

ANNEX I

CHANGES TO THE IRB APPROACH

PART I

CHANGES TO THE RANGE OF APPLICATION OF RATING SYSTEMS OR INTERNAL MODELS APPROACHES TO EQUITY EXPOSURES

SECTION 1

Changes requiring competent authorities' approval ('material')

1. Extending the range of application of a rating system to:
 - (a) exposures in an additional business unit, that are of the same type of product or obligor;
 - (b) exposures of an additional type of product or obligor unless the additional type of product or obligor falls within the range of application of an approved rating system based on the criteria as referred to in points (c)(i) and (ii);
 - (c) additional exposures related to the lending decision of a third party to the group, unless the institution can prove that the additional exposures fall within the range of application of an approved rating system, based on all of the following criteria:
 - (i) the 'representativeness' of the data used to build the model to assign exposures to grades or pools with respect to the key characteristics of the institution's additional exposures where the lending decision has been taken by a third party, according to Article 174(c) of Regulation (EU) No 575/2013;
 - (ii) the 'comparability' of the population of exposures represented in the data used for estimation, the lending standards used when the data was generated and other relevant characteristics with the ones of the additional exposures where the lending decision has been taken by a third party, according to Article 179(1)(d) of Regulation (EU) No 575/2013.

For the purposes of establishing 'representativeness' and 'comparability' under points (i) and (ii) of the first paragraph institutions shall provide a complete description of the criteria and measures used.

2. Extending the range of application of an internal models approach to equity exposures, to one of the following type of exposures:
 - (a) to the Simple risk weight method according to Article 155(2) of Regulation (EU) No 575/2013;
 - (b) to the PD/LGD approach according to Article 155(3) of Regulation (EU) No 575/2013;
 - (c) to the temporary partial use provision according to Article 495 of Regulation (EU) No 575/2013;
 - (d) to the same type of product in an additional business unit;

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- (e) to an additional type of product unless the institution can prove that it falls within the range of application of an existing internal models approach to equity exposures.

SECTION 2

Changes requiring prior notification to competent authorities

1. Reducing the range of application or the scope of use of a rating system.
2. Reducing the range of application of an internal models approach to equity exposures.
3. Extending the range of application of a rating system for which it can be shown that it does not fall under Part I, Section 1, point 1 of this Annex.
4. Extending the range of application of an internal models approach to equity exposures where such extension does not fall under Part I, Section 1, point 2 of this Annex.

PART II

CHANGES TO RATING SYSTEMS OR AN INTERNAL MODELS APPROACH TO EQUITY EXPOSURES

SECTION 1

Changes requiring competent authorities' approval ('material')

1. Changes in the methodology of assigning exposures to exposure classes and rating systems. These include:
 - (a) changes in the methodology used for assigning exposures to different exposure classes according to Article 147 of Regulation (EU) No 575/2013;
 - (b) changes in the methodology used for assigning an obligor or a transaction to a rating system according to Article 169(1) of Regulation (EU) No 575/2013.
2. The following changes in the algorithms and procedures used for: assigning obligors to obligor grades or pools; for assigning exposures to facility grades or pools; or for quantifying the risk of obligor default or associated loss ('changes in the rating methodology for IRB systems'):
 - (a) changes of the modelling approach for assigning an obligor to grades or pools and/or exposures to facility grades or pools according to Article 171(1) and Article 172(1) (a) to (d) of Regulation (EU) No 575/2013;
 - (b) changes to the institution's approach to the 'one-obligor-one-rating principle' according to Article 172(1)(e) of Regulation (EU) No 575/2013;
 - (c) changes in the rating system's assumptions behind ratings relating to the extent by which a change in economic conditions is expected to result in a net migration of a large number of exposures, obligors or facilities across grades or pools of the model, as opposed to migration of only some exposures, obligors or facilities due only to their individual characteristics the measure and significance levels of which are defined by the institution;

