Mapping of ICAP Group S.A.'s credit assessments under the Standardised Approach

1. Executive summary

1. This report describes the mapping exercise carried out by the Joint Committee to determine the 'mapping'[1] of the credit assessments of ICAP Group S.A. (ICAP).

2. The methodology applied to produce the mapping is the one specified in the Commission's Implementing Regulation (EU) 2016/1799 ('the Implementing Regulation') laying down Implementing Technical Standards (ITS) with regard to the mapping of credit assessments of External Credit Assessment Institutions (ECAIs) for credit risk in accordance with Articles 136(1) and (3) of the Regulation (EU) No 575/2013 of the European Parliament and the Council ('the CRR'). This Implementing Regulation employs a combination of the provisions laid down in Article 136(2) CRR.

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[2] nor should be understood as a comparison of the rating methodologies of ICAP with those of other ECAIs. This mapping should however be interpreted as the correspondence of the rating categories of ICAP 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 Implementing Technical Standards on the mapping of ECAIs' credit assessments under Article 136(1) and (3) of Regulation (EU) No 575/2013. Figure 1 below shows the result for the main ratings scale of ICAP, the Global long-term rating scale.

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

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

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

Credit assessment	Credit quality step
AA	2
A	2
BB	3
B	3
C	4
D	4
E	5
F	5
G	6
H	6

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 ICAP Group S.A. (ICAP).

6. ICAP is a credit rating agency that has been registered with ESMA in 7 July 2011 and therefore meets the conditions to be an eligible credit assessment institution (ECAI)[3]. ICAP is actively involved in the assignment of credit ratings for companies since 1995, using information derived from ICAP DATABANK. ICAP's credit rating methodology assigns credit assessments to Greek corporate entities located all over Greece that are not considered to be a financial institution or insurance. ICAP focuses on SMEs.

7. The methodology applied to produce the mapping is the one specified in the Commission's Implementing Regulation (EU) 2016/1799 ('the Implementing Regulation') laying down Implementing Technical Standards (ITS) with regard to the mapping of credit assessments of External Credit Assessment Institutions (ECAIs) for credit risk in accordance with Articles 136(1) and (3) of the Regulation (EU) No 575/2013 of the European Parliament and the Council ('the CRR'). This Implementing Regulation employs a combination of the provisions laid down in Article 136(2) CRR. Two sources of information have been used. On the one hand, the quantitative and qualitative information available in ESMA Central Repository (CEREP[4]) has been used to obtain an overview of the main characteristics of this ECAI. On the other hand, as the definition of default has changed in 2012, and all the available data refers to the old definition, specific bankruptcy information has been directly requested to the ECAI, which was used to estimate the default rates of the rating categories.

8. 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 ICAP's ratings scale relevant for the purpose of the mapping. Section 4 contains the methodology applied to derive the mapping of ICAP's rating scale. The mapping table is shown in Appendix 4 of this document and have been specified in Annex III of the Implementing Technical Standards on the mapping of ECAIs' credit assessments under Article 136(1) and (3) of Regulation (EU) No 575/2013.

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

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

3. ICAP credit ratings and rating scales

9. ICAP produces one credit rating, **Long-term issuer rating**, which may be used by institutions for the calculation of risk weights under the Standardised Approach (SA)[5], as shown in column 2 of Figure 2 in Appendix 1.

10. Long-term issuer ratings express an estimation of a company's credit quality with respect to the probability of default and/or bankruptcy within a one–year time horizon.

11. ICAP assigns this credit rating to the **Global long-term rating scale** as illustrated in column 3 of Figure 2 in Appendix 1. Therefore, a specific mapping has been prepared for this rating scale. The specification of Global long-term rating scale is shown in Figure 3 of Appendix 1.

12. The descriptive characteristics show some similarities to the rating categories of the large international ECAIs, however are not necessarily comparable[6] to those and have different labelling.

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

4. Mapping of ICAP's Corporate long-term rating scale

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

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

In a second stage, the qualitative factors proposed in Article 7 of the ITS have been considered to challenge the result of the previous stage, especially the additional information that can be obtained from the default experience of credit ratings assigned by ICAP and the default definition.

[5] As explained in recital 4 ITS, Article 4(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.

[6] As an example, ICAP ratings are point-in-time (based on a one-year time horizon) as opposed to the through-the-cycle ratings of the large international rating agencies.

4.1. Initial mapping based on the quantitative factors

4.1.1. Calculation of the long-run default rates

16. Starting 2010, ICAP has changed its rating methodology. Prior to 2009, the assessments were mainly based on the quantitative algorithm and less on the analyst's involvement. From 2010 and onwards, the opinion of the analyst was introduced into the credit assessments. This change in methodology means that it cannot be guaranteed that the data prior to 2010 is comparable to the data from 2010 onwards, and therefore cannot be used in the mapping based on quantitative factors.

