



EUROPEAN CENTRAL BANK  
EUROSYSTEM

## ECB Guide on materiality assessment (EGMA)

Materiality assessment for IMM  
model extensions and changes

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## Document releases

Release	Date of issue	Release number	Sections/Chapters modified	Rationale underlying the release
<b>ECB Guide on materiality assessment (EGMA)</b> <b>Materiality assessment for IMM and A-CVA model extensions and changes</b>	17/09/2017	1.0	Initial version <sup>1</sup>	ECB guide in absence of mandated RTS
<b>ECB Guide on materiality assessment (EGMA)</b> <b>Materiality assessment for IMM model extensions and changes</b>	26/06/2026	2.0	Deletion of all sections, chapters and references to A-CVA	With effect from 01/01/2025, the A-CVA was substituted by SA-CVA, for which Article 383a(5)(a) of the CRR mandates EBA to develop regulatory technical standards to specify the conditions for assessing the materiality of extensions and changes to the use of the standardised approach as referred to in Article 383(3) of the same regulation

<sup>1</sup> Draft versions for public consultations before 18/09/2020 are not listed in this table.

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# 1 Introduction

The Capital Requirements Regulation (CRR)<sup>2</sup> requires model approval by the competent authority for material model extensions and changes to credit, operational and market risk internal models. Regulatory technical standards (RTS) have been adopted by the European Commission for the materiality assessment of model extensions and changes to the internal ratings-based approach (IRB approach) for credit risk (see Chapter 2.1). Based on this RTS, model extensions and changes to internal models are categorised as material extensions and changes that require prior approval from the competent authority or as extensions and changes that are not material and require either ex ante notification or ex post notification.

For counterparty credit risk (CCR) for the internal model method (IMM), the adoption of similar RTS is not mandated by the current text of the CRR. However, it should be borne in mind that the European Banking Authority (EBA) may regulate this field by adopting guidelines on the basis of Article 16 of the EBA Regulation<sup>3</sup> or RTS based on any future EU legislation.

**Under the CRR, credit institutions can use the internal model method (IMM) for the purposes of calculating capital requirements for counterparty credit risk (CCR).** These internal models focus on over-the-counter derivative contracts and securities financing transactions (SFTs). These exposures are calculated differently from a traditional loan, where the exposure is, to a large extent, fixed. The output of these internal models is one input factor in the calculation of an institution's Pillar 1 capital requirements.

This document introduces the European Central Bank (ECB) Guide on materiality assessment (EGMA) for IMM model extensions and changes. The EGMA is adopted in the context of the ongoing review of the permissions to use internal approaches and indicates how the ECB intends to interpret the existing legal framework. The EGMA provides assistance to significant institutions in their self-

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<sup>2</sup> Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012.

<sup>3</sup> Regulation (EU) No 1093/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Banking Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/78/EC.

assessment of the materiality of changes and extensions to IMM models under the applicable legal framework. The Guide is an integrated document intended to be applied in its entirety. Applying only individual elements is likely to distort the coherence of the assessment process and should be avoided insofar as possible.

The EGMA is not intended by the ECB to have legal effect and nothing within its wording and context or its substance should be construed otherwise. The EGMA merely proposes a course of action to be followed by the institutions concerned within the applicable legal framework. The EGMA is not intended to replace, overrule or affect in any other way applicable EU and national law.

The remainder of this document is organised as follows: Chapter 2 presents the components of the EGMA; Chapter 3 presents the rationale behind the EGMA; Finally, Chapter 4 contains the Guide itself.

## 2 Components of the EGMA

### 2.1 Building blocks

The EGMA is based on, and refers (insofar as possible) to, the applicable legal framework. The building blocks are:

1. The [CRR](#), in particular, Article 162(2)(i) – the institution's requirement to obtain the approval of the competent authority in order to be allowed to set M equal to 1.
2. [Commission Delegated Regulation \(EU\) No 529/2014 of 12 March 2014 supplementing Regulation \(EU\) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards for assessing the materiality of extensions and changes of the Internal Ratings Based Approach and the Advanced Measurement Approach \(RTS on IRB\)](#).

### 2.2 EGMA – parts

The EGMA consists of two parts (a general part, and an IMM-specific part).

