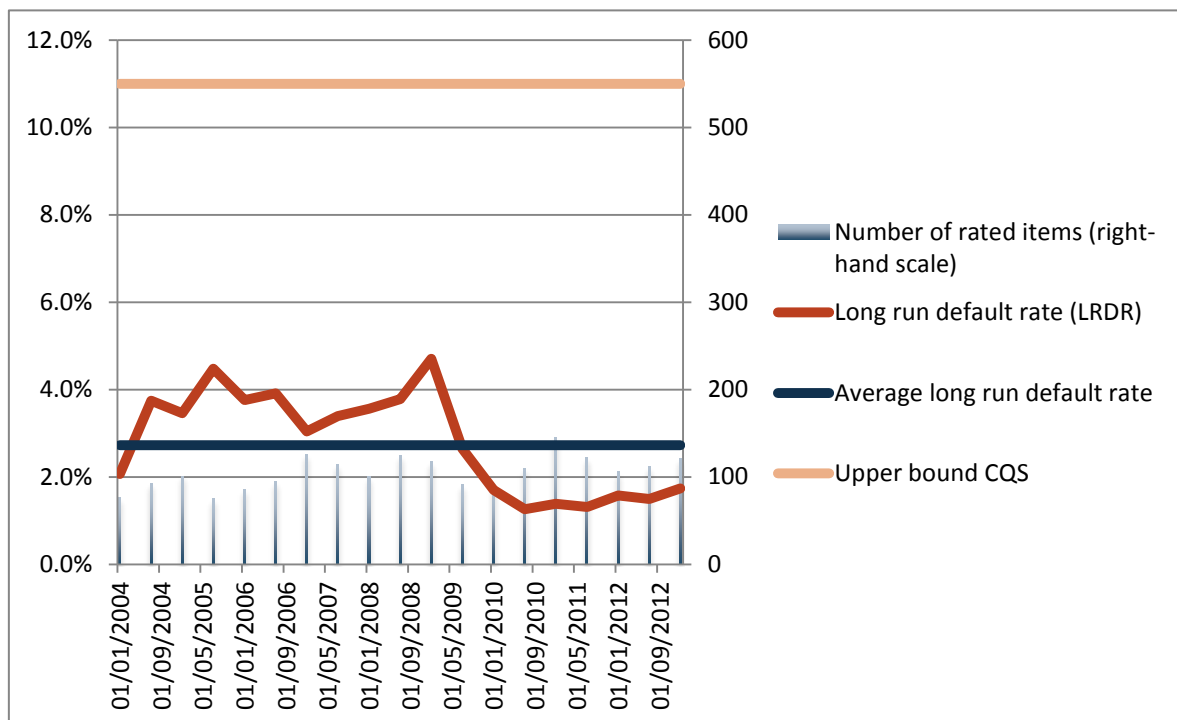

Source: Joint Committee calculations based on CEREP and Feri data

Figure 14: Long-run estimated and observed default rates of A rating category
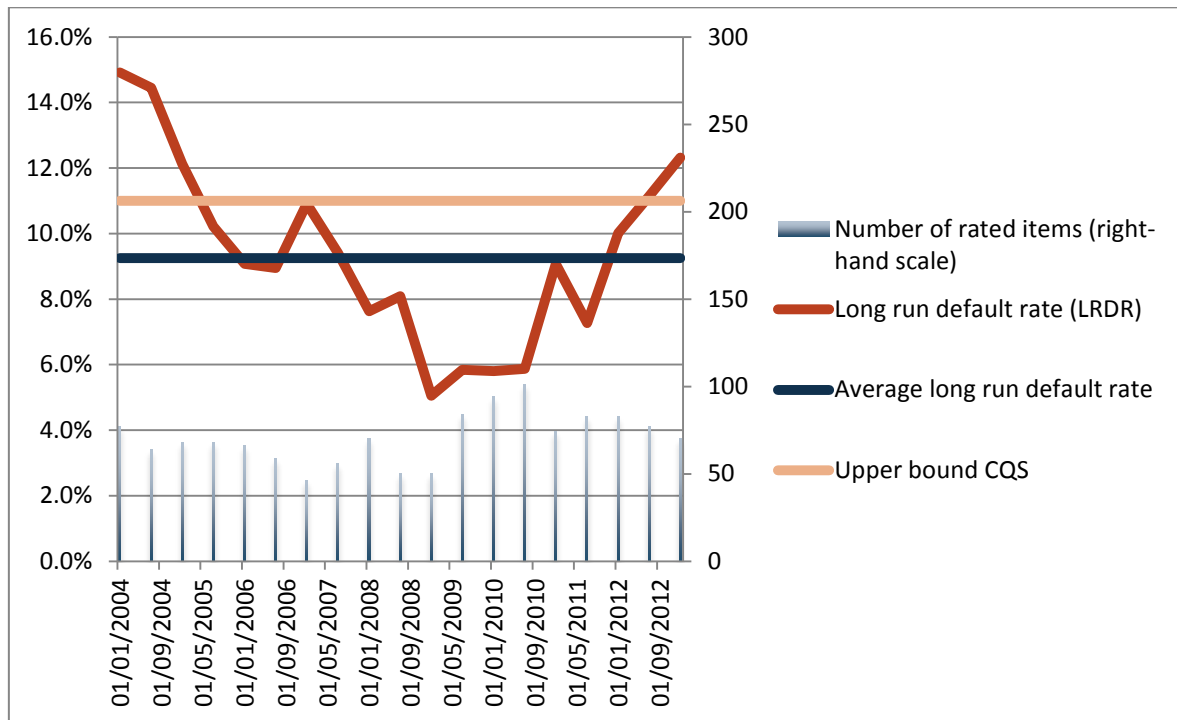

Source: Joint Committee calculations based on CEREP and Feri data

Figure 15: Long-run estimated and observed default rates of BBB rating category

Source: Joint Committee calculations based on CEREP and Feri data

Figure 16: Long-run estimated and observed default rates of BB rating category

Source: Joint Committee calculations based on CEREP and Feri data

Appendix 4: Mappings of each rating scale

Figure 17: Mapping of Feri's FERI EuroRating rating scale

Credit assessment	Initial mapping based on LR DR (CQS)	Review based on evolution of LR DR (CQS)	Final review based on qualitative factors (CQS)	Main reason for the mapping
AAA	1	1	1	The quantitative factors are representative of the final CQS.
AA	1	1	1	
A	2	2	2	The quantitative factors are representative of the final CQS.
BBB	4	4	4	The quantitative factors are representative of the final CQS. The mapping has been reinforced by the expected downgrade probability of BBB-rated items.
BB	4	4	4	The quantitative factors are representative of the final CQS.
B	n.a.	n.a.	5	The meaning and relative position of the rating category is representative of the final CQS. The quantitative factors reinforce the final CQS after accounting for the missing observation period.
CCC	n.a.	n.a.	6	The meaning and relative position of the rating category is representative of the final CQS. The quantitative factors reinforce the final CQS.
CC	n.a.	n.a.	6	
D	n.a.	n.a.	6	The meaning and relative position of the rating category is representative of the

Credit assessment	Initial mapping *based on LR DR* (CQS)	Review *based on evolution of LR DR* (CQS)	Final review *based on qualitative factors* (CQS)	Main reason for the mapping
				final CQS.