17. In addition, in 2012 ICAP has changed the definition of default to include 90 days past due payments. Therefore, the default definition applied by ICAP, described in Appendix 2, has not been used for the calculation of default rates, as it is not comparable to the current definition of default. Instead the bankruptcy (hard default) information was used.

18. Bankruptcy information was provided directly by ICAP for all rated items. Regarding withdrawn ratings, their bankruptcy behavior has only been made available for part of it. For the rest, the same bankruptcy rate has been extrapolated. Regarding the observation period, data from 2010h2 has been discarded due to the limited number of post-withdrawal bankruptcy information. Therefore, only data from 2010h1 will be used.

19. The information on ratings and default data is shown in Figure 4 and Figure 5 in Appendix 3. The following aspects should be highlighted:

- For AA to B rating categories, the number of credit ratings cannot be considered sufficient for the calculation of the short and long run default rates specified in the Articles 3 – 5 of the ITS since the number of rated items is below the required minimum. As a result, the allocation of the CQS for these rating categories has been made in accordance with Article 6 of the ITS, as shown in Figure 6 and Figure 7 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.

- Also for the remaining categories the number of ratings cannot be considered sufficient for the calculation of the short and long run default rates specified in Articles 3 – 5 ITS. Therefore also in this case the allocation of the CQS would have to be made in accordance with Article 6 ITS, by considering the number of defaulted and not defaulted items. However in this case the size of the pools is too large[7] to be evaluated by a small pool methodology. In this situation Article 6 is applied by considering the number of defaulted and not defaulted items through the computation of short run default rates and a proxy

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

for the long run default rate[8]. The proxy of the long run default rate is considered as a first indicator to perform the allocation to each CQS, together with the prior expectation of the equivalent rating category of the international rating scale. However in this case the result needs to be confirmed by the qualitative factors given that only a proxy of the long run default rate has been achieved.

4.1.2. Mapping proposal based on the long run default rate

20.As illustrated in the second column of Figure 8 in Appendix 4, the assignment of the rating categories to credit quality steps has been initially made in accordance with Article 6 of the ITS. Therefore, the numbers of bankrupt and non-bankrupt rated items have been used together with the prior expectation of the equivalent rating category of the international rating scale.

21.As the rating scale of the Global long-term rating scale does not follow the conventional letter and symbols, its equivalence with the international rating scale was based on the meaning and relative position of the rating categories. This qualitative factor is discussed in more detail in Section 4.2.

22.The results are specified in Figure 6 and Figure 7 and Figure 8 of Appendix 3:

- **AA to BB**: the number of rated items in these rating categories is below the minimum required number of observed items so that the credit quality steps associated with the AA, A and BB rating categories in the international rating scale (CQS 1, CQS 1and CQS 2 respectively) cannot be assigned. Therefore, the proposed credit quality steps for these rating categories are CQS 2, CQS 2 and CQS 3 respectively.

- **B**: the number of rated items in this rating category is equal or larger than the respective minimum required number of observed items given the number of defaulted items in the rating category. Therefore the credit quality step associated with the B rating category in the international rating scale (CQS 3) can be.

- **C to H:** Empirical bankruptcy rates can be calculated based on bankruptcy information provided by ICAP for rating categories C to H. Figure 8 shows the observed bankruptcy rate for each relevant rating category and the estimated bankruptcy rate (once the effect of post-withdrawal bankruptcies has been taken into account). These have been considered as proxies of long run default rates[9], and they have been employed as a first indicator to perform the allocation to each CQS. Therefore the proposed credit quality steps for rating categories C, D, E, F, are CQS 3, CQS 4, CQS 4 and CQS 4 respectively. However the prior expectation of the equivalent rating category of the international rating

[8] It has to be noted that in this situation the proxy LRDR is formally not a LRDR, the latter needs indeed to be computed over at least 10 short run default rates. We are here abusing of the LRDR naming.

[9] Proxy long run default rates would be computed through the weighted average of short run default rates. In this case it implies that the single short run default rates available (referring to 2010h1) act also as proxy long run default rates.

scale would suggest a more conservative mapping for rating categories C, E and F, so that the result needs to be confirmed by the qualitative factors. In case of rating categories G and H the bankruptcy rate is not useful due to the meaning and relative position of the rating category, which suggests CQS 6.

4.2. Final mapping after review of the qualitative factors

23. The qualitative factors specified in Article 7 of the ITS have been used to challenge the mapping proposed by the default rate calculation. Qualitative factors acquire more importance in the rating categories where quantitative evidence is not sufficient to test the default behavior[10], as it is the case for all rating categories of ICAP's Global long-term rating scale.

