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## Final Draft Regulatory Technical Standards

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on Initial Margin Model Validation under article Art. 11 – Paragraph 15 – point (aa) of Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories (EMIR)

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# 1. Executive Summary

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The EBA, in cooperation with ESMA and EIOPA, has been mandated to develop draft regulatory technical standards (RTS) to specify the supervisory procedures that would ensure initial and ongoing validation of the risk-management procedures referred to in Article 11(15) of Regulation (EU) No 648/2012 (EMIR<sup>1</sup>) on uncleared over-the-counter (OTC) derivatives.

The risk-management procedures referred to in the above-mentioned EMIR Article and further elaborated in the Delegated Regulation (EU) 2016/2251<sup>2</sup> prescribe the exchange of variation and initial margins (IM). Since the initial margin is calculated by models, whereas the variation margin is based on a mark-to-market valuation, this mandate is asking the EBA to develop an RTS focusing on the methodology for the validation of the initial margin models, henceforth: Initial Margin Model Validation (IMMV).

This validation framework has been designed to operate with the requirements set out in the Delegated Regulation (EU) 2016/2251 on uncleared OTC derivatives. It also takes into consideration well-known internal market risk models approval practices, such as the ones laid down in the Delegated Regulation (EU) 2015/942 on model changes<sup>3</sup>, and the Draft RTS on the assessment methodology for market risk internal models<sup>4</sup>.

In the design of the requirements for the IMMV, the EBA paid great attention to the variety of market participants in the scope of these draft RTS. On one side of the spectrum, it is possible to observe (a few) subjects that deal with a very significant volume of OTC derivatives, who generally have an extensive experience in terms of model approval. On the opposite, there are (many) market participants dealing with a smaller volume of OTC derivatives and with less experience in model validation processes. For this reason, a dual process is foreseen in the proposed draft RTS on IMMV, where the most significant market participants<sup>5</sup> would apply a “standard” validation process (Sections 2 of the RTS) very similar to the standard internal model approval process for market risk, while the smaller counterparties would apply a “simplified” validation process in the scope of these requirements (Section 3 of the RTS).

Additionally, these draft RTS address the issue of how to validate an IM model when this is outsourced (in terms of design or implementation) to external providers. Although the draft RTS, in a general way, address the validation of any IM model, in case a model is adopted by a plurality of market participants or at an industry-wide level, the possibility for competent authorities to

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<sup>1</sup> Regulation (EU) 2019/834 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) No 648/2012 [EMIR Refit].

<sup>2</sup> Delegated [Regulation \(EU\) 2016/2251](#). RTS for risk-mitigation techniques for OTC derivative contracts not cleared by a central counterparty.

<sup>3</sup> [Commission Delegated Regulation \(EU\) 2015/942 of 4 March 2015 amending Delegated Regulation \(EU\) No 529/2014 supplementing Regulation \(EU\) No 575/2013, for assessing the materiality of extensions and changes of internal approaches when calculating own funds requirements for market risk.](#)

<sup>4</sup> EBA RTS on the [specification of the assessment methodology to use internal models for market risk](#).

<sup>5</sup> Institutions above Euro 750 bn of the gross notional amount of uncleared OTC derivatives are subject to the standard approval process, which are the institutions in Phase 1 to 4 of the IM roll-out.

avoid assessing the same core methodology more than once is offered. Moreover, for counterparties adopting the same model, there will be simplified communication processes with their competent authority.

Finally, for counterparties in the scope of the “simplified” validation process, in the case they rely on the service provided by one or more counterparties validated in accordance with the “standard” validation requirements, there will be additional simplifications in terms of documentation, governance and outsourcing requirements in general, for the requirements of the validation process.

The last aspect to consider is how to structure a transitional framework for these model validations, considering that IM models are already being used today in the European Union without explicit supervisory approval. This transition toward a formal validation will need to balance the burden on counterparties and supervisors, such that it does not disrupt the current use of the models against the regulatory requirement to have all those models validated. Therefore, it is proposed that the application of the IMMV requirements is phased in with respect to the size of the counterparties and that there are transitional provisions designed to smooth the effect of the validation process.

It is expected that these draft RTS will ensure harmonisation in the supervisory assessment methodology of IM models across all EU Member States. Quantitative and qualitative aspects concerning the costs and benefits of the proposed rules are discussed in the last section of this document.

## 2. Background and rationale

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These Final Draft RTS on the Initial Margin Model Validation (IMMV) complement the ESAs RTS on uncleared OTC derivatives<sup>6</sup>, which establish that counterparties, within the scope of EMIR, must exchange Initial Margins when they enter an OTC derivatives transaction not cleared by a central counterparty (CCP), and to do so, they are allowed to use an initial margin (IM) model.

Contrary to the Basel/IOSCO standards, the original joint ESAs RTS mandate on uncleared OTC derivatives did not impose any supervisory approval for IM models, as the legal empowerment in EMIR did not allow its introduction. Instead of specifying the approval process, the RTS on uncleared OTC derivatives introduced several requirements to the margin framework, all aligned with the Basel Working Group on Margin Requirements (WGMR) framework<sup>7</sup>.

Meanwhile, the industry went in the direction of adopting a standard model to exchange IM. The compliance of the IM model proposed by the industry (ISDA SIMM<sup>8</sup>) with the requirements of the EU regulation was internally assessed at the ESAs level under the Joint Assessment Team<sup>9</sup> (JAT).

The JAT focused on the compliance of the SIMM methodology with the EU framework. The JAT's analysis, however, clarified the preference of the competent authorities that the approval of the model should be done at the firm level. The need for specific approval by the supervisor, even if the standard methodology is compliant with the regulation, arises from the requirement to ensure that the model fits the specific application. Nonetheless, supervisors did not have the legal empowerment to approve the IM model, but only to forbid its application in case of manifest non-compliance with the EU regulation.

With the adoption of the amendments of EMIR on 28 May 2019 ('EMIR Refit'), a supervisory approval of the IM model was introduced, as Article 11(15) EMIR requires that *"EBA, in cooperation with ESMA and EIOPA, shall submit the draft regulatory technical standards referred to in point (aa) of the first subparagraph to the Commission by 18 June 2020"*, where point (aa) amended as follows:

*"(aa) the supervisory procedures to ensure initial and ongoing validation of those risk-management procedures"*.

This mandate has been developed in a way that operates with the requirements set out in the RTS on uncleared OTC derivatives, the Delegated Regulation (EU) 2016/2251. Furthermore, due to

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<sup>6</sup> Which was subsequently adopted as Delegated Regulation (EU) 2016/2251. <https://eur-lex.europa.eu/legal-content/GA/TXT/?uri=CELEX:32016R2251>

Supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories with regard to regulatory technical standards for risk-mitigation techniques for OTC derivative contracts not cleared by a central counterparty)

<sup>7</sup> Margin requirements for non-centrally cleared derivatives: <https://www.bis.org/bcbs/publ/d317.htm>; <https://www.bis.org/bcbs/publ/d475.pdf>

<sup>8</sup> (03/09/2019) <https://www.isda.org/2019/09/03/isda-publishes-isda-simm-v2-2/>

<sup>9</sup> The JAT was an ESAs initiative, carried out in 2015-2016, to form a team of national experts in model approval. This initiative aimed to assess the compliance of the ISDA SIMM with the EU requirements set in the ESAs RTS on uncleared OTC derivatives.

similarities to existing market risk models, for the RTS on IMMV, it has been decided to rely on, keeping in mind some fundamental differences, the supervisory assessment methods developed in the context of existing market risk models, mainly specified in the RTS on “model changes”, the Delegated Regulation (EU) 2015/942<sup>10</sup>, and the final draft RTS on “assessment methodology for market risk internal models<sup>11</sup>”.

Moreover, the mandate has been developed by taking into consideration the guidance of recital 20 of the EMIR Refit, which says:

*“(20) To avoid inconsistencies across the Union in the application of the risk-mitigation techniques, due to the complexity of the risk-management procedures requiring the timely, accurate and appropriately segregated exchange of collateral of counterparties which involve the use of internal models, competent authorities should validate those risk-management procedures or any significant change to those procedures, **before they are applied.**”*

Finally, the guidance of the WGMR framework is considered in the parts where it specifies that “Models that have not been granted **explicit approval** may not be used for initial margin purposes” and “There will be no presumption that approval by one supervisor in the case of one or more institutions will imply approval for a wider set of jurisdictions and/or institutions.”

## 2.1 Main policy decisions and structure of the RTS

In developing these RTS, two main policy issues had to be considered: (i) the great variety of the counterparties under the scope of the Initial Margin Model validation and (ii) the fact that a substantial number of counterparties will apply for the Initial Margin Model validation at the same time. These are areas of particular attention, as some subjects are already exchanging IM via the ISDA-developed Standard Initial Margin Model (SIMM). The structure of these RTS is consequently developed around these two issues. Also, the broad application of a standard for the exchange of IM has been considered in the policy development of these RTS to facilitate the validation process.

The first policy issue, i.e., the variety of counterparties in the scope of the validation, refers to the presence of large, sophisticated institutions and smaller, simpler ones, with a great range of other institutions between these two extremes that must comply with these RTS. The large, sophisticated institutions are likely the ones with a significant volume of derivatives and good experience in model validation within the prudential framework. The medium-small institutions (medium-small banks, investment funds, insurances, etc.) are the ones with a relatively smaller exposure in derivatives in their portfolios and with expected limited experience in the process of model validation. This issue is described in more detail in section 3.2 of the Background.

EBA addressed the diversity in the counterparties in the scope of the validation pragmatically, developing a proportionate approach. The proposal in this final draft RTS contains two distinctive

<sup>10</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32015R0942>

<sup>11</sup> <https://www.eba.europa.eu/sites/default/documents/files/documents/10180/1669525/f75ab291-838d-42fb-871e-3b2011728dfb/Final%20draft%20RTS%20on%20the%20IMA%20assessment%20methodology%20%26%20significant%20shares%20%28EBA-RTS-2016-07%29.pdf?retry=1>

processes: a standard and a simplified one, both to be carried out by the competent authorities to validate the IM models. The criteria to discriminate the subjects rely mainly on a quantitative assessment (Article 2). Most significant institutions will be identified by the volumes of their OTC derivative activity and will have to follow a standardised process of validation of the IM model. The rest of the institutions shall go through a simplified form of validation unless they decide to apply for the standard validation. This request to diverge from the simplified validation is an option available to those simplified institutions that want to provide support for the implementation and validation of the IMMV to other simplified institutions. The alternative, i.e., not allowing the simplified institutions to apply for a higher standard of validation, would prevent them from the possibility of providing the supporting service and simplification that is granted to the institutions that are naturally in the scope of the standardised procedure for validation.

In order to identify which institutions should fall under the scope of the standard validation, EBA suggested relying on the threshold of Euro 750 bn set by the Aggregate Average Notional Amount (AANA)<sup>12</sup>, i.e., the annual computation that counterparties must perform to meet the requirements of the Delegated Regulation (EU) 2016/2251. Considering the results of the survey conducted by EBA among Competent Authorities, there are at least 37 counterparties above the 750 bn threshold. Being these counterparties mostly banks, these are the counterparties that would fall under the scope of the standard validation, while the rest would need to comply with the simplified validation unless they decide to apply for the standard validation.

Once institutions are classified according to the AANA threshold, the two validation processes (Section 2 and Section 3 of these RTS) follow the same structure. Both start with the requirements to submit the request for the initial validation of the model or any material changes and extensions to an existing validation. After the request is submitted, together with the proper documentation, competent authorities assess a list of aspects, qualitative (governance) and quantitative (particularly backtesting), before providing their decision on the IM model application.

Both processes derive their structure from the final draft RTS on internal model assessment methodology for market risk. Nonetheless, differently from this latter methodology, these RTS on IMMV are linked to the specification of the existing requirements on initial margin models set out in the RTS on uncleared OTC derivatives under EMIR, Delegated Regulation (EU) 2016/2251.

The standard validation process is provided in Section 2 of these RTS (please refer to Section 3.2.1 for more details). In a nutshell, Subsection 1 of Section 2 provides the general provisions on how the initial validation must be requested to the competent authorities and on how to assess the model changes or extensions for the ongoing validation of the model.

Subsection 2 of Section 2 of these RTS provides a list of the requirements dedicated to specific aspects of the governance and backtesting, as additional specification was required with respect to the high-level requirements set out in the RTS on uncleared OTC derivatives, Delegated Regulation (EU) 2016/2251.

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<sup>12</sup> i.e., subjects that are in the scope for the exchange of IM from the 1 September 2019, in accordance to Delegated Regulation (EU) 2016/2251.

In particular, in Article 7, specific provisions were included regarding the outsourcing of the model. This is a significant policy part of these RTS as the subjects in the scope of application of IM currently heavily rely on the use of the same model (such as the ISDA SIMM) to quantify the IM. Therefore, it is expected that the competent authorities will inspect a plurality of subjects, all applying the same model, and that this will imply many potentially duplicated tasks for both the counterparties and the competent authorities.

In this regard, it should be recalled that a completely centralised solution is impossible for several reasons. First, there is no unique competent authority for all the subjects in the scope of these RTS, and therefore, no single supervisor is legally empowered to grant the validation. Moreover, although the IM model could be the same for all counterparties, its specific implementation will differ from firm to firm.

Nonetheless, these RTS recognise the possibility of simplifying some aspects of the validation in the case of outsourcing the same IM model for a plurality of subjects. In this regard, the simplifications in Articles 8 and 13 should be considered. Competent authorities are expressly allowed to leverage the results and findings from previous validations in their assessment. This should allow their time/resources to be optimised since the model's methodology will be identical for many subjects in the scope. In addition, simplifications are envisaged for counterparties as well, as they will be allowed to provide/refer to some general documentation, at least for the model design, in their internal validation process.

The simplified validation process is provided in Section 3 of these IMMV RTS (please also refer to Section 3.2.2 for more details). Its structure is the same as for the standard process but with substantial simplifications with respect to it. These simplifications can be summarised as a less stringent threshold for model changes, a simplified backtesting programme and less granular governance requirements. Following the consultation, additional simplifications were introduced in a way to further simplify the validation process for counterparties in the scope of the simplified validation process that would be supported by counterparties that have obtained a validation under the more stringent set of rules of the standard validation process.

The second substantial policy issue addressed in these RTS concerns the vast number of validation processes that will concern both the competent authorities and the counterparties, potentially simultaneously. This is further complicated by the fact that, for many institutions under the scope, the IM model is already used for IM exchange today. This issue is further described in Section 3.3.

The expected considerable number of validation requests for competent authorities implies a potential issue for the business continuity of the OTC activities of the counterparties involved, should the validation process discontinue the use of the existing IM model. It is expected that the contracts in place before the application of these RTS on IMMV will not be affected, assuming the IM model implemented is compliant with Delegated Regulation (EU) 2016/2251. Therefore, some specifications are needed for the contracts put in place after the entry into force of these RTS.

In Section 4, these RTS propose a transitional solution for counterparties already using an IM model. By the time this regulation applies, the use of any existing IM models should be allowed to continue for a limited period, while sufficient time is provided to the competent authorities to complete the



first wave of the validation processes. After the initial validation, the use of the IM model will be conditioned to the outcome of the ongoing validation process.

Finally, further proposals are included to achieve an orderly validation process, which is running in parallel for a bulk of subjects. In this regard, it is suggested to apply a phased implementation of the validation processes so that smaller counterparties, which fall under the scope of the simplified validation process, could benefit from a prolonged period to prepare.

## 2.2 Proportionality for counterparties of different sizes and complexity

As mentioned, it is possible to envisage two groups of counterparties in the scope of the initial margin model validation (IMMV). The first group would consist of a small number of large banks that trade high volumes of uncleared OTC derivatives, some of which are likely to be complex (or exotic), and that have significant experience in model validation. The second group would be characterised by a more significant number of medium-sized banks and non-banks, with a limited volume of uncleared OTC derivatives and less experience in model validation. This latter group has expanded significantly with phase-5 and phase-6 counterparties, as defined in the Delegated Regulation (EU) 2016/2251, fall within the scope of the IM exchange<sup>13</sup>.

For this reason, competent authorities should have the possibility to apply two different validation processes: an in-depth validation for the first group ('standard validation') and a more proportional assessment for the second group ('simplified validation').

To allow this separation, Article 2 of the RTS establishes a quantitative criterion to separate counterparties using an IM model into two groups. The first group would consist of banks (or banking groups) with an AANA of uncleared OTC derivatives above Euro 750 bn and would therefore include a significant percentage of the 37 subjects<sup>14</sup> disclosed by the EBA survey, which would undergo the standard validation process (see Sections 2 of the draft RTS, or following Subsection 3.2.1, for more details). The second group, the rest of the counterparties<sup>15</sup> in the scope of the IM exchange, would take advantage of a simplified version of the validation process (see Section 3 of the draft RTS or following Subsection 3.2.2 for more details).

### 2.2.1 Standard validation process

The standard validation process is provided in Section 2 of the draft RTS. Articles 3 through 8 contain the general requirements for the standard validation process. Articles 9 through 16 cover the model governance. Articles 17 through 23 detail the monitoring of model performance and the quantitative assessment. The following subsections elaborate on these aspects.

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<sup>13</sup> Above 50bn (phase 5) in scope from 1<sup>st</sup> of September 2021; Above 8bn (phase 6) in scope from 1<sup>st</sup> of September 2022.

<sup>14</sup> See results of the survey in the Impact Assessment section for more details. No disaggregation between credit institutions and not credit institutions is not available.

<sup>15</sup> See results of the survey in the Impact Assessment section for more details. No disaggregation between "credit institution" and "not credit institution" is not available. Even if not all the Competent Authorities responded to the survey, 300+ subjects could be in the scope of the simplified process.

a. **Section 2 – Subsection 1 of the draft IMMV RTS. Standardised supervisory procedures for applications by counterparties: Articles 3 through 6**

Section 2, Subsection 1 (Standardised supervisory procedures for applications by counterparties) covers several topics, such as the standard procedure for the initial validation, the distinction between changes and extensions that are material and changes and extensions that are not material and the documentation required for the validation.

The model validation process starts with the submission of the request for initial validation by the counterparty, which is covered in Article 3 of the RTS.

Once the initial validation is completed, further validations of the model (part of the “ongoing validation” of the model) will be needed once the requirements set in Article 4 (Material extensions and changes to the Initial Margin model) and Annex 1 are met. These provisions prescribe, for instance, that when the model changes significantly (e.g., the IM changes for more than 5% of total IM), together with other conditions specified in Annex 1 (e.g., the extension to another location), the counterparty has to obtain a new validation from its competent authority. In case of very significant changes (i.e., the IM changes for more than 10% of the total IM), no other conditions need to be met, and the model change needs the competent authority's validation to be applied. These changes are intended as actual changes of the model so that the change of the IM due to the pure recalibration of the model does not enter into the computation of the changes that trigger the model re-validation.

Article 5 (Extensions and changes to the Initial Margin Model not considered material) deals with less substantial changes (e.g., regular recalibration), which would have to be only notified to competent authorities. These requirements follow the existing regulation for assessing the materiality of extensions and changes of internal approaches when calculating own funds requirements for market risk<sup>16</sup> and the European Central Bank (ECB) Guide on materiality assessment (EGMA) for IMM and A-CVA model extensions and changes<sup>17</sup>.

Subsection 1 of section 2 closes with Article 6, which establishes the minimal set of documents that needs to be provided by the counterparty to apply for the validation (description of the model, foreseen implementation date, the scope of application etc.).

b. **Section 2 – Subsection 2 of the draft IMMV RTS. Standardised supervisory procedures for granting validation: Articles 7 and 8**

Subsection 2 (Standardised supervisory procedures for granting validation) opens with the requirements for the outsourcing of an IM model. The draft RTS consider that an IM model, such as the one implemented so far, i.e., the ISDA-SIMM, could be designed by an external model provider.

Consequently, the draft RTS deal with the possibility of outsourcing an IM model (Article 7 – Outsourcing) and provide the conditions to comply with in such a case. For example, the RTS require

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<sup>16</sup> Commission Delegated Regulation (EU) 2015/942 of 4 March 2015 amending Delegated Regulation (EU) No 529/2014 supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council as regards regulatory technical standards for assessing the materiality of extensions and changes of internal approaches when calculating own funds requirements for market risk) [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:JOL\\_2015\\_154\\_R\\_0001](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:JOL_2015_154_R_0001)

<sup>17</sup> [https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.egma\\_guide\\_201709.en.pdf](https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.egma_guide_201709.en.pdf)

that outsourcing should not hamper the competent authority's possibility to conduct its analysis of the model. Moreover, since an IM model design may be the same for many counterparties (and potentially all of them), Article 8 of the RTS (Use of Validation Results) provides the competent authority with the faculty to re-use the result of a previous IM model validation. This previous validation, where available, can derive from a validation process run by the same competent authority for the same model. Alternatively, it can derive from another competent authority in the scope of EMIR (e.g., a supervisor of a subsidiary in a country can use the validation of another supervisor of the parent company). This provision aims to avoid that a competent authority from unnecessarily repeating the core assessment of the same externally developed model.

After these general provisions, the RTS provide detailed requirements on two fundamental aspects of the validation process: a) model governance and b) model performance assessment.

These provisions are meant to specify the general requirements included in Article 18 (*Qualitative requirements*, i.e., governance requirements) and Article 14(2) and (3) (*General requirements*, i.e., backtesting requirements) of the Delegated Regulation (EU) 2016/2251. The rationale for these provisions lies in the fact that governance and performance monitoring necessitate a much higher level of detail to ensure their harmonised application across EU member states.

The IMMV RTS address model governance in Articles 9 through 16 and model performance in Articles 17 through 23. Both sets of articles are primarily inspired, in their structure, by the corresponding articles on the same topics in the internal model assessment methodology for market risk<sup>18</sup> in order to facilitate their application by the subjects in the scope of the validation, as they are generally aware of those provisions.

**c. Section 2 – Subsection 2 of the draft IMMV RTS. Standardised supervisory procedures for granting validation: Articles 9 through 16 (Governance Requirements)**

Section 2 – Subsection 2 (Articles 9 through 16) of the draft RTS provides a detailed set of requirements to assess the model governance.

The governance requirements start with the specifications that the competent authorities have to follow to verify that the senior management has a good understanding and is actively involved in managing the IM model (Article 10 – Senior management and management body). This refers to the approval of the internal policy regarding the model, the internal structure that manages the model, and its actual implementation within counterparties.

Furthermore, besides the senior management, the other parties involved in the practical use and management of the model, such as implementing, auditing and validating units, must be sufficiently independent and represented in the decision-making process about the model. Finally, the

<sup>18</sup> RTS on the specification of the assessment methodology for competent authorities regarding the compliance of an institution with the requirements to use internal models for market risk and assessment of significant share under points (b) and (c) of Article 363(4) of Regulation (EU) No 575/2013 [https://eba.europa.eu/sites/default/documents/files/documents/10180/1669525/f75ab291-838d-42fb-871e-3b2011728dfb/Final%20draft%20RTS%20on%20the%20IMA%20assessment%20methodology%20&%20significant%20share%20\(EBA-RTS-2016-07\).pdf](https://eba.europa.eu/sites/default/documents/files/documents/10180/1669525/f75ab291-838d-42fb-871e-3b2011728dfb/Final%20draft%20RTS%20on%20the%20IMA%20assessment%20methodology%20&%20significant%20share%20(EBA-RTS-2016-07).pdf)

resources allocated to these bodies should be proportionate to the size of the OTC derivatives activity of the counterparties (Article 11 – Model development unit, Article 12 – Audit process and Article 13 – Internal validation).

The above-mentioned articles of these RTS, in particular, are very similar to the final draft RTS for assessment methodology for market risk as it represents the most advanced practice in terms of model governance requirements for competent authorities. Furthermore, these latter RTS are also well known by the counterparties in the scope of this standard validation, which should represent further facilitation in terms of implementation.

Outsourcing impacts the governance of the model, especially in the IM case, where substantial outsourcing is expected.

In this regard, Article 13 of these RTS recognises the possibility of distinguishing between the design and the actual implementation of the model. The counterparty can explicitly outsource the model design, i.e., the general structure of the model. In other words, a third-party model can be adopted by any counterparties exchanging IM. In this case, Article 13 specifies that counterparties using the outsourced IM model can rely on the general documentation developed by the model provider for its internal validation and as part of the documentation to be provided to the competent authorities for supervisory validation purposes. This provision is expected to be a substantial facilitation for both the counterparties and the competent authorities, with the latter ones only needing to examine one set of documents for all the counterparties in the scope (i.e., the ones applying the outsourced model).

On the other hand, as remarked before, the actual implementation of the IM model is done at the firm level, and it must thus fit the firm's actual business. Therefore, in terms of governance of the actual implementation, it is required that the competent authorities verify the appropriateness of the IM model with respect to the counterparties' business model.

Because the calibration of the IM model is a particularly delicate aspect of its implementation, the internal validation function of each counterparty must continuously ensure that the calibration still respects the provisions of the Delegated Regulation (EU) 2016/2251, and hence leads to results that ensure a level of initial margins in line with the specification therein (a one-tailed 99 per cent confidence interval over the Margin Period of Risk – MPoR). To do so, the internal validation would have to review the 'static' backtesting analysis of the model calibration based on a similar but updated period and on the exact same period applied for the actual calibration, at least for the netting sets that need to be analysed and reported to their CAs.

The proposed backtesting of the calibration is a static backtesting to be run at least once every three months, specified in Article 14. On the day the backtesting is run, counterparties have to compare the initial margin held for their netting sets with the changes in market value. The changes in market value have to cover a period as long as the MPoR and have to be computed for an updated period that coincides in length and construction with the one that the counterparty has used to calibrate its model. The composition of the netting set is to be held constant when calculating the changes in market value – hence, the name 'static backtesting'. By comparing the initial margin with

the changes in market value, it can be inferred whether the initial margin is sufficient to cover losses on an MPoR horizon with a one-tailed 99 per cent confidence interval.

Based on the number of the overshootings (i.e., loss exceeding the initial margin), every netting set would be classified in accordance with a methodology inspired by Basel's traffic-light method. This backtesting methodology is supposed to be close to the industry's current methodology to calibrate their model and verify its calibration continuously to reduce the burden of this requirement.

Due to the substantial issues raised in the public consultation concerning the backtesting requirements (see feedback tables and public responses received [published on the EBA website](#)), most remarkably on the need for analysis, reporting, and remediations that would have been triggered, which was considered excessive by the respondent, the provisions were amended. In addition, the respondent suggested using the concept of a "shortfall" of a netting set to define what netting sets are selected for the analysis of overshootings, reporting to Competent Authorities and remediation actions, along with a specific definition of the shortfall. EBA carefully reviewed the suggested amendments and followed the logic proposed to reduce the burden and focus only on the most relevant netting sets.

In doing so, EBA supports a somewhat different shortfall concept named "Margin Average Shortfall" (MAS). This MAS is the simple average of the P&L values minus the initial margin amount floored at zero (i.e., margin shortfall amounts) over the dates of the relevant lookback period times 100. It should be noted that this shortfall definition uses the same input data as the industry practice adopted so far (i.e., P&Ls and IMs). This choice was meant to not increase the burden for the counterparties dealing with OTC derivatives not cleared. The significant advantage of this shortfall definition is that it is meant to provide meaningful information to the competent authorities concerning the ex-post knowledge of the riskiness of nettings sets for identifying the most relevant ones for assessing the performance of the IM model. MAS thresholds have been set to be compatible with the current practice of the market and not to trigger an excessive need for overshooting analysis and reporting so as to not be overburdensome for both counterparties and Competent Authorities. The new information required (MAS) is meant to complement the industry practice, not to replace it or discourage its application.

MAS is a measure of the absolute average riskiness of a netting set in case of a default of the counterparty had happened in the sense that it is proportional to the absolute size, as it is proportional to the P&L and IM. For comparing the relative riskiness of netting sets of different sizes, a relative version of MAS, the "margin average *relative* shortfall" (MARS) is to be reported for the selection of netting sets which need to be analysed. MARS is obtained from MAS by dividing each summand by the initial margin amount, thus measuring the average percentage of margin shortfall. If MARS is high, then a netting set had a high riskiness per unit of initial margin.

The model remediation part has also been reshaped to be more flexible and not trigger an automatic need for a model recalibration or change based on a specific threshold figure. Thresholds to define the remediation actions, which do not have to be based mandatorily on the MAS concept, need to be defined at a firm level in a manner commensurate with the size of the OTC activity of the counterparty and with respect to the relationship to its counterparties, will have to be considered appropriate by the supervisor. This provision is not meant to distort the market practice,

especially with respect to the governance practice established by the current standard of exchange of IM. Conversely, it is meant to recognise that there is far too much variety in the OTC not-cleared market to support a one-size-fits-all setting for remediation action.

d. **Section 2 – Subsection 2 of the draft IMMV RTS. Standardised supervisory procedures for granting validation: Articles 17 through 23 (IM model assessment and backtesting)**

The quantitative assessment of the model performance is also based on Article 17 ('dynamic' backtesting) for the initial and ongoing supervisory validation, as a specification of the explicit requirement set in Article 14(3) of the Delegated Regulation (EU) 2016/2251. The dynamic backtesting of the model must be performed continuously, not just for the purpose of the supervisory validation, as the issues detected through the analysis of its results could trigger a model change, a recalibration or a remediation action taken by the institution to correct a problem encountered.