#### **EGMA – general part**

The general provisions of the EGMA consist of Sections 1, 2, 3 and 6 (see Chapter 4).

In order to ensure consistency, the structure of the general provisions of the EGMA is similar to that of the RTS on IRB.

Section 1 of the EGMA defines the scope of the EGMA. All extensions and changes are considered.

#### **EGMA – IMM-specific part**

The IMM-specific part of the EGMA consists of Section 4, Section 5 and the Annex of the EGMA and covers all IMM extensions and changes.

The structure of the IMM part of the EGMA is based on the structure of the RTS on IRB.

## 3 Rationale

The CRR requires model approval by the competent authority for material model extensions and changes to credit, operational and market risk internal models. Article 143, Article 312 and Article 363 CRR mandate the EBA to develop RTS, to be adopted by the European Commission. The current text of CRR does not mandate similar RTS for the internal model method (IMM). The ECB therefore considered that it would be helpful to provide the institutions under its direct supervision with guidance on how to assess the materiality of extensions and changes to internal models for counterparty credit risk. Existing RTS for other risk categories mandated in the CRR serve by analogy as a basis for the Guide.

This chapter discusses differences between the EGMA structure and the structure of the RTS on IRB and the reasoning behind them. It further discusses how IMM changes will be assessed. The chapter does not record the rationale for those parts of the EGMA that have been taken over from the existing RTS: for this rationale, the reader is referred to the existing RTS (see the link in Chapter 2.1).

### 3.1 Model maintenance

This refers to Section 1(2) of the EGMA.

#### **Scope of the EGMA**

The permission of competent authorities for the use of IMM relates to the methods, processes, controls, data collection and IT systems. Therefore, this Guide does not cover elements such as ongoing alignment of the models to the calculation data-set used, correction of errors or minor adjustments (necessary for the day-to-day maintenance of the IMM), which occur within the already approved methods, processes, controls, data collection and IT systems.

## 3.2 Extensions and changes that need to be investigated

This refers to Section 2(1) and (3) of the EGMA.

### **EGMA classification**

Within the RTS on IRB, the materiality of extensions and changes to the IRB approach is subject to a self-assessment by the relevant institution, which also determines the classification of an extension or change as either "material" or "not material".

The self-assessment, which is the first step in the process, can lead to two classifications: "extensions and changes that need to be investigated" or "not material extensions and changes".

The extensions and changes categorised as "not material" are notified to the ECB and implemented in accordance with Section 2(3).

The extension and changes categorised as needing to be investigated are subject to an ECB internal model investigation, which allows the ECB to finally classify them as either "material" or "not material". Prior to receiving the ECB conclusion on the classification, the institutions cannot implement the extension or change that needs to be investigated. When the extension or change is classified as material, the institution receives a decision from the ECB. When the extension or change is classified as not material, the institution receives the ECB's view regarding its implementation.

### **Rationale for the introduction of the classification process**

The ECB is of the opinion that the materiality assessment of a subset of extensions and changes to the IMM approach requires an investigation by the ECB to supplement the pre-defined qualitative and quantitative assessment criteria that are recorded in the EGMA.

The ECB internal model investigation provides additional information concerning the materiality of an extension or change. In certain cases, this approach also avoids the triggering of a formal ECB decision process for changes that the investigation establishes as not material.

### 3.3 Backstops for the material classification

This refers to Section 2(2) of the EGMA.

#### **EGMA materiality assessment**

The ECB will perform an internal model investigation on extensions and changes that need to be investigated. The following extensions and changes will always be classified as material (backstop):

3. extensions to the IMM approach that need to be investigated;
4. changes to the IMM approach that reduce the institution's overall RWA by at least 1% (this backstop was introduced owing to the relatively high quantitative impact); and
5. extensions and changes that – based on the outcome of the ECB's internal model investigation – are submitted to the ECB decision-making bodies with the proposal to reject them (as these extensions and changes are by definition material).

### 3.4 Quantitative assessments

#### 3.4.1 IMM extensions and changes that need to be investigated

This refers to Section 4(1) of the EGMA.

#### **EGMA quantitative assessment**

A change of at least 5% in the RWA of the full CCR portfolio needs to be investigated.