24. The **definition of default** applied by ICAP was not used for the calculation of the default rates because the bankruptcy information was used instead. Since only defaults relating to bankruptcies have been used in this mapping exercise, the mapping has been reviewed according to Article 8 of the ITS. Therefore, in accordance with the ITS, the default rates are increased by 100%, especially in cases where the default rate is close to the upper bound of the assigned CQS. In case of rating categories C, D, E and F the adjustment based on this factor suggests these rating categories be mapped to CQS 4, CQS 4, CQS 5 and CQS 5 respectively, while for the mappings described in Figure 6 and Figure 7 of Appendix 3 the adjustment based on this factor would not affect rating categories AA, A and BB, but would suggest a more conservative mapping for the rating category B (from CQS3 to CQS4).

25. Regarding **the meaning and relative position of the credit assessments**, it suggests the following mapping for the different rating categories:

- **AA** and **A** indicate very low to lowest credit risk and companies assigned this rating can honour obligations even under severe distressed conditions. This meaning is consistent with reference meaning of CQS1;
- **BB** indicates very low credit risk, but is likely to be affected marginally by severe distressed conditions, which is consistent with the reference meaning of CQS2;
- **B** is more likely to be affected by severe distressed conditions, which is consistent with the reference meaning of CQS3.
- **C** and **D** indicate moderate or relatively increased credit risk and are assigned to companies that are sensitive to market and economic conditions, which is consistent with reference meaning of CQS 4.

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

- **E** and **F** indicate increased and significantly increased credit risk, and in case of F, which is consistent with the reference meaning of CQS 5.

- Finally, in the case of the **G** and **H** rating categories, their meaning is consistent with the one of CQS 6 stated in Annex II ITS.

26. Regarding the **time horizon** reflected by the rating category, ICAP follows a point-in time methodology. As this cannot be further supported by transition probabilities due to the low number of ratings, no change is proposed to the mapping.

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

Appendix 1: Credit ratings and rating scales

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

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

Source: ICAP

Figure 3: Global long-term rating scale

Credit assessment	Meaning of the credit assessment
AA	The AA-rating indicates the lowest credit risk and it is assigned to companies that are able to honour their obligations even under severe distressed conditions and therefore their credit worthiness is expected to continue to be very high. Companies rated with AA are characterized by exceptional financial strength, very strong business growth and important market position.
A	The A-rating indicates very low credit risk and it is assigned to companies that are able to honour their obligations even under severe distressed conditions and therefore their credit worthiness is expected to continue to be high. Companies rated with A are characterized by very strong financials, strong business growth and important market position.
BB	The BB-rating indicates very low credit risk and it is assigned to companies that are likely to be affected very marginally by severe distressed conditions and therefore their credit worthiness is expected to continue to be relatively high. Companies rated with BB are characterized by significant financial strength, stable business growth and competitive market position.
B	The B-rating indicates low credit risk and it is assigned to companies that are likely to be affected slightly by severe distressed conditions and therefore their credit worthiness is expected to continue to be relatively stable. Companies rated with B are characterized by satisfactory financial strength, stable business growth and relatively competitive market position
C	The C-rating indicates moderate credit risk and it is assigned to companies that are sensitive to market and economic conditions and therefore their credit worthiness is expected to continue to be relatively stable. Companies rated with C are characterized by moderate financial strength and stable business level and relatively declining competitive market position.
D	The D-rating indicates relatively increased credit risk and it is assigned to companies that are rather sensitive to market and economic conditions. Companies rated with D are characterized by below average financial strength and negative business growth and declining competitive market position.
E	The E-rating indicates increased credit risk and it is assigned to companies that are very sensitive to market and economic conditions. Companies rated with E are characterized by low financial strength and substantially negative business growth and low competitive market position.

Credit assessment	Meaning of the credit assessment
F	The F-rating indicates significantly increased credit risk and it is assigned to companies that have or are very likely to have in the short term a problem in honouring their financial obligation. Companies rated with F are characterized by significantly low financial strength and competitive market position
G	The G-rating indicates very high credit risk and it is assigned to companies with significant problems in honouring their financial obligation. Companies rated with G are characterized by encumbered financial strength that put in jeopardy their business.
H	The H-rating indicates the highest credit risk and it is assigned to companies with very significant problems in honouring their financial obligation. Companies rated with H are characterized by extremely encumbered financial strength that put in significantly jeopardy their business.
N.R.	Not Rated. The “NR” class does not constitute a rating grade and includes companies that cannot be rated.
N.T.	Not Trading. The “NT” class does not constitute a rating grade and includes companies that have ceased to operate.
N.C.	Not Calculated. The “NC” class does not constitute a rating grade and includes companies that cannot be calculated.