In accordance with Article 17, the dynamic backtesting for the subjects in the scope of the standardised validation process will have to be performed in parallel with the requirement set in Article 14 (static backtesting on model calibration). However, differently from Article 14, the "dynamic" nature of this backtesting means that the composition of the netting sets, where IM are computed, constantly changes, possibly daily.

In contrast to the static backtesting (Article 14), the daily output of the IM model will be rescaled to 1-business-day MPoR. This IM will be matched with the hypothetical (i.e., without considering the intraday activity) one-day change in the market value of the netting set of the day that the IM is meant to cover. The rescaling of the IM, which is computed typically with a 10-day window horizon, to 1-business-day MPoR would be allowed if performed with the appropriate methodology. Alternatively, the model could be recalibrated directly to 1-business-day.

With respect to the static backtesting, a shorter time series is required for the dynamic backtesting, i.e., just 250 days of observations (the latest 250 days available, where possible).

After counting the overshootings of the IM model, as for Article 14, a classification according to Basel's traffic-light test is run for every single netting set. The definition of the thresholds for this dynamic backtesting is similar to the one for the static backtesting. However, as it is simplified by the absence of autocorrelation of the returns, it is very similar to the original Basel's traffic light test formulation. The only difference with respect to Basel is that the time series could be shorter than 250 observations when those observations are not available. The possibility of having a shorter period (i.e., less than 250 days) implies different thresholds for the traffic-light categorisation. Tables to define the thresholds for the netting set classification, when the Normal distribution assumption is adopted, are provided in Annex 3 of the RTS, for both Articles 14 and 17.

After the classification, the competent authorities will verify that the "green", "amber", and "red" portion of netting sets are distributed as expected by the model calibration.

The dynamic backtesting ensures that the day-to-day performance of the IM model is fit for the purpose, considering the trading activity of the institution, which changes the daily composition of the netting sets.

It should be noted that the calculation of the netting set's change in the value has been the object of specific consideration. An idea contemplated but not implemented was to be close to what is proposed in the EBA RTS on Backtesting and P&L Attribution under the FRTB framework<sup>19</sup>. However, a prescriptive definition of the change in the value of the netting set, which would mimic the P&L definition in the FRTB framework, with a specific distinction of different valuation adjustments, does not seem to be appropriate for the IMMV framework, especially considering that the concept of valuation adjustments can be fairly challenging for non-bank subjects unfamiliar with the FRTB.

Understanding the benefit of having a dynamic monitoring of the IM model but acknowledging that the dynamic test could generate an excessive amount of remediations, which would be counterproductive for an effective IM exchange, the breaches of the thresholds defined for remediations actions following the dynamic backtest results, differently by the static backtest, need to be supported by an analysis that shows the presence of a material weakness or inaccuracy of the model.

The rest of the Section covers other aspects, such as requirements on modelling assumptions (Article 18), risk factors omitted (Article 19), nonlinearities (Article 20), the use of proxies (Article 21), risk arising from less liquid positions (Article 22), and risk factors correlations (Article 23). These requirements have been based on the IMA Assessment Methodology RTS and are directly linked to the requirements in Article 14.2, points (a) to (k) of the Delegated Regulation (EU) 2016/2251.

### **2.2.2 Simplified validation process**

Section 3 (Simplified Supervisory Procedures) of the draft IMMV RTS establishes the requirements for the most numerous, smaller, simpler, and likely less familiar with validation process counterparties in the scope of the validation of IM models. This section of the RTS mimics the structure of Section 2 and is divided into Subsection 1 – Simplified supervisory procedures for applications by counterparties (Articles 24 through 28) and Subsection 2 – Simplified supervisory procedures for granting validation (Article 29).

For counterparties in the scope of the simplified assessment, i.e., counterparties below the threshold of Euro 750 bn and non-credit institutions in general, the validation process operates in a similar manner as the standard validation process. First, the subjects apply for (initial or ongoing) supervisory validation to their competent authorities by providing all the necessary documentation. Then, the competent authorities will express their opinions on the model validations based on their compliance with the regulation in place.

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[https://www.eba.europa.eu/sites/default/documents/files/document\\_library//EBA-RTS-2020-02%20Final%20draft%20RTS%20on%20Backtesting%20and%20PLA%20requirements.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library//EBA-RTS-2020-02%20Final%20draft%20RTS%20on%20Backtesting%20and%20PLA%20requirements.pdf)

In this regard, Article 24 (Simplified supervisory procedures for validation of initial applications of an initial margin model) establishes the need for smaller counterparties in the scope of these RTS to apply to their competent authorities to start the validation process.

Then, Articles 25 and 26 (similarly to Articles 4 and 5) establish the requirements concerning material extensions and changes to the IM model for counterparties in the scope of the simplified supervisory procedures. Regarding the definition of model changes applicable to the validation process, for the simplified supervisory procedures, only significant changes that trigger a new validation will have to be communicated in advance; the rest of the changes can just be notified on an annual basis. Another significant difference with respect to the standard process is in the thresholds for the definition of model changes: 10% of the IM computed instead of 5% when some other condition is attached to the change, or 20% instead of 10% when there are no other conditions to trigger the material change. These thresholds are set to generate a less frequent model validation process for the counterparties in the scope of the simplified supervisory procedures.

Article 27, with direct reference to Article 6, establishes the documents necessary to apply for supervisory validation.

Article 28 of these RTS (Documentation requirements specific to governance under the simplified supervisory procedures) sets a series of model governance requirements (e.g., general documentation describing the managing structures, the governance activities and the independence of the subject involved) for the counterparties in the scope of the simplified procedure. The set of governance requirements is far less prescriptive with respect to the standard validation process set in Articles 10 through 16. Notably, the static backtesting of the calibration is not required for the institutions in the scope of the Simplified Supervisory Procedures.

Article 29 opens Subsection 2 of Section 3, the Simplified supervisory procedures for granting validation. For the simplified process, there is a direct reference to the provisions concerning outsourcing and the (re)use of validation results (Articles 7 and 8). Therefore, these aspects of the validation are commonly applicable to smaller counterparties as well as to bigger counterparties in the scope of the validation.

Article 29 also specifies the monitoring of the performance of the model (dynamic backtesting). For counterparties in the scope of the simplified supervisory procedures, only the dynamic 1-day backtesting (as established in Article 17, with 1-day hypothetical P&L, over a period of 250 observations) will be required. Asking only for the dynamic backtesting is far less resource-intensive compared to both static and dynamic backtesting, as required for the standardised validation process<sup>20</sup>, which would be disproportionate with respect to the average computational capability of the subjects in the scope of the simplified validation. Still, the dynamic backtesting provides supervisors with sufficient evidence to assess if the model's performance is fit for the counterparties applying the IM model. Nonetheless, in the case where the dynamic backtesting is not meaningful, e.g., the application of the IM model has been too short, the static version of the

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<sup>20</sup> See also Article 14.



backtesting (as in Article 14) can be provided to competent authorities in place of the dynamic version.

The simplified supervisory procedures for validation also differ from the standard ones in terms of strict pre-validation. As a standard rule, subjects under both standardised and simplified supervisory procedures shall obtain the IM model's supervisory validation before being allowed to implement the model, except during the transitional phase (see Section 3.3). Nonetheless, pursuant to Article 2.3, even after the transitional phase, competent authorities will have the option of allowing the immediate use of the model upon receiving the request for validation from counterparties in the scope of the Simplified Supervisory Procedures. In this case, the competent authorities will retain the possibility to reject the implementation of the model within a year from the receipt of the application and will have to formalise its supervisory validation within the same time window.

The application of the simplified procedure was the object of the second significant concern among the feedback received on the Consultation. The main point raised was that the procedure, even if simplified, it is still too burdensome and complicated for subjects that, in many cases, are not familiar with the validation process and that, for the major part, claim that will apply or better will outsource the application, the standardised IM model available nowadays in the market. Suggestions on this point were mainly overly simplistic, as many suggested excluding these counterparties from the validation. This way forward seems not viable since it would provide an exemption that cannot be introduced via RTS but would have to be specified in the level one text of the regulation (EMIR).

On the other side, EBA acknowledged the complications that this new validation process could imply for many small counterparties and the possible even-playfield concerns with respect to international peers that would not have to go through such a process to apply the IM model. For this reason, in the final framework, within the simplified process, additional simplifications were introduced for the subjects that would rely on their implementation of the IM Model to subjects that have been validated in accordance with the more rigorous requirements set by the standardised process of this framework. To be more specific, the further simplification concerns the provision of less documentation (Article 27(2)), the further simplified governance requirements (Article 28(8)), and in general, the provision linked to outsourcing (Article 29(2) and (3)) were also adapted to this specific case of outsourcing to a standard validated counterparty.

## 2.3 Transition phase of existing models' applications (Section 4 of the RTS – Articles 30 & 31)

Once the difference among the subjects in the scope is addressed, the issue of the large number of subjects that may potentially apply for validation remains to be solved.

It should be recalled that many subjects in the scope of the supervisory validation already use an IM model today, and many more will likely join them in the near future<sup>21</sup>. It will be the first time that counterparties and supervisors will go through the massive validation exercise of supervisory

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<sup>21</sup> The final two phases of implementation of IM exchange are September 2021 and September 2022 – as recently amended in the original Delegated Regulation 2016/2251.

validation of the IM models. Therefore, it is also likely that both counterparties and supervisors will face significant constraints in terms of resources available to carry out the supervisory validation processes.

Consequently, it is crucial to find a solution which enables a smooth transition into the new supervisory validation regime while at the same time ensuring that there will be limited disruptions to the OTC market. This transition is even more relevant, given that there may be a significant gap in terms of the initial margin requirements computed by the IM model and the standardised measures.

The EBA assessed several options to implement the supervisory model validation, and early industry suggestions<sup>22</sup> were considered.

For instance, the industry suggested not to validate any existing models that have already been reviewed by competent authorities in the EU or approved by authorities in other jurisdictions compliant with the BCBS-IOSCO non-cleared margin framework. This suggestion would directly violate the EMIR mandate, which prescribes that all the models must be validated before their application. It would also disregard the WGMR guidance, according to which there is no presumption that approval by one supervisor in the case of one or more institutions will imply approval for a wider set of jurisdictions.

It was also taken into consideration to adopt a permanent non-objection procedure for granting the validation of the models. This solution seems to diverge from the WGMR guidance, which requests explicit validation by supervisors. It also potentially breaches the legal mandate to have a supervisory validation process before adopting the IM model. Therefore, these RTS are aligned with the EMIR's legal mandate, which states that the competent authorities should address each supervisory validation process on a case-specific basis, respecting their internal process and the general principle that supervisory validation occurs before applying the model.

Nonetheless, the possibility of applying a more flexible temporary validation process is provided in these RTS for the smaller (and far more numerous) subjects in the scope of the simplified validation process. This option is conditioned by a decision of the competent authorities (Article 2(3)), which can choose when to deviate from the standard ex-ante validation process, in particular when there are concerns that the high volume of validation requests could “disrupt” the OTC market. Therefore, a temporary supervisory validation can be granted on the basis of expressing an opinion on the effective validation within one year.

As mentioned, all the most significant subjects in the scope already apply an IM model to collect margins, and many other subjects will have joined them by the time these RTS enter into force. Requiring all these subjects to revert to the Standardised Methods to compute the IM could cause substantial market disruptions (e.g., contracts to be broken or repapered, an increase in collateral requirements, etc.). This possible disruption is understood not to be the will of the legislator, and it should be avoided as an unwanted outcome.

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<sup>22</sup> [https://www.isda.org/a/Y3tME/2019.05.17\\_EU-Letter\\_IM-Models\\_FINAL.pdf](https://www.isda.org/a/Y3tME/2019.05.17_EU-Letter_IM-Models_FINAL.pdf)

Therefore, in order to avoid the possible disruption of the market caused by an unwanted reversion to the Standardised Methods to compute the IM, these RTS propose a transitional provision (Article 30), which establishes that counterparties already implementing an IM model and applying for the supervisory validation in due time (one month from the entry into application of the provisions in these RTS) would be allowed to keep using the IM model. During the transitional phase, once the counterparties have applied for the supervisory validation, the competent authorities will have up to two years to raise any issues on the model implementation based on the requirements in the regulatory framework.

This transitory non-objection approval, as provided in Article 30, is designed to avoid market disruption. Setting enough time for the transition is paramount for competent authorities to be able to review all the applications for validations in a proper manner.

Considering all the above, the possibility that all the supervisory validation applications are submitted simultaneously, causing a bottleneck issue, has to be considered.

This issue could be even more critical for smaller counterparties, which have less time to familiarise themselves with the mechanics of the IM exchange or with the validation process.

For this reason, to allow an orderly supervisory validation process for all the counterparties in the scope already using an IM model, a phased implementation is foreseen in Article 31. Three phases are suggested: the first phase will start after one year of the entry into force of the regulation for counterparties in the scope of the standardised validation process; the second and third phases will cover the numerous subjects in the scope of the simplified validation process as provided in Section 3 of these RTS. These subjects are expected to be so numerous that a further delay in the implementation seems appropriate. A delay of two years (phase two) for counterparties above the threshold of AANA 50 bn and a delay of three years of delayed implementation for the rest of the subjects (phase three) are proposed.

### 3. Draft regulatory technical standards

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In between the text of the draft RTS that follows, further explanations on specific aspects of the proposed text are occasionally provided, which either offer examples or provide the rationale behind a provision, or set out specific questions for the consultation process. Where this is the case, this explanatory text appears in a framed text box.

**COMMISSION DELEGATED REGULATION (EU) No .../..****of XXX**

[...]

**supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council with regard to regulatory technical standards for the supervisory procedures to ensure initial and ongoing validation of the risk-management procedures of counterparties under Article 11(3)**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 648/2012 of the European Parliament and of the Council of 04 July 2012 on OTC derivatives, central counterparties and trade repositories<sup>23</sup>, and in particular the fifth subparagraph of Article 11(15) thereof in relation to point (aa) of that Article, Whereas:

- (1) As other risk mitigation techniques for non-centrally cleared OTC derivatives are already specified in detail in Delegated Regulation (EU) 2016/2251<sup>24</sup>, it is necessary to specify supervisory procedures in relation to the initial and ongoing validation by competent authorities of the initial margin model. As a result, in case of non-compliance with the rules of Delegated Regulation (EU) 2016/2251 and the rules on the supervisory validation procedure, counterparties are required to apply the standardised approach referred to in Annex IV of that Regulation. Further, given that such validation necessarily involves the interaction between competent authorities and counterparties, rules on the supervisory procedures for initial and ongoing margin model validation should include rules setting out the details of that interaction, such as rules on the manner of requesting a validation (documentation to be submitted, timelines, etc.), as well as rules for the procedures competent authorities should follow before granting that validation.
- (2) Given the variety of counterparties involved in the non-centrally cleared OTC derivatives markets, different supervisory procedures relating to initial margin models should apply to different types of counterparties, depending on the size and complexity of the counterparty and the OTC activities included in the initial margin model scope.

<sup>23</sup> Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories OJ L 201 27.7.2012, p. 1)

<sup>24</sup> Commission Delegated Regulation (EU) 2016/2251 of 4 October 2016 supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories with regard to regulatory technical standards for risk-mitigation techniques for OTC derivative contracts not cleared by a central counterparty (OJ L 340, 15.12.2016, p. 9–46).

As a result, it is necessary to provide for standardised supervisory procedures for the validation of initial margin models for bigger counterparties with more complex derivatives activities, and for simplified supervisory procedures for the validation of initial margin models for smaller counterparties or with more limited derivatives activities. Institutions should be able to know which procedures apply to them so that they make the necessary arrangements for getting the validation of their model. Therefore, criteria should be provided to set out the counterparties that are subject to each set of supervisory procedures. Nevertheless, given that the validation of an initial margin model is still a non-trivial task, even under the simplified procedure, institutions under the simplified procedure should benefit from the support provided by institutions validated under the standardised procedure. Therefore, not to restrict the provision of support only to institutions that would be naturally under the standard rule for validation, the standard procedure should be available also to institutions that would benefit from the simplified validation but are willing to apply for validation under the standardised framework instead.

- (3) For counterparties to be able to either use an initial margin model for the first time or to apply any extensions or changes to it, they first need to have such a model or such extensions or changes validated by their competent authorities, as made clear by recital 20 of Regulation (EU) 2019/834 of the European Parliament and of the Council of 20 May 2019<sup>25</sup> amending Regulation (EU) No 648/2012, among others, in relation to the risk-mitigation techniques for OTC derivative contracts not cleared by a central counterparty. Nevertheless, where simplified supervisory procedures apply, competent authorities should be given the possibility to allow the initial use of an initial margin model or the application of extensions or changes to such a model, and to be able to finalise the use of the model or of the extensions or changes within a reasonable timeframe after that. This is appropriate because of the following considerations. On the one hand, counterparties captured under the simplified supervisory procedures are smaller and less sophisticated counterparties that carry out only a minority of the transactions in the market. Hence allowing them to use an initial margin model or extensions or changes to the model does not represent a substantial systemic risk, especially if this is decided by the relevant competent authority. On the other hand, counterparties captured under the simplified supervisory procedures represent the majority of counterparties in the market, hence requiring an ex-ante validation of their applications before they can apply either the initial margin model or the extensions or changes to it could lead to an increased operational burden for the relevant competent authorities and a resulting delay in the validation of those models and extensions or changes, which would be disproportionate for the counterparties. Such an approach could also lead to disadvantaging counterparties in the Union vis-à-vis international ones, especially since international standards in this area have not been implemented to require any such ex-ante approvals in major jurisdictions, and, as per recital 21 of Regulation (EU) 2019/834, international regulatory convergence should be ensured with regard to risk-management procedures for various classes of derivatives. Finally, it is appropriate to require that, when competent authorities choose to apply that deviation and accept notifications of the use of a model or application of extensions or changes to it, they should be given a maximum timeframe within which to complete their assessment of such model or extensions or changes to it. This is because of the need to

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<sup>25</sup> REGULATION (EU) 2019/834 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 May 2019 amending Regulation (EU) No 648/2012 as regards the clearing obligation, the suspension of the clearing obligation, the reporting requirements, the risk-mitigation techniques for OTC derivative contracts not cleared by a central counterparty, the registration and supervision of trade repositories and the requirements for trade repositories (*OJ L 141, 28.5.2019, p. 42*).

provide legal certainty to the counterparties on when they could expect their model validation to be final. Given the large number of counterparties covered by the simplified supervisory procedures and, therefore, the large number of models and extensions or changes to such models that competent authorities would have to review before granting their validation, the maximum timeframe for the competent authorities should be set to a year from the date of the notification of the application by each counterparty.

- (4) For counterparties in the non-centrally cleared OTC derivatives market that intend to use an initial margin model, competent authorities should have the flexibility to validate the use of the initial margin model at the most granular level of the application so that competent authorities could prevent the use of the initial margin model for a netting set of non-centrally cleared OTC derivatives for which they are not sufficiently satisfied with the conservativeness of the margins.
- (5) Competent authorities should be provided with all the necessary documentation in order to make a fully informed assessment of the initial margin model, by all the counterparties in the context of the OTC derivatives markets that intend to use an initial margin model. For the same reason, competent authorities should be required to assess the quality of the documentation submitted by a counterparty and that it is approved at the appropriate management level of the counterparty, and that the counterparty ensures appropriate governance arrangements of the implementation of that initial margin model. These include, for example, internal policies and accountability mechanisms; involvement of the senior management and management body of the counterparty, which should be aware of the uncertainties of the market environment and operational issues and of how these are reflected in the model and which is actively involved in the management of the initial margin model; appropriate independence of all actors involved in the practical administration of the model from each other, such as model implementing unit, audit as well as validation unit.
- (6) Unlike other models used in other contexts, such as the internal model developed for capital requirement purposes used by credit institutions, which are different from one to another and calibrated to the specific business of the credit institution, in the case of the exchange of initial margins, there are advantages for different counterparties in using the same model, such as reduction of disputes, and externalising to a third party the development of the initial margin model. Therefore, the industry exploits these advantages by adopting models that several counterparties can apply. As a result, competent authorities may have to validate the same model applied by many counterparties in the scope of their supervision. For this reason, competent authorities should be given the possibility to focus on the actual implementation of the model, at the counterparty level, by validating the general structure of the model once. Competent authorities should also be given the option to rely on the assessment of the general structure of the initial margin model methodology, carried out by another competent authority subject to the same framework.
- (7) The model design (i.e. the general structure of the model) can be outsourced, so that a third-party model can be adopted by counterparties exchanging initial margin. As a result, counterparties using the outsourced initial margin model should be permitted to rely on the general documentation developed by the model provider for their internal validation. Indeed, in such cases of outsourcing to a third party, where it might be more practical that the same third-party provider submits the application for validation to the competent authorities on behalf of more than one counterparty, this possibility should

be permitted, given the cost and time savings it allows, as long as the appropriate proof of such delegation to the third-party provider in accordance with the applicable law is also included in the relevant documentation submitted to the competent authority. On the other hand, the actual implementation of the initial margin model is done at the firm level, given that the model has to fit the actual business of the specific firm. Therefore, the actual implementation of the model and the appropriateness of the initial margin model for the business model of the specific counterparty should be required to be internally validated by the counterparties under examination, and their internal validation findings should be provided to the competent authorities who, in turn, should be called to verify that appropriateness.

- (8) The performance of the initial margin model, i.e., its predictive power, including the calibration of the model, should be assessed by means of back-testing to ensure the accuracy of the model, as is the case for internal models for capital requirements purposes. To this end, the ‘static back-testing’ compares the initial margin computed by the model for a netting set at the end of the period applied for the static back-testing with the time series of hypothetical changes in the same netting set’s value over the same period that corresponds in length and construction to the time window for model calibration. Therefore, this ‘static back-testing’ should be used at the initial approval of the model so that competent authorities can have a view of whether the model is fit for purpose or not; but also on an ongoing basis so as to allow competent authorities to assess the performance of the model and to detect new potential deficiencies. In order to ensure consistency with international standards requiring that the initial margin model is to be constructed with the theoretical assumptions of a value-at-risk-like method, the ‘traffic light’ approach developed in the context of the Basel Committee for Banking Supervision (BCBS)<sup>26</sup> should be used to classify the results of the back-testing also in the process for validating internal margin models. The back-testing results, however, can only be used to detect the presence of a deficiency, but not explain it. Therefore, the counterparties should be required to analyse further any potential deficiencies of the model, specifically when the changes in the value of a netting set exceed the initial margin, called ‘overshooting’, and in particular in case of numerous overshootings, in order to identify the root cause of those deficiencies and to remediate them. In any case, non-compliance of the counterparties with the requirements on the back-testing is in itself an adequate reason for the non-validation of the model by the competent authorities, and the return to the standardised approach of Article 11(1) of Regulation (EU) No 2016/2251, as the back-testing is crucial for the assessment of the performance of the initial margin model.
- (9) In order to enhance the continuous monitoring of the performance of the model mentioned in the previous recital, a ‘dynamic back-testing’ should be applied in addition, i.e. the back-testing comparison should be done in a dynamic one-year rolling time window and changing netting sets. To this end, the counterparty should be required to compare the daily output of the model, rescaled to the 1-day basis, with the hypothetical change in the value of the netting sets that it is supposed to cover in case of default of its counterparty. For the same reasons as explained above in relation to the static back-testing, the BCBS ‘traffic-light’ methodology and the requirements for counterparties to analyse overshootings should also apply here.

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<sup>26</sup> Supervisory Framework for the Use of “Backtesting” in Conjunction with the Internal Models Approach to Market Risk Capital Requirements, Basel Committee on Banking Supervision (BCBS), January 1996 <https://www.bis.org/publ/bcbs22.htm>



- (10) Considering that counterparties may use an initial margin model for numerous netting sets and to reduce the burden for analysis and reporting of overshootings in a manner proportionate to the scale and risks of netting sets, only those netting sets that are most relevant should be analysed and reported to the competent authorities. To this end, the ‘margin average shortfall’ (MAS) is used, which measures the time average of the zero-floored change of the netting set’s value minus the margin amount on each date (the margin shortfall) over the period of the back-testing. Only those netting sets with the largest margin average shortfall combined with the back-testing traffic light classification should be analysed and reported for the static and dynamic back-testing.
- (11) In order to compare the riskiness of netting sets of different sizes of a counterparty and across counterparties in combination with the back-testing results, an intensive property for the relative riskiness per unit is needed for the reporting to competent authorities. For this purpose, the ‘margin average relative shortfall’ is used, which is computed like the extensive ‘margin average shortfall’ with the modification that, on each date, the margin shortfall is divided by the initial margin itself.
- (12) Article 11(15), point (aa), of Regulation (EU) No 648/2012, as introduced by Regulation (EU) 2019/834, establishes the requirement of validation of initial margin models and the extensions or changes to such models. Regulation (EU) 2019/834 also clarifies, in its recital 20, that such validation needs to be provided before the model or the extensions or changes to it are applied. It is therefore necessary that the supervisory procedures applicable to such validation apply to any validation requests that are submitted following the entry into force of the rules governing those procedures. Nevertheless, Regulation (EU) No 648/2012 already provided for initial margin models as one of the risk-mitigation techniques applicable to non-centrally cleared OTC derivatives and Delegated Regulation (EU) 2016/2251 subsequently laid out the basic characteristics of such models. As those two acts allowed the use of initial margin models, there are counterparties which relied on those Regulations and started using initial margin models back then, which are still being used. As a result, the entry into force of the rules on the supervisory validation of initial margin models should not result in a disruption of an already well-functioning market of counterparties who interact with others internationally, by requiring the automatic discontinuation of these models currently in use, and the return to the standardised approach referred to in Annex IV of Delegated Regulation (EU) 2016/2251, as that would be disproportionate. Instead, given that there is a need for competent authorities to review any such models, which could require some time, a transitional period should be allowed during which they could object to the use of such models.
- (13) Counterparties in the non-centrally cleared OTC derivative markets are relatively numerous, especially the smaller and less sophisticated ones, which are the majority of counterparties expected to request validation of their initial margin models. For this reason, a phase-in implementation of supervisory validation requirements seems to be appropriate in order to achieve a smooth implementation of these requirements to avoid any substantial business continuity issues. This phase-in should be set up to provide more time for the smaller counterparties since they are expected to represent a large ‘wave’ of validation requests towards competent authorities via the simplified supervisory procedures. Therefore, in order to allow additional time for the counterparties to prepare for the new regime, and for the competent authorities to first focus on the validation of initial margin models on the fewer but larger and more sophisticated counterparties in the market, the new regime should start applying one year after its entry into force for larger counterparties. On the other side, because of the

expected significant number of counterparties in the scope of the simplified supervisory procedures, a further deferral of the implementation is appropriate. These simplified supervisory procedures should start applying two years, for counterparties above the 50 euro billion of aggregate average notional amount, and three years after the date of entry into force of the new regime, for the rest of the counterparties.

- (14) This Regulation is based on the draft regulatory technical standards developed in cooperation with the European Securities and Markets Authority and the European Insurance and Occupational Pensions Authority, and submitted by the European Supervisory Authority (European Banking Authority) (EBA).
- (15) EBA has conducted open public consultations on the draft regulatory technical standards on which this Regulation is based, analysed the potential related costs and benefits and requested the advice of the Banking Stakeholder Group established in accordance with Article 37 of Regulation (EU) No 1093/2010<sup>27</sup>,

HAS ADOPTED THIS REGULATION:

## ***SECTION 1***

### ***General Provisions***

#### ***Article 1***

#### ***Definitions***

For the purposes of this Regulation, the following definition applies:

An ‘overshooting’ means when a gain, over a specific time horizon, of the market value of the non-centrally cleared OTC derivative contracts in a netting set exceeds the amount of the initial margin as defined by Article 1 of Delegated Regulation (EU) 2016/2251, computed, over a time horizon that matches the time horizon of the gain in the market value, by making use of an initial margin model.

#### ***Article 2***

#### ***Supervisory procedures for validation of initial applications and material extensions or changes of initial margin models***

1. For the purpose of validating either initial applications or applications for material extensions or changes of an initial margin model, the applicable supervisory procedures shall be as follows:
  - (a) the simplified supervisory procedures set out in Section 3 shall apply where the counterparty meets any of the following conditions:

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<sup>27</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 (OJ L 331, 15.12.2010, p. 12).

