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| 17 November 2015 | ESMA/2015/1736 |

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| Reply form for the Discussion Paper on the validation and review of Credit Rating Agencies’ methodologies |
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| Date: 17 November 2015 |

Responding to this paper

The European Securities and Markets Authority (ESMA) invites responses to the specific questions listed in the ESMA Discussion Paper on the validation and review of Credit Rating Agencies’ methodologies, published on the ESMA website.

*Instructions*

Please note that, in order to facilitate the analysis of the large number of responses expected, you are requested to use this file to send your response to ESMA so as to allow us to process it properly. Therefore, ESMA will only be able to consider responses which follow the instructions described below:

* use this form and send your responses in Word format (pdf documents will not be considered except for annexes);
* do not remove the tags of type <ESMA\_ QUESTION\_VR\_CRA\_1> - i.e. the response to one question has to be framed by the 2 tags corresponding to the question; and
* if you do not have a response to a question, do not delete it and leave the text “TYPE YOUR TEXT HERE” between the tags.

Responses are most helpful:

* if they respond to the question stated;
* contain a clear rationale, including on any related costs and benefits; and
* describe any alternatives that ESMA should consider

**Naming protocol**

In order to facilitate the handling of stakeholders responses please save your document using the following format:

ESMA\_VR\_CRA\_NAMEOFCOMPANY\_NAMEOFDOCUMENT.

E.g. if the respondent were ESMA, the name of the reply form would be:

ESMA\_VR\_CRA\_ESMA\_REPLYFORM or

ESMA\_VR\_CRA\_ESMA\_ANNEX1

To help you navigate this document more easily, bookmarks are available in “Navigation Pane” for Word 2010 and in “Document Map” for Word 2007.

***Deadline***

Responses must reach us by **19 February 2016.**

All contributions should be submitted online at [www.esma.europa.eu](http://www.esma.europa.eu) under the heading ‘Your input/Consultations’.

***Publication of responses***

All contributions received will be published following the end of the consultation period, unless otherwise requested. **Please clearly indicate by ticking the appropriate checkbox in the website submission form if you do not wish your contribution to be publicly disclosed. A standard confidentiality statement in an email message will not be treated as a request for non-disclosure.** Note also that a confidential response may be requested from us in accordance with ESMA’s rules on access to documents. We may consult you if we receive such a request. Any decision we make is reviewable by ESMA’s Board of Appeal and the European Ombudsman.

***Data protection***

Information on data protection can be found at [www.esma.europa.eu](http://www.esma.europa.eu) under the headings ‘Legal notice’ and ‘Data protection’.

# Introduction

Please make your introductory comments below, if any:

< ESMA\_COMMENT\_VR\_CRA\_1>

TYPE YOUR TEXT HERE

< ESMA\_COMMENT\_VR\_CRA\_1>

1. Do you agree with ESMA’s view regarding the discriminatory power of methodologies?

<ESMA\_QUESTION\_VR\_CRA\_1>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_1>

1. Do you agree that the Accuracy Ratio, as derived from the CAP curve, is the minimum statistical measure that a CRA should use as part of its validation processes for demonstrating the discriminatory power of its methodologies?

<ESMA\_QUESTION\_VR\_CRA\_2>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_2>

1. Do you agree that complementary measures such as the Kolmogorov-Smirnov statistic and the ROC curve (along with a confusion matrix) add further information to the discriminatory power of methodologies? If not, please explain why.

<ESMA\_QUESTION\_VR\_CRA\_3>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_3>

1. Are there additional quantitative measures that CRAs should use and which would add further insight into the discriminatory power of methodologies? If yes, please explain the measures and your rationale.

<ESMA\_QUESTION\_VR\_CRA\_4>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_4>

1. Are there qualitative measures that are appropriate for demonstrating the discriminatory power of methodologies? If yes, please explain the measures and your rationale.

<ESMA\_QUESTION\_VR\_CRA\_5>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_5>

1. Do you agree with ESMA’s view regarding the predictive power of methodologies?

<ESMA\_QUESTION\_VR\_CRA\_6>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_6>

1. Do you agree that statistical measures of predictive power increase the quality of validation of CRAs methodologies and should be performed by the CRAs?

<ESMA\_QUESTION\_VR\_CRA\_7>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_7>

1. Do you agree that the binomial and the chi-square tests are the minimum statistical measures that a CRA (when its ratings refer to default probabilities) should use as part of its validation processes for demonstrating the predictive power of its methodologies?