Source: ICAP

Appendix 2: Definition of default

ICAP's definition of default includes elements that indicate the inability of the obligor to fulfil its obligations. These elements are collected directly by ICAP's own means from first instance courts and government gazettes and relate to events on bankruptcy and bankruptcy petitions, payment orders, seizures and auctions.

A company falls in default if the information provided meets one of the following three conditions that are set within the year of the observed default:

1. Event of bankruptcy
2. Bankruptcy petition
3. Negative data, i.e. payment orders, seizures and auctions

From 2012 and onwards, ICAP has enriched its default definition by using 90+ delay of payments based on Greek banks reporting on ECAF eligible cases. Moreover, ICAP cooperates with a number of Greek companies and collects invoice data. ICAP uses this data to identify additional defaults.

Source: ICAP

Appendix 3: Default rates of each rating category

Figure 4: Number of rated items

Date	AA	A	BB	B	C	D	E	F	G	H
Non-withdrawn rated items										
01/01/2010	170	323	384	161	132	89	44	23	3	1
Observed withdrawn items										
01/01/2010	11	64	74	137	130	151	100	53	12	11
Non- observed withdrawn items										
01/01/2010	92	211	350	441	424	346	250	163	23	39
Total rated items										
01/01/2010	273	598	808	739	686	586	394	239	38	40

Source: Joint Committee calculations based on CEREP data and data provided by ICAP

Figure 5: Number of defualted items (bankruptcies)

Date	AA	A	BB	B	C	D	E	F	G	H
Number of bankruptcies of non-withdrawn rated items										
01/01/2010	1	0	0	1	0	1	0	1	0	0
Number of bankruptcies of observed withdrawn items										
01/01/2010	1	1	3	3	2	6	7	3	1	
Estimated number of bankruptcies of non- observed withdrawn items										
01/01/2010	8	3	14	10	7	14	18	9	2	0
Total number of bankruptcies										
01/01/2010	10	4	17	14	9	21	25	13	3	0

Note: Number of bankruptcies for non-observed withdrawn items was estimated based on the bankruptcy rates of withdrawn observed items. The estimated figures and the calculations that include estimated figures are marked in grey.

Source: Joint Committee calculations based on CEREP data and data provided by ICAP

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

2010h1	AA	A	BB	B
CQS of equivalent international rating category	CQS 1	CQS 1	CQS 2	CQS3
N. observed defaulted items	2	1	3	4
N. estimated defaulted items	10	4	17	14
Minimum N. rated items	5515	2206	2688	441
Observed N. rated items	273	598	808	739
Mapping proposal	**CQS 2**	**CQS 2**	**CQS 3**	**CQS3**

Source: Joint Committee calculations based on CEREP data and data provided by ICAP

Figure 7: Bankruptcy rates

Date	AA	A	BB	B	C	D	E	F	G	H
Observed bankruptcy rate	n.a.	n.a.	n.a.	n.a.	0.29	1.19	1.78	1.67	2.63	0.00
Estimated bankruptcy rate	n.a.	n.a.	n.a.	n.a.	1.24	3.54	6.22	5.53	7.68	0.00

Note: Observed bankruptcy rate represents the ratio of the number of bankruptcies for non-withdrawn items and withdrawn items for which post-withdrawal information is available. Estimated bankruptcy rate represents the observed bankruptcy rate augmented by the estimated bankruptcies in the set of withdrawn items for which post-withdrawal information is not available.

Source: Joint Committee calculations based on CEREP data and data provided by ICAP

Appendix 4: Mappings of each rating scale

Figure 8: Mapping of ICAP's Global long-term rating scale

Credit assessment	Initial mapping *based on LR DR* (CQS)	Review *based on SR DR* (CQS)	Final review *based on qualitative factors* (CQS)	Main reason for the mapping
AA	2	n.a.	**2**	The quantitative factors are representative of the final CQS.
A	2	n.a.	**2**	The quantitative factors are representative of the final CQS.
BB	3	n.a.	**3**	The quantitative factors are representative of the final CQS.
B	3	n.a.	**3**	The quantitative factors are representative of the final CQS.
C	3	n.a.	**4**	The adjusted bankruptcy rate is representative of the final CQS.
D	4	n.a.	**4**	The adjusted bankruptcy rate is representative of the final CQS.
E	4	n.a.	**5**	The adjusted bankruptcy rate is representative of the final CQS.
F	4	n.a.	**5**	The adjusted bankruptcy rate is representative of the final CQS.
G	n.a.	n.a.	**6**	The meaning and relative position of the rating category are representative of the final CQS.
H	n.a.	n.a.	**6**	The meaning and relative position of the rating category are representative of the final CQS.