- (i) where the counterparty is not one of the entities referred to in Article 4(1), point (3), of Regulation (EU) No 575/2013<sup>28</sup>;
    - (ii) where the counterparty does not belong to a group and has an aggregate month-end average notional amount of non-centrally cleared OTC derivatives, computed in accordance with Article 28 of Delegated Regulation (EU) 2016/2251, for the months of March, April and May of the preceding year that is less than or equal to EUR 750 billion;
    - (iii) where the counterparty belongs to a group that has an aggregate month-end average notional amount of non-centrally cleared OTC derivatives, computed in accordance with Article 28 of Delegated Regulation (EU) 2016/2251, for the months of March, April and May of the preceding year that is less than or equal to EUR 750 billion;
  - (b) the standardised supervisory procedures set out in Section 2 shall apply in all other cases.
2. By way of derogation from paragraph 1, point (a), competent authorities shall apply the standardised supervisory procedures set out in Section 2 when requested by a counterparty that applies for validation in accordance with the standards of that Section. Despite requested by a counterparty to apply Section 2, competent authorities may decide, based on the complexity and interlinkages of the counterparty's activity in OTC derivatives, to apply the simplified supervisory procedures set out in Section 3, where the requesting counterparty has an aggregate month-end average notional amount of non-centrally cleared OTC derivatives, computed in accordance with Article 28 of Delegated Regulation (EU) 2016/2251, for the months of March, April and May of the preceding year, that is at less than or equal to EUR 50 billion.
  3. Where the simplified supervisory procedures apply in accordance with paragraph 1, point (a), by way of derogation from Sub-section 1 of Section 3, competent authorities may choose to permit the immediate use of an initial margin model or a material extension or change to it, upon receipt of the application by the counterparty.
  4. Where competent authorities take the decisions referred to in paragraph 3, it shall notify the counterparty accordingly within a month from the date of receipt of the application by the counterparty, and communicate its assessment of the supervisory validation of the use of the model, or the relevant extension or change, within a year from the date of receipt of the application by the counterparty.
  5. Competent authorities may exclude types of OTC derivative contracts from the scope of the validation requested.
  6. Competent authorities shall withdraw the validation, in full or partially, for specific netting sets, upon verification that the counterparty ceases to comply with the conditions set in this Regulation or the requirements set in Chapter I, Section 4 of the Delegated Regulation (EU) 2016/2251.

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<sup>28</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 (*OJ L 176, 27.6.2013, p. 1–337*).

## ***SECTION 2***

### ***Standardised Supervisory Procedures***

#### **Subsection 1**

#### **Standardised supervisory procedures for applications by counterparties**

##### *Article 3*

##### *Standardised supervisory procedures for initial requests for validation of an initial margin model*

In order to have their initial margin model validated by competent authorities, counterparties that either do not meet the conditions set out in Article 2(1), point (a), or apply for validation according to Article 2(2) shall submit their application for validation to those competent authorities in writing, in accordance with the documentation requirements set out in Article 6.

##### *Article 4*

##### *Standardised supervisory procedures for validation of material extensions or changes to the initial margin model*

1. In order to have material extensions or changes to their initial margin model validated by competent authorities, counterparties that either do not meet the conditions set out in Article 2(1), point (a), or apply for validation according to Article 2(2) shall submit their application to those competent authorities in writing, in accordance with the documentation requirements set out in Article 6.
2. Extensions or changes to the initial margin model shall be considered material for the purposes of paragraph 1, where they meet any of the following conditions:
  - (a) they fall under any of the extensions referred to in Part I, Section 1, of Annex I, and they result in a change of 5% or more in terms of the ratio calculated in accordance with paragraph 3;
  - (b) they fall under any of the changes referred to in Part II, Section 1, of Annex I, and they result in a change of 5% or more in terms of the ratio calculated in accordance with paragraph 3;
  - (c) they result in a change of 10% or more in terms of the ratio calculated in accordance with paragraph 3.
3. The changes referred to in paragraph 2 shall be equal to the highest value of a ratio observed over the period of 15 consecutive business days prior to the date of application for validation for the extension or change. That ratio shall be calculated as the ratio given by the absolute

value of the difference of the initial margin computed using the initial margin model with and without the extensions or changes, divided by the value of the initial margin computed using the initial margin model without the extensions or changes, calculated as the sum of all netting sets in the scope of the initial margin model application.

4. The changes referred to in paragraph 2 and the ratio referred to in paragraph 3 shall not consider changes in the initial margin resulting from changes in the calibration of the initial margin model or calibration methodology, as specified in Part II, Section 2, point 2, of Annex I.
5. For counterparties belonging to a group, the changes referred to in paragraph 2 shall be calculated at the group level for all netting sets of the entities that have been given permission to use the same initial margin model. Investment funds that meet the requirements in Article 28(3) of Delegated Regulation (EU) 2016/2251 shall be considered distinct entities for the purpose of this Article.
6. For the purposes of assessing extensions or changes in this Article, counterparties shall not subdivide the extensions or changes into several incremental ones with the aim of avoiding a breach of materiality thresholds as defined in this Article.

#### *Article 5*

##### *Standardised supervisory procedures for notification of extensions or changes to the initial margin model which are not considered material*

Extensions or changes to the initial margin model, which are not material in accordance with Article 4(2), shall be notified to competent authorities in accordance with the following:

- (a) extensions or changes falling under Part I, Section 2, or Part II, Section 2, of Annex I shall be notified at least two months before their planned implementation date, in accordance with the documentation requirements set out in Article 6(2);
- (b) by way of derogation from point (a), changes to the initial margin model that exclusively consist of changes to the calibration of the initial margin model or calibration methodology as referred to in Part II, Section 2, point 2, of Annex I shall be notified at least one month before their planned implementation date, in accordance with the documentation requirements set out in Article 6(2);
- (c) all other extensions or changes shall be notified after implementation, at least on an annual basis, in accordance with the documentation requirements set out in Article 6(2).

## *Article 6*

### *Documentation requirements for applications under the standardised supervisory procedures*

1. When applying for the initial use of an initial margin model in accordance with Article 3 or for material extensions or changes to an initial margin model in accordance with Article 4, counterparties shall submit, to competent authorities, all of the following information:
  - (a) description of the rationale and objective of the envisaged initial margin model or of the rationale and objective of the extension or change of the initial margin model;
  - (b) the implementation date of the envisaged initial margin model or the initial margin model extension or change;
  - (c) scope of application of the model or scope of application affected by the initial margin model extension or change, with volume characteristics;
  - (d) confirmation that the initial margin model or its extension or change have been approved in accordance with the counterparties' internal approval processes by the relevant competent bodies, and the date of that approval;
  - (e) where applicable, the quantitative impact of the change or extension on the relevant initial margin model or sum of relevant initial margins;
  - (f) technical and process documents relating to the initial margin model or its material extension or change;
  - (g) reports of the counterparties' independent review or validation;
  - (h) records of the counterparties' current and previous version number of initial margin models which have been validated;
  - (i) appropriate proof of the delegation provided to the third party submitting the application on behalf of the counterparty, where applicable.
  
2. When notifying extensions or changes not deemed material in accordance with Article 4, counterparties shall submit, together with the notification referred to in Article 5, the documentation outlined in points (a) to (e) and (i) of paragraph 1.

## Subsection 2

### **Standardised supervisory procedures for granting validation**

## *Article 7*

### *Outsourcing*

Where a counterparty has outsourced some or all important or critical functions, activities or services related to the design, calibration, implementation, internal validation and audit of its initial margin model to a third party, or has purchased an initial margin model or services related to an initial margin model from a third party, competent authorities shall verify that the outsourcing or purchase does not hinder the application of the assessment methodology referred to in this Regulation and, in particular, all of the following:

- (a) that the senior management, as well as the management body or the committee designated by it, are actively involved in the supervision and decision-making over the important or critical functions, activities or services delegated to a third party and over the initial margin model obtained from third parties;
- (b) that the counterparty's own staff have sufficient knowledge and understanding of the important or critical functions, activities or services delegated to third parties and of the structure of the initial margin model obtained from a third party;
- (c) that continuity of the outsourced functions, activities or services is ensured, including by means of appropriate business contingency and continuity plans;
- (d) that the audit and other controls of the important or critical functions, activities or services delegated to third parties are not limited or inhibited by the involvement of the third party;
- (e) that full access and audit rights are granted to the competent authority of the counterparty that outsourced some or all important or critical functions, activities or services, in relation to all relevant information.

## *Article 8*

### *Use of Validation Results*

1. For the purpose of verifying compliance of the general structure of the model with the governance requirements referred to in Article 13
2. , paragraph 2, point (a), and paragraph 3, competent authorities may rely on the available results, findings, and measures of a previous assessment conducted in either of the following ways:
  - (a) an assessment conducted by the same competent authorities of an initial margin model applied by another counterparty;
  - (b) an assessment conducted by another competent authority subject to this Regulation of an initial margin model applied by another counterparty.
3. Competent authorities may apply the process referred to in paragraph 1, point (a), where all of the following conditions are met:
  - (a) the design and calibration of the initial margin model under validation are outsourced to the same third party as to which the design and calibration of the initial margin model already validated was also outsourced;
  - (b) the initial margin model under validation has the same general structure, specification and calibration of parameters, methodological choices and model assumptions as the initial margin model already validated.
4. Competent authorities may apply the process referred to in paragraph 1, point (b), where all of the following conditions are met:
  - (a) the design and calibration of the initial margin model under validation are outsourced to the same third party as to which the design and calibration of the initial margin model already validated was also outsourced;

- (b) the initial margin model under validation has the same general structure, specification and calibration of parameters, methodological choices and model assumptions as the initial margin model already validated;
  - (c) the competent authority validating the initial margin model avails evidence of validation of the other initial margin model assessed by another competent authority;
  - (d) the competent authority validating the initial margin model avails evidence of internal validation of the validated initial margin model referred to in point (c) that satisfies the provisions of Article 13(3).
5. For the purpose of the validation of a model of a subsidiary of a group according to Articles 3 or 24, Article 4(5) or Article 25(5), competent authorities may rely on the available results, findings, and measures of a previous assessment when conditions in, paragraphs 2 and 3 are met and the initial margin model validation of the parent was conducted in accordance with the procedures set out in Section 2.

## *Article 9*

### *General aspects of internal model governance*

1. For the purpose of ensuring that the counterparty has established an internal governance process to assess the appropriateness of the initial margin model on a continuous basis, in accordance with Article 18(1) of Delegated Regulation (EU) 2016/2251, competent authorities shall assess the initial margin model governance arrangements as a whole.
2. Competent authorities shall ensure that the decision-making process of the counterparty regarding all aspects of initial margin models is clearly laid down in the counterparty's internal documentation, in accordance with Article 16.
3. In order to assess whether a counterparty is compliant with the requirements of internal governance, including requirements on senior management and management body, internal organisation, model development unit, audit, and internal validation, competent authorities shall verify whether a counterparty has a clear organisational structure for the governance and management of the model with well-defined, transparent and appropriate lines of responsibility, taking into account the nature, scale and complexity of the activities of the counterparty, and shall verify in particular all of the following:
  - (a) the role of the senior management and management body, in accordance with Article 10;
  - (b) the resources of the model development unit, in accordance with Article 11;
  - (c) the independence and resources of the audit function, in accordance with Article 12;
  - (d) the process for addressing the conclusions and recommendations raised by the audit function in their review of the initial margin models in accordance with Article 12;
  - (e) the adequacy and independence of the internal validation process, in accordance with Article 13



## *Article 10*

### *Senior management and management body*

1. In assessing the soundness of the role of the senior management and management body as referred to in Article 9(3), point (a), competent authorities shall verify that the counterparty's senior management and management body are actively involved in, and ensure that adequate resources are allocated to, the management of the initial margin model.
2. Competent authorities shall verify that the senior management and the management body of the counterparty have a good understanding of the internal margin model and are aware of the limitations and assumptions of the model used and the impact those limitations and assumptions can have on the reliability of the output of the initial margin model by verifying at least all of the following:
  - (a) that, following a proposal from the model development unit, the management body or the committee designated by it approves all relevant policies and procedures related to the implementation of the initial margin model, including the appropriate organizational structure ensuring that the model is implemented with integrity;
  - (b) that the management body or the committee designated by it takes appropriate corrective action where the model development unit, the qualified parties tasked with the internal validation of the model, the audit function or any other control functions of the counterparty identify weaknesses of the initial margin model;
  - (c) that the management body or the committee designated by it is aware of and follows up on, at least once a year, the recommendations raised by the audit, the model development unit or the validation function in relation to the initial margin model;
  - (d) that, following a proposal from the model development unit, and after due consideration of the conclusions and recommendations raised in the internal validation and audit reports, the management body or the committee designated by it approves the methodologies, extensions and material changes applied to the initial margin model;
  - (e) that the management body or the committee designated by it is aware of the number of overshootings calculated in accordance with the back-testing programme referred to in Articles 14 and 17;
  - (f) that the model development unit provides notice to the management body or the committee designated by it of material changes to or extensions of the use of initial margin models.

## *Article 11*

### *Model development unit*

1. In assessing the internal governance of the counterparty in relation to the model development unit as referred to in Article 9(3), point (b), and in accordance with Article 18(1) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify in particular all of the following:

- (a) that the model development unit ensures the units responsible for originating, renewing, or trading exposures cannot alter the model implementation without appropriate control;
- (b) that the model development unit is appropriately represented in the counterparty's decision-making bodies and is involved in the decision-making process, at least in the cases where either of the following issues is on the agenda:
  - (i) the approval of new initial margin methodologies and any extensions or changes of the initial margin model, internally validated in accordance with Article 13
  - (ii) the approval of IT infrastructure systems related to the initial margin model in accordance with Article 15;
- (c) that the model development unit is adequate and proportionate to the size of the counterparty and to the risks of the counterparty's business, and that it has the appropriate resources to perform its tasks effectively;
- (d) that the model development unit reports their findings concerning the analysis in points (e) and (f) to the senior management;
- (e) that the model development unit is responsible for the quantitative outcome of any initial margin model that the counterparty is using for the calculation of initial margins;
- (f) that the model development unit is responsible for producing reports on the output of the initial margin model, controlling input data integrity, and analysing the output of the initial margin model.

## *Article 12*

### *Audit process*

1. For the purposes of assessing the independent review of the initial margin model as part of the audit process as referred to in Article 9(3), points (c) and (d), and in accordance with Article 18(1) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify that the audit is independent, that the resources assigned to it are appropriate and that the process established within the counterparty to address the recommendations coming from the audit is adequate, by verifying, in particular, all of the following:
  - (a) that the internal or external audit of the counterparty reviews all the initial margin models on at least an annual basis and delivers the conclusions of that review in a report submitted to the counterparty's senior management and management body, as referred to in Article 10
  - (b) that the report referred to in point (a) provides sufficient information to the counterparty's senior management and management body on the compliance of the initial margin model with all applicable requirements referred to in Article 18(1), point (c), of Delegated Regulation (EU) 2016/2251 and identifies the areas in the annual work plan where it is necessary to carry out a detailed review of compliance with those requirements;
  - (c) that the audit is independent, adequate, proportionate and performs its tasks effectively.
2. Competent authorities shall review the latest and other relevant reports produced by the audit in accordance with paragraph 1, and verify that remediations of issues identified by the audit are relevant, material, and credible.

3. Competent authorities shall verify whether a regular audit of the counterparty's compliance with the provisions of Chapter I, Section 4 of Delegated Regulation (EU) 2016/2251 and this Regulation takes place and whether appropriate remediation plans are being produced and followed.

### *Article 13*

#### *Internal validation*

1. For the purposes of assessing whether the internal validation process for an initial margin model as referred to in Article 9(3), points (e), meets the requirements in Article 18(1) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify in particular all of the following:
  - (a) that the internal validation process is conducted by personnel that was not involved in the development of the initial margin model;
  - (b) that the internal validation process is conducted with adequate resources, including personnel sufficiently experienced and qualified to perform such tasks;
  - (c) that the performance of the initial margin model is monitored on a continuous basis by conducting internal validation at least annually;
  - (d) where the validation of extensions or changes of the initial margin model is sought in accordance with Article 4, that the internal validation reviews those extensions or changes before the application for validation is submitted to the competent authority;
  - (e) that the findings resulting from the internal validation process are reflected in a validation report and remediated in a timely manner;
  - (f) that the validation report is comprehensive and sound.
2. Competent authorities shall verify that, as part of the initial and ongoing internal validation of an initial margin model, both of the following conditions are met:
  - (a) the general structure of the model is internally validated, including at least both of the following:
    - (i) the appropriateness of the initial margin model and its underlying model assumptions and calibration processes;
    - (ii) the performance of the initial margin model, making use of back-testing and other suitable statistical tests;
  - (b) the implementation of the model is internally validated, including at least all of the following:
    - (i) the appropriateness of the initial margin model and its underlying model assumptions and calibration for the counterparty's business model and portfolio;
    - (ii) the performance of the initial margin model regarding the counterparty's business model and portfolio, making use of back-testing and other suitable statistical tests;
    - (iii) the accuracy of the model implementation.
3. For the purpose of paragraph 2 point (a), a third-party undertaking, different from the party that developed the model, may be mandated by the counterparty to conduct the initial and

ongoing internal validation of the initial margin model on behalf of the counterparty provided that both of the following conditions are met:

- (a) that the internal validation meets the requirements set out in Article 18(1) of Delegated Regulation (EU) 2016/2251 and in paragraph 1;
  - (b) that the internal validation plan, as well as the internal validation report and its results, are made available to the counterparty in a comprehensive manner, and that the counterparty ensures that findings are remediated in a timely manner.
4. For the purpose of paragraph 3, a third-party undertaking means an undertaking that provides auditing or consulting services to counterparties and has staff sufficiently skilled in the area of market risks and counterparty credit risks in trading activities.

#### *Article 14*

##### *Internal validation of model calibration - static back-testing*

1. In assessing that the performance of the initial margin model is monitored on a continuous basis, as required by Article 14(3) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify all of the following:
  - (a) that the unit of the counterparty responsible for the internal validation of the static back-testing programme, in accordance with Article 13(2) of this Regulation, is independent from the trading units responsible for originating, renewing or trading exposures;
  - (b) whether the counterparty assesses the performance of the initial margin model at least via static back-testing;
  - (c) whether, when carrying out the assessment referred to in point (b), the counterparty performs the following steps in sequence, at least at the end of each quarter and for each netting set for which the derogation referred to in Article 29 of Delegated Regulation (EU) 2016/2251 is not applied at the time of the application of those steps:
    - (i) it identifies the MPoR used for the calculation of the initial margin in accordance with Article 15 of Delegated Regulation (EU) 2016/2251;
    - (ii) it identifies an up-to-date period of equal length and similar construction to that used for the calibration of the initial margin model's parameters in accordance with Article 16 of Delegated Regulation (EU) 2016/2251;
    - (iii) for each date included in the period identified in point (ii), it identifies a corresponding following date distancing as many business days as the MPoR by that date;
    - (iv) for each date included in the period identified in point (ii) and for all risk factors that are used to price the non-centrally cleared OTC derivative contracts in the netting set in its current composition, it calculates the risk factors' return observed between that date and the corresponding date identified in point (iii);
    - (v) for each date included in the period identified in point (ii), it computes a change by applying the returns obtained in point (iv) to the current value of the corresponding risk factors and measuring the resulting changes in the market value of the non-centrally cleared OTC derivative contracts in the netting set;

- (vi) it builds a time series of the changes obtained as a result of point (v), and counts the number of overshootings with respect to the initial margins applied at the end of the period considered for back-testing.
2. Competent authorities shall verify whether, when computing the change in the market value of the non-centrally cleared OTC derivative contracts in the netting set, as referred to in paragraph 1, point (c)(v), the counterparty meets all of the following:
    - (a) it applies the same pricing methods, model parametrisations, market data and any other techniques used in the counterparty's end-of-day valuation process, or a close approximation of it; where it applies a Taylor series approximation as pricing method approximation, the counterparty shall compute at least the material first- and second-order terms to reflect the change in the market value of the non-centrally cleared OTC derivative contracts in the netting set;
    - (b) it documents the basis for determining the change in the market value of the non-centrally cleared OTC derivative contracts in the netting set and the end-of-day valuation process for the positions covered by the initial margin model;
    - (c) it ensures that, where the model does not cover all asset classes referred to in Article 17(2) of Delegated Regulation (EU) 2016/2251, the change in the market value of the non-centrally cleared OTC derivative contracts in the netting set only encompasses the change in the market value of the non-centrally cleared OTC derivative contracts in the netting set stemming from instruments covered by the initial margin model.
  3. Competent authorities shall verify whether all netting sets are classified in the following manner:
    - (a) a netting set is considered “green” where the number of overshootings resulting from paragraph 1, point (c), is lower than or equal to the number  $N_{g,s}$  obtained in accordance with paragraph 4;
    - (b) a netting set is considered “amber” where the number of overshootings resulting from paragraph 1(b) is greater than  $N_{g,s}$  and lower than or equal to the number  $N_{a,s}$  obtained in accordance with paragraph 4;
    - (c) a netting set is considered “red” where it is neither green nor amber in accordance with points (a) and (b).
  4. Competent authorities shall verify whether the counterparty determines the numbers  $N_{g,s}$  and  $N_{a,s}$  referred to in paragraph 3, by applying the following steps:
    - (a) it applies a distribution  $X$  of the changes in the value of the netting set over a period of 1 business day and construct the distribution  $Y$  of those changes over a period of days equal to the MPoR applied in the initial margin model calibration in accordance with Article 15 of Delegated Regulation (EU) 2016/2251, as follows:

$$Y = \sum_{i=1}^{MPoR} X_i,$$

where all  $X_i$  are distributed like  $X$  and are independent from one another.

The distribution  $X$  shall be based on proper empirical evidence or the normal distribution;

(b) it obtains the value of  $K_s$  as the value for which the following condition is met:

$$Probability(Y \leq K_s) = 0.99$$

(c) the number  $N_{g,s}$  shall be the number for which the following condition is met:

$$Probability(O \leq N_{g,s}) < 0.95 \leq Probability(O \leq N_{g,s} + 1)$$

where  $O$  is a random variable counting the number of overshootings that occur in a period as long as the one identified in paragraph 1, point (c)(ii), by comparing a time series of the gains over MPoR overlapping business days against the initial margin over MPoR business days, and assuming:

- (i) a model for which the initial margin over MPoR business days has been set to  $K_s$ ;
- (ii) to each business day  $t$  in the period identified in paragraph 1, point (c)(ii) corresponds a daily change  $X_t$  distributed like  $X$  and independent from each daily change of the other business days in the same period;
- (iii) for each business day  $t$  in the period identified in paragraph 1, point (c)(ii) corresponds the following gain over MPoR business days:

$$G_t = \sum_{i=t}^{t+MPoR-1} X_i$$

where:

- $X_i$  are the daily changes as described in point (ii);

(d) the number  $N_{a,s}$  shall be the number for which the following condition is met:

$$Probability(O \leq N_{a,s}) < 0.9999 \leq Probability(O \leq N_{a,s} + 1)$$

where  $O$  is defined as in point (c);

(e) where a normal distribution is applied to define  $X$ , and for a period between 3 and 5 years, the values  $N_{g,s}$  and  $N_{a,s}$  defined in Table 1 in Annex III shall be used, whereas the number of days in the period shall be rounded downwards to the next multiple of ten.

5. Competent authorities shall verify whether the counterparty determines the “margin average shortfall” for each netting set in its portfolio. For the purpose of this Regulation, the margin average shortfall for the static back-testing for each netting set  $ns$  shall be the average zero-floored additional margin required over all  $T$  days in the back-testing period identified in paragraph 1, point (c)(ii), multiplied by 100, and calculated as follows:

$$MAS_s^{ns} := \frac{100}{T} \sum_{t=1}^T \max(0, A_{s,t}^{ns})$$

where:

- $MAS_s^{ns}$  denotes the margin average shortfall for the static back-testing for each netting set  $ns$ ;
  - $A_{s,t}^{ns} = PL_t^{ns} - IM_{\text{end of period}}^{ns}$  denotes the additional margin required to cover the exceedance of IM;
  - $PL_t^{ns}$  denotes the change in the market value at date  $t$  over the margin period of risk, identified in paragraph 1, point (c)(v);
  - $IM_{\text{end of period}}^{ns}$  denotes the initial margin amount computed by the initial margin model at the end of the period for the static back-testing for the margin period of risk.
6. Competent authorities shall verify whether the counterparty analyses at least all the overshootings in the netting sets reported in accordance with Section 3 of Annex II.
  7. Competent authorities shall verify whether, with regard to the analysis of the overshootings referred to in paragraph 6, the counterparty carries out at least all of the following:
    - (a) it analyses whether and which market movements or risk factors or parameters caused the overshooting;
    - (b) it analyses whether any modelling issues, or missing risk factors, or aggregation of risk numbers contributed to the overshooting;
    - (c) it analyses whether process failures, including positions not being properly captured or missing updates of data, contributed to or caused the overshooting.
    - (d) it analyses whether the calibration of the model contributed to or caused the overshooting, by rerunning the steps defined in paragraph 1, point (c), and substituting the step defined in paragraph 1, point (c)(ii), with the following:
      1. it identifies the period that is used for the calibration of the initial margin model's parameters in accordance with Article 16 of Delegated Regulation (EU) 2016/2251;
  8. Competent authorities shall verify whether the counterparty reports to them, on a quarterly basis, the result of the static back-testing, including the analysis referred to in paragraph 6, for each netting set as specified in Annex II.
  9. Competent authorities shall assess the appropriateness of the threshold applied by the counterparty to define when a suitable shortfall measure is considered material for the purpose of paragraph 10(b) with respect to the total size of the counterparty's portfolio subject to the requirements in scope of Delegated Regulation (EU) 2016/2251.

10. Competent authorities shall verify whether, in accordance with Article 14(2), point (k), of Delegated Regulation (EU) 2016/2251, the following are considered events triggering a model change, recalibration or other remediation action:
- (a) the occurrence of an overshooting for which the analysis referred to in paragraph 7 identifies a material weakness or inaccuracy in the initial margin model;
  - (b) the breach of the threshold referred to in paragraph 9.

### *Article 15*

#### *Robustness of IT infrastructure*

1. For the purpose of ensuring that the initial margin model facilitates a timely and accurate exchange of collateral in accordance with Article 11(3) of Regulation 648/2012, competent authorities shall verify both of the following:
- (a) whether the IT systems related to the initial margin calculation and exchange provide accurate results in a timely manner;
  - (b) whether appropriate remediation capabilities are in place in case of problems encountered in relation to the IT systems referred to in point (a).

### *Article 16*

#### *Quality and auditability of the documentation*

Competent authorities shall verify whether the documentation submitted by a counterparty in support of its application for the use of an initial margin model or material extensions or changes to the initial margin model meets at least all of the following:

- (a) it is approved at the senior management level of the counterparty;
- (b) it is complete, consistent, accurate, and up-to-date;
- (c) it provides for the identification of at least the author, reviewer, authorising agent and owner, dates of development and approval of the document;
- (d) it is version numbered and provides a comprehensive overview of the history of the amendments to the document;
- (e) it is sufficiently detailed to allow a knowledgeable third party to understand and replicate the set-up of the initial margin models and its processes.



## Article 17

### *On-going monitoring - dynamic back-testing*

1. In assessing that the performance of the initial margin model is monitored on a continuous basis, as required by Article 14(3) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify all of the following:
  - (a) that the unit of the counterparty responsible for the internal validation of the dynamic back-testing programme, in accordance with Article 13(2) of this Regulation, is independent from the trading units responsible for originating, renewing, or trading exposures;
  - (b) whether the counterparty assesses the performance of the initial margin model at least via dynamic back-testing;
  - (c) whether, when carrying out the assessment referred to in point (b), the counterparty performs the following steps in sequence, at least at the end of each quarter and for each netting set for which the derogation referred to in Article 29 of Delegated Regulation (EU) 2016/2251 is not applied at the time of the application of those steps, and where data to obtain at least 100 observations are available:
    - (i) it identifies the dates corresponding to the most recent 250 business days, where these observations concerning the netting set are available, otherwise the most recent dates available;
    - (ii) for each date referred to in point (i), it identifies the non-centrally cleared OTC derivative contracts within the netting set that the counterparty has in place on that date, it calculates the market value of those contracts on that date and the subsequent business day, and it obtains the change between those values;
    - (iii) it determines the initial margin for that netting set over a 1-business-day MPoR, by either computing the initial margin required for that MPoR or scaling down the initial margin required by the model on the basis of the MPoR referred to in Article 15 of Delegated Regulation (EU) 2016/2251 by means of an appropriate methodology, subject to periodic review as part of the internal validation process;
    - (iv) for each date identified in point (i), it compares the change in the market value referred to in point (ii) with the initial margin over a 1-business-day MPoR calculated according to point (iii), and it counts the overshootings.
2. Competent authorities shall verify whether, when computing the change in the market value of the non-centrally cleared OTC derivative contracts in the netting set, as referred to in paragraph 1, point (c)(ii), the counterparty complies with all of the following:
  - (a) it applies the same pricing methods, model parametrisations, market data and any other technique used in the counterparty's end-of-day valuation process, or a close approximation of it; where it applies a Taylor series approximation as pricing method approximation, the counterparty shall compute at least the material first- and second-order terms to reflect the change in the market value of the non-centrally cleared OTC derivative contracts in the netting set;
  - (b) it documents the basis for determining the change in the market value of the non-centrally cleared OTC derivative contracts in the netting set and the end-of-day valuation process for the positions covered by the initial margin model;
  - (c) it ensures that, where the model does not cover all asset classes referred to in Article 17(2) of Delegated Regulation (EU) 2016/2251, the change in the market value of the

non-centrally cleared OTC derivative contracts in the netting set only encompasses the change in the market value of the non-centrally cleared OTC derivative contracts in the netting set stemming from instruments covered by the initial margin model.