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- (d) changes to the rating criteria as referred to in Article 170(1)(c) and (e) and Article 170(4) of Regulation (EU) No 575/2013 and/or their weights, sequence or hierarchy, if any of the following conditions are met:
 - (i) they change the rank ordering referred to in Article 170(1)(c) and (3)(c) of Regulation (EU) No 575/2013 in a significant manner, the measure and level of which will have been defined by the institution;
 - (ii) they change the distribution of obligors, facilities or exposures across grades or pools according to Article 170(1)(d) and (f) and Article 170(3)(b) of Regulation (EU) No 575/2013 in a significant manner, the measure and level of which will have been defined by the institution.
 - (e) introduction or withdrawal of an external rating as a primary factor determining an internal rating assignment according to Article 171(2) of Regulation (EU) No 575/2013;
 - (f) change in the fundamental methodology for estimating PDs, LGDs including best estimate of expected loss, and conversion factors according to Articles 180, 181 and 182 of Regulation (EU) No 575/2013, including the methodology for deriving a margin of conservatism related to the expected range of estimation errors according to Article 179(1)(f) of Regulation (EU) No 575/2013. For LGDs and conversion factors this includes also changes in the methodology for accounting for an economic downturn according to Articles 181(1)(b) and 182(1)(b) of Regulation (EU) No 575/2013;
 - (g) inclusion of additional types of collateral into the LGD estimation according to Article 181(1)(c) to (g) of Regulation (EU) No 575/2013 if their treatment differs from procedures that have already been approved.
3. Changes in the definition of default according to Article 178 of Regulation (EU) No 575/2013.
 4. Changes in the validation methodology and/or validation processes which lead to changes in the institution's judgment of the accuracy and consistency of the estimation of the relevant risk parameters, the rating processes or the performance of their rating systems according to Article 185(a) of Regulation (EU) No 575/2013.
 5. Changes in the internal models approach to equity exposures. These include:
 - (a) changes in the value-at-risk modelling approach to estimate risk weighted exposure amounts for equity exposures according to Article 155(4) of Regulation (EU) No 575/2013;
 - (b) changes in the methodology for adjusting estimates of potential loss to achieve appropriate levels of realism and/or conservatism, or changes in the analytical method to convert shorter horizon period data to quarterly data according to Article 186(a) of Regulation (EU) No 575/2013;
 - (c) changes in the model capture of material risk drivers considering the specific risk profile and complexity, including non-linearity's of the institution's equity portfolio according to Article 186(b) and (c) of Regulation (EU) No 575/2013;
 - (d) changes in the fundamental methodology for mapping of individual positions to proxies, market indices or risk factors according to Article 186(d) of Regulation (EU) No 575/2013.

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SECTION 2

Changes requiring *ex ante* notification to competent authorities

1. Changes in the treatment of purchased receivables according to Article 153(6) and (7) and Article 154(5) of Regulation (EU) No 575/2013.
2. The following changes in the rating methodology for IRB systems:
 - (a) changes in the internal procedures and criteria for assigning risk weights to specialised lending exposures according to Articles 153(5) and 170(2) of Regulation (EU) No 575/2013;
 - (b) changes from the use of direct estimates of risk parameters for individual obligors or exposures to the use of a discrete rating scale or vice versa according to Article 169(3) of Regulation (EU) No 575/2013, unless already classified as material according to Part II, Section 1 of this Annex;
 - (c) changes to the rating scale in terms of the number or structure of rating grades according to Article 170(1) of Regulation (EU) No 575/2013, unless already classified as material according to Part II, Section 2 of this Annex;
 - (d) changes to the rating criteria and/or their weights or hierarchy according to Article 170(1)(c) and (e) and 170(4) of Regulation (EU) No 575/2013, unless already classified as material according to Part II, Section 1 of this Annex;
 - (e) changes to the grade or pool definitions or criteria according to Articles 171(1) and 172 of Regulation (EU) No 575/2013, unless already classified as material according to Part II, Section 1 of this Annex;
 - (f) changes in the scope of information used to assign obligors to grades or pools according to Article 171(2) of Regulation (EU) No 575/2013 or inclusion of new or additional information in a model for parameter estimation according to Article 179(1)(d) of Regulation (EU) No 575/2013;
 - (g) changes in the rules and processes for the use of overrides according to Article 172(3) of Regulation (EU) No 575/2013, unless already classified as material according to Part II, Section 1 of this Annex;
 - (h) changes in the methodology for estimating PDs, LGDs including best estimate of expected loss, and conversion factors according to Articles 180, 181 and 182 of Regulation (EU) No 575/2013 including the methodology for deriving a margin of conservatism related to the expected range of estimation errors according to Article 179(1)(f) of Regulation (EU) No 575/2013, unless already classified as material according to Part II, Section 1 of this Annex. For LGDs and conversion factors this includes also changes in the methodology for accounting for an economic downturn according to Article 181(1)(b) and Article 182(1)(b) of Regulation (EU) No 575/2013;
 - (i) changes in the way or extent to which conditional guarantees are accounted for in the LGD estimation according to Article 183(1)(c) of Regulation (EU) No 575/2013;
 - (j) inclusion of additional types of collateral into the LGD estimation in accordance to Article 181(1)(c) to (g) of Regulation (EU) No 575/2013, unless already classified as material according to Part II, Title I of this Annex;