#### **IRB equivalent**

Extensions and changes to the IRB approach that have a below-indicated quantitative impact are material, based on the RTS on IRB:

6. a decrease of 1.5% or more in the RWA of the full credit risk portfolio;
7. a decrease of 15% or more in the RWA within the range of application of the rating system.

### Rationale for the difference

First, the IMM quantitative threshold is defined only for the full CCR portfolio of the institution, while the RTS on IRB defines the IRB quantitative threshold for the full credit risk portfolio of the institution. The full credit risk portfolio also includes a subset of CCR-related transactions, since exposure values resulting from the CCR are also subject to the calculation of RWA for credit risk. Within the ECB, the internal models for credit risk and the CCR are treated as different model types. Therefore, the threshold has been set for the full CCR portfolio of the institution and not for the whole credit risk portfolio.

Second, the quantitative thresholds have been increased, because:

8. IMM portfolios are less granular than IRB portfolios;
9. IMM model extensions and changes usually affect the whole CCR portfolio via the use of netting sets including different asset classes and/or transaction types, while IRB model extensions and changes might only affect one exposure class in the whole IRB portfolio.

Therefore, if the IRB thresholds were used for the IMM assessment, it is very likely that all model extensions and changes would be identified as extensions and changes that need to be investigated. This would be unnecessarily burdensome for all the parties involved.

Third, additional thresholds have been introduced that, in addition to reductions in RWA, also identify increases in RWA as extensions and changes that need to be investigated. These thresholds have been introduced for the following two reasons.

10. The IRB consists of distinct exposure classes. In contrast, the IMM consists of different asset classes (e.g. interest rate and foreign exchange), which can be affected differently by a single model extension or change. Model extensions and changes that increase the overall IMM RWA could reduce the IMM RWA for a specific, currently smaller asset class, which may, however, become larger in the future, requiring the ECB's attention as well. Therefore, it is necessary to also add a threshold for increases in RWA.
11. In order to ensure continued understanding of the institution's model extensions and changes, the materiality of extensions and changes that result in an increase in the IMM RWA above the defined threshold is also investigated.

Fourth, the quantitative threshold is only defined for the full CCR portfolio, i.e. there is no separate threshold for the IMM range of application. There are two arguments for why an additional

quantitative threshold for the IMM range of application is unnecessary:

12. Within the Single Supervisory Mechanism (SSM), institutions cover at least 50% of their CCR RWA by the IMM.
13. Assuming the extension or change is made in a subsidiary of the institution, the impact of an IRB model extension or change can be small at the consolidated level, but large at the subsidiary level. Note that the scope of application of some IRB models might be limited to a subsidiary. Therefore, the RTS on IRB requires a quantitative threshold for the range of application of the rating system. By contrast, the IMM model used for a subsidiary is the same as the IMM model applied at the consolidated level.

#### **Rationale for defining the threshold on RWA**

The thresholds are defined on the level of RWA of the portfolio concerned. Alternatively, the thresholds could have been defined on exposures (e.g. effective expected positive exposure, EEPE). However, the latter is not risk weighted, i.e. changes to identical levels of exposure would contribute the same amount to the materiality assessment regardless of whether they relate to a legal agreement with a low probability of default (PD) and a low LGD or a legal agreement with a high PD and a high LGD. In addition, by definition, EEPE ignores exposure profiles after the one-year horizon, whereas the full EE profiles are included in the RWA via the maturity adjustment.<sup>4</sup> Altogether, the RWA are considered to be the most appropriate risk measure to define the materiality thresholds.

#### **3.4.2 IMM extensions and changes that are not material and are notified ex ante**

This refers to Section 5 of the EGMA.

#### **EGMA quantitative assessment**

No quantitative assessment is needed.

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<sup>4</sup> This holds provided that M is not equal to 1 in accordance with Article 162(2)(i) of the CRR.

### **IRB equivalent**

A decrease of 5% or more in the RWA within the range of application of the rating system.

### **Rationale for the difference**

The RTS on IRB only specifies a quantitative threshold for the range of application of the rating system, but, as already discussed, there is no such threshold in the case of the IMM. Thus, a quantitative assessment of the IMM range of application is unnecessary.

## **3.4.3 Measure to be kept constant during impact analyses**

This refers to Section 4(4).