3. Competent authorities shall verify whether all netting sets are classified in the following manner:
  - (a) a netting set is considered “green” where the number of overshootings resulting from paragraph 1, point (c), is lower than or equal to the number  $N_{g,d}$  obtained in accordance with paragraph 4;
  - (b) a netting set is considered “amber” where the number of overshootings resulting from paragraph 1, point (c) is greater than  $N_{g,d}$  and lower than or equal to the number  $N_{a,d}$  obtained in accordance with paragraph 4;
  - (c) a netting set is considered “red” where it is neither green nor amber in accordance with points (a) and (b).
4. Competent authorities shall verify whether the counterparty determines the numbers  $N_{g,d}$  and  $N_{a,d}$  referred to in paragraph 3, by applying the following steps:
  - (a) Competent authorities shall verify whether the counterparty determines the numbers  $N_{g,d}$  and  $N_{a,d}$  referred to in paragraph 3 as follows: the number  $N_{g,d}$  shall be the number for which the following condition is met:

$$Probability(O \leq N_{g,d}) < 0.95 \leq Probability(O \leq N_{g,d} + 1),$$

where  $O$  is a random variable distributed as the binominal distribution  $B(T, 1\%)$  and represents the number of overshootings that occur in a period  $T$  as long as the one identified in paragraph 1, point (c)(i);

- (b) the number  $N_{a,d}$  shall be the number for which the following condition is met:

$$Probability(O \leq N_{a,d}) < 0.9999 \leq Probability(O \leq N_{a,d} + 1),$$

where  $O$  is defined as in point (a);

- (c) for a number of observations between 100 and 250, the values  $N_{g,d}$  and  $N_{a,d}$  defined in table 2 of Annex III shall be used, whereas the number of days  $T$  in the period is rounded downwards to the next multiple of ten.

5. Competent authorities shall verify whether the counterparty determines the “margin average shortfall” for each netting set in its portfolio. For the purpose of this Regulation, the margin average shortfall for dynamic back-testing for each netting set  $ns$  shall be the average zero-floored additional margin over all  $T$  days in the back-testing period identified in paragraph 1, point (c)(i), multiplied by 100, and calculated as follows:

$$MAS_d^{ns} := \frac{100}{T} \sum_{t=1}^T \max(0, A_{d,t}^{ns})$$

where:

- $MAS_d^{ns}$  denotes the margin average shortfall for dynamic back-testing for each netting set  $ns$ ;

- $A_{d,t}^{ns} = PL_t^{ns} - IM_t^{ns}$  denotes the additional margin required to cover the exceedance of IM;
  - $PL_t^{ns}$  denotes the change in the market value between date  $t$  and the subsequent business day, identified in paragraph 1, point (c)(ii);
  - $IM_t^{ns}$  denotes the initial margin amount at date  $t$  computed by the model over a 1-business-day MPoR, identified in paragraph 1, point (c)(iii).
6. Competent authorities shall verify whether the counterparty analyses at least all the overshootings in the netting sets reported in accordance with Section 3 of Annex II.
  7. Competent authorities shall verify whether, with regard to the analysis of the overshootings referred to in paragraph 6, the counterparty carries out at least all of the following:
    - (a) it analyses whether and which market movements or risk factors or parameters caused the overshooting;
    - (b) it analyses whether any modelling issues, or missing risk factors, or aggregation of risk numbers contributed to the overshooting;
    - (c) it analyses whether process failures, including positions not being properly captured or missing updates of data, contributed to or caused the overshooting.
  8. Competent authorities shall verify whether the counterparty reports to them, on a quarterly basis, the result of the dynamic back-testing, including the analysis referred to in paragraph 6, for each netting set as specified in Annex II.
  9. Competent authorities shall assess the appropriateness of the threshold applied by the counterparty to define when a suitable shortfall measure is considered material for the purpose of paragraph 10(b) with respect to the total size of the counterparty's portfolio subject to the requirements in scope of Delegated Regulation (EU) 2016/2251.
  10. Competent authorities shall verify whether, in accordance with Article 14(2), point (k), of Delegated Regulation (EU) 2016/2251, the following are considered events triggering a model change, recalibration or other remediation action:
    - (a) the occurrence of an overshooting for which the analysis referred to in paragraph 7 identifies a material weakness or inaccuracy in the initial margin model;
    - (b) the breach of the threshold referred to in paragraph 9 whether an ad-hoc analysis of the breach identifies a material weakness or inaccuracy in the initial margin model.

### *Article 18*

#### *Appropriateness of modelling assumptions and integrity of modelling processes*

1. When assessing that the initial margin model captures all significant risks arising from entering into non-centrally cleared OTC derivative contracts, in accordance with Article 14(2) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify all the following:

- (a) that the distributional and any other relevant statistical assumptions used in the model, including volatility and correlation, are well justified, including the tails of the distributions relevant for the initial margin calculation;
  - (b) that the initial margin does not rely on parameters assumption, including correlation assumptions, that are not appropriately supported by market data;
  - (c) that the parameters used to describe any stochastic processes used in the model are well justified, and that, irrespective of whether the calibration of those parameters is performed using historical market data or market implied data, the approach selected is applied consistently by type of parameter.
2. Where initial margin calculations are based on a randomly generated simulation, competent authorities shall verify all of the following:
  - (a) that the number of simulations used is well justified and sufficient to avoid material simulation errors, when compared to the results of using a higher number of simulations;
  - (b) that the model development unit ensures that randomness properties of the number sequences used to generate the simulation are appropriate by performing statistical tests which assess at least the autocorrelation, the repeating patterns, and the probability distributions of those number sequences;
  - (c) that the use of variance reduction methods does not introduce inaccuracies in the IM calculation.
3. Competent authorities shall verify that the internal policies of the counterparty outline in detail the mapping between the pricing factors that are used to compute the changes in the netting sets value, and the risk factors that are used to compute the initial margin calculation. Competent authorities shall verify that the mapping performed by the counterparty is appropriate and based on objective criteria.

### *Article 19*

#### *Risk factors omitted from the initial margin model*

1. When assessing whether the initial margin model captures a sufficient number of risk factors, in accordance with Article 14(2), points (a) to (h), of Delegated Regulation (EU) 2016/2251, competent authorities shall verify that, where a risk factor is incorporated into a counterparty's pricing model but not into its initial margin model, the counterparty provides an appropriate justification for such an omission.
2. Where the counterparty justifies the omission referred to in paragraph 1 on the grounds of an excessive computational burden, competent authorities shall verify that the effect of the omitted risk factor is immaterial for initial margin calculation purposes.
3. Where a risk factor incorporated in the counterparty's pricing model is excluded from the initial margin model, in particular for counterparties holding material netting set in instruments embedded with such risk factors, competent authorities shall verify whether the counterparty assesses, as part of the analyses of back-testing overshootings referred to in Article 14(7), point (b), and Article 17(7), point (b), the materiality of the excluded risk factor for initial margin purposes.

## Article 20

### *Capture of nonlinearities in an initial margin model*

1. When assessing that an initial margin model captures main non-linear dependencies in accordance with Article 14(2), point (i), of Delegated Regulation (EU) 2016/2251, competent authorities shall verify all of the following:
  - (a) that, where a counterparty uses sensitivities to measure the risk from non-linear positions, it computes at least the material first- and second-order terms of Taylor series approximations, to reflect the change in the price of each position due to changes in relevant risk factors;
  - (b) that the counterparty captures all material risk linked to the non-linear profile of options and other products.
2. Where a counterparty uses Taylor series approximations to capture non-linearities, competent authorities shall verify that for the non-centrally cleared OTC derivative contracts in the netting set, the terms in the Taylor series approximation which are not taken into account for calculating the change in the market value of the non-centrally cleared OTC derivative contracts in the netting set are not material.

## Article 21

### *Use of proxies*

1. When assessing the use of proxies in accordance with Article 16(10) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify that proxy market data are used in the calibration of the initial margin model only for those risk factors for which direct market data are insufficient or not reflective of the true volatility of a position, and in particular:
  - (a) that the available data within the historical observation period used for the calibration of the initial margin model according to Article 16 of Delegated Regulation (EU) 2016/2251 contain missing data points or stale data;
  - (b) that there are insufficient available data within the historical observation period used for the calibration of the initial margin model according to Article 16 of Delegated Regulation (EU) 2016/2251 due to IT systems failures, the absence of a liquid market or the inexistence of a risk factor in that historical observation period.
2. When assessing the use of proxies in accordance with the requirements Article 16(10) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify that they are appropriately conservative and show a good track record for the actual position held. To that end, they shall verify:
  - (a) that the counterparty has documented and assessed any proxies used in the initial margin model;
  - (b) that the proxy documentation includes both of the following:
    - (i) areas where proxies equal to market data, without any further transformation, are used;
    - (ii) areas where weighted proxies are used;

- (c) the counterparty's assessment of whether the proxy conservatively approximates the risk factor;
  - (d) that the counterparty's selected proxy does not underestimate the volatility of the missing risk factor, including under stress conditions.
3. Competent authorities shall verify that, as part of the periodic internal validation in accordance with Article 13, the counterparty reviews the necessity for the proxies used and assesses the degree of data reliance on the risk factors approximated using proxies.

## *Article 22*

### *Risks arising from less liquid positions*

When assessing that the initial margin model conservatively assesses the risk arising from less liquid positions in accordance with Article 14(2), point (f), and Article 15(2) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify that counterparties have processes to identify illiquid positions and positions with limited price transparency and to capture their risks in the initial margin model conservatively.

## *Article 23*

### *Risk factor correlations*

1. When assessing whether the initial margin model reflects correlation in a prudent manner, in accordance with Article 14(8) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify that counterparties assess how a change in the assumed correlation between risk factors would affect the value of the total initial margin, by comparing the current calibration of the correlation with all of the following ones:
- (a) the previous calibration;
  - (b) a calibration to the most recent period of significant financial stress as referred to in Article 16(2) of Delegated Regulation (EU) 2016/2251;
  - (c) a calibration to the preceding 3 years;
  - (d) a calibration to the preceding 5 years.
2. Where counterparties calculate the initial margin by aggregating sensitivities via correlation parameters, competent authorities shall verify whether, as part of the internal validation process referred to in Article 13(2), point (b), those counterparties assess changes to the total initial margin under a high correlation scenario and a low correlation scenario where those correlation parameters are increased and decreased respectively. For this purpose, the competent authority may require those counterparties modifications of the correlation parameters according to both of the following:
- (a) under the high correlation scenario, by uniformly multiplying each parameter by 1.25 subject to a cap at 1;
  - (b) under the low correlation scenario, by taking the maximum between multiplying each parameter by 0.75 and multiplying each parameter by 2 and subtracting 1.

## SECTION 3

### *Simplified Supervisory Procedures*

#### Subsection 1

### **Simplified supervisory procedures for applications by counterparties**

#### *Article 24*

#### *Simplified supervisory procedures for validation of initial applications of an initial margin model*

In order to have their initial margin model validated by competent authorities, counterparties that meet the conditions set out in Article 2(1), point (a), and do not apply for validation according to Article 2(2) shall submit their application to those competent authorities in writing, together with the information set out in Articles 27 and 28.

#### *Article 25*

#### *Simplified supervisory procedures for validation of material extensions and changes to the initial margin model*

1. In order to have material extensions or changes to their initial margin model validated by competent authorities, counterparties that meet the conditions set out in Article 2(1), point (a), and do not apply for validation according to Article 2(2) shall submit their application to those competent authorities in writing, together with the documentation set out in Articles 27, and any change in the information set out in Article 28 from that provided for the purpose of the initial validation referred to in Article 24.
2. Extensions or changes to the initial margin model shall be considered material for the purposes of paragraph 1, where they meet any of the following conditions:
  - (a) they fall under any of the extensions referred to in Part I, Section 1, of Annex I, and they result in a change of 10% or more in terms of the ratio calculated in accordance with paragraph 3;
  - (b) they fall under any of the changes referred to in Part II, Section 1, of Annex I, and they result in a change of 10% or more in terms of the ratio calculated in accordance with paragraph 3;
  - (c) they result in a change of 20% or more in terms of the ratio calculated in accordance with paragraph 3.
3. The changes referred to in paragraph 2 shall be equal to the highest value of a ratio observed over the period of 15 consecutive business days prior to the date of application for validation of the extension or change. That ratio shall be calculated as the ratio given by the absolute value of the difference in the initial margin computed using the initial margin model with and without the extensions or changes, divided by the value of the initial margin computed

using the initial margin model without the extensions or changes, calculated as the sum of all netting sets in the scope of the initial margin model application.

4. The changes referred to in paragraph 2 and the ratio referred to in paragraph 3 shall not consider changes in the initial margin resulting from changes in the calibration of the initial margin model or calibration methodology, as specified in Part II, Section 2, point 2, of Annex I.
5. For counterparties belonging to a group, the changes referred to in paragraph 2 shall be calculated at the group level for all netting sets of the entities that have been given permission to use the same initial margin model. Investment funds that meet the requirements in Article 28(3) of Delegated Regulation (EU) 2016/2251, shall be considered distinct entities for the purpose of this Article.
6. For the purposes of assessing extensions or changes in this Article, counterparties shall not subdivide the extensions or changes into several incremental ones with the aim of avoiding a breach of materiality thresholds as defined in this Article.

#### *Article 26*

##### *Simplified supervisory procedures for notification of extensions or changes to the initial margin model which are not considered material*

All extensions and changes to the initial margin model, other than those referred to in Article 25, shall be notified to competent authorities at least on an annual basis, in accordance with the documentation requirements set out in Article 27 together with any change in the information set out in Article 28 with respect to what provided for the purpose of the initial validation referred to in Article 24.

#### *Article 27*

##### *General documentation requirements under the simplified supervisory procedures*

1. When applying for the initial validation in accordance with Article 24, for material extensions or changes in accordance with Article 25, or notifying non-material extensions or changes in accordance with Article 26, counterparties shall submit to competent authorities, together with their application or notification, at least the general documentation outlined in Article 6(1), points (a) to (e), (g) and (i), and a self-assessment of the compliance with Chapter I, Section 4 of Delegated Regulation (EU) 2016/2251 and this Regulation.



2. By way of derogation from paragraph 1, and in accordance with the requirements set in Article 8, paragraphs 2 and 3, where the counterparty applying for validation relies on the service provided by one or more counterparties validated in accordance with the procedures set out in Section 2, that counterparty shall submit to its competent authority, together with its application or notification, the general documentation outlined in Article 6(1), points (a) to (c), and (i), and a list of the validated counterparties which it relies upon for the implementation of its model, and of the competent authorities that granted validation of their initial margin models.

### *Article 28*

#### *Documentation requirements specific to governance under the simplified supervisory procedures*

1. Competent authorities shall assess that the initial margin model governance arrangements comply with the requirements set out in Article 18(1) of Delegated Regulation (EU) 2016/2251 based on the documents submitted by the counterparty.
2. In order to determine the soundness of the role of the counterparty's senior management and management body, competent authorities shall receive all of the following documents:
  - (a) a description of the organisational structure of the senior management and management body;
  - (b) documentation, in the form of reports addressed to the management and meeting minutes, reflecting that the senior management and management body have a general understanding of the initial margin model and are involved in the management of the model.
3. In order to determine the appropriateness of the governance of the model development unit, competent authorities shall receive all of the following documents:
  - (a) description of the organisational structure of the model development unit;
  - (b) documentation showing that the model development unit ensures the units responsible for originating, renewing, or trading exposures cannot alter the model implementation without appropriate control;
  - (c) the latest and other relevant reports to the management of at least the last year.
4. In order to determine the appropriateness of the audit, competent authorities shall receive all of the following documents:
  - (a) description of the organisational structure of the audit function;
  - (b) documentation showing that the audit function is independent;
  - (c) the latest and other relevant audit reports of at least the last year.
5. For the purposes of assessing whether the internal validation process for an initial margin model meets the requirements of internal governance, competent authorities shall receive all of the following documents:
  - (a) description of the organisational structure of the internal validation unit;

- (b) documentation showing that the internal validation is independent from units responsible for the development of the initial margin model;
  - (c) the latest and other relevant validation reports of at least the last year.
6. In order to determine the appropriateness of the IT infrastructure, competent authorities shall receive all of the following documents:
- (a) description of IT systems related to the initial margin model calculation;
  - (b) the latest IT reports detailing the accuracy and timeliness of initial margin calculations.
7. By way of derogation from paragraphs 3 to 6, where the counterparty applying for validation relies on the service provided by one or more counterparties validated in accordance with the procedures set out in Section 2, that counterparty shall submit to its competent authority, a list of the validated counterparties which it relies upon for the implementation of its model, and of the competent authorities that granted validation of their initial margin models, the description of the organisational structure of the counterparty's model development unit, and evidence that the model is suitable for the business applied by the counterparty.
8. Authorities shall request from the counterparty any other additional documents deemed necessary to complete the assessment described in this Section.

## Sub-section 2

### **Simplified supervisory procedures for granting validation**

#### *Article 29*

##### *Further provisions applicable for simplified supervisory procedures*

1. In order to validate an initial application for the use of an initial margin model in accordance with Article 24, or for extensions or changes to that model in accordance with Article 25, competent authorities shall apply Articles 7, 8 and 17. Where the application of Article 17 is not feasible because the minimum number of 100 observations specified in Article 17(1), point (c), is not available, competent authorities shall apply Article 14 instead.
2. For the purpose of the application of Article 7, where the outsourcing is delegated to a counterparty that has been granted validation in accordance with the procedures set out in Section 2, the absence of limitations referred to in Article 7, first paragraph, point (d), shall not extend to:
  - (a) information not related to the netting sets to which the initial margin model subjected to the outsourcing is applied, or;
  - (b) proprietary information of the delegated counterparty linked to:

- (i) discussion with its competent authority;
  - (ii) internal and regulatory audits;
  - (iii) internal decision-making process;
  - (iv) pricing model assumptions;
  - (v) issuer rating information, and;
  - (vi) information concerning other counterparties.
3. For the purpose of the application of Article 7, first paragraph, point (e), where the outsourcing is delegated to a counterparty or a third-party that has been granted validation in accordance with the procedures set out in Section 2, competent authorities of the delegating counterparties may rely on the supervisory information analysed and the assessment made with reference to the delegated counterparty, where the conditions specified in Article 8, paragraphs 2 and 3, are met.
4. For the purpose of the application of Article 7, first paragraph, points (d) and (e), where the outsourcing is delegated to a counterparty that has been granted validation in accordance with the procedures set out in Section 2, the obligation to provide information to the audit or the competent authority shall remain with the delegating counterparty.

## **SECTION 4**

### **TRANSITIONAL AND FINAL PROVISIONS**

#### *Article 30*

##### *Transitional provisions*

The following shall apply in relation to the supervisory validation of initial margin models already in use by counterparties prior to the date of application of this Regulation:

(a) in order for counterparties to be able to continue to use such models, they shall submit their application to their competent authorities in accordance with Article 3 or Article 24, based on the criteria specified in Article 2(1) and (2) at the latest within one month from the date of application in accordance to Article 31, paragraphs second to forth;

(b) competent authorities may object to the use of the model within two years from the date of application referred to in point (a), based on the provisions of this Regulation.

#### *Article 31*

##### *Entry into force and date of application*

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

Section 2 shall apply [*Instructions to OJ*: 1 year from the date of entry into force of this Regulation].

Section 3 shall apply [*Instructions to OJ*: 2 years from the date of entry into force of this Regulation] where the counterparty has an aggregate month-end average notional amount of non-centrally cleared OTC derivatives, computed in accordance with Article 28 of Delegated Regulation (EU) 2016/2251, for the months of March, April and May 20XX [*instructions to OJ*: insert the year prior to entry into force of this Regulation] that is above EUR 50 billion.

Section 3 shall apply [*Instructions to OJ*: 3 years from the date of entry into force of this Regulation] where the counterparty has an aggregate month-end average notional amount of non-centrally cleared OTC derivatives, computed in accordance with Article 28 of Delegated Regulation (EU) 2016/2251, for the months of March, April and May 20XX [*instructions to OJ*: insert the year prior to entry into force of this Regulation] that is less than or equal to EUR 50 billion.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

*For the Commission  
The President*

*[For the Commission  
On behalf of the President*

*[Position]*

## ANNEX

### ANNEX I

#### EXTENSIONS AND CHANGES TO THE INITIAL MARGIN MODEL

##### PART I

##### EXTENSIONS TO THE INITIAL MARGIN MODEL

###### Section 1

###### **Extensions requiring competent authorities' approval ('material')**

1. Extension of the initial margin model to an additional location in another jurisdiction, including extending the initial margin model to the positions of a desk located in a different time zone, or for which different front office or IT systems are used.
2. Extension of the initial margin model to additional asset classes.
3. Extension of the initial margin model to new legal agreement types with regard to netting and margining if they require new or different modelling techniques compared with the ones for the existing legal agreement types.

###### Section 2

###### **Extensions requiring ex ante notification to competent authorities**

1. The inclusion in the scope of an initial margin model of product classes requiring risk modelling techniques other than those forming part of the validated initial margin model, including path-dependent products, or multi-underlying positions.

##### PART II

##### CHANGES TO THE INITIAL MARGIN MODEL

###### Section 1

###### **Changes requiring competent authorities' approval ('material')**

1. Changes in the way the model captures the effect of existing margining legal agreements for calculating initial margin exposure.

2. 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 and the calibration method used to calibrate the parameters of the underlying stochastic processes.

## Section 2

### **Changes requiring ex ante notification to competent authorities**

1. Changes in the fundamental features of the statistical methods applied in the initial margin model, including any of the following:
  - (a) reduction in the number of simulations;
  - (b) introduction or removal of variance reduction methods;
  - (c) changes to the algorithms used to generate the random numbers;
  - (d) changes in the statistical method used to estimate volatilities or correlations between risk factors;
  - (e) changes in the assumptions about the joint distribution of risk factors.
2. Changes to the calibration of the initial margin model or calibration methodology, in accordance with Article 16 of Delegated Regulation (EU) 2016/2251.
3. Changes in the definition of risk factors in the initial margin model.
4. Changes in the methodology for defining proxies.
5. Changes in how shifts in risk factors are translated into changes of the netting set market values, including all of the following:
  - (i) changes between analytical, semi-analytical, and simulation-based pricing functions;
  - (ii) changes between Taylor-approximation and full revaluation approaches;
  - (iii) changes in the methods for calculating sensitivity measures;

The changes referred to in the first subparagraph shall require ex-ante notification to the competent authority where they meet all of the following conditions:

- (i) for all netting sets having an absolute market value greater than EUR 10.000.000 before the change, the absolute value of the relative change is greater than 10% for at least one netting set;
- (ii) the sum of the absolute market values of all the netting sets of the counterparty affected by the change is greater than EUR 100.000.000 before the change;
- (iii) the absolute value of the relative change of the sum of the absolute market values of all the netting sets of the counterparty affected by the change is greater than 1% of the value before the change.

6. Changes in the methodology used for back-testing.



7. Changes to methodology for including add-ons or adjustments in the model.
8. Changes to the treatment of non-linear risks and basis risks.
9. Changes in the IT environment, including any of the following:
  - (a) changes to the IT system, which result in amendments in the calculation procedure of the initial margin model;
  - (b) applying vendor pricing models for the first time;
  - (c) outsourcing of central data collection functions for the first time.



## ANNEX II

### OVERSHOOTINGS REPORTING

#### Section 1

##### **Remittance dates**

1. The reporting remittance date shall fall within 15 working days from the day of the reporting reference date which is the last business day of each quarter in accordance with the frequency set out in Article 14(8) and 17(8) of this Regulation.
2. If the remittance date is a public holiday in the Member State of the competent authority to which the reporting is to be provided, or a Saturday or Sunday, data shall be submitted on the following working day.

#### Section 2

##### **IT solutions for the submission of data from institutions to competent authorities**

1. Counterparties shall submit the information referred to in this Regulation in the data exchange formats and representations specified by their competent authorities.
2. Numeric values shall be submitted as data points according to the following:
  - (i) data points with the data type “Monetary” shall be reported using a minimum precision equivalent to thousands of units;
  - (ii) data points with the data type “Percentage” shall be expressed as per unit with a minimum precision equivalent to four decimals;
  - (iii) data points with the data type “Integer” shall be reported using no decimals and a precision equivalent to units.

#### Section 3

##### **General instructions**

1. Counterparties in the scope of the standardised supervisory procedures as specified in Section 2 of this Regulation shall report only for those netting sets with a MAS, as defined in Article 14 and Article 17, that exceed the threshold of EUR 5 000 000.
2. Counterparties in the scope of the standardised supervisory procedures as specified in Section 2 of this Regulation shall report the netting sets with the highest MAS computed in accordance with the static back-testing defined in Article 14, in this order, where available:
  - (a) 15 highest MAS for red netting sets in descending order;

- (b) 10 highest MAS for amber netting sets in descending order;
- (c) 5 highest MAS for green netting sets in descending order.
3. Counterparties in the scope of the standardised supervisory procedures as specified in Section 2 of this Regulation shall report the netting sets with the highest MAS computed in accordance with the dynamic back-testing defined in Article 17, in this order, where available:
- (a) 15 highest MAS for red netting sets in descending order;
- (b) 10 highest MAS for amber netting sets in descending order;
- (c) 5 highest MAS for green netting sets in descending order.
4. Counterparties in the scope of the simplified supervisory procedures as specified in Section 3 of this Regulation shall report only those data according to the back-test performed in accordance with Article 29, and only those netting sets with a MAS as defined in Article 14 or Article 17, as applicable, that exceed the threshold of EUR 500 000.
5. Counterparties in the scope of the simplified supervisory procedures as specified in Section 3 shall report the netting sets with the highest MAS computed in accordance with Article 14 or Article 17, as applicable, in this order, where available:
- (a) 5 highest MAS for red netting sets in descending order;
- (b) 3 highest MAS for amber netting sets in descending order;
- (c) 2 highest MAS for green netting sets in descending order.
6. All amounts shall be in the reporting currency.
7. For the purpose of this reporting, the counterparty shall determine the “margin average relative shortfall” (MARS) for static back-testing for each netting set  $ns$ , as follows:

$$\text{MARS}_s^{ns} := \frac{100}{T} \sum_{t=1}^T \max\left(0, \frac{\text{PL}_t^{ns}}{\text{IM}_{\text{end of period}}^{ns}} - 1\right)$$

where:

- $\text{MARS}_s^{ns}$  denotes the margin average shortfall for static back-testing for each netting set  $ns$ ;
- $\text{PL}_t^{ns}$  denotes the change in the market value at date  $t$  over the margin period of risk as applicable and
- $\text{IM}_{\text{end of period}}^{ns}$  denotes the initial margin amount computed by the model over the margin period of risk as applicable, for the static back-testing in accordance with Article 14, i.e., the initial margin amount for all dates is the one at the end of the period applied for the static back-testing.

8. For the purpose of this reporting, the counterparty shall determine the “margin average relative shortfall” (MARS) for dynamic back-testing for each netting set  $ns$ , as follows:

$$\text{MARS}_d^{ns} := \frac{100}{T} \sum_{t=1}^T \max\left(0, \frac{\text{PL}_t^{ns}}{\text{IM}_t^{ns}} - 1\right)$$

where:

- $\text{MARS}_d^{ns}$  denotes the margin average shortfall for dynamic back-testing for each netting set  $ns$ ;
- $\text{PL}_t^{ns}$  denotes the change in the market value at date  $t$  over the margin period of risk as applicable and
- $\text{IM}_t^{ns}$  denotes the initial margin amount computed by the model over the margin period of risk as applicable for the dynamic back-testing in accordance with Article 17 and denotes the initial margin amount at date  $t$  computed by the model over a 1-business-day MPoR. Should  $\text{IM}_t^{ns} = 0$  occur for a date  $t$ , the summand shall be set to zero for that date in  $\text{MARS}_d^{ns}$ .

#### Section 4

#### **General information to be reported at counterparty level**

1. Counterparties in scope of this Regulation shall report at least the following information concerning the whole set of netting sets for which the counterparty exchanges initial margin:
  - a. Name of the counterparty reporting the information;
  - b. LEI code of the counterparty reporting the information, where available;
  - c. Classification of the counterparty, reporting the information, in accordance with Article 2, points (8) and (9), of Regulation (EU) 648/2012, where available;
  - d. Reporting reference date;
  - e. Total number of all netting sets for which the counterparty exchanges initial margin;
  - f. Total number of all netting sets for which an initial margin model in scope of this Regulation is used;
  - g. Total amount of collected initial margin of all netting sets of point (e) as of the reporting date;
  - h. Total amount of collected initial margin of all netting sets of point (f) as of the reporting date;

- i. Average daily initial margin of all netting sets of point (e) over the reporting quarter;
- j. Average daily initial margin of all netting sets of point (f) over the reporting quarter;
- k. Where the static back-testing in accordance with Article 14 was performed: the total sum of the MAS of all netting sets in point (f) for which the static back-testing was performed;
- l. Where the dynamic back-testing in accordance with Article 17 was performed: the total sum of the MAS of all netting sets in point (f) for which the dynamic back-testing was performed;
- m. Where the static back-testing in accordance with Article 14 was performed: the total number of netting sets of the ones in point (f) for which the static back-testing was performed and the number of nettings sets being classified according to Articles 14(3) as Green, Amber and Red.
- n. Where the dynamic back-testing in accordance with Article 17 was performed: total number of netting sets of the ones in point (f) for which the dynamic back-testing was performed and the number of netting sets being classified according to Article 17(3) as Green, Amber and Red.