<ESMA\_QUESTION\_VR\_CRA\_8>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_8>

1. Do you agree that complementary measures such as the Brier score and the Vasicek one-factor model test add further information to the predictive power of methodologies (when the CRAs’ ratings refer to default probabilities)? If not, please explain why.

<ESMA\_QUESTION\_VR\_CRA\_9>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_9>

1. Are there additional measures that CRAs should use and which would add further insight into the predictive power of methodologies when the CRAs’ ratings refer to default probabilities? If yes, please explain the measures and your rationale.

<ESMA\_QUESTION\_VR\_CRA\_10>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_10>

1. Are there qualitative measures that are appropriate for demonstrating the predictive power of methodologies when the CRAs’ ratings refer to default probabilities? If yes, please explain the measures and your rationale.

<ESMA\_QUESTION\_VR\_CRA\_11>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_11>

1. Do you agree that CRAs using methodologies related to creditworthiness measures other than default probabilities should use statistical measures to demonstrate the predictive power of their methodologies? If yes, please state the potential creditworthiness measures that methodologies could relate to and the corresponding statistical measures as well as any appropriate qualitative measures.

<ESMA\_QUESTION\_VR\_CRA\_12>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_12>

1. If ESMA establishes that there is a need for further guidance to the industry, should this guidance also cover the demonstration of predictive power of methodologies related to creditworthiness measures other than default probabilities?

<ESMA\_QUESTION\_VR\_CRA\_13>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_13>

1. Do you agree with ESMA’s view regarding the historical robustness of methodologies?

<ESMA\_QUESTION\_VR\_CRA\_14>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_14>

1. Do you agree that stability statistical measures and the transition (migration) matrices are the minimum measures that a CRA should use as part of its validation processes for demonstrating the historical robustness of its methodologies?

<ESMA\_QUESTION\_VR\_CRA\_15>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_15>

1. Do you agree that complementary measures such as distribution analysis, the univariate analysis of rating determinants and benchmarking add further information to the historical robustness of methodologies? If not, please explain why.

<ESMA\_QUESTION\_VR\_CRA\_16>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_16>

1. Are there additional measures (qualitative or quantitative) that CRAs should use and which would add further insight into the historical robustness of methodologies? If yes, please explain the measures and your rationale.

<ESMA\_QUESTION\_VR\_CRA\_17>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_17>

1. Do you agree with ESMA’s view regarding the validation of methodologies with limited quantitative evidence?

<ESMA\_QUESTION\_VR\_CRA\_18>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_18>

1. Do you agree that CRAs should, as a first step, investigate data enhancement in validating methodologies with limited quantitative evidence?

<ESMA\_QUESTION\_VR\_CRA\_19>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_19>

1. Do you agree that CRAs should, as a second step, investigate measures that may enable them to perform statistical tests to demonstrate the discriminatory power of their methodologies?

<ESMA\_QUESTION\_VR\_CRA\_20>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_20>

1. Do you agree that historical robustness measures should be performed when validating methodologies with limited quantitative evidence?

<ESMA\_QUESTION\_VR\_CRA\_21>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_21>

1. Do you agree that the transition (migration) matrices and benchmarking are the minimum measures that a CRA should use as part of its validation processes for methodologies with limited quantitative evidence?

<ESMA\_QUESTION\_VR\_CRA\_22>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_22>

1. Do you agree that complementary historical robustness measures add further information to the validation processes for methodologies with limited quantitative evidence? If not, please explain why.

<ESMA\_QUESTION\_VR\_CRA\_23>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_23>

1. Are there additional measures that CRAs should use when validating methodologies with limited quantitative evidence? If yes, please explain the measures and your rationale.

<ESMA\_QUESTION\_VR\_CRA\_24>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_24>

1. Do you agree that thresholds should be set for the quantitative validation techniques?

<ESMA\_QUESTION\_VR\_CRA\_25>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_25>

1. Do you agree that the Internal Review Function should decide on these values?

<ESMA\_QUESTION\_VR\_CRA\_26>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_26>

1. **Do you agree that predefined actions should be defined by the CRAs when the thresholds are met?**

<ESMA\_QUESTION\_VR\_CRA\_27>

TYPE YOUR TEXT HERE

<ESMA\_QUESTION\_VR\_CRA\_27>