### **EGMA quantitative assessment**

Measures<sup>5</sup> that are not affected by the IMM extension or change under consideration are expected to be kept constant during the quantitative impact analyses. For example, when calculating the impact of a change to an institution's IMM approach on the RWA, the PD and LGD measures are expected to be kept constant.

### **Rationale**

In order to obtain a representative quantitative impact assessment, measures that are not related to the considered extension or change to the IMM approach, are expected to be kept constant.

## **3.5 Observation period for the IMM quantitative materiality assessment**

This refers to Section 4(3) of the EGMA.

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<sup>5</sup> Please note that, in this context, a measure is referred to as a quantitative parameter value that affects the capital requirement.

### **EGMA observation period**

The EGMA introduces an observation period for the IMM quantitative assessment criteria.

### **Rationale for the introduction of an EGMA observation period**

The RTS on IRB requires only a single observation for the quantitative assessment criteria. However, IMM RWA are more volatile than IRB RWA. Therefore, the EGMA introduces an observation period in order to obtain a representative quantitative impact figure. IMM RWA are more volatile than IRB RWA because:

14. IMM exposure can fluctuate as a result of changes in market data;
15. IMM exposure can fluctuate as a result of ongoing trading/hedging activities.

## **3.6 Qualitative assessments**

This is only relevant for model extensions and refers to Annex, Part I of the EGMA.

### **EGMA –extensions**

The IMM part of the EGMA introduces different qualitative materiality assessment criteria for IMM extensions than those found in the RTS on IRB.

### **Rationale for introduction**

The qualitative assessment criteria for IMM model extensions cannot be taken from IRB models, as there is no overlap in the range of application. Therefore, the EGMA contains IMM-specific qualitative assessment criteria.

## **3.7 Changes “significantly” affecting an assessment criterion**

This refers to Section 6(2)(c) and the Annex of the EGMA (both for extensions and changes that need to be investigated and not material extensions and changes needing ex ante notification).

There is a trade-off between a principle-based approach and an all-embracing approach.

The advantage of a principle-based approach is that the EGMA does not have to list and classify all possible future extensions and changes in advance. The disadvantage of the principle-based approach is that, for an extension or change, it is not unambiguously clear how to classify the extension or change. The advantages and disadvantages of an all-embracing approach are the opposite of those for a principle-based approach.

The EGMA implemented a principle-based approach for a subset of assessment criteria, because it is not possible to list all future extensions and changes in an exhaustive way. The principle-based approach uses the term “significant” to further describe changes in Section 4 and the Annex.

An example of an assessment criterion that uses the term “significant” is found in Annex, Part II, Section 1, item 2, in which the methodology for the forecasting of the risk factor distribution is defined as an assessment criterion. If the change to the forecasting of the risk factor distribution is significant, such as changing the stochastic model of interest rate curves from a log-normally distributed process to a normally distributed process, the materiality of that change needs to be investigated.

### 3.8 Classification examples

This section presents the classification of some illustrative examples of model changes<sup>6</sup> to the IMM. The aim of this section is to increase the understanding of the concept “model maintenance” and “significant”.

Note that the sample classification in the table below is only based on the qualitative assessment criteria specified in the Guide. The final classification of the listed changes may differ owing to the quantitative assessment criteria, i.e. a change may then be classified as “need to be investigated”, even though it would be classified as “not material” under the purely qualitative criteria.

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<sup>6</sup> Note that model extensions can never be treated as model maintenance.

<b>Model change</b>	<b>EGMA reference</b>	<b>EGMA classification</b>
(Quarterly) re-calibration of the model parameters of the forecasting risk factor distribution.	N.a.	N.a. This is considered model maintenance.
Using a specific credit spread curve instead of a proxy spread curve due to availability of new market data.	N.a.	N.a. This is considered model maintenance.
Adding a commodity/energy risk factor to an internal model that already includes a simulation approach for commodity/energy risk factors.	N.a.	N.a. This is considered model maintenance.
Modification of the granularity of a given risk factor (e.g. more tenors in interest rate curves).	N.a.	N.a. This is considered model maintenance.
Changes in the manner how the initial margin (IM) is taken into account.	Annex, Part II, Section 1, Item 1	Such changes need to be investigated when the IM is included in the model for the first time.
	Annex, Part II, Section 2, Item 1	Consequent changes would in principle be not material needing ex ante notification (e.g. if only the way in which the IM is captured in the IMM is changed).
Adding a new type of risk factor (e.g. the implied volatility of	Annex, Part II,	Change that needs to be investigated.