## Section 5

### **Specific Information to be reported at netting set level**

1. Counterparties in scope of the standardised supervisory procedures shall report at least the following information for each netting set selected in accordance with Section 3 of this Annex both for the static back-testing in accordance with Article 14 and for the dynamic back-testing in accordance with Article 17. Counterparties in scope of the simplified supervisory procedures shall report the following information for each netting set selected in accordance with Section 3 of this Annex only for the static or dynamic back-testing performed in accordance with Article 29, as applicable:
  - a. Name of the counterparty of the netting set;
  - b. LEI code of the counterparty of the netting set, where available;
  - c. Classification of the counterparty of the netting set in accordance with Article 2, points (8) and (9), of Regulation (EU) 648/2012, where available;
  - d. Reporting reference date;
  - e. Type of back-testing (static or dynamic);
  - f. Name of the model applied;
  - g. Internal bank's identification of the netting set;



- h. Description of the netting set (risk class and type of derivative);
  - i. Amount of average daily initial margin of the netting set in the reporting quarter;
  - j. Classification of the netting set in accordance with Article 14(3) or Article 17(3): green, amber, or red;
  - k. Amount of the margin average shortfall (MAS) of this netting set computed in accordance with Article 14(5) or Article 17(5);
  - l. Amount of margin average relative shortfall (MARS) of this netting set, computed in accordance with the definition in Section 3, points (7) and (8), of this Annex;
  - m. Margin period of risk (MPoR) applied for back-testing in accordance with Article 14(1), point (c)(i), or Article 17(1), point (c)(iii);
  - n. Start date of the period applied for back-testing in accordance with Article 14(1), point (c)(ii), or Article 17(1), point (c)(i);
  - o. End date of the period applied for back-testing in accordance with Article 14(1), point (c)(ii), or Article 17(1), point (c)(i);
  - p. Number of business days in the period applied for back-testing in accordance with Article 14(1), point (c)(ii), or Article 17(1), point (c)(i);
  - q. Total number of overshootings recorded for the netting set in the period applied for back-testing in accordance with Article 14(1) or Article 17(1);
  - r. Total number of overshootings recorded for the netting set in the reporting quarter;
  - s. Amount of difference between the change in market value and the initial margin defining the largest overshooting of the netting set in the reporting quarter. If there was no overshooting in the reporting quarter, report “not applicable”;
  - t. Date of the largest overshooting of the netting set in the reporting quarter. If there was no overshooting in the reporting quarter, report “not applicable”;
  - u. Concise explanation of the largest overshooting of this netting set in the reporting quarter. If there was no overshooting in the reporting quarter, report “not applicable”.
2. Additionally, for the netting sets selected in accordance with Section 3 of this Annex for which the static back-testing in accordance with Article 14 was performed:
- a. Total number of overshootings recorded for the netting set in the period that is used for the calibration of the initial margin model’s parameters in accordance with Article 14(7), point (d);

3. Additionally, for the netting sets selected in accordance with Section 3 of this Annex for which the static back-testing in accordance with Article 14 was performed:
- a. the initial margin of the netting set at the end of the period applied for back-testing,  $IM_{\text{end of period}}^{ns}$  in accordance with Article 14(1) point (c)(vi);
  - b. Value-at-risk number for the one-tailed 99 percent confidence interval over the MPoR of the netting set (historical VaR) applying the estimator specified in paragraph 4 obtained from the time-series of the changes in market value of the period in accordance with Article 14(1)(c);
  - c. Value-at-risk number for the one-tailed 99 percent confidence interval over the MPoR of the netting set (historical VaR) applying the estimator specified in paragraph 4 obtained from the time-series of the changes in market value of the period that is used for the calibration of the initial margin model's parameters in accordance with Article 14(7)(d);
  - d. Margin average shortfall for static back-testing ( $MAS_s$ ) of the netting set obtained from the time-series of the changes in market value of the period in accordance with Article 14(1)(c) computed in analogy with Article 14(5) and replacing the initial margin at the end of the period ( $IM_{\text{end of period}}^{ns}$ ) by the historical VaR calculated in accordance with point b;
  - e. Margin average shortfall for static back-testing ( $MAS_s$ ) of the netting set obtained from the time-series of the changes in market value of the period in accordance with Article 14(7)(d) computed in analogy with Article 14(5) and replacing the initial margin at the end of the period ( $IM_{\text{end of period}}^{ns}$ ) by the historical VaR calculated in accordance with point c.
4. Counterparties shall calculate the estimate of the value-at-risk number of a time-series of the changes in market value  $\{PL_t^{ns}\}$  with the following formula:

$$\widehat{VaR}^{ns} = ([m] - m + 1) \cdot PL_{([m])}^{ns} + (m - [m]) \cdot PL_{([m]+1)}^{ns}$$

where:

- $T$  denotes the number of dates of the time series of the changes in market values in  $\{PL_t^{ns}\}$ ;
- $\alpha = 1\%$ ;
- $m = \alpha(T + 1)$ ;
- $[m]$  denotes the integer part of  $m$ ;
- $PL_{(i)}^{ns}$  denotes the  $i$ -th largest observation of the time-series of the changes in market values  $\{PL_t^{ns}\}$  sorted in descending order, i.e., the largest change of market value is  $PL_{(1)}^{ns}$ .

## ANNEX III

## Back-testing tables

Table 1

<b>N. Obs.</b>	<b>Ng,s</b>	<b>Na,s</b>	<b>N. Obs.</b>	<b>Ng,s</b>	<b>Na,s</b>
<b>750</b>	<b>17</b>	<b>39</b>	<b>1030</b>	<b>22</b>	<b>45</b>
<b>760</b>	<b>17</b>	<b>39</b>	<b>1040</b>	<b>22</b>	<b>45</b>
<b>770</b>	<b>17</b>	<b>39</b>	<b>1050</b>	<b>22</b>	<b>46</b>
<b>780</b>	<b>18</b>	<b>40</b>	<b>1060</b>	<b>22</b>	<b>46</b>
<b>790</b>	<b>18</b>	<b>40</b>	<b>1070</b>	<b>22</b>	<b>46</b>
<b>800</b>	<b>18</b>	<b>40</b>	<b>1080</b>	<b>22</b>	<b>46</b>
<b>810</b>	<b>18</b>	<b>40</b>	<b>1090</b>	<b>22</b>	<b>46</b>
<b>820</b>	<b>18</b>	<b>41</b>	<b>1100</b>	<b>23</b>	<b>47</b>
<b>830</b>	<b>18</b>	<b>41</b>	<b>1110</b>	<b>23</b>	<b>47</b>
<b>840</b>	<b>19</b>	<b>41</b>	<b>1120</b>	<b>23</b>	<b>47</b>
<b>850</b>	<b>19</b>	<b>41</b>	<b>1130</b>	<b>23</b>	<b>47</b>
<b>860</b>	<b>19</b>	<b>41</b>	<b>1140</b>	<b>23</b>	<b>48</b>
<b>870</b>	<b>19</b>	<b>42</b>	<b>1150</b>	<b>23</b>	<b>48</b>
<b>880</b>	<b>19</b>	<b>42</b>	<b>1160</b>	<b>24</b>	<b>48</b>
<b>890</b>	<b>19</b>	<b>42</b>	<b>1170</b>	<b>24</b>	<b>48</b>
<b>900</b>	<b>20</b>	<b>42</b>	<b>1180</b>	<b>24</b>	<b>48</b>
<b>910</b>	<b>20</b>	<b>42</b>	<b>1190</b>	<b>24</b>	<b>49</b>
<b>920</b>	<b>20</b>	<b>43</b>	<b>1200</b>	<b>24</b>	<b>49</b>
<b>930</b>	<b>20</b>	<b>43</b>	<b>1210</b>	<b>24</b>	<b>49</b>
<b>940</b>	<b>20</b>	<b>43</b>	<b>1220</b>	<b>24</b>	<b>49</b>
<b>950</b>	<b>20</b>	<b>43</b>	<b>1230</b>	<b>25</b>	<b>50</b>
<b>960</b>	<b>20</b>	<b>44</b>	<b>1240</b>	<b>25</b>	<b>50</b>
<b>970</b>	<b>21</b>	<b>44</b>	<b>1250</b>	<b>25</b>	<b>50</b>
<b>980</b>	<b>21</b>	<b>44</b>	<b>1260</b>	<b>25</b>	<b>50</b>
<b>990</b>	<b>21</b>	<b>44</b>	<b>1270</b>	<b>25</b>	<b>50</b>
<b>1000</b>	<b>21</b>	<b>44</b>	<b>1280</b>	<b>25</b>	<b>51</b>
<b>1010</b>	<b>21</b>	<b>45</b>	<b>1290</b>	<b>25</b>	<b>51</b>
<b>1020</b>	<b>21</b>	<b>45</b>	<b>1300</b>	<b>26</b>	<b>51</b>

Table 2

<b>N. Obs.</b>	<b>Ng,d</b>	<b>Na,d</b>	<b>N. Obs.</b>	<b>Ng,d</b>	<b>Na,d</b>
<b>100</b>	<b>2</b>	<b>5</b>	<b>180</b>	<b>3</b>	<b>7</b>
<b>110</b>	<b>2</b>	<b>6</b>	<b>190</b>	<b>3</b>	<b>8</b>
<b>120</b>	<b>2</b>	<b>6</b>	<b>200</b>	<b>4</b>	<b>8</b>
<b>130</b>	<b>2</b>	<b>6</b>	<b>210</b>	<b>4</b>	<b>8</b>
<b>140</b>	<b>3</b>	<b>6</b>	<b>220</b>	<b>4</b>	<b>8</b>
<b>150</b>	<b>3</b>	<b>7</b>	<b>230</b>	<b>4</b>	<b>9</b>
<b>160</b>	<b>3</b>	<b>7</b>	<b>240</b>	<b>4</b>	<b>9</b>
<b>170</b>	<b>3</b>	<b>7</b>	<b>250</b>	<b>4</b>	<b>9</b>



## 4. Accompanying documents

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### 4.1 Draft cost-benefit analysis / impact assessment

As per Article 16(2) of Regulation (EU) No 1093/2010 (EBA Regulation), any guidelines and recommendations developed by the EBA shall be accompanied by an Impact Assessment (IA) which analyses the potential related costs and benefits.

This analysis presents the IA of the main policy options included in the Consultation Paper (CP) on regulatory technical standards (RTS) on Initial Margin Model Validation (IMMV). The IA is divided into two parts. The first part is a cost-benefit analysis of the policy options considered in the drafting of the RTS and is high-level and of qualitative nature. The second part reflects the results of a dedicated survey on the perceived costs and benefits to CAs and institutions, as well as estimates on the number and size of counterparties in the scope of the RTS.

#### A. Problem identification and background

In July 2012, the European market infrastructure regulation (EMIR)<sup>29</sup> established rules on OTC derivatives, central counterparties and trade repositories. Inter alia, it entails a framework for risk-mitigation techniques for OTC derivative contracts not cleared by a CCP. Mandated as part of Article 11 (15) of the EMIR, EBA has produced RTS on risk-mitigation techniques for OTC-derivative contracts not cleared by a CCP.<sup>30</sup> Inter alia, those RTS sets out requirements for counterparties around the calculation of initial margins.

Initial margins are crucial in the context of derivatives that are not centrally cleared. The latter accounts for a substantial part of the market and could therefore cause substantial contagion effects and hence financial stability issues in case a counterparty defaults. Initial margins present collateral to offset losses caused by a derivatives counterparty, thereby reducing contagion and spillover effects. Initial margins are hence an important tool to reduce systemic risk and ensure financial stability.<sup>31</sup>

However, until recently, there had been no formal, obligatory validation by competent authorities (CAs) of initial margin models used for the computation of initial margins to be exchanged by counterparties. Whilst the RTS on risk-mitigation techniques for OTC-derivative contracts not cleared by a CCP provide CAs with the legal powers to deny the use of those initial margin (IM) models that do not meet the requirements laid down by the RTS, it does however not provide for

<sup>29</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012R0648&from=EN>

<sup>30</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R2251&from=EN>

<sup>31</sup> Exact definition as per the RTS: 'Initial margin' means the collateral collected by a counterparty to cover its current and potential future exposure in the interval between the last collection of margins and the liquidation of positions or hedging of market risk following a default of the other counterparty.

a legal basis to validate and officially endorse internal models used for the calculation of initial margins.

The EMIR Refit<sup>32</sup> published in May 2019 has changed this and provides the missing link between initial margin models' usage by counterparties and the respective validation by CAs. The revised legislation provides an explicit mandate to the EBA to produce additional RTS on the actual supervisory procedures 'to ensure initial and ongoing validation of those risk-management procedures'. These have been developed in the form of 'initial margin model validation' methods presented in the CP at hand.<sup>33</sup>

## B. Policy objectives

The draft proposed RTS have been developed following Article 11 (15) (aa) of the EMIR Refit, establishing criteria for Internal Margin Model Validation (IMMV). They aim to establish common and consistent criteria for the validation by supervisors of counterparties' risk management procedures.

## C. Options considered, assessment of the options and preferred options

Section C. presents the main policy options discussed and the decisions made during the development and amendments of the templates and instructions. Advantages and disadvantages, as well as potential costs and benefits of the policy options and the preferred options resulting from this analysis, are reported.

### Taking a proportionate approach to model validation

**Option 1a: Require the same procedures, depth of analysis and methodology to be applied to all counterparties in the validation of initial margin models**

**Option 1b: Adopt a proportionate approach and require more streamlined validation procedures for counterparties with smaller aggregate average notional amounts (AANA)**

Article 36 of the RTS for risk-mitigation techniques for OTC derivative contracts not cleared by a central counterparty sets out a phased-in approach for the application of the initial margin calculation, staged by the size of the AANA of non-centrally cleared derivatives. Full phase-in was concluded at the end 2022, where the application of the initial margin was applied whenever AANA of both counterparties is above EUR 8 bn. As of the drafting date of the consulted RTS, initial margin calculation and exchange applied whenever AANA was greater than EUR 50 bn.

Therefore, by definition in the steady state the validation of the initial margin models also only applies in cases where the AANA is greater than EUR 8 bn. Arguably however, it needs to be assessed whether it is feasible, and indeed reasonable, for the validation of initial margin models

<sup>32</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:2019:141:FULL&from=EN>

<sup>33</sup> The term 'risk management procedures' has been interpreted as the use of initial margin models for the computation of initial margins to be exchanged.

of all counterparties (above ANNA of EUR 8 bn) to be fully-fledged or if it makes sense to apply simplified validation methods in certain cases.

It has been assessed that indeed a proportionate approach would be more appropriate and would lead to a more optimal allocation of supervisory resources. It is not feasible for CAs to apply a fully-fledged IMMV to all counterparties. Rather, it would be more efficient to enable CAs to focus attention and resources on the most significant players in the market and hence also those transactions most likely to trigger problems and contagion effects, should they fail. It is the latter counterparties, for which it is most crucial to have in place stricter initial margin model validation processes. Hence, **Option 1b has been chosen as the preferred option**. The RTS at hand propose a fully-fledged approach only for counterparties, which are institutions in accordance with the CCR definition, with an AANA > EUR 750 bn. For counterparties below this threshold, instead, validation can take place via a simplified assessment by CAs. In this way, supervisory resources can be focussed on where they are needed most.<sup>34</sup>

The threshold of EUR 750 bn has been chosen as it covers the great majority of the market. No official statistics are available on the size of counterparties and market coverage. Non-official figures shared at the Basel level show that at the global level, the EUR 750 bn threshold would cover the great majority of the total activity of not centrally cleared OTC. According to the same study, lowering the threshold would have a substantial impact on the share of the number of actual entities covered.

These findings are confirmed by the results from the EBA survey among 17 Competent Authorities conducted for the purpose of the impact assessment for the RTS. In the survey, NCAs were asked to provide the number of counterparties that fall under the specified AANA thresholds or belong to groups that fall under the specified AANA thresholds. The information is summarized in Table 1 below.

Out of the 17 NCAs that filled in the survey, six did not report any counterparties. Among the remaining NCAs, there were 362 counterparties identified. The total AANA for 341 of them (excluding Ireland, for which no AANA was provided) is EUR 60.8 trillion. Counterparties with AANAs above EUR 3 trillion can be found in DE, IE, FR and NL, representing 37.8 trillion AANA (without Ireland)<sup>35</sup>, almost two-thirds of the total AANA for all the identified counterparties.

The results indicate that there are 37 counterparties (out of 362) with AANA above EUR 750 billion, accounting for EUR 50 061 billion AANA, which constitutes 82.3% of the AANA of all the counterparties identified in the survey<sup>36</sup>. A decrease of the threshold to EUR 50 billion would lead to an increase in the share of AANA to 95%.

Given the high share of activity already covered using a threshold of EUR 750 bn, it has been concluded that the additional burden on European competent authorities in the form of quite a

<sup>34</sup> The RTS establish a minimum. Competent authorities of course can always decide to apply a fully-fledged approach to all counterparties under their remit.

<sup>35</sup> Data on nominal amount does not include Ireland.

<sup>36</sup> The total AANA excludes 12 counterparties from Ireland, for which no AANA information was provided.

substantial number of additional counterparties to be assessed, is not warranted. Furthermore, the application of the AANA methodology (in the specific case of EUR 750 bn figure) ensures consistency with the RTS on the risk management techniques.

Table 1 Number and size of counterparties (as of 30 September 2021)

	Number of counterparties	Total nominal amount of AANA (EUR billion) <sup>37</sup>
<b>Nominal AANA &gt; EUR 3 trillion</b>	17	37811.9
<b>Nominal AANA &gt; EUR 2.25 trillion and &lt;= EUR 3 trillion</b>	1	2872.0
<b>Nominal AANA &gt; EUR 1.5 trillion and &lt;= EUR 2.25 trillion</b>	6	2103.2
<b>Nominal AANA &gt; EUR 750 billion and &lt;= EUR 1.5 trillion</b>	13	7273.8
<b>Nominal AANA &gt; EUR 50 billion and &lt;= EUR 750 billion</b>	80	7862.0
<b>Nominal AANA &gt; EUR 8 billion and &lt;= EUR 50 billion</b>	245	2870.4
<b>Total</b>	362	60793.4

Source: EBA survey among NCAs on the impact of the RTS

Table 2: Number of counterparties by Member State (as of 30 September 2021)

	Nominal AANA > EUR 3 trillion	Nominal AANA > EUR 2.25 trillion and <= EUR 3 trillion	Nominal AANA > EUR 1.5 trillion and <= EUR 2.25 trillion	Nominal AANA > EUR 750 billion and <= EUR 1.5 trillion	Nominal AANA > EUR 50 billion and <= EUR 750 billion	Nominal AANA > EUR 8 billion and <= EUR 50 billion
<b>Belgium<sup>38</sup></b>					2	3
<b>Finland<sup>39</sup></b>	0	0	0	0	2	0
<b>France</b>	2				2	

<sup>37</sup> Data on nominal amount does not include Ireland.

<sup>38</sup> Subsidiaries of EU parent counterparties are not included.

<sup>39</sup> There will probably be one counterparty with nominal amount of AANA above EUR 8 billion, but it is within the perimeter of ECB (ECB did not report the quantitative data)

	Nominal AANA > EUR 3 trillion	Nominal AANA > EUR 2.25 trillion and EUR 3 trillion	Nominal AANA > EUR 1.5 trillion and EUR 2.25 trillion	Nominal AANA > EUR 750 billion and <= EUR 1.5 trillion	Nominal AANA > EUR 50 billion and <= EUR 750 billion	Nominal AANA > EUR 8 billion and <= EUR 50 billion
<b>Germany</b>	8	0	2	2	40	85
<b>Ireland<sup>40</sup></b>	5	0	2	5	1	8
<b>Italy</b>	0	0	0	1	7	1
<b>Luxembourg<sup>41</sup></b>	0	0	0	0	4	71
<b>Netherlands<sup>42</sup></b>	2		2	3	17	58
<b>Slovenia</b>	0	0	0	0	0	3
<b>Spain</b>	0	0	0	2	3	11
<b>Sweden</b>	0	1	0	0	2	5

Source: EBA survey among NCAs on the impact of the RTS

## Backtesting – Static or dynamic

### Option 2a: Require static backtesting

### Option 2b: Require dynamic backtesting

### Option 2c: Require both dynamic and static backtesting (in a proportionate way).

One cornerstone of initial and ongoing model validation (in general) is backtesting. Backtesting allows institutions and CAs to verify a model's ability to predict losses. This is done by comparing model predictions to realised values. The RTS on risk-mitigation techniques for OTC-derivative contracts not cleared by a CCP<sup>43</sup> set out the backtesting requirements for initial margin models in Article 14, which should 'include a comparison between the values produced by the model and the realised market values of the non-centrally cleared OTC derivative contracts in the netting set'.

Various specifications can be chosen in the context of backtesting. One specification is the choice between static and dynamic backtesting. The former compares risk measure values as calculated by the model (the IM), with changes in the values of the portfolios observed in the past. Crucially, the model calculates the risk measure values based on the portfolio composition and characteristics at testing time  $t$ , and compares them to changes in the value of the portfolio attributable to the

<sup>40</sup>Data is as per the notifications which have been received across various dates over the past number of years.

<sup>41</sup>The number of counterparties does not contain NFC- that are not subject to IM requirements.

<sup>42</sup>Wide range of institutions (pension, FC, NFC, banks, insurers)

<sup>43</sup><https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R2251&from=EN>

portfolio specifications in  $t-1$ , ...,  $t-n$ . In other words, the change in the composition of the portfolio over time is ignored, since the test is over a risk measure computed over a static composition of the portfolios, compared with the change in values of that same portfolios over a specific time window. Dynamic backtesting on the other hand accounts for changes in the portfolio composition. Model outcomes based on a given portfolio at time  $t$ , are compared to changes in the value of the portfolios that materialise for that specific portfolio. This is performed for time  $t$ ,  $t+1$ , etc. 'Dynamic' refers to the fact that essentially the risk measure (IM) is continuously adjusted during the time of the test, and then compared with the changes in values of the portfolios of the day when the IM is actually computed.

Each approach has its advantages. Static backtesting allows one to create a long time series of values which to compare the model outcomes. Essentially, one takes portfolio of day  $t$ , and applies  $t-1$ , ...,  $t-n$ 's risk parameter values to calculate the changes in values of the portfolios of the portfolio for  $t-1$ , ...,  $t-n$  period on applying a static portfolio. The challenge is to have the time series of today's risk factors. Here lies the advantage of the dynamic back-testing approach, where the portfolio evolves over time along with the risk measure (IM), so the changes in values of the portfolios are easily available for comparison with the IM prediction.

Since it allows for a long time series, static back-testing is important when assessing and validating the calibration of a model. The calibration of the main methodology currently applied for the IM calculation, the ISDA standard initial margin model (ISDA-SIMM), is back-tested via static backtesting.

Nevertheless, for the purpose at hand - validating the implementation of internal margin models at the level of each counterparty - it has been assessed that the use of dynamic backtesting is crucial for monitoring the continued performance of the model over time. It is also much simpler as no time series of risk parameters are required.

Since the static backtesting is already run by major counterparties, and the dynamic one is not particularly complex to implement, the application of both backtesting methodologies for the most sophisticated counterparties is assessed as feasible. Dynamic backtesting only can be considered sufficient for less sophisticated counterparties and **Option 2c has therefore been chosen as the preferred option.**

### Backtesting – Time horizon

**Option 3a: Use 1-day changes in values of the portfolios for backtesting**

**Option 3b: Use 10 days changes in values of the portfolios for backtesting**

**Option 3c: Use 1 day and 10 days changes in values of the portfolios for backtesting, in accordance with the typology of backtesting implemented**

Another specification to be considered is the time horizon over which changes in values of the portfolios are accounted for the purpose of backtesting. There is a trade-off for using longer versus shorter time windows.

On the one hand, longer time windows (10 days) make it more difficult to account for changes in the portfolio (new and maturing trades). On the other hand, a shorter time window (1 day) does not match the time length used for the model calibration (typically 10 days).

The time horizon of the changes in values of the portfolios must be compatible with the output provided by the model implemented. Because of the decision to require running both static and dynamic backtesting for the most significant subjects, and only dynamic ones for less significant subjects, **Option 3c has been assessed as superior**. Using the 10 days overlapping changes in values of the portfolios is appropriate for the static backtesting, which is applied only by the most significant subjects, with greater computational capability. The smaller subjects in the scope will be asked to perform only the dynamic 1 day backtest. Therefore, they can use the 1-day change in values of the portfolios, to be compared with the rescaled IM output of the model (rescaling the 10 days IM with an appropriate methodology or actual recalibration of IM to 1 day IM will be both admissible). Hence both time windows apply, depending on the type of institution and the type of backtesting applied.

### Initial margin shortfall measures

**Option 4a: Introduction of the concept of SIMM Green Shortfall (industry proposal, plus additional requirements on amber netting sets)**

**Option 4b: Introduction of the concept of Margin Average Shortfall (MAS)**

Respondents in the public consultation expressed that the number of netting sets to analyse and report should be reduced to the most relevant ones to avoid an excessive burden, both on the side of counterparties and competent authorities.

In the context of these RTS, the notion of a margin shortfall measure is needed to capture netting sets that consistently present shortfalls with respect to their initial margins. Such a margin shortfall measure is mostly relevant for Article 14 (static backtesting), and Article 17 (Dynamic backtesting). The netting sets with the highest margin shortfall measure should be scrutinised with higher priority, in particular in combination with a high number of overshootings, while low margin shortfall measures would indicate less concern in a risk-based prioritisation. This will ensure a proportional approach to addressing problematic netting sets.

A margin shortfall measure should have the following properties:

- P1: It should grow with the initial margin, to grow with the size of a netting set

- P2: It should grow with the number of overshootings observed for a netting set
- P3: It should grow with the severity of overshootings observed for a netting set

One respondent proposed to use the ISDA SIMM Green Shortfall (the least amount of additional margin to make a netting set green in the back-testing traffic light approach). In this section both the SIMM Green Shortfall (Option 4a) and the alternative proposal Margin Average Shortfall (MAS) (option 4b) are described, and some observations on their properties are made.

In conclusion, it was considered that the Margin Average Shortfall would be more suitable for the context of the RTS for the needs of competent authorities. To be noted, the use of the Margin Average Shortfall does not interfere with the ISDA SIMM model to continue using another margin shortfall measure for their purposes.

In order to describe the two proposals, the following notations are used:

- $PL_t^{ns}$  denotes the *change in market value* (P&L) over the margin period of risk (MPoR) or 1 day as required for a netting set  $ns$ , applying essentially the same pricing methods as those used in the end-of-day valuation process as specified in Articles 14 and 17 of the draft RTS. A positive P&L means that a counterparty default would lead to a loss, which needs to be mitigated by the margin collateral posted.
- $IM_t^{ns}$  denotes the *initial margin amount* computed by the model for a netting set  $ns$ . We call the difference between the P&L and the initial margin the “additional margin”,  $A_t^{ns} = PL_t^{ns} - IM_t^{ns}$ . The additional margin can be negative in case the margin exceeds the P&L, and positive in case of a margin shortfall. This notation is general and comprises the case of a constant initial margin as in the static backtesting with  $IM_t^{ns} = IM_{\text{end of period}}^{ns} \forall t$ .
- An overshooting occurs when the P&L exceeds the initial margin,  $PL_t^{ns} > IM_t^{ns}$ , i.e. there is a *shortfall over the initial margin*,  $S_t^{ns} := \max(A_t^{ns}, 0) = \max(PL_t^{ns} - IM_t^{ns}, 0)$ . If an overshoot occurred and the counterparty defaulted at the same time, the amount  $S_t^{ns}$  would not be covered by the initial margin.
- For counting overshootings, let  $N_{OS}^{ns}$  denote the number of overshootings in a netting set. The thresholds and conditions for the overshooting count traffic light back-testing colours of a netting set are:  $N_{OS}^{ns} \leq N_g$  for green,  $N_g < N_{OS}^{ns} \leq N_a$  for amber, and  $N_{OS}^{ns} > N_a$  for red.

**Option 4a** presented above is the proposal to use **the ISDA SIMM definition of green shortfall**, which is the least amount of additional initial margin which would need to be added to give a green result from a (static or dynamic) backtest for red and amber netting sets. For green netting sets, ISDA SIMM defines ‘*the least negative shortfalls if the traffic-light result is “green”*’, which is a negative number. This definition is outlined in Point [C14.10] of the [“SIFMA AMG and Joint Trades Response to EBA Technical Standards for Initial Margin Model Validation”](#) and used in the ISDA SIMM regular monitoring.



Formally, the ISDA SIMM Green Shortfall (SGS) can be written as the  $(N_{OS}^{ns} - N_g)$ -th order statistic of shortfalls for non-green netting sets and for green netting the least negative additional margin, which is the maximum of the negative  $A_t^{ns}$ :

$$SGS^{ns} := \begin{cases} S_t^{ns} (N_{OS}^{ns} - N_g) = (A_t^{ns} > 0)_{(N_{OS}^{ns} - N_g)} ; N_{OS}^{ns} > N_g \\ \max_t (A_t^{ns} \leq 0) ; N_{OS}^{ns} \leq N_g \end{cases}$$

Equation 1

Some observations on the SIMM Green Shortfall:

- Per definition it will **be negative for green netting sets**, and only grows for non-green netting sets with the number of overshootings. In practice, green netting sets which are close to being amber and have seen large overshootings will not be selected if there is any non-green netting set of arbitrarily small size.
- It is discontinuous between green and amber netting sets with a cliff height when a netting set changes from green to amber with an additional overshooting at date  $t^*$  of

$$\min_{t=t_1, \dots, t_{N_g}, t^*} (A_t^{ns} > 0) - \max_{t=t_1, \dots, t_{N_g}} (A_t^{ns} \leq 0) \geq \min_{t=t_1, \dots, t_{N_g}, t^*} (S_t^{ns}),$$

Equation 2

i.e. a jump by at least the smallest overshooting shortfall amount recorded.  
This leads to a **cliff effect**;

- A single order statistic is **less robust** than an average;
- It has no easy interpretation.