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- (k) if an institution maps its internal grades to the scale used by an ECAI and then attributes the default rate observed for the external organisation's grades to the institutions' grades according to Article 180(1)(f) of Regulation (EU) No 575/2013, changes in the mapping used for this purpose unless already classified as material according to Part II, Section 1 of this Annex.
- 3. Changes in the validation methodology and/or process according to Articles 185 and 188 of Regulation (EU) No 575/2013, unless already classified as material according to Part II, Section 1 of this Annex.
- 4. Changes in processes. These include:
 - (a) changes in the credit risk control unit according to Article 190 of Regulation (EU) No 575/2013 as regards its position within the organisation and its responsibilities;
 - (b) changes in the validation unit's position according to Articles 190(1) and (2) of Regulation (EU) No 575/2013 within the organisation and its responsibilities;
 - (c) changes in the internal organisational or control environment or key processes that have an important influence on a rating system.
- 5. Changes in the data. These include:
 - (a) if an institution starts or ceases to use data that is pooled across institutions according to Article 179(2) of Regulation (EU) No 575/2013;
 - (b) change of the data sources used in the process of allocating exposures to grades or pools or for parameter estimation according to Articles 176(5)(a) and 175(4)(a) of Regulation (EU) No 575/2013;
 - (c) change in the length and composition of time series used for parameter estimation according to Article 179(1)(a) that goes beyond the annual inclusion of the latest observations, unless already classified as material according to Part II, Section 1 of this Annex.
- 6. Changes in the use of models, if an institution starts using risk parameter estimates for internal business purposes that are not those used for regulatory purpose and, where this was previously not the case, within the lines set out according to Article 179(1) of Regulation (EU) No 575/2013.
- 7. Changes in the internal models approach to equity exposures. These include:
 - (a) changes of the data used to represent return distributions for equity exposures under the internal models approach according to Article 186(a) of Regulation (EU) No 575/2013;
 - (b) changes in the internal organisational or control environment or key processes that have an important influence on the internal models approach to equity exposures.

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ANNEX II

EXTENSIONS AND CHANGES TO THE AMA

PART I

SECTION 1

Extensions requiring competent authorities' approval ('material')

1. First-time introduction of measures to capture expected losses in the institutions' business practices offset according to Article 322(2)(a) of Regulation (EU) No 575/2013.
2. First-time introduction of operational risk mitigation techniques such as insurance or other risk transfer mechanisms according to Article 323(1) of Regulation (EU) No 575/2013.
3. First-time recognition of correlations in operational risk losses according to Article 322(2)(d) of Regulation (EU) No 575/2013.
4. First-time introduction of methodology for allocating operational risk capital among the different entities of the group according to Article 20(1)(b) and 322(2)(a) of Regulation (EU) No 575/2013.
5. The introduction of the AMA within parts of the institution or group of institutions not yet covered by the approval or the approved roll out plan according to Article 314(1) of Regulation (EU) No 575/2013, where those additional areas account for more than 5 % of the EU parent institution on a consolidated level or of the institution which is neither a parent institution, nor a subsidiary.

The above calculation shall be made at the end of the preceding financial year using the amount of the relevant indicator assigned to the areas to which the AMA will be rolled out as defined in Article 316 of Regulation (EU) No 575/2013.

SECTION 2

Extensions requiring *ex ante* notification to competent authorities

The introduction of the AMA within parts of the institution or group of institutions not yet covered by the approval or the approved roll out plan according to Article 314(1) of Regulation (EU) No 575/2013, where those additional areas account with respect to the EU parent institution on a consolidated level or of the institution which is neither a parent institution, nor a subsidiary for both of the following:

- (a) more than 1 %;
- (b) less than or equal to 5 %.

The above calculation shall be made at the end of the preceding financial year using the amount of the relevant indicator assigned to the areas to which the AMA will be rolled out, as defined in Article 316 of Regulation (EU) No 575/2013.

PART II

CHANGES TO THE AMA

SECTION 1

Changes requiring competent authorities' approval ('material')

1. Changes in the organisational and operational structure of the independent risk management function for operational risk according to Article 321 of Regulation (EU) No 575/2013 which reduce the ability of the operational risk management function to oversee and inform the decision making processes of the business and support units they control.
2. Changes to the measurement system for operational risk if they fulfil any of the following criteria:
 - (a) they change the architecture of the measurement system regarding the combination of the four data elements of internal and external loss data, scenario analysis, business environment and internal control factors, according to Article 322(2)(b) of Regulation (EU) No 575/2013;
 - (b) they change the logics and drivers of the methodology for allocating the operational risk capital between the different entities of a group according to Article 20(1)(b) and 322(2)(a) of Regulation (EU) No 575/2013.
3. Changes to the procedures relating to internal and external data, scenario analysis and business environment and internal control factors where they:
 - (a) reduce the level of controls regarding the completeness and quality of operational risk data collected according to Article 322(3) and (4) of Regulation (EU) No 575/2013;
 - (b) change the external data sources to be used within the measurement system according to Article 322(4) and 322(5) of Regulation (EU) No 575/2013 unless the data are comparable and representative for the operational risk profile.
4. Changes to the overall method on how insurance contracts and/or other risk transfer mechanisms are recognized within the calculation of the AMA capital charge according to Article 323(1) of Regulation (EU) No 575/2013.
5. Reducing the part of the operational risk captured by the AMA within the institution or group of institutions using the AMA according to Article 314(2) and (3) of Regulation (EU) No 575/2013, where one of the following conditions is met:
 - (a) the areas to which the AMA will no longer be applied account for more than 5 % of the overall own funds requirements for operational risk of the EU parent institution on a consolidated level or of the institution which is neither a parent institution, nor a subsidiary;
 - (b) the reduction of the areas covered under the AMA leads to a use of the AMA in a part of the institution which account for a lower percentage as required by the competent authority under Article 314(3) of Regulation (EU) No 575/2013.

This calculation shall be made when the institution applies for the change and shall be based on the capital requirement as calculated at the end of the preceding financial year.

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SECTION 2

Changes requiring *ex ante* notification to competent authorities

1. Changes to the way the operational risk measurement system is integrated into the day-to-day management process through operational risk processes and policies according to Article 321(a) and (c) of Regulation (EU) No 575/2013, where the changes have one of the following characteristics:
 - (a) they change the extent to which the operational risk measurement system contributes to relevant information in the institutions' risk management and related decision making processes, including the approval of new products, systems and processes and definition of the operational risk tolerance;
 - (b) they reduce the scope, groups of recipients and frequency of the reporting system for informing all relevant parts of the institution about the results of the operational risk measurement system and decisions taken in response to material operational risk events.
2. Changes in the organisational and operational structure of the independent risk management function for operational risk according to Article 321(b) of Regulation (EU) No 575/2013 if they fulfil any of the following criteria:
 - (a) they reduce the hierarchical level of the operational risk management function or of its head;
 - (b) they lead to a relevant reduction the duties and responsibilities of the operational risk management function;
 - (c) they extend the duties and responsibilities of the operational risk management function, unless no conflicts of interests exist and appropriate additional resources are provided to the operational risk management function;
 - (d) they lead to a reduction of the available resources in terms of budget and headcount of more than 10 %, of the institution or group, since the last approval according to Article 312(2) of Regulation (EU) No 575/2013 was granted, unless the available resources in terms of budget and headcount at the institution or group level has been reduced with the same proportion.
3. Changes to validation processes and the internal review according to Article 321(e) and (f) of Regulation (EU) No 575/2013 if they change the logic and methodologies used for internally validating or reviewing the AMA framework.
4. Changes to the calculation of the operational risk capital charge which change one of the following:
 - (a) structure and characteristics of the data set used for the calculation of the operational risk capital requirement (the 'calculation data set'), including any of the following:
 - (i) the definition of gross loss amount to be used within the calculation data set according to Article 322(3)(d) of Regulation (EU) No 575/2013;
 - (ii) the reference date of loss events to be used within the calculation data set according to Article 322(2)(a) of Regulation (EU) No 575/2013;

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- (iii) the method used to determine the length of the time series of loss data to be used within the calculation data set according to Article 322(2)(a) of Regulation (EU) No 575/2013;
 - (iv) the criteria to group losses caused by a common operational risk event or by related events over time according to Article 322(3)(b) and (3)(e) of Regulation (EU) No 575/2013;
 - (v) the number or the type of risk classes, or equivalent, over which the operational risk capital requirement is calculated;
 - (vi) the method for setting the threshold for the level of losses above which the model is fitted to the data according to Article 322(2)(a) of Regulation (EU) No 575/2013;
 - (vii) where applicable, the method for setting the threshold for differentiating the body and tail regions of the data, when fitted by different methods according to Article 322(2)(a) of Regulation (EU) No 575/2013;
 - (viii) the processes and criteria for assessing the relevance, for scaling or for doing other adjustments to the operational risk data according to Article 322(3)(f) of Regulation (EU) No 575/2013;
 - (ix) change the external data sources to be used within the measurement system according to Article 322(4) and 322(5) of Regulation (EU) No 575/2013, unless already classified as material according to Part II, Section 1 of this Annex.
- (b) the criteria for the selection, update and review of used distributions and methods for the estimation of their parameters according to Article 322(2)(a) of Regulation (EU) No 575/2013;
 - (c) criteria and procedures for the determination of the aggregated loss distributions and for the calculation of the pertinent operational risk measure at the regulatory confidence level according to Article 322(2)(a) of Regulation (EU) No 575/2013;
 - (d) methodology for the determination of expected losses and their capturing within internal business practices according to Article 322(2)(a) of Regulation (EU) No 575/2013;
 - (e) methodology about how correlations in operational risk losses across individual operational risk estimates are recognised according to Article 322(2)(d) of Regulation (EU) No 575/2013.
5. Changes to the standards relating to internal data, scenario analysis and business environment and internal control factors if they:
- (a) change the internal processes and criteria for collecting internal loss data according to Article 322(3) of Regulation (EU) No 575/2013, including any of the following:
 - (i) increase of the threshold for the collection of internal loss data according to Article 322(3)(c) of Regulation (EU) No 575/2013;
 - (ii) methods or criteria for the exclusion of activities or exposures from the scope of the internal data collection according to article 322(3)(c) of Regulation (EU) No 575/2013.

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- (b) change the internal processes and criteria for one of the following:
 - (i) performing scenario analysis according to Article 322(5) of Regulation (EU) No 575/2013;
 - (ii) determining business environment and internal control factors according to Article 322(6) of Regulation (EU) No 575/2013.
- 6. Changes to the standards relating to insurance and other risk transfer mechanisms according to Article 323 of Regulation (EU) No 575/2013, if they fulfil one of the following conditions:
 - (a) they cause a relevant alteration of the level of coverage provided;
 - (b) they alter the processes and criteria for calculating the haircuts in the amount of insurance recognition, introduced to capture the uncertainty of payment, the mismatches in coverage and the policy's residual and cancellation terms, where less than one year according to article 323(4) of Regulation (EU) No 575/2013.
- 7. Relevant changes to the IT systems used to process the AMA, including the collection of data and their administration, reporting procedures and the measurement system for operational risk according to article 312(2) of Regulation (EU) No 575/2013 and the general risk management standards set out in article 74 of Directive 2013/36/EU, which reduce the integrity and availability of the data or IT systems.