<b>Model change</b>	<b>EGMA reference</b>	<b>EGMA classification</b>
interest rate products) while keeping the set of products in scope of the IMM unchanged.	Section 1, Item 2	
Changing the stochastic model of interest rate curves from a log-normally distributed process to a normally distributed process.	Annex, Part II, Section 1, Item 2	Change that needs to be investigated.
Modification of the data source used for model calibration.	Annex, Part II, Section 2, Item 7	Not material change which is subject to ex ante notification if the model is switching from one external data provider to another for a significant part of the market data.

\* CRR Part Three, Title II, Chapter 6 for derivative transactions and SFTs included in the IMM, and Part Three, Title II, Chapter 4 for standardised SFTs.

## 4 ECB Guide on materiality assessment of extensions and changes to the internal model method

The EGMA is not intended by the ECB to have legal effect and nothing within its wording and context or its substance should be construed otherwise. The EGMA merely proposes a course of action to be followed by the institutions concerned within the applicable legal framework. The EGMA is not intended to replace, overrule or affect in any other way applicable EU and national law. The Guide is an integrated document intended to be applied in its entirety. Applying only individual elements is likely to distort the coherence of the assessment process and should be avoided insofar as possible.

### 4.1 Section 1: Subject matter

16. The ECB Guide on materiality assessment (EGMA) lays down indicative criteria which have been adopted by the ECB for assessing the materiality of extensions and changes to the internal model method (IMM) in accordance with Article 162<sup>7</sup> and Articles 283 to 294 of Regulation (EU) No 575/2013 (CRR).
17. The EGMA does not apply to ongoing alignment of the IMM to the calculation data-set used, correction of errors or minor adjustments necessary for the day-to-day maintenance of the internal model approaches, which occur within already approved methods, processes, controls, data collection and IT systems.
18. The EGMA defines – in Section 4, Section 5 and in the Annex – materiality assessment criteria for all model extensions and changes.

### 4.2 Section 2: Categories of extensions and changes

19. Institutions<sup>8</sup> classify extensions and changes for IMM under the following categories:
  - (a) extensions and changes that need to be investigated by the ECB;
  - (b) other extensions and changes that are notified to the ECB.

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<sup>7</sup> Article 162 is only considered for paragraph 2(i).

<sup>8</sup> For the purpose of EGMA, the term “institution” refers only to (a) parent institutions of a group, or (b) to individual institutions not belonging to a group subject to consolidated capital requirements, or whose parent institution is outside the SSM.

20. For extensions and changes that need to be investigated by the ECB in accordance with Section 2(1)(a), the final classification is obtained from the ECB as follows:
- (a) material extensions and changes that need approval; or
  - (b) not material extensions and changes.
  - (c) The final classification depends on the outcome of the ECB's investigation. However, the following cases are always classified as material;
  - (d) extensions to the IMM approach that need to be investigated;
  - (e) extensions and changes to the IMM approach that reduce the institution's overall RWA by at least 1%;
  - (f) extensions and changes that – based on the outcome of the ECB's internal model investigation – are submitted to the ECB's decision-making bodies with the proposal to reject them.
  - (g) Prior to implementing the extension or change, the institution waits for the ECB:
    - to approve the extension or change after an internal model investigation (in accordance with Article 9 of the SSM Regulation<sup>9</sup>) and decision phase (in this case, the ECB considers the extension or change material); or
    - to notify the institution that the extension or change is considered not material. This notification may present the ECB's view regarding the submitted extension or change.
21. Institutions classify the extensions and changes referred to in Section 2(1)(b) above as:
- (a) not material extensions and changes that are notified before their implementation (“ex ante”);
  - (b) not material extensions and changes that are notified after their implementation (“ex post”).

### 4.3 Section 3: Principles governing the classification of extensions and changes

22. The classification of extensions and changes in the IMM approach is carried out in accordance with this section and Sections 4 and 5.

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<sup>9</sup> [Council Regulation \(EU\) No 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions.](#)

23. Where institutions calculate the quantitative impact of any extension or change , they apply the following methodology:
  - (a) for the purpose of the assessment of the quantitative impact, institutions use the most recent data available;
  - (b) where a precise assessment of the quantitative impact is not feasible, institutions instead perform an assessment of the impact based on a representative sample or other reliable inference methodologies;
  - (c) for changes having no direct quantitative impact, such as organisational changes, internal process changes or risk management process changes, no quantitative impact is calculated, as laid down in Section 4 for the IMM approach.
24. One extension or change may not be split into several changes or extensions of potentially lower materiality.
25. Several different extensions or changes may not be merged into one change or extension of a potentially lower materiality.
26. In case of doubt, institutions assign extensions and changes in their self-assessment to the category with the highest relevant materiality.
27. The institution can request that an extension or change which needs to be investigated obtains "material" as a final classification. The ECB will take this request into consideration; however, it is not binding on the ECB.
28. The ECB informs the institution of the final classification (material or not material) of extensions and changes that need to be investigated.
29. When the ECB has approved a material extension or change, institutions calculate the own funds requirements based on the approved extension or change from the date specified in the new approval. Failure to implement an extension or change within the deadline specified in the ECB's notification of approval creates the need for further action by both the ECB and the institution.
30. When the ECB, after it has investigated the extension or change, notifies the institution that an extension or change is considered not material, the institution calculates the own funds requirements based on the extension or change from the date specified in the notification. Any failure to implement an extension or change within the deadline specified in the ECB's notification creates the need for further action by both the ECB and the institution.
31. Where an extension or change is classified as requiring prior notification to the ECB and where, subsequent to the notification, institutions decide not to implement the extension or change, institutions notify the ECB of this decision without undue delay.

## 4.4 Section 4: Extensions and changes to the IMM approach that need to be investigated

32. Extensions<sup>10</sup> and changes to the IMM approach are submitted to the ECB in order to investigate materiality if they fulfil any of the following conditions:
- (a) they fall under any of the extensions described in Annex, Part I, Section 1;
  - (b) they fall under any changes described in Annex, Part II, Section 1;
  - (c) they result in a change:
    - (i) in absolute value of 1% or more, computed for the first business day of the testing of the impact of the extension, in the institution's overall risk-weighted exposure amounts for the CCR (in accordance with Part Three, Title II, Chapter 6 and Chapter 4 (limited to SFTs) of the CRR); **and**
    - (ii) in absolute value of 5% or more in the institution's overall risk-weighted exposure amounts for the CCR.
33. For the purposes of Section 4(1)(c) above, and in accordance with Section 3(2), the impact of any extension or change is the ratio defined below:
- (a) in the numerator, the difference in the risk-weighted exposure amounts for the CCR computed before and after the extension or change;
  - (b) in the denominator, the overall risk-weighted exposure amounts for the CCR computed before the extension or change.
34. For the purposes of Section 4(1)(c)(ii) above, the ratio referred to in Section 4(2) is calculated for whichever of the following periods (a) or (b) is the shortest, using the highest absolute value assessed over the selected period:
- (a) 15 consecutive business days starting from the first business day of the testing of the impact of the extension or change, provided that daily IMM calculation is possible. The latter implies daily updates of the EE profiles.
  - (b) Where institutions are not able to calculate new risk exposures on a daily basis, institutions can use as a fall-back three consecutive weekly observations.
  - (c) Where institutions are not able to calculate new risk exposures on a daily or weekly basis, institutions can use as a fall-back two consecutive monthly observations.
  - (d) Institutions demonstrate that the selected observation days are representative for their portfolio if the observation frequency is not daily.

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<sup>10</sup> Note that, in accordance with Section 2 of the EGMA, extensions falling in Section 4 will be classified as material after an internal model investigation.

(e) Until the calculation of the ratio referred to in Section 4(2) results in an impact equal to or greater than the percentage referred to in Section 4(1)(c)(ii).

35. For the purposes of Section 4(1)(c), the determination of the ratio referred to in Section 4(2) respectively relates, where possible, only to the impact of the extension or change to the IMM model. If measures that are not IMM measures are changed in the impact analyses, the ECB is notified and institutions explain why the measures that are no IMM measures are not kept constant.

## 4.5 Section 5: Extensions and changes to the IMM approach considered not material

36. Extensions and changes not falling under Section 4 are classified as not material and are notified to the ECB at least two weeks before their implementation if they are described in Annex, Part II, Section 2.

37. All other extensions and changes are notified to the ECB after their implementation on at least an annual basis.

## 4.6 Section 6: Documentation of extensions and changes

38. For extensions and changes to the IMM approach that need to be investigated, institutions are expected to submit the following documentation:

(a) description of the extension or change, its rationale and objective;

(b) the intended implementation date;

(c) scope affected by the model extension or change, with volume characteristics;

(d) relevant technical and process document(s), such as documentation on:

(i) calibration of the risk drivers;

(ii) pricing of the transactions;

(iii) collateral modelling;

(iv) netting and margining;

(v) back-testing;

(vi) stress testing;

(vii) wrong-way risk;

(e) reports on the institution's independent review or validation;

- (f) confirmation that the extension or change has been approved through the institution's approval processes by the competent bodies and the date of approval;
- (g) where applicable, documentation of the quantitative impact of the change or extension on the risk-weighted exposure amounts or the own funds requirements.<sup>11</sup> This documentation should include:
  - (i) the quantitative impact on the minimum capital requirement if the considered extension or change is to the IMM;
  - (ii) where applicable, an explanation of the representative sample or reliable inference methodology in accordance with Section 3(2)(b);
  - (iii) the quantitative impact on all levels for which the institutions applies the model.

39. For extensions and changes classified as not material, institutions submit, together with the notification:

- (a) the documentation referred to in Section 6(1)(a), (b), (c), (f), and (g);
- (b) the intended implementation date in the case of notification before implementation; otherwise the date of implementation;
- (c) evidence supporting the institution's assessment in cases where the institution argues that the considered extension or change does not significantly affect the relevant assessment criterion (Annex).

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<sup>11</sup> Please note that the ECB can ask for further quantitative impact figures during the investigation of extensions and changes that need to be investigated.

# Annex

## Part I: Extensions to the IMM

### Section 1: Extensions that need to be investigated<sup>12</sup>

40. Extending the range of application of the IMM to:<sup>13</sup>
- (a) exposures in additional business areas that are of the same type of transaction, but:
    - (i) introduce the inclusion of new management processes as regards policies, processes and systems in accordance with Article 286 of the CRR; or
    - (ii) influence the fulfilment of use test requirements in accordance with Article 289 of the CRR;
  - (b) exposures of an additional type of transaction, unless the additional type of transaction falls within the approved range of application of the IMM. The latter holds if the following three conditions are met:
    - (i) the risk drivers (i.e. underlying market data) are already part of the confirmed IMM with regard to their stochastic modelling and calibration;
    - (ii) the pricing functions belong to pricing libraries confirmed for use inside the IMM, including compliance with all the requirements provided for in Articles 293 and 294 of the CRR (in particular, Article 294(1)(e) thereof);
    - (iii) the management processes as regards policies, processes and systems in accordance with Article 286 of the CRR and the use test requirements in accordance with Article 289 of the CRR are consistent;
  - (c) new legal agreement types with regard to netting and margining if they require new or other modelling compared with existing agreement types.<sup>14</sup>
41. Any permanently reversed extension, such as in cases where institutions aim to apply one of the standardised methods to netting sets, asset classes or types of

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<sup>12</sup> Note that, in accordance with Section 2 of the EGMA, these extensions will be classified as material after an internal model investigation.

<sup>13</sup> Note that, in accordance with Article 283(1) of the CRR, institutions require approval for new transaction types.

<sup>14</sup> New legal agreement types are legal agreements for which institutions cannot prove that the additional agreement type falls within the approved range of application of the IMM.

transaction for which they have approval to use IMM.<sup>15</sup> A reversed extension includes both a fully and a partially reversed extension.

## Part II: Changes to the IMM

### Section 1: Changes that need to be investigated

42. Significant changes in the way the model captures the effect of existing margining agreements for calculating margined exposure in accordance with Article 285(1) of the CRR (including changes owing to moving from approach (a) to (b) in order to include margining effects in expected exposures in accordance with Article 285(1) of the CRR).
43. Significant changes in the methodology for forecasting risk factor distributions, including changes in the specification of forecasting distributions for market value changes of the netting set, the modelling of dependency structures (e.g. correlations) and the calibration method used to calibrate the parameters of the underlying stochastic processes.
44. Significant changes in the validation methodology and/or processes in accordance with Articles 292(6)(a) and (b) and 294(1) of the CRR which lead to changes in the way the institution assesses the integrity of the IMM.

### Section 2: Changes that are considered as not material (ex ante notification)

45. Changes – that are not significant – in the way the model captures the effect of existing margining agreements for calculating margined exposure in accordance with Article 285(1) of the CRR (which also captures changes owing to moving from approach (a) to (b) in order to include margining effects in expected exposures in accordance with Article 285(1) of the CRR).
46. Changes – that are not significant – in the methodology for forecasting risk factor distributions, including changes in the specification of forecasting distributions for market value changes of the netting set, the modelling of dependency structures (e.g. correlations) and the calibration method used to calibrate the parameters of the underlying stochastic processes.
47. Changes – that are not significant – in the validation methodology and/or processes in accordance with Articles 292(6)(a) and (b) and 294(1) of the CRR that lead to changes in the way the institution assesses the integrity of the IMM.
48. Changes in the implementation of the margin period of risk (MPOR) (i.e. changes in the methodology used to determine whether collateral is considered

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<sup>15</sup> Note that, in accordance with Article 283(5) of the CRR, institutions require approval from the ECB in order to revert from the IMM to any of the methods set out in Part Three, Title II, Chapter 6, Sections 3 to 5 of the CRR, including partial reversion.

illiquid or changes in the setting of the MPOR itself) in accordance with Article 285(2) to (5) of the CRR.

49. Changes in the methodology used to model collateral in accordance with Article 285(6) of the CRR and to model own volatility adjustments to the value of eligible collateral in accordance with Article 285(7) of the CRR.
50. Changes in the method used to determine the stress period in accordance with Article 292(2) of the CRR.
51. Significant changes in the management processes of the CCR in accordance with Article 286 of the CRR, including significant changes to:
  - (a) the limit-setting framework and reporting framework which influence significantly the institution's respective decision-making processes;
  - (b) the IT systems affecting the calculation procedure of the internal model;
  - (c) the use of vendor models, if not already specifically captured by Section 1.
52. Significant changes in the regular stress test framework that reduce the frequency and/or the severity of the implemented stress tests in accordance with Article 290 of the CRR.
53. Changes in the methodology used to determine all positions with general wrong-way risk and specific wrong-way risk in accordance with Article 291 of the CRR.
54. Changes in how scenarios of market risk factors are translated into scenarios of the portfolio value, such as changes in the instrument valuation models used to calculate sensitivities to risk factors or to revalue positions when calculating risk numbers, which includes changes from analytical to simulation-based pricing models, or changes inside or between Taylor approximation and full revaluation.

## Abbreviations

<b>AMA</b>	<b>advanced measurement approach</b>
<b>CCR</b>	counterparty credit risk
<b>CRR</b>	Capital Requirements Regulation
<b>EBA</b>	European Banking Authority
<b>EE</b>	expected exposure
<b>EEPE</b>	effective expected positive exposure
<b>EGMA</b>	ECB Guide on materiality assessment
<b>IM</b>	initial margin
<b>IMM</b>	internal model method
<b>IRB</b>	internal ratings-based
<b>LGD</b>	loss given default
<b>M</b>	maturity
<b>MPOR</b>	margin period of risk
<b>PD</b>	probability of default
<b>RTS</b>	regulatory technical standards
<b>RWA</b>	risk-weighted assets
<b>SFT</b>	securities financing transaction as defined in Article 3(11) of Regulation (EU) 2365/2015
<b>SSM</b>	Single Supervisory Mechanism

© **European Central Bank, 2026**

Postal address 60640 Frankfurt am Main, Germany  
Telephone +49 69 1344 0  
Website [www.ecb.europa.eu](http://www.ecb.europa.eu)

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For specific terminology please refer to the [ECB glossary](#) (available in English only).

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