Regarding the desired properties, P1 is fulfilled as scaling up the netting set would increase the SGS, property P2 is fulfilled, while P3 is not, both by construction.

**Option 4b** provides an alternative proposal to introduce the notion of **Margin Average Shortfall ("MAS")**, defined as the time average of the difference between the change in market value and the initial margin floored at zero, divided by the tail probability.

The average over all days means that if there was no shortfall over the initial margin on a day, zero is used in the average. Dividing by the tail probability 1% is done to ensure comparability with the calibration of the initial margin itself, because assuming a correctly calibrated initial margin, a shortfall over VaR(99%) (the initial margin) is only expected in 1% of cases, so one has to divide by this tail probability  $\alpha = 1\%$ .

Formally, this can be written as

$$MAS^{ns} := \frac{100}{T} \sum_{t=1}^T S_t^{ns} = \frac{1}{\alpha T} \sum_{t=1}^T \max(A_t^{ns}, 0) = \frac{1}{\alpha T} \sum_{t=1}^T \max(PL_t^{ns} - IM_t^{ns}, 0)$$

Equation 3

Some observations on the Margin Average Shortfall:

- It is **consistently defined for all netting sets**, without a specific treatment of the green and non-green cases.
- It grows with the number and size of overshootings also in the green netting sets. The increment when a netting set changes from green to amber with an additional overshooting at date  $t^*$  in the MAS is the contribution to the average of this day, i.e.  $\frac{S_{t^*}^{ns}}{\alpha T}$ . This is typically smoother than the increment for SGS because of the division by the observation period length  $T$ , and hence there is **no cliff effect**.
- An average is a **more robust** measure than a single order statistic.
- The average of daily shortfalls over the initial margin is an **easy-to-interpret measure**. The Margin Average Shortfall is the observed average loss over the initial margin scaled to the confidence level of the initial margin model.

Regarding the desired properties, P1 is fulfilled as scaling up the netting set would increase the MAS, properties P2 and P3 are fulfilled both by construction.

A relative version of the MAS is obtained by dividing the shortfall  $S_t^{ns}$  by the initial margin  $IM_t^{ns}$  on each date (assuming  $IM_t^{ns} > 0$ ) to have the **Margin Average Relative Shortfall (MARS)**:

$$MARS^{ns} := \frac{100}{T} \sum_{t=1}^T \frac{S_t^{ns}}{IM_t^{ns}} = \frac{1}{\alpha T} \sum_{t=1}^T \max\left(\frac{PL_t^{ns} - IM_t^{ns}}{IM_t^{ns}}, 0\right) = \frac{1}{\alpha T} \sum_{t=1}^T \max\left(\frac{PL_t^{ns}}{IM_t^{ns}} - 1, 0\right)$$

*Equation 4*

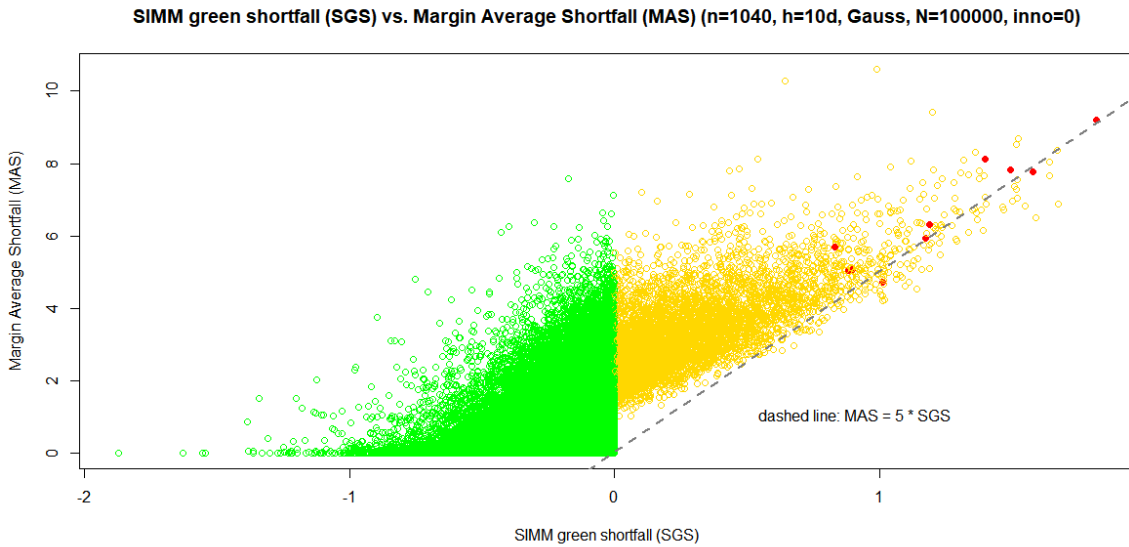
This normalisation allows a comparison across netting sets of all sizes in terms of the number and severity of overshootings. While property P1 is replaced by a standardisation to the initial margin amount, properties P2 and P3 remain fulfilled.

### Relation of SIMM Green Shortfall and Margin Average Shortfall

In this section we analyse how the SIMM Green Shortfall (SGS) and the Margin Average Shortfall (MAS) introduced above are related. For the analysis we use a synthetic simulation setup like for the static backtesting: 10 i.i.d. 1-day returns drawn from a standardised Gaussian distribution are added to mimic a 10-day MPoR. The initial margin is perfectly calibrated to the VaR(99%) of the 10-day distribution, which is also a Gaussian and thus the value is analytically known<sup>44</sup>. For other 1d return choices a numerical estimation can be performed.

<sup>44</sup>  $\text{VaR}(\text{Gauss}, 10\text{d}, 99\%) = \sqrt{10} \Phi^{-1}(0.99) = 7.356558$

Figure 1: SIMM Green Shortfall (SGS) vs Margin Average Shortfall (MAS). For “red” netting sets with a high number of overshootings, the relation is approximately linear.



Both SGS and MAS grow the more overshootings are encountered, so we expect a positive correlation. This is what we observe in Figure 1 for the perfectly calibrated initial margin model for 10 day MPoR in the Gaussian setup: For the red netting sets, there is an approximate linear relation between SGS and MAS, which is given by

$$MAS^{ns} \approx 5 \times SGS^{ns}$$

*Equation 5*

This relation allows to convert SGS and MAS for red netting sets with reasonable accuracy, and in a conservative manner for amber netting sets. For green netting sets (which per calibration of the back-test traffic light colors comprise 95% of the observations) the SGS is negative, and the proportionality cannot hold anymore, because the MAS is never negative.

One can also see that under the MAS measure, green and amber netting sets can have very similar values, especially then the SGS is close to zero. This means that their riskiness in case of counterparty default is similar. Results for different parameters (daily distributions, model calibration, MPoR, observation period  $T$ ) are qualitatively similar, while the steepness and intercept can change, in particular in case the initial margin model is artificially mis-specified (e.g. 10% too low).

To conclude, the Margin Average Shortfall was found to be the better alternative for the purpose of these RTS for risk-based prudential supervision. It works consistently for all netting sets and is smoother regarding the impact of single overshootings.

## Survey results

The validation of initial margin models is a new task for supervisors. The use of those models is foreseen with the regulator's push towards collateralisation and has a significant impact in terms of systemic risk reduction. A right balance had to be found in order for supervisors to fulfil the tasks with confidence without an overwhelming operational cost. Therefore, the set-up of this RTS aims at promoting cooperation between relevant CAs and at leveraging to some extent the existing practices for pillar 1 models. To collect CAs' feedback on the proposals and in particular, on their operationalisation, EBA has conducted a survey among CAs, in parallel with the public consultation.

The scope of the survey includes all the institutions under EMIR. Considering there are several competent authorities for EMIR in some jurisdictions, the survey was addressed to all relevant competent authorities.<sup>45</sup> Competent authorities (both national and ECB) responded to the survey in the limits of their perimeter of competence.

The survey assessed the following elements from the point of view of consistency with current regulation, impact (costs and benefits) on institutions and impact on NCAs:

### Assessment of Significance

- a. Use of the AANA (average aggregate notional amount)
- b. Possibility for CAs to single-handedly change the result of the assessment of significance (e.g., requiring the full assessment for a counterparty below the threshold but for which SIMM has a major impact on business, or requiring the simplified approach for a counterparty above the threshold because the counterparty underwent a recent IMM mission where the initial margin model was investigated).

### Assessment of the internal model's common governance requirements, including outsourcing

- c. Requirements on the documentation stemming from the model development unit, the internal validation unit, and the internal audit (documentation)
- d. Requirements on Independence of the model development unit and the front office and the internal validation unit, and independence of the internal audit unit (independence)
- e. Requirements on the involvement of senior management (involvement of senior management)
- f. Requirements on the competency and adequate staffing of the model development unit, the internal validation unit, and the internal audit unit (competency and adequate staffing)

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<sup>45</sup> Since not all competent authorities for EMIR are members of the EBA, the survey was be shared with ESMA and EIOPA for dissemination, with a request for co-operation of their competent authorities. In this regard, joint responses of competent authorities from the same jurisdiction were allowed.

g. Requirements on outsourcing, possible for model implementation and internal validation (outsourcing)

h. Requirements on IT infrastructure (IT infrastructure)

A separate quantitative section is dedicated to assessing the number and the total nominal amount of AANA (in EUR billion) of the counterparties in each jurisdiction that fall under the specified AANA thresholds or belong to groups that fall under the specified AANA thresholds.

The survey was completed by 17 National Competent Authorities. ECB also responded to the part of the survey assessing the costs and benefits for institutions and CAs.

### Consistency

Table 3 shows the answers from 17 NCAs to the question of whether they already have any national rules on a list of elements proposed in this RTS. None of the NCAs has elements related to the assessment of significance (AANA and possibility for CAs to single-handedly change the result of the assessment of significance).

Some NCAs follow the counterparties' practices in terms of margin requirements in general, as part of ongoing supervision of counterparties' activities as well as the international regulatory work and development in this area. However, they did not implement any national regulation in this respect.

Table 3: Do you currently have national rules or practices on the following policies?

Policy	Yes	No
a. Use of the AANA	0	17
b. Possibility for CAs to single-handedly change the result of the assessment of significance	0	17
c. Requirements on the documentation stemming from the model implementation unit, the internal validation unit, and the internal audit	5	12
d. Requirements on Independence of the model implementation unit and the front office and the internal validation unit, and independence of the internal audit unit.	6	11
e. Requirements on the involvement of senior management	7	10
f. Requirements on the competency and adequate staffing of the model implementation unit, the internal validation unit, and the internal audit unit	5	12
g. Requirements on outsourcing, possible for model implementation and internal validation.	6	11

Policy	Yes	No
h. Requirements on IT infrastructure	7	10

On the other elements used for the assessment of the internal model's common governance requirements, including outsourcing (points c to h), between 5 and 7 NCAs out of 17 have them in national rules.

Among the policies that already are used in EU jurisdictions, most are either public and binding, or are not public. The policies are generally fully, mostly, or partially complied with the RTS requirements (see Table 4). For each policy element, the type of rule and the level of compliance varies across countries, with no one trend observed.

Table 4: If the NCA answered yes to 1st question, what is the form of the rule and the overall level of compliance with the RTS requirements

Policy	Number of NCAs	Public and binding	Public and non-binding	Non public	Fully complied	Mostly complied	Partially complied	Not complied
c. Requirements on the documentation stemming from the model implementation unit, the internal validation unit, and the internal audit	5	3	0	2	2	1	2	0
d. Requirements on Independence of the model implementation unit and the front office and the internal validation unit, and independence of the internal audit unit.	6	4	0	2	2	2	2	0
e. Requirements on the involvement of senior management	7	5	0	2	2	2	3	0
f. Requirements on the competency and adequate staffing of the model implementation unit, the internal validation unit, and the internal audit unit	5	3	0	2	2	1	2	0
g. Requirements on outsourcing, possible for model implementation and internal validation.	6	3	1	2	2	1	3	0
h. Requirements on IT infrastructure	7	5	0	2	2	2	3	0

### Costs and benefits

In this section of the survey, NCAs provided an assessment of the magnitude of costs and benefits of various requirements in the draft RTS for institutions and for Competent Authorities. The assessment varies between negligible, small, medium, or large. For interpretation of results, we group the answers in two groups: negligible/ small vs medium/ large. A more detailed breakdown can be observed in the graphs.

Costs for institutions are assessed as negligible or small, by the majority of respondents for the following requirements: The possibility for CAs to single-handedly change the result of the assessment of significance and requirements on documentation, for which benefits were also assessed as mostly negligible or small (Figure 2). For the remaining requirements, both costs and benefits were assessed as medium or high by a majority of respondents: use of AANA, requirements on the independence of units, the involvement of senior management, the competence and adequate staffing, outsourcing and IT infrastructure (Figure 2 and Figure 3).

Figure 2: Costs for institutions expected by CAs by adoption of the draft RTS

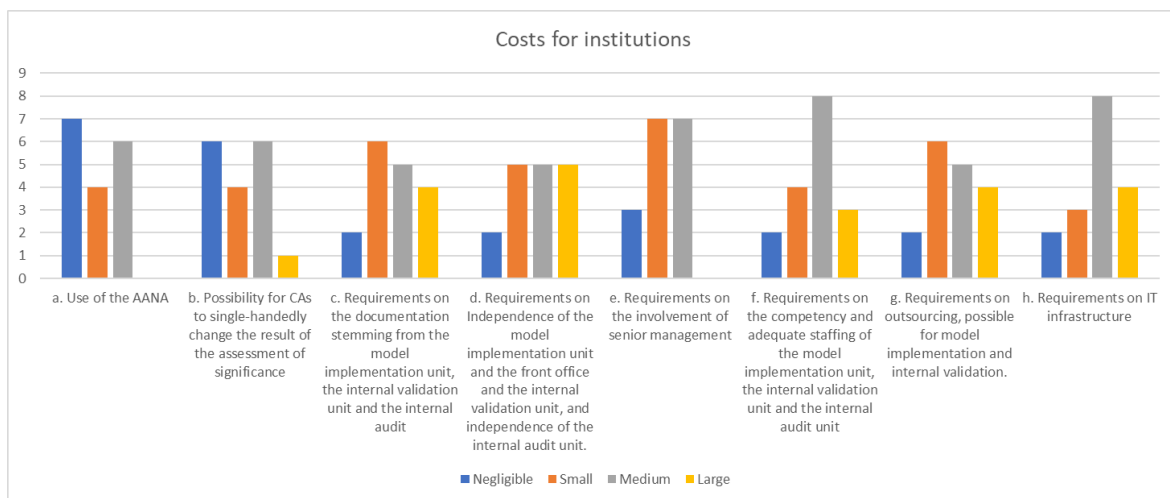
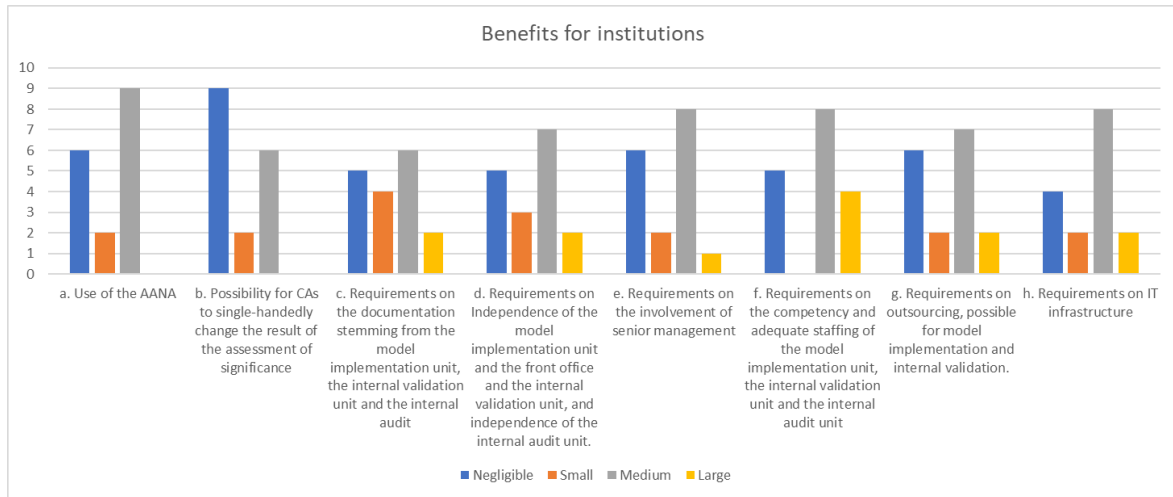




Figure 3: Benefits for institutions expected by CAs by the adoption of the draft RTS



For Competent authorities, all elements’ benefits are mostly assessed as medium or medium and large (Figure 5). Costs vary with medium or large costs expected from requirements on the independence of units, competency, and adequate staffing, outsourcing and IT infrastructure, as well as the possibility for CAs to single-handedly change the result of the significance assessment (Figure 4). Costs for Competent Authorities are assessed as negligible or small for the use of AANA, the involvement of senior management. An equal distribution of views between negligible/ small and medium/large is seen for requirements on documentation and requirements on independence of units.

Figure 4: Costs for Competent Authorities expected by CAs by adoption of the draft RTS

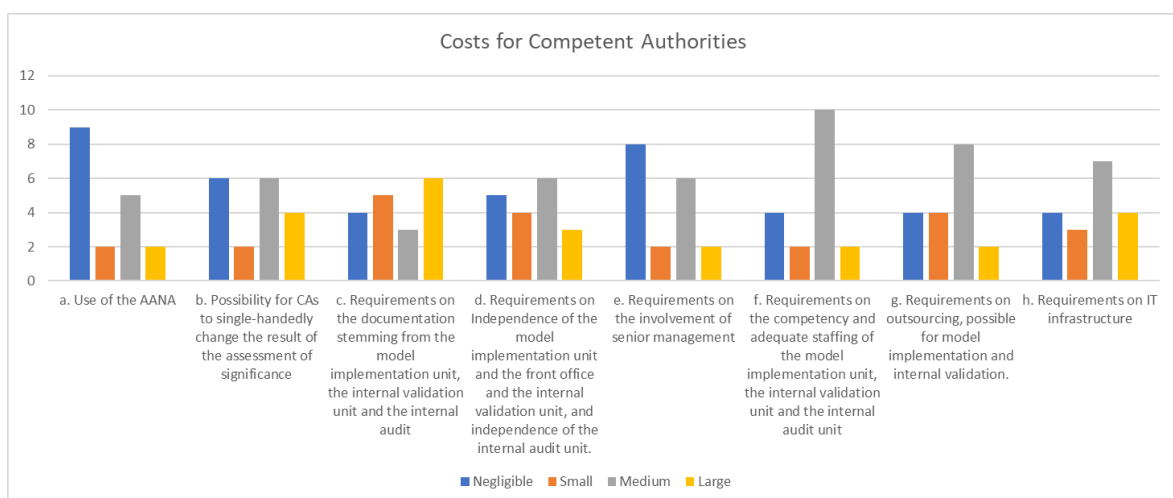
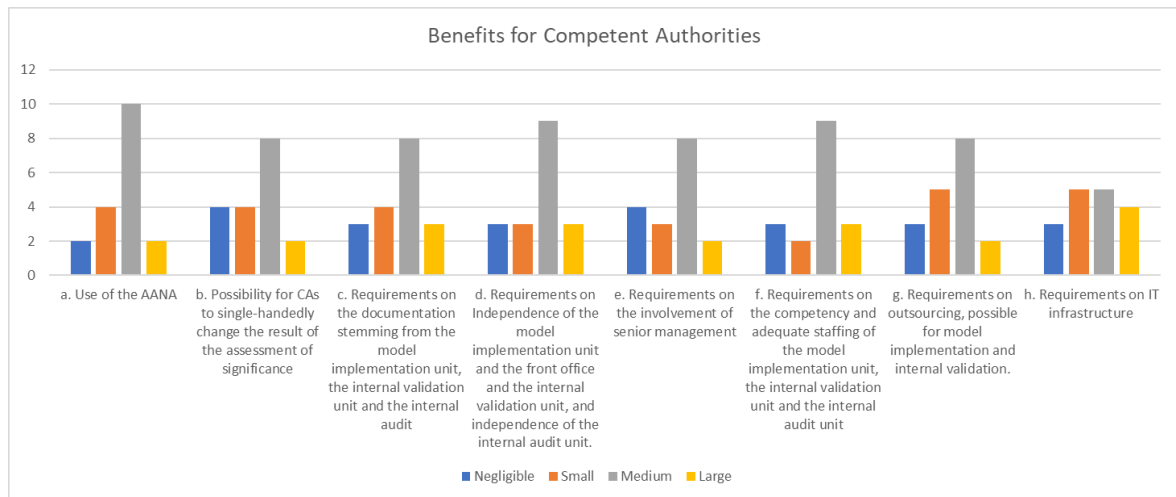


Figure 5: Benefits for Competent Authorities expected by CAs by adoption of the draft RTS



Below are provided some specific comments on the sources of costs and benefits for each of these requirements:

- Regarding the use of AANA, most CAs reported negligible or small costs for institutions because the volume of transactions is clearly below threshold, and therefore the RTS is not relevant to them. Several CAs assessed the costs as medium, referring mostly to largest counterparties that do not do the calculation of AANA at the moment, sine it involves a demanding reconciling process of figures of the trading repositories with their own books. Smaller counterparties may also find difficulties calculating the AANA, if there is a doubt about where they fall in or out of the scope of the RT. Ultimately the distinction by AANA is likely to benefit smaller counterparties in terms of smaller compliance costs. CAs in turn have no or little implementation costs but high benefits steaming from uniform calculation and proportionality.
- Possibility for CAs to single-handedly change the result of the assessment of significance was assessed as having negligible, small, or medium costs, and mostly negligible benefits. An NCA stated that the possibility of single-handed change is a sort of regulatory uncertainty for counterparties. For the NCAs, the question of whether to use the possibility creates additional work for the authority but unlikely to be used.
- Regarding the documentation stemming from the model implementation unit, the internal validation unit and the internal audit, costs were mostly assessed as medium or large, while benefits mostly negligible or small. Representative of the industry underlined in discussions with NCAs that the documentation requirements are quite burden. These requirements will imply a greater effort to be done by all these units, which in some cases must be sufficiently staffed and trained. This major effort will bring benefits in the medium and long term as it will over time improve internal practices and so be beneficial for counterparties. However, the impact (both costs and benefits) is expected to be limited for larger counterparties who are already using ISDA SIMM approaches, considering that the expected compliance of the ISDA SIMM approach to the RTS should be further clarified. For NCAs, costs are also expected to be

medium or large, as the NCA will need resources to be able to deal with the information that the companies will share with NCAs. Benefits are expected due to unified governance requirements that ensure consistent risk management and comparability among institutions

- On independence of units, costs were estimated by equal amount of CAs as small, medium, and large, while benefits were mostly assessed as medium. While the independence of different areas has clear, in case the organization must restructure their human resources in order to separate a group of people responsible of models (implementation, validation and audit) it will involve major costs, especially for smaller counterparties and NFC which subject to the margin requirements. For CAs, the segregation of duties and independence strengthen the counterparties internal practices and the reliability of quantitative and other information from counterparties. So, the need for deeper analyses and inspections into details are expected to decrease over time.
- On involvement of senior management: the estimation of costs was split between medium and negligible, with one NCA mentioning that potentially for smaller organisations this may entail larger costs. For NCAs, clear and transparent involvement of senior management facilitate supervision of ownership and responsibilities of models.
- On competency and adequate staffing, both costs and benefits for institutions were assessed as medium or large by NCAs. ECB however mentioned that most of these requirements are already applicable, given that they are enshrined in the ESAs RTS on risk-management procedures for OTC derivatives not cleared. Hence additional costs or benefits are likely not material. Similarly, to the above points, these requirements make the supervision less costly, and thus are beneficial.
- On Outsourcing, most costs were estimated as small or medium, while benefits mostly medium. Smaller counterparties and NFC may opt for this approach, which in any case may become costly as even simplified validation requires a significant amount of work. At the same time, as there are not many providers available, it can become very expensive. In terms of implementation, the expectation is that most of the counterparties choose a third-party IM model and may require external services for its implementation. Smaller counterparties and NFC may benefit from not to hire and manage much more staff when opting for outsourcing, although they will remain responsible of the work, and therefore they need to build internal capabilities in any case. Similarly, to the above points, these requirements make the supervision less costly, and thus are beneficial.
- On IT infrastructure, both costs and benefits were estimated as medium. Initially costly for counterparties but over time good IT support reduces costs of abiding by rules and reduces supervision costs as well. They will have to invest in software and people to implement the back-testing procedures and then run it on an ongoing basis. As benefits, they will gain efficiency in their middle office tasks, they will improve the trustworthiness of the outputs and reduce operational risks related to handmade process. Good IT support reduces costs of abiding by rules and reduces supervision costs for CAs as well.

### Estimates of costs for smaller counterparties to engage with external service providers

NCA's were asked to estimate the costs for smaller counterparties to engage with an external service provider to implement an initial margin model, once they fall under the threshold as per the phased-in approach as defined in Article 36 of the Commission Delegated Regulation 2016/2251. Three estimates were provided:

- (a) 600 thousand
- (b) 20 thousand
- (c) Only one NCA provided a more detailed response, as follows:
  - Phase 4 and Phase 5 counterparties estimate costs ranging from 4,500 thousand EUR to 8,000 thousand EUR for the initial implementation of an initial margin model. Apart from this, they estimate recurrent annual costs ranging 285 to 580 thousand EUR.
  - Phase 6 counterparties have responded that they expect initial cost of implementation ranging up to 2,000 thousand EUR, with big dispersion among the respondents. In terms of the annual recurrent costs, without considering the cost of validation, answers range from 45 thousand EUR to 262 thousand EUR, being the consensus under 100 thousand EUR of annual cost.

### D. Conclusion

The RTS on the validation of internal margin models are an important step in improving the accuracy, relevance, and effectiveness of initial margin calculations across the EU.

Since currently no legal obligations for validation exist, it can be argued that the initial costs for CAs will be significant. Nevertheless, the approval processes and methodologies build on the RTS on the assessment methodology for internal models from 2016<sup>46</sup> and hence CAs are already familiar with these processes. Importantly, the initial margin models that need to be validated and approved, in the large majority of cases, are the same in the form of the ISDA-SIMM<sup>47</sup> and as such CAs have smaller additional incremental costs for each counterparty validated. Furthermore, for the most significant subjects, since they are already using the IM models and hence it is expected that they are already compliant with the existing RTS on initial margin model requirements, there should not be any substantial additional cost, except to provide the documentation for validation to their CA.

The specific options chosen in the drafting of the RTS try to carefully balance any additional cost and benefits that validation implies for counterparties and CAs. A pragmatic approach has been taken towards the scope of application of the model validation itself, as well as the technical aspects

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<sup>46</sup> See EBA RTS on Internal Model Approach for Assessment Methodology

<sup>47</sup> The SIMM has been created by ISDA as a common global methodology to help market participants calculate initial margin on non-cleared derivatives developed under the Basel framework. This is intended to reduce the potential for disputes given there are more than one market players involved in agreeing on the model result (as opposed to internal models for credit risk, for example). See the latest SIMM methodology [here](#).



of the important element of backtesting, also acknowledging differences on requirements that still exist at the global level.

In this way, the RTS contribute to creating a level-playing field in initial margin calculations across the EU, whilst duly taking into account operational impacts.

## 4.2 Feedback on the public consultation

The EBA publicly consulted on the draft proposal contained in this paper.

The consultation period lasted for three months and ended on the 3 of February 2022. 11 responses were received, of which seven were published on the EBA website.

This paper presents a summary of the key points and other comments arising from the consultation, the analysis and discussion triggered by these comments and the actions taken to address them if deemed necessary.

In many cases several industry bodies made similar comments or the same body repeated its comments in the response to different questions. In such cases, the comments, and EBA analysis are included in the section of this paper where EBA considers them most appropriate.

Changes to the draft RTS have been incorporated as a result of the responses received during the public consultation.

### Summary of key issues and the EBA's response

The complete set of issues reported in the feedback to the consultation paper is in the following table. In summary, the two main issues detected in the feedback were the general concerns in the application of the proposed framework for smaller counterparties and some technical issues linked to monitoring the model's performance and the remediation actions linked to it.

The concerns for smaller counterparties were raised almost unanimously in the feedback. The respondents claimed an excessive prescriptiveness and complexity in the proposed framework proposed and suggested simplified validation for ISDA SIMM or total exemption for smaller firms.

An exemption from the legal requirements validation must be granted at level one regulation, i.e., EMIR, so there is no ground to consider in the RTS. The same goes for any favourable treatment for a specific model provided since the framework needs to apply to any IM model.

Nonetheless, the consultation paper took into significant consideration the fact that, currently, there is a predominant IM model applied in the market. Moreover, the final RTS address the issues for smaller counterparties simplifying even further the validation process for such counterparties when they rely upon, for the IM model implementation, subjects which are validated in accordance with the standardised process for validation and it makes outsourcing requirements for these smaller subjects even more straightforward to meet.

The concerns on the entity level monitoring and thresholds definition for remediation actions were addressed by redesigning the backtesting requirements. The backtesting requirements linked to the analysis and reporting of the issues to the supervisors are less burdensome with respect to the consultation paper. Remediation actions are now expected on a counterparties level when issues



are detected via the performance monitoring of the model. Specific metric measures are also prescribed to enhance transparency with respect to the IM model performances. The final RTS also define in detail the information to be reported to the supervisors to allow the continuous monitoring of the IM model performance within the optic of the ongoing validation of the IM model.

Additional details can also be found in the Background section and the Impact Assessment Section of these RTS.



## Summary of responses to the consultation and the EBA's analysis

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
<b>General comments</b>			
Exemption for smaller firms	A few respondents suggest that smaller firms using existing models (e.g., ISDA SIMM) should be exempted.	Exemptions must be defined in Level 1 regulation (EMIR), so the RTS cannot introduce exemptions not foreseen in EMIR; therefore, introducing exceptions via RTS would not be acceptable from a legal standpoint. Because of this, the suggestion to generally exempt some firms from validation requirements is not considered. As explained in the background and rationale of this RTS, smaller/less sophisticated subjects are considered thoroughly, and a specific simplified process is foreseen for them to comply with validation requirements. Nonetheless, following the feedback received specific aspects of the RTS have been reviewed, to make them feasible for counterparties in the scope of Section 3.	Please consult the specific article in Section 3 for the details of the changes in this regard.
Excessive prescriptiveness of the RTS	A respondent believes that the RTS is overly prescriptive and describes requirements that will be difficult, and in some cases impossible, for both Financial Counterparties (FC) and Non-Financial Counterparties over the clearing threshold (NFC+) (together, the "EU Counterparties") to meet.	Requirements are detailed when necessary to provide harmonious guidance to follow for different competent authorities during the validation. Nonetheless, many aspects of the RTS have been reviewed, following the feedback received, to make them workable for counterparties that have to follow them indirectly.	Please consult the specific questions for the details of the changes in this regard.
Conflict with ISDA SIMM	A few respondents believe that the proposed RTS does not adequately consider that IM is calculated	The proposal thoroughly considers the existence of the SIMM. The regulation has to be written and	Please consult the specific question for





Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<p>and exchanged subject to the ISDA SIMM which is de facto industry standard. Reliance on the SIMM methodology is also a vital prerequisite to allow cross-border/ cross IM-regime transactions.</p> <p>A respondent believes that this would not only avoid conflicts and inconsistencies but also significantly reduce complexity and increase the efficiency of the validation process for all involved parties, including the competent authorities.</p> <p>A respondent believes that firms which will apply for IM model approval, will have been using SIMM for as many as eight years. Changes to the model will take significant effort to implement, will be most onerous for smaller counterparties and will have global impact. Global consistency is key across users, in order to maintain the ability to reconcile initial margin; and across jurisdictions because many transactions span across borders.</p>	<p>applicable to a general IM model without favouring any specific IM model. On the other side, the existence of a broadly used IM model, which is industry standard, is vastly considered. For example, let's mention the outsourcing requirements and use of validations results (Articles 7 and 8), or the features of the backtesting (Articles 14 and 17); also, the provision on interval validation of the general structure (Article 13(2)(a)) and the many aspects of possible delegation and reference to general documentation. On the other side, the presence of an industry standard does not mean that supervisors should loosen their commitments toward model validation.</p> <p>The RTS do not intend to define the features of the IM model but establish a set of common requirements for supervisors to follow in the validation of the model.</p>	<p>the details of the changes in this regard.</p>
Simplified validation for ISDA SIMM	<p>A respondent believes that firms using SIMM and ISDA SIMM should generally be subject to a simplified and, in particular, uniform validation process.</p>	<p>As specified above, the presence of an industry-wide standard for IM model is taken into consideration in many aspects of the RTS. In this regard, counterparties applying a general IM model are facilitated in many aspects, therefore they are already subject to a form of simplified process for validation.</p>	<p>No change in the proposal followed this suggestion.</p>
Effect on hedging	<p>A respondent believes that, if adopted as proposed, the IMMV RTS may have the detrimental effect of forcing EU parties above the €750 billion threshold (Phase 1-4) to abandon SIMM and shift to the standardized method specified in Annex IV of the</p>	<p>Business continuity has been thoroughly considered in the development of the proposal, in the elaboration of the feedback received and in the drafting of the final draft RTS.</p>	<p>Please consult the specific question for the details of the</p>



Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	EMIR RTS (i.e., GRID). Together these consequences would have a chilling effect on the use of derivatives in the EU and derivatives trading with EU counterparties, creating a barrier to real world hedging.	Aspects concerning the inapplicability/difficult applicability of some backtesting requirements were addressed in the final RTS	changes in this regard.
Complexity of the “simplified” validation	A respondent highlights the complexity of the “simplified” validation which refers to a large extent to the rules applicable to the “standardised” validation.	EBA disagrees with the comment. The simplified process is quite simpler with respect the standardised one (for example: possibility to immediately implement the model, less communication to competent authorities, higher thresholds to define model changes, simpler backtesting requirements, less granular governance requirements). It should be noticed that not many concrete suggestions on where or how to simplify further the simplified process were provided by the respondents. Nonetheless, some further simplifications in the final RTS are provided based on the specific comments received to the specific questions.	Please consult the specific question for the details of the changes in this regard.
Emphasis on the role of the management body	A few respondents question if the management body is the right organisational level to assign tasks of such a technical nature, since this body of a credit institution is not typically involved in the day-to-day business. IM calculation and settlement are typically considered middle or back-office tasks.	The standards require an active involvement of the management body of the counterparty, which does not mean that the management body actually manages the IM model. The management body, as the final decision body of the firm is required to have the final say and take responsibility on behalf of the counterparty applying the model, on the suggestions provided by the units/bodies (internal or external) that actively manage (implement, internally validate and audit) the model.	No change in the proposal followed this suggestion.



Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Appropriateness of a draft RTS	A respondent questions whether it is appropriate to use a draft RTS as a legal basis when drafting proposals for technical standards.	<p>The final draft RTS on assessment methodology, even if not yet adopted by the EC and approved by the Parliament, represents an agreement among EU banking supervisors on the best guidance for model approval. Published RTS are also internally reviewed by EBA legal office, to ensure a sound legal basis of the draft legal text draft in it.</p> <p>Therefore, due to the many similarities (documentation requirements, model changes, externalisation, backtesting, governance etc) between the approval of Internal Models for Market risk capital requirements and validations of Initial Margin Model, it is appropriate to applying a similar wording, where it is appropriate, when it could facilitate the correct application of standards for counterparties and their supervisors.</p> <p>Finally, it should be clear that the legal basis of the RTS IMMV is the mandate in EMIR.</p>	Some articles in the RTS have been reviewed and the wording further clarified. Please consult the specific question for the details of the changes in this regard.
Service providers	A respondent believes the important role of service providers should be acknowledged by explicitly making it the task of service providers to ensure that the required model and model-governance documentation is available. Counterparties should have the final responsibility for having access to an IM model.	It is not the scope of the RTS to acknowledge the role of the service providers; moreover, considering wide variety of types of services provided, it is unlikely that they can be classified in here. In any case, a whole article of the RTS is dedicated to general outsourcing, plus specific delegation requirements (such as art 7(1)(i) and 13(3) are already explicit, but not limited, reference enough of to the role of providers. Responsibility of the counterparty for the respect of the standard was never under discussion.	The RTS have been amended in order to facilitate the provision of services and outsourcing in this specific model implementation. Please consult the specific question for the details of the



Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Thresholds under article 2(2)	<p>A respondent believes that decisions under Article 2(2) could be made with little or unclear argumentation, and it will open to very different practices across Europe. A respondent doesn't believe there is a need to request Section 2 compliance from counterparties above the EUR 50 billion threshold. However, should the Article 2(2) option be upheld, the respondent suggests that more specific and objective criteria for requiring Section 2 compliance should be introduced.</p>	<p>The same suggestion was considered in the specific question below – please refer to Q3 analysis.</p>	<p>changes in this regard.</p> <p>Please consult the specific question for the details of the changes in this regard.</p>
Entity level monitoring and thresholds	<p>A respondent is concerned with the provisions in the consultation that require analysis or remediation at the entity level, across all netting sets. There are legal, economic and practical reasons why we believe these entity-level requirements are unworkable, and we request they be replaced with portfolio-level. A respondent suggests that the IMMV RTS could incorporate the portfolio-level tests in the ISDA SIMM Governance Framework.</p>	<p>EBA is of the opinion the request for remediation actions at the entity level comes from a restrictive interpretation of the respondent. Only the analysis was requested at the entity level so that the counterparties as a whole are aware of the model's possible limitations. For example, in the requirements in the CP RTS IMMV, there was nothing that prevented applying a remediation action at the netting set/portfolio level. On the other hand, in order to avoid such misleading interpretations, the remediation actions references have been amended in the backtesting requirements of the RTS.</p> <p>The way the counterparties remediate model deficiency is a counterparties' decision when the counterparties detect deficiencies. When the supervisors detect deficiencies in applying the</p>	<p>Please consult the specific question for the details of the changes in this regard.</p>



Comments	Summary of responses received	EBA analysis	Amendments to the proposals
		<p>regulatory standards, the remediations will be agreed upon with the supervisors on a case-by-case basis.</p> <p>The final draft RTS provides substantial amendments concerning specific provisions to which this general comment is linked.</p> <p>Finally, the supervisors recognised and understood the contractual bilateral and private nature of the OTC business. Nonetheless, the bilateral and private nature of the OTC business cannot be exploited to lower the standards of IM model requirements.</p>	
<p><b>Responses to questions in Consultation Paper EBA/CP/2021/33</b></p>			
<p>Q1: What are the stakeholders' views regarding the split between standard and simplified validation processes?</p>	<p>A few respondents see that the validation process should not include smaller firms (e.g., those in Phase 4-6 regarding the implementation of IM) using existing models (e.g., ISDA SIMM) that have already been assessed by NCAs in the EU or approved by authorities in other BCBS-IOSCO non-cleared margin commitments-compliant jurisdictions and are yearly reviewed.</p> <p>A respondent considers that it should be clarified in the technical standards that smaller firms' usage of such existing models are out of scope of the regulation.</p> <p>A respondent asks that the counterparties using the SIMM model are derogated from this process when this use has been already approved.</p>	<p>Similar to what was already replied to in the general comments sections, firms in the scope of EMIR requirements cannot be exempted from validation, even if they use an industry-wide model or because another competent authority has done an assessment. For example, as allowed in the provisions, competent authorities could apply the results of their assessments of the general aspects of the same model used by another counterparty or other assessments from other competent authorities for the general part of the same model when available, and special provisions are applicable in the transition phase. Nonetheless, the validation has to be explicit when it comes to the application of that model for individual counterparties, and subjects in scope cannot be exempted from the validation.</p>	<p>No arguments have been raised against the splitting of the scope of the validation between simplified and standard process; no change in this regard in the final draft RTS are provided.</p>



Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<p>A respondent requests all Phase 5 and 6 non-brokers to be exempted from both internal back-testing and internal governance process (respectively Articles 14 and 18 of the Delegated Regulation 2016/2251)</p> <p>A respondent considers that the provisions of the Article 11(15) of EMIR regarding the initial and ongoing validation of risk-management procedures, that IM models, should not apply to the users of the SIMM model as this model has been already reviewed and approved by NCAs (check of compliance should be sufficient to fulfil the EMIR requirements).</p> <p>A respondent believes that the use of existing regulatory tests which have already been implemented for other purposes by the industry is welcome as it saves the considerable cost in time and money of education and implementation of a new test.</p> <p>A respondent believes that smaller banks do not use internal models in the market risk area and hence have no experience of the internal validation process. Some banks do not have capabilities or the will to invest in validation process – thus, the validation requirement (either simplified or standard) would create a gap between banks.</p>	<p>It is clear that smaller firms that use an industry-wide model are in the scope of validation requirements, as prescribed in the mandate for the RTS IMMV.</p> <p>Similarly, Phases 5 and 6 firms (even if they are non-brokers - industry terminology, without juridical value for EU jurisdiction, to indicate the clients of the bigger banks that usually works as a broker of the OTC contracts) cannot be exempted from an essential part of the validation such as backtesting or governance. These aspects were simplified with respect to the standard requirements, but they remain an essential element for competent authorities' decision-making process over the validation of a model.</p> <p>It is understood that smaller subjects, without previous experience in the validation of a model, will have to put in place some effort to obtain the validation, but it is clear that, since an IM model allows to obtain some advantages (it is usually less expensive than the grid computation for IM) for firms applying it, these advantages cannot be obtained without the sufficient guarantee that the subject applying the model is aware of its functioning and limitations of the IM Model.</p>	
Q2: What are the stakeholders' views regarding the Euro 750 bn threshold selected?	A few respondents suggest a lighter validation process, as well as a phase-in approach for the	As for the application of IM exchange, it is opportune to apply the validation requirement at the same level, in order to avoid easy circumvention of the	"or equal to" was added in Articles 2(1)(ii) and (iii)



Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<p>implementation: 2 years for Phase 5 and 3 years for Phase 6.</p> <p>A respondent believes that, in context of threshold setting for applicable model validation process (standard vs. simplified), the AANA calculated at group level is not aligned with the proportionate approach which drives ESAs considerations and taking into account the heterogeneity of counterparties subject to IM requirements. This is because the AANA calculated at consolidated group level catches up so called medium-small institutions affiliated in the group of large sophisticated major investment banks. The group level AANA approach is adequate where EMIR regulation addresses matters of systemic risk prevention (i.e. requirement to exchange VM and IM) but not for the model approach validation process which is based on sophistication and experience with model validation. In this regard one should look to size of the derivative portfolio at concerned entity level and not to that from the whole parent group. In other words, insurance companies, small/medium sized banks or investment companies being part of a financial group crossing the 750 billion AANA threshold on a consolidated level should benefit from simplified validation process where they remain taken individually under the threshold.</p> <p>A respondent suggests rewording Article 2(1)(ii) and (iii) from “less than EUR 750 billion” to “less than or equal to EUR 750 billion.”</p>	<p>regulation, and uneven application, by splitting the total volume of OTC derivatives within the subject of a group. Therefore, defining the level of approval at solo level is not applicable nor desirable.</p> <p>EBA, on the other side, agrees with the small amendment suggested of the Article 2(1)(ii) and (iii), to be consistent with definition of thresholds in Delegated Regulation 2251/2016.</p>	



Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<p>A respondent believes that whatever threshold is chosen, the SIMM will be validated first by counterparties with larger portfolios.</p>		
<p>Q3: What are the stakeholders' views regarding Article 2, Par 2, and the 50 Euro bn threshold selected to allow the switch from simplified to standardised validation processes?</p>	<p>A respondent considers that clear criteria for taking such decision by the national competent authority shall be established.</p> <p>A few respondents suggest that the phrase <i>"complexity and interlinkages of the counterparty activity in OTC derivatives"</i> is elaborated on to establish clear criteria for national competent authorities to apply the standard validation procedure or to delete the reference to the AANA EUR 50bn threshold in Article 2(2). Another alternative would be to increase the threshold materially.</p> <p>A respondent does not support the option in Article 2(2) for a competent authority to decide that the standardized approach applies to a Phase 5 following the submission of its initial application. Basing this decision on the <i>"complexity and interlinkages of the counterparty activity in OTC derivatives"</i> is subjective, leaving this decision open to differing interpretation, creating uncertainty for Phase 5 firms going into their IM model selection and could result in different requirements for entities of a Phase 5 group which are subject to approval by different competent authorities.</p>	<p>EBA has taken into account the reasonings of the respondents and reviewed the requirements in Article 2(2) of the consultation.</p> <p>The EBA took into consideration two options:</p> <ul style="list-style-type: none"> <li>a) removal of Article 2(2) (respondents' suggestion); or</li> <li>b) redraft of Article 2(2) - not to prevent medium size counterparties (such as medium banks just below the 750 bn threshold) from applying for a more "robust" validation to be able to provide the outsourcing services to the smaller counterparties.</li> </ul> <p>Since the requirements in Section 3 were simplified even more in case the service was outsourced to a counterparty that received the validation in accordance with the provisions provided in Section 2, it seems correct to allow even smaller counterparties to apply if they want to provide the outsourced service, for the more rigorous validation format. Option b was endorsed.</p>	<p>Article 2(2) was redrafted to enable a small counterparties to apply for a more complex validation procedure in order to be able to provide the IM model services to other counterparties.</p>





Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Q4: What are the stakeholders' views regarding Article 2, Par 3, that would allow a temporary implementation of the model to subject in the simplified validation process?	A respondent supports the ability for a competent authority to permit immediate use of an IM model or a material extension or change to such model for EU counterparties subject to the simplified validation process.		No change in the proposal followed this suggestion.
Q5: What are the stakeholders' views regarding Section 1? Please specify the issue by article where possible.	<p>A respondent believes that it would be justified to include the SIMM as a standard method and to postpone the entry into force of the RTS.</p> <p>A respondent believes that the definition of an "overshooting" in Article 1 should be revised to refer to a "gain in market values" rather than a "loss in market values". This is because counterparty credit risk increases when the portfolio value increases rather than decreases. This error also applies to the first line of the final paragraph on page 13 of the consultation; Article 13 (1)(c)(1); Article 14 (1)(b)(v),(vi); Article 14 (7)(c)(ii),(iii); Article 14 (9)(b)(i); and Article 17(9)(b)(i).</p>	<p>The proposal of the submitter would require, at least, a change in the Basel/IOSCO framework and a substantial review of the EMIR and Delegated Regulation 2251/2016; moreover, the SIMM is a patented product. Therefore, the proposal is not feasible at the current stage.</p> <p>The suggested amendment to the "overshooting" is, on the other hand, considered and accepted.</p>	The definition in Article 1 was amended as suggested, as well as the reference in Articles 13 and 14.
Q6: What are stakeholders' views regarding the methodology applied to identify material changes and extensions in the IM model?	<p>A respondent believes that changes in the initial margin value resulting from the annual recalibration of the ISDA SIMM model should not be considered to constitute a material change for each individual user and should therefore – as such - not trigger the need for a new/additional validation by the competent authority for each market participant.</p> <p>A respondent requests that the provision in Article 4, paragraph 3, be revised to be a 1-day test instead</p>	<p>Calibration changes were already excluded from material changes and should only be communicated in advance to competent authorities; see Annex 1, Part 2, Section 2, point 2. This has now been made explicit in Article 4(4).</p> <p>The EBA considered the proposal to reduce the days needed to identify the changes in IM model. It was concluded that the supervisors need more than one</p>	The new Article 4.4 was added to make explicit that the changes in IM due to the recalibration (recalibration meant as just updating the data – this does not include fundamental changes in the



Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<p>of a 15-day test. The 15-day test specified in Article 4, paragraph 3 makes more sense for risk capital calculations, and is not very informational for initial margin purposes where the netting sets tend to be more stable. It would be resource intensive and expensive to snap all the portfolios on 15 successive business days and recalculate their SIMMs. Running these consecutive calculations would be quite onerous without being likely to change the ratio. Respondent requests this provision to be revised to be a one-day test.</p>	<p>day to test this change. Therefore, this proposal was rejected.</p>	<p>calibration methodology) are not to be considered to define a model change.</p>
<p>Q7: What are the stakeholders' views regarding the threshold selected (5% and 10%) in order to trigger the process?</p>	<p>A respondent believes that thresholds are not a useful indicator.</p> <p>A respondent proposes that paragraph 3 of Article 4 be clarified to define the change of initial margin calculation to include all model and methodology changes (including calibration methodology), but to exclude IM changes due to changes in calibration input market data. The respondent notes a potential problem in relation to calibration level changes which are not caused by model or methodology changes. Article 16 of EU Delegated Regulation 2016/2251 places an obligation on firms to recalibrate their IM model at least annually, and other jurisdictions have similar requirements. Those requirements would be hard to fulfil if pre-approval were required for natural (non-model related) changes to calibrated parameters due to changed market conditions. Otherwise, there could be a significant burden on competent authorities to</p>	<p>Establishing thresholds is a consistent manner to define a substantial change in the model. Moreover, no other alternative methods have been suggested.</p> <p>The calibration was excluded from the model changes, and EBA clarified in the final text that the changes in the model are netted from the recalibration effect.</p> <p>The suggestion to remove Article 4(2)(c) was endorsed, and with it, the removal of the proposed Article 4(5).</p> <p>The Article 4(4) was also reviewed to consider the investment funds' specificity, similar to the provision of the Delegated Regulation 2251/2016. This issue was addressed with new paragraphs 5 and 6, to facilitate the validation for groups applying the same model and to avoid the circumvention of the thresholds established in Article 4(2) by splitting the same change in a plurality of years.</p>	<p>Article 4(2)(c) included in the consultation was removed.</p> <p>Article 4(3) was amended and clarified.</p> <p>New Article 4(4) was added as explained for Q6.</p> <p>Article 4(5) included in the consultation was removed and</p>



## Comments

## Summary of responses received

## EBA analysis

## Amendments to the proposals

approve calibration-related changes within a tight timeframe or else their regulated entities would be forced onto the standard GRID because they would not be able to meet their regulatory obligation to recalibrate annually. This proposal would permit annual recalibrations to proceed on schedule without triggering a re-validation. The reason for this request is to assist the competent authorities in complying with Article 16 of the IM regulations.

A respondent requests that Article 4(2)(c) be removed. Article 4(2)(c) allows competent authorities to assess whether an IM amount change greater than or equal to 5% and less than 10% is material. The option for each competent authority to determine whether a change is material will create uncertainty and potentially inconsistent determinations for different counterparties with respect to the same version of ISDA SIMM.

A respondent requests that Article 4(4) be revised in accordance with a possible proposed wording: "For counterparties belonging to a group, the changes referred to in paragraph 2 shall be calculated at the group level where it is practicable and appropriate to do so". Articles 4(4) and 25(4) state that the conditions in paragraph 2 to determine the materiality of extensions and changes are calculated at the group-level for counterparties belonging to a group. There are circumstances unique to Phase 5 and 6 firms which

replaced with a new provision for groups.

New Article 4 paragraphs (5) and (6) were added.

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are relevant to the expectation that such conditions could be analyzed at the group level.

A respondent suggests that Article 4(5) be removed. Article 4(5) says competent authorities shall inform applying parties of the effective materiality of changes and extensions so they know whether validation is required before implementation. The text suggests such a determination would be prompted by a counterparty's application or notification of change. Per Annex 1, Part 1, Section 2 model change notification would only be required in the event that new risk modelling techniques are introduced. Therefore, IM model users may not submit an application for model change or extension approval unless they already understood such a materiality decision had been made by the competent authority. If no new modelling techniques are introduced, then notice (which might also serve as a prompt for the authority to advise on materiality) would not be submitted if the change was less than the 10% specified in Article 4(2)(d).

In the case where Articles 4(2)(c) and 4(5) are not removed, the respondent requests for ISDA SIMM that a joint authority determination be made based on the documentation submitted by ISDA, so that all SIMM users subject to EU requirements could be informed by ISDA of the requirement to submit an application for model change approval.



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Q8: What are the stakeholders' views regarding the selected extensions and changes in the Annex I Part I and II?	<p>A respondent suggests that paragraph 1 of Annex 1, Part 1, Section 1 be removed. The extension requirements in Part 1, Section 1, Paragraph 1 of Annex 1 are more suitable to market risk capital calculations than initial margin calculations. Major EU counterparties are global banks with offices in many jurisdictions. It is unclear why use of the IM model by a trading desk in a different location, or where different risk systems are used, would warrant an extension of the model approval.</p> <p>A respondent suggests that paragraphs 5(i) and 5(ii) of Annex 1, Part 2, Section 2, be removed. With respect to Part II, Section 2, Para 5(i) and 5(ii), front office pricing models may change frequently and at reasonably short notice. As the processes are subject to internal controls, it is concluded excessive and onerous to require firms to notify their competent authority every time a change is made to their pricing models. This goes beyond the requirements for Market Risk models and would also present a burden to the competent authority to review these notifications, particularly given such reviews would lead to no action being taken by the competent authority because the processes are subject to internal controls.</p>	<p>With regards to suggested removal of the paragraph 1 of Annex 1, Part 1, Section 1 EBA rejects the proposal on the basis that changes in these cases would not be very frequent and when they happen, they will likely be significant and need validation.</p> <p>With regards to the suggested removal of paragraphs 5(i) and 5(ii) of Annex 1, Part 2, Section 2 EBA agrees on the removal of only paragraph 5(i) since it can generate unnecessary communications.</p>	<p>Paragraph 5(i) of Annex 1, Part 2, Section 2 was removed. Paragraph 5 was also clarified.</p> <p>Materiality thresholds to limit the ex-ante communications of these changes have been added to the paragraph 5.</p>
Q9: What are the stakeholders' views regarding the documentation to be provided for the application under the	A respondent suggests that points (c) and (f) of Article 6 should be clarified as the current wording of those provisions is very broad.	In EBA's opinion, the definitions in Article 6, letters c and f, are sufficiently clear upon its review. Moreover, some flexibility has to be left to them so that	No change in the proposal followed this suggestion.



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Standardised process.	<p>supervisory</p> <p>A respondent considers that it is unclear what is meant by the term “relevant competent bodies” in point (d) of Article 6 and asks for clarification in the final report.</p> <p>A respondent considers the requirements to be unnecessary formalistic and detailed. As regards the possibility to allow for the involvement of third parties, which is addressed in by Article 6 (1) item (i), it could be considered to review or clarify the provision: Article 6 (1) first sentence implies that (only) a “counterparty” is required (and able?) to submit the documentation. This appears to conflict with item (i) which sets out a special requirement for a third party (namely to submit proof of the right to act on behalf of a counterparty).</p>	<p>competent authorities can adjust the request to more detailed documentation where it sees fit.</p> <p>On the other side, the requirements must be sufficiently formal and detailed, so the request to make them less so is not acceptable.</p> <p>The responsibility of the information submitted remains on the counterparty applying for validation; nonetheless, submission of the documentation, or part of it, from a third party is possible, of course, assuming proper delegation of the task, which has to be notified to the competent authorities.</p>	
Q10: What are the stakeholders’ views regarding the Section 2 Subsection 1 in general? Please specify the issue by article where possible	<p>A respondent questions the actions to be taken by the management body, as the management body of a credit institution is not typically involved in the day-to-day business.</p>	<p>The standards require the active involvement of the management body of the counterparty, which does not mean that the management body manages the IM model. Therefore, the management body, as the final decision body of the firm, is required to have the final say and take responsibility on behalf of the counterparty applying the model on the suggestions provided by the units/bodies (internal or external) that actively manage (implement, internally validate and audit) the model.</p>	<p>No change in the proposal followed this suggestion.</p>
Q11: What are the stakeholders’ views regarding the outsourcing provisions proposed by Article 7 in the RTS?	<p>A respondent considers that it should be clarified what it means that the management body or the committee designed by it is “actively involved”. Also, the respondent asks for a confirmation in the final report that the requirements regarding</p>	<p>Active involvement means that even when some tasks or functions are outsourced, the management body is still responsible for approving the decision concerning the IMM, as for Article 10 of the RTS.</p>	<p>Article 7 was only marginally reworded - Article 29 was amended to reflect the issues raised in</p>



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	<p>outsourcing in the technical standards are aligned with and not broader than EBA's guidelines on outsourcing. Finally, the respondent suggests allowing credit institutions to decide which control function is most suitable to perform the audit of the models, e.g. the risk control function in addition to internal and external auditors.</p> <p>A respondent considers that the reliance on these standardised elements as well as the involvement of third parties in this connection should be subject to a uniform/simplified/streamlined validation and connected requirements, in all provisions concerning the delegation/outsourcing of elements of the IM model implementation and use.</p> <p>A respondent would appreciate the confirmation that EU authorities agree that ISDA's role in the design and calibration of SIMM satisfies the requirements of Article 7, as ISDA is prepared to support firms that select ISDA SIMM as their IM model by providing the relevant documentation necessary to meet the documentation requirements of Article 6(1)(f).</p> <p>Moreover, a respondent requests that Article 7(d) be removed. Some Phase 5 and 6 firms would prefer to use the day-to-day IM calculations of each of their dealer counterparties by agreeing with each of them that the relevant dealer will act as the calculation agent for the purpose of calculating the regulatory IM amount which the Phase 5 or 6 firm is required to collect for the relevant bilateral</p>	<p>There is not defined function, external or internal to the counterparties applying the model, has to carry out the implementation, internal validation and audit duties as long as they are separate and independent subjects.</p> <p>On the reliance on these standardised elements as well as the involvement of third parties in this respect, EBA notes that those are subject to a uniform set of validation, as provided by the RTS.</p> <p>Regarding the request to clarify the ISDA/SIMM role in Article 7, EBA assesses that this is not in the scope of the RTS, and the decision remains at the competent authority.</p> <p>With regard to the removal of Article 7(d), the EBA considered that the application of the suggestion, i.e., to rely solely on the validation of the dealer's model, i.e., similar to what happens in other jurisdictions, would be not compatible with the legal mandate, because it would exclude the validation for some of the subjects in scope of the validation. Since Article 7 applies to the subject in scope of the standardised process, and they seem not to have issues with the application of such requirement in case of outsourcing any of their function, Article 7(d) remains unchanged. On the other side, Article 29(2) was added to provide some facilitation for subjects that would apply the IM model and outsource some of the</p>	<p>the feedback, i.e., Articles 29(2) and (4) were added.</p>



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	<p>portfolio. Where the Phase 5 or 6 firm’s dealer counterparty is using a model validated under EU, US or other appropriate regulation, the Phase 5 or 6 firm should be able to rely on the IM calculation without separately having to validate the dealer’s model. This aligns with Article 14(1) of the EMIR RTS which permits both parties to use the model developed by one party.</p> <p>Finally, a respondent requests that Article 7(e) be removed. If “full access to competent authorities in relation to all relevant information” means that the dealer would be responsible for satisfying the documentation required by its client’s competent authority, then this would also prevent dealers from agreeing to calculate IM on behalf of their counterparties, eliminating an approach which is of interest to some parties.</p> <p>In the case of delegation for day-to-day IM calculations to the dealer counterparty, the competent authority for the delegating party should be allowed to defer to the competent authority, or other regulatory body overseeing the dealer’s model use, to assess the adequacy of the model calculation process and controls. These are not relevant to the EU counterparty’s need to understand the mechanics and risks of the IM model it has employed.</p>	<p>functions to subjects in scope of the validation as provided in Section 2 of the RTS (Standardised Validation process). When applying the provision in Article 7, the control function of the subjects in the scope of Section 3 should not have access to the proprietary information, that are primarily not related to the netting sets outside the scope of the outsourcing.</p> <p>In Article 29(3) is now envisaged the possibility to rely on another CAs assessment subject to specific conditions: such as in cases that a CAs in the scope of EMIR or equivalent regulation.</p> <p>It should be noted outsourcing the service or a function does not shift the responsibility, which stays with the counterparty under supervision. However, delegating the task does not extend or transfer the responsibility to another subject (Article 29(4)).</p>	
Q12: What are the stakeholders’ views regarding the use of validation results	A respondent sees beneficial to be able to rely on the assessment made by another competent authority in the EU or in a third country, as it would	Article 8 refers solely to Article 13, paragraphs 2(a) and (3) because the general structure of the model is the only standard part in common among different	Article 8(5) was added.





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proposed by Article 8 in the RTS?	<p>decrease the amount of work for market participant as well as for competent authorities.</p> <p>A respondent believes that Subparagraphs 1 and 4d both refer solely to Article 13 (“Internal validation” under Section 2, Standardised Supervisory Procedures) and they should refer also to Section 2, and the relevant parts concerning supervisory validation, and to Section 3 (Simplified Supervisory Procedures); Article 8 should refer to both sections and the validation procedures laid down therein, or a corresponding article should be included in Section 3.</p>	<p>counterparties. Different counterparties would have different backtesting results, internal validation, governance structure, and different implementation of their specific business model. However, the findings on these aspects are not transferable between competent authorities. Similar analyses and findings could be shared by different supervisors within the same group so that the provision is now extended to model changes within the same group as for Article 8(5). It should also be noted that Article 8 is also available to simplified counterparties, as recalled by Article 29.</p>	
<p>Q13: What are the stakeholders’ views regarding the possibility to rely on the assessment of a third country competent authority and the treatment proposed by Article 8 in the RTS?</p>			
<p>Q14: What are the stakeholders’ general views regarding the senior management requirements as stated in Article 10? Also, please highlight specific issues.</p>	<p>A respondent requests that Article 10 be amended to recognize the option for delegation of responsibility for 2(b), (c) and (e) to a management body or committee established under the organization structure established by senior management. Article 10 assigns certain responsibilities to senior management while allowing other tasks to be overseen by the management body or the committee designated by it. Although ultimate responsibility will always roll</p>	<p>EBA agrees with the request of consistency in the wording applied in Article 10, paragraph 2 (b), (c) and (e)</p>	<p>Text was amended as suggested: “the management body and the committee designed by it”</p>



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	<p>up to senior management, tasks such as taking corrective actions for model weaknesses, addressing recommendations from audit or model implementation or validation units, and intimate familiarity with backtesting results may also be assigned within an organization to a management body or a committee under its oversight.</p>		
<p>Q15: What are the stakeholders' general views regarding the model implementation unit requirements as stated in Article 11? Also, please highlight specific issues.</p>	<p>A respondent requests that Article 11(1)(a) be removed. As it specifies that the model implementation unit must be independent from the units responsible for originating, renewing or trading exposures. As IM is reliant on funding, most major dealers have intentionally positioned their model implementation units in the front office, in proximity to their XVA desks. This placement also allows for the model implementation unit to be independent from the model validation team, as required by U.S. regulations. Our members believe it is not operationally feasible or appropriate to relocate model implementation units away from the front office.</p> <p>The same respondent asks to clarify the requirements of Article 11(1)(d) mean in practice as ultimately all areas of a firm report to senior management.</p> <p>Finally the respondent asks to clarify that the current process by firms to reconcile IM calculations against their counterparties' calculations on a daily basis in order to agree the amount to be exchanged would count as "analysis and reports" of the IM</p>	<p>EBA provided a rewording of Article 11(1)(a) in a way that when independence cannot be guaranteed, at the very least, the unit originating the exposure cannot alter the model without due controls set in place.</p> <p>Regarding the suggestion in Article 11(1)(d), further details were provided to clarify the requirements.</p> <p>With regard to clarification on Art 11(1)(f), EBA believes that the requirement should be flexible enough to encompass additional analysis, not just restrained to the IM reconciliation, where needed in the reporting production.</p>	<p>Article 11(1)(a) was reworded.</p> <p>Article 11(1)(d) was amended and added details.</p> <p>No change to Article 11(1)(f) was made since the clarification made on Article 11(1)(d) makes the latter enough clear.</p> <p>The title of the Article was also change from implementation to development unit.</p>



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	<p>model output under Article 11(1)(f), as it says that the model implementation unit is responsible for producing reports on the output of the IM model, controlling input data integrity and analysing the output of the IM model.</p>		
<p>Q16: What are the stakeholders' general views regarding the audit requirements as stated in Article 12? Also, please highlight specific issues.</p>			
<p>Q17: What are the stakeholders' general views regarding the internal validation requirements as stated in Article 13? Also, please highlight specific issues.</p>	<p>A respondent requests that the subclause (i) in Article 13(1)(c) be removed, as Article 13(1)(c)(i) suggests a requirement to conduct internal validation when backtesting shows large overshooting. The criteria to determine a 'large' overshoot is not clear. Also, backtesting is already part of validation and firms run backtesting every quarter, as stipulated in Article 14(1)(b) and 17(1)(b), to assess the performance of the initial margin model. As such, this subclause seems to be neither practical nor necessary.</p> <p>Additionally, the respondent requests that the definition of third-party undertaking in Article 13(4) be amended to include the counterparty to the portfolio, as an EU counterparty can designate a third-party undertaking for purposes of internal validation per Article 13(3), but Article 13(4) does</p>	<p>With regard to the first point, EBA agrees on the removal of Article 13(1)(c)(i) since it triggers a re-validation which is different from the analysis request of Article 14(1)(b). Moreover, it is objectively difficult to define "large market loss".</p> <p>With regard to the request for the amendment of Article 13(4), EBA rejected the request on the basis that the article applies solely to counterparties in the standardised process, that likely not to need to externalise the service to other counterparties in the scope of the same section. Also, the absence of a specific recall to the counterparty of the portfolio does not exclude it from the third part undertaking definition. For simplified counterparties, this definition also does not apply; therefore, it is even less binding in this regard.</p>	<p>Article 13(1)(c) was redrafted and the subclause (i) removed.</p> <p>Article 13(1)(c)(ii) was also redrafted and renamed as point "d".</p> <p>No amendment was made to the Article 13(4).</p>



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	not recognize the counterparty to the portfolio for this purpose.		
Q18: What are the stakeholders' views regarding the split between the general structure of the model and the actual implementation of the model for the validation as stated in Article 13(2)?			
Q19: What are the stakeholders' views regarding the thresholds suggested to trigger for the CAs notification, as described in paragraph 5 of Article 14?	<p>A respondent believes that the backtesting requirements are too closely modelled on parallel CRR market risk requirements and are overly complex and not suited to IM models.</p> <p>A respondent proposes that Article 14(5) is to be reworded so that competent authorities shall verify that the counterparty communicates to them the result of the static backtesting program, including the analysis referred to in Article 14(6), for each netting set that is classified as 'red' and has a shortfall of at least EUR 25 million. The respondent believes that the threshold of 11 overshootings is very low for a set of 1040 observations. This would mean that using a threshold of 11 a firm would have to report 43 out of 100 portfolios on average to the competent authority even though the model was operating correctly for these portfolios.</p>	<p>In regard to the comment that the backtesting requirements are too closely modelled on Market Risk requirements, that was done on purpose to facilitate the implementation of the requirements, since the Market Risk requirements are well-known. On the other side, requirements were adapted to the application of IM, where it was appropriate.</p> <p>Regarding the issue linked to the threshold suggested in the consultation that would trigger an excessive notification, the EBA agrees with the analysis.</p> <p>On the other side, the shortfall definition suggested appears insufficient in terms of information disclosed to the EU supervisors. In the final version of the RTS, the EBA support a modified version of the shortfall, called Margin Average Shortfall (MAS), that would provide additional information to EU supervisors at a limited computational cost. Additional detail on the MAS can be found in the background and the IA of these RTS. Therefore, the notification process is now linked to this MAS shortfall definition. Additionally,</p>	Article 14(5) was completely redrafted in order to adapt to the MAS definition in the final Article 14(5). The notification is now specified in Annex 2 of the final RTS.



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		<p>the burden of the notification is managed because it is now limited in time (once a quarter) and in number of netting sets to be notified.</p>	
<p>Q20: What would be the stakeholders' choice on the value of <math>K_s</math>, as described in paragraph 7 of Article 14?</p>	<p>A respondent sees this definition as sensible and reasonable.</p>		<p>No change in the proposal followed this suggestion.</p>
<p>Q21: What would be the stakeholders' choice on the distribution of <math>X_i</math> applied? Could you please specify the first four moments (mean, standard deviation, standardized skewness and standardized excess kurtosis)? Additionally, could you please describe the distribution <math>X_i</math>, e.g., by means of an analytical approximation or a plot of the empirical distribution density, with the normal distribution included as comparison?</p>	<p>A respondent suggests that the wording in paragraph 14(7)(a) be changed from "based on proper empirical evidence" to "using a reasonable choice" to reflect this situation, as they believe that the choice for the distribution of <math>X_i</math> should be a normal distribution, which is conservative, and it is essential that stakeholders use the same distribution, otherwise they will not agree on which portfolios require remediation, or how to remediate them.</p>	<p>EBA interprets the suggestion to use a "reasonable choice" as a to unclear and challenging to apply, therefore not appropriate as requirement.</p> <p>On the other side, the EBA considered the simulation provided by the respondent that shows how the Normal distribution is reasonably conservative.</p> <p>EBA considered that it could be reasonable to allow the use of Normal distribution to facilitate the definition of the thresholds for the backtesting.</p> <p>Nonetheless, where a distribution different from the Normal is applied, proper empirical evidence has to be provided to the supervisors.</p>	<p>Article 14(4) was amended.</p>
<p>Q22: What would be the stakeholders' choice on the values of <math>N_{g,s}</math> and <math>N_{r,s}</math>. Would you please provide a concise description of the methodology to obtain <math>N_{g,s}</math> and <math>N_{r,s}</math>?</p>	<p>A respondent suggests using the standard BCBS definition from "Supervisory Framework for the use of 'backtesting' in conjunction with the internal models approach to market risk capital requirements" (BCBS Paper 22, January 1996), which is <math>P(0 \leq N_{g,s}) &lt; 0.95 \leq P(0 \leq N_{g,s+1})</math>. For <math>N_{g,s}</math>, and for <math>N_{r,s}</math> is <math>P(0 \leq N_{r,s}) &lt; 0.99 \leq P</math></p>	<p>EBA agrees with the suggestions.</p> <p>The final version of the RTS specify the amber threshold, instead of the red threshold.</p>	<p>Article 14(4) was amended accordingly.</p>



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	<p><math>(0 \leq Nr, s+1)</math>. The respondent believes that this approach is conservative in preferring <math>Ng, s</math> over <math>Ng, s+1</math> and that the precise expression as written has no integer solution in general since <math>O</math> and <math>Ng, s</math> are integer valued.</p> <p>The respondent signals a typo in the expression for <math>Ld</math> in Article 14(7)(c)(iii) where the sum should be taken from <math>i = d</math> to <math>i = d+MPOR - 1</math> (not to <math>i = d+MPOR</math>)</p>		
Q23: What are the stakeholders' methods applied to transactions maturing in less days than the MPoR?	<p>A respondent highlights that these transactions are not treated differently under SIMM. They expect that for such transactions, the IM would be conservative, but the amount of hypothetical PnL could be overestimated since the trade matures before the MPoR. If there are overshootings reported, then the backtesting analysis may attribute the cause to the overestimated PnL.</p>	No additional elements are available on this concern for trades with short maturity.	No change in the proposal followed this suggestion.
Q24: What are the stakeholders' views on the static backtesting proposal as stated in Article 14?	<p>A respondent requests that Article 14(1)(a)(i) be removed, as it is neither necessary nor practical, in line with the response on the independence of the "implementation unit" in Article 11(1)(a).</p> <p>The same respondent requests that quarterly monitoring under Article 14(1)(b) be allowed to use a rolling window for testing to allow some out-of-sample testing using more recent market data. Indeed, Article 14(1)(b) requires firms to use the calibration period of the model not only for annual backtesting but also for quarterly monitoring differently from the current process for industry-</p>	<p>EBA agrees with the suggestion to redraft the point 14(1)(a)(i) in terms of independence between internal validator and unit generating the exposure.</p> <p>On the request on Article 14(1)(b) to be allowed to use a rolling window for testing the request was endorsed by EBA, on the basis to maintain an international convergence on the practice in place. Nonetheless, in order to provide additional information, the static window of test will be applied also on the netting set that need to be reported</p>	<p>Article 14(1)(a) was amended accordingly with the suggestion provided.</p> <p>Article 14(1)(b) was amended partially accordingly with the suggestion provided.</p> <p>Article 14(2)(a) was amended</p>



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	<p>wide quarterly monitoring of ISDA SIMM. The respondent believes that this requirement also runs counter to the recent BCBS, CPMI and IOSCO Review of Margining Practices which encourages non-centrally cleared IM models to look into the timely remediation of IM shortfalls in market stress periods. The respondent thinks that if this requirement were to stand, firms would need to conduct a different internal process for the quarterly monitoring in the EU than they do in other jurisdictions and which they are conducting for industry-wide quarterly monitoring of SIMM.</p> <p>Additionally, the respondent requests that the option to use greeks-based or grid-based approximations be allowed in paragraph 2(a), as under Article 14(2)(a), most firms would find it impossible to revalue all their trades on each of the approximately 1000 historical scenarios.</p> <p>The respondent proposes that a possible alternative wording for Article 14(2)(a) could be: “it applies a reasonably close match for the pricing methods, model parameterisations, market data and any other technique used in the end-of-day valuation process”, as the proposed wording could be problematic in practice since, for example, many firms will include FVA adjustments in their pricing models, even though those risks are mostly not captured in SIMM. The respondent thinks that removing the sub-clause should allow additional</p>	<p>(which are a very limited subset of the netting sets) to the supervisor. This request is understood to deviate from international practice, but still provides, at limited cost, additional valuable information to the supervisor.</p> <p>With regard to requests to consider the option to use greeks-based or grid-based approximations under Article 14(2)(a), the EBA agreed to allow it, upon specific conditions to be met, for the use of approximation methodology in the market value computation methodology.</p> <p>With regard to Article 14(3) proposal, EBA agrees that asking “all breach” would be excessive and unnecessary, but the proposed suggestion could be too aggressive in the other direction (i.e., implies too little analysis).</p> <p>On the other side, the shortfall definition suggested appears insufficient in terms of information disclosure to the EU supervisors. In the final version of the RTS, the EBA supports a modified version of the shortfall, called Margin Average Shortfall (MAS), that would disclose additional information at a very limited computational cost. Additional detail on the MAS can be found in the background and the IA of these RTS. Therefore, the analysis that needs to be run is now linked to this MAS shortfall definition. Additionally, the burden of the analysis is managed because it is now limited (but not restricted to) the netting set to be notified.</p>	<p>accordingly with the suggestion provided.</p> <p>Article 14(8-11) was significantly amended, following the concerns raised but providing a different solution with respect to what was suggested in the feedback. Overall, Article 14 was significantly redrafted in relation to the analysis, notification and remediation actions.</p>



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	<p>risk factors to be captured and FVA adjustments to be made in official pricing models.</p> <p>The respondent also proposes that Article 14(3) be amended to apply to only 'red' portfolios with shortfall greater than EUR 5 million, as analysing all overshootings would result in a too large number of shortfalls to be examined in detail even in the case that the model is performing perfectly (that is, it meets the 99% 10-day horizon requirement for model coverage). The respondent thinks that for large firms, this requirement would divert available resourcing away from analysis of real problems; for smaller firms it would be unfeasible, while applying Article 14(3) to only 'red' portfolios with shortfall greater than EUR 5 million should achieve the desired regulatory objective, focusing on portfolios which have genuine issues.</p> <p>The respondent also requests that Article 14(8) and 14(11)(b) be deleted. Article 14(8), (9)(b)(iii), (10) and (11)(b),(c) all refer to "all the netting sets" for assessment and redress of total shortfalls. Bilateral remediation can only be done at the portfolio level, so these references would be better expressed by referring to "each netting set" instead. Since the respondent also thinks it is difficult to recast paragraphs 8 and 11(b) into an equivalent netting-set test, they request that these should be deleted.</p> <p>The respondent also requests the use of a standard definition under Article 14(9), where the <i>shortfall</i> is the smallest amount of extra initial margin required</p>	<p>With regards to the proposed changes to Article 14(8)-(9)-(10)-(11), EBA agrees that the test and the remediation at the counterparty level would be feasible. Moreover, EBA agrees on the potential problem the proposed test could trigger. For this reason, the proposal of Article 14(8-11) was abandoned. On the other side, as noticed in the analysis and notification points, the notion of shortfall proposed needed to be revised to meet the supervisor's need for information disclosure. Therefore, the proposal to link the remediation action to that definition was not endorsed. The final proposal requires that the reporting be done every quarter on the nettings sets defined as specified in Annex 2. The final version allows for a flexible definition of material shortfall thresholds, which does not necessarily need to be based on the MAS definition, nor exclude the industry definition of shortfall; furthermore, it provides the competent authorities with the power to assess the appropriateness of the definition of such thresholds. The remediation actions, in the end, will be linked to the outcome of the overshooting analysis and the breaches of the material shortfall limit.</p>	





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	<p>to make the portfolio be classed as 'green'. The instruction for determining what constitutes a shortfall in Article 14(9) refers to less than 1% of the total margin, which is not consistent with Article 15 of the Regulations which is "based on a one-tailed 99 percent confidence interval".</p> <p>The respondent also proposes that Article 14(9)(b)(iii) be changed to have the test that the shortfall for a 'red' netting set should be less than EUR 50 million, as an absolute threshold may make more sense than a relative one, since it would direct attention to larger portfolios rather than to smaller ones.</p> <p>The respondent finally recommends that Article 14(10) be replaced accordingly to the new netting-set shortfall test described.</p>		
<p>Q25: What are the stakeholders' views regarding the thresholds suggested to trigger for the CAs notification, as described in paragraph 5 of Article 17?</p>	<p>A respondent request that Article 17(5) be amended to apply to only 'red' portfolios that have a shortfall of at least EUR 25 million. The respondent believes that the threshold is too tight and would be better positioned for any netting set classified as 'red' which has a shortfall of at least EUR 25 million.</p>	<p>Since the proposal is the same as provided to the response to Q19, the EBA invites to refer to that analysis.</p>	<p>Art 17(5) was completely redrafted in order to adapt to the MAS definition in the final Article 17(5). The notification is now specified in Annex 2 of the final RTS.</p>
<p>Q26: What would be the stakeholders' choice on the</p>			



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<p>value of <math>K_d</math>, as described in paragraph 7 of article 17?</p> <hr/> <p>Q27: What are the stakeholders' views regarding the dynamic backtesting as set in Article 17?</p>	<p>A respondent requests that firms be allowed to use ten-day actual (A10) in addition to one-day actual (A1) method specified in the Article 17(1)(b)(iii), as both methods are currently used in fairly equal proportion by market participants for SIMM monitoring, and both methods are recognized as valid in the comments on pages 65, 66 of the Consultation.</p> <p>The same respondent requests that Article 17(3) be amended to apply to only 'red' portfolios with shortfall greater than EUR 5 million. According to the respondent this requirement, as it is, would produce too many false alarms.</p> <p>The same respondent suggests that the wording in paragraph 17(7)(a) be changed from "based on proper empirical evidence" to "using a reasonable choice".</p> <p>In addition respondent suggests, in Article 17(7)(c) and (d), using the more precise definition of <math>N_{g,d}</math> and <math>N_{r,d}</math> as given.</p> <p>In addition respondent requests the removal of Article 17(8), as it is an entity-level test and it is also too stringent and unlikely to be satisfied in practice.</p> <p>In this regards, the respondent requests use of a standard definition, where the shortfall is the smallest amount of extra initial margin required to</p>	<p>EBA disagrees with the suggestion to run the dynamic backtesting over a 10-days period, in order to keep the test and the definition of market value changes as simple as possible. The 10 days change in market value is already applied for the static backtesting.</p> <p>With regard to Article 17(3) proposal, EBA agrees that asking "all breach" would be excessive and unnecessary, but the suggestion could be too aggressive in the other direction (too little analysis).</p> <p>On the other side, the shortfall definition suggested appears insufficient in terms of information disclosure to the EU supervisors. In the final version of the RTS, the EBA support a modified version of the shortfall, called Margin Average Shortfall (MAS), that would disclose additional information at a very limited computational cost. Additional detail on the MAS can be found in the background and the IA of these RTS. Therefore, the analysis that needs to be run is now linked to this MAS shortfall definition. Additionally, the burden of the analysis is managed because it is now limited (but not restricted to) the netting set to be notified.</p> <p>The EBA considered the simulation provided by the respondent that shows how the Normal distribution</p>	<p>Article 17 was substantially reworded.</p> <p>Paragraph 1 was streamlined.</p> <p>Analysis and reporting requirements were amended, in a way to make them less burdensome.</p> <p>Analysis and reporting requirements are now linked to the MAS concept, consistently with the Article 14. The remediations actions paragraph (10) is also amended, and linked to a specific ad-hoc analysis when the material thresholds are breached.</p>



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	<p>make the portfolio be classed as ‘green’, and the test in Article 17(9) be amended to apply to ‘red’ portfolios with a shortfall of at least EUR 50 million, as the instruction for determining what constitutes a shortfall in Article 17(9) refers to less than 1% of the total margin, which is not consistent with Article 15 of the IM Regulations which is “based on a one-tailed 99 percent confidence interval”. The respondent recommends that the test of backtesting success under Article 17(10), which is an entity-level test, be replaced with the netting-set shortfall test.</p> <p>Regarding Article 17(11), the respondent requests that if both parties to a portfolio can only perform a dynamic backtest, the outcome of the dynamic backtest should form the basis of bilateral agreement for the exchange of additional margin in the event that issues with the initial margin model are identified during testing. Otherwise, if either party can conduct the static backtesting, then static backtesting should form the basis for firms to bilaterally agree to exchange additional margin.</p>	<p>is reasonably conservative. EBA considered that it could be reasonable to allow, the use of Normal distribution to facilitate the definition of the thresholds for the backtesting.</p> <p>Nonetheless, where a distribution different from the Normal is applied, proper empirical evidence has to be provided to the supervisors.</p> <p>EBA agrees with the suggestions provide a more precise definition of the green threshold. The final version of the RTS specify the amber threshold, instead of the red threshold.</p> <p>With regards to the proposed changes to Article 17(8)-(9)-(10), EBA agrees that the test and the remediation at the counterparty level would be feasible. Moreover, EBA agrees on the potential problem the proposed test could trigger. For this reason, the proposal of Article 17(8-10) was abandoned. On the other side, as noticed in the analysis and notification points, the notion of shortfall proposed needed to be revised to meet the supervisor's need for information disclosure. Therefore, the proposal to link the remediation action to that definition was not endorsed. The final proposal requires that the reporting be done every quarter on the nettings sets defined as specified in Annex 2. The final version allows for a flexible definition of material shortfall thresholds, which does not necessarily need to be based on the MAS definition, nor exclude the industry definition of shortfall; furthermore, it provides the competent</p>	



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		<p>authorities with the power to assess the appropriateness of the definitional of such thresholds. The remediation actions, in the end, will be linked to the outcome of the overshooting analysis and the breaches of the material shortfall limit.</p> <p>With regards to the proposed changes to Article 17(11), the EBA disagrees with the proposal to consider the outcome of the dynamic backtest as the basis of the bilateral agreement for the exchange of additional margin in the event that issues with the initial margin model are identified during testing only if both counterparties can only perform the dynamic backtesting because it would void the use of the dynamic backtesting control. On the other side, EBA acknowledges that some features of dynamic backtesting could lead to disproportionate remediations action, these remediation actions need to be also supported by additional analysis, where the dynamic backtesting suggests that there may be issues on the IM model that need to be addressed.</p>	
<p>Q28: What are the stakeholders' views regarding the treatment of the Valuations Adjustments within the requirement of the backtesting programme as set in Article 14 and the monitoring programme of Article 17?</p>	<p>A respondent requests that the option to use greeks-based or grid-based approximations be allowed under Article 17(2)(a) Alternatively, the respondent suggests a possible alternative wording for Article 17(2)(a) as: "it applies a reasonably close match for the pricing methods, model parameterisations, market data and any other technique used in the end-of-day valuation process", as it could be problematic in practice if, for example, many firms will include FVA adjustments</p>	<p>With regard to requests to consider the option to use greeks-based or grid-based approximations under Article 17(2)(a), the EBA agreed to allow for the use of approximation methodology in the market value computation methodology, upon specific condition to be met.</p>	<p>Articles 14(2)(a) and 17(2)(a) were amended accordingly.</p>



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	in their pricing models, even though those risks are mostly not captured in SIMM.		
Q29: What are the stakeholders' views regarding the requirement in the backtesting programmes as set in Articles 14 and 17? Should the requirements be specified in terms of IM collected only?	A respondent agrees with the current draft of the IMMV RTS on the validation of the IM without specification of either IM collected or IM posted to keep flexibility in the process.		No change in the proposal followed this suggestion.
Q30: What are the stakeholders' views regarding Articles 18 through 23? Please specify the issue by article where possible.	<p>A respondent requests that the final clause (“and that incorporation of that risk factor in the institution’s pricing model is justified due to its material impact on the pricing accuracy.”) under Article 19(2) be removed, as the IMMV RTS should not prevent firms from including certain risk factors in their pricing models which could reduce the validity of the testing benchmark and may limit the assurance that the calculated IM will cover a realized P&amp;L move.</p> <p>With respect to Article 20, a respondent requests that the removal of Articles 20(1)(b) and 20(3), as they believe there is no value in measuring or assessing its materiality. Furthermore, the respondent requests that the sub-paragraph text under Article 20(1)(c) retain the initial phrase “that the counterparty captures all material risk linked to the nonlinear profile of options and other products” and removes the subsequent text, since it believes that Article 20(1)(c) goes beyond the requirement in</p>	<p>Regarding the suggestion concerning Article 19(2), EBA agrees with the suggestion, and certain risk factors could be represented mainly in the front office model.</p> <p>Regarding suggestions concerning Article 20, the EBA agrees with the proposed suggestion.</p> <p>Regarding the suggestion concerning Articles 21 and 22, the EBA believes these clarifications are unnecessary since the text is explicit (i.e., a proxy for calibration).</p> <p>Regarding the recommendation concerning Article 23, the EBA accepts the reasoning behind the suggestion. Where implemented, these suggestions would have implied the deletion of Article 23. In this regard, the EBA amended Article 23 in a way that would require the counterparties, during its</p>	<p>A new Article 18(1)(b) was added, as well as 18(3).</p> <p>Article 19(2) was amended accordingly to the suggestion.</p> <p>Article 20(1 and 3) was amended accordingly to the suggestion received.</p> <p>Article 23 was completely updated. Article 23(1)(b) moved to Article 18.</p>

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the IM Regulations and the BCBS-IOSCO Framework to include material risks and that it mandates what the model should do, rather than providing guidance on how to assess the model.

Moreover, the respondent requests clarification that the data proxies mentioned in Article 21, and in Article 16(10) of the IM Regulations, would refer in the case of SIMM to proxies used as part of the calibration process and not to the SIMM risk bucket structure in general.

In addition, the respondent recommends that Article 22 be reworded to replace the clause “set in place processes to identify illiquid positions and positions with limited price transparency and to capture their risks in the initial margin model conservatively” with the clause “included in the MPOR the estimated period needed to replace each of the non-centrally cleared OTC derivative contracts within the netting set or hedge the risks arising from them, taking into account the level of liquidity of the market and the size of the position”, as if a particular structured derivative transaction is illiquid, SIMM breaks down that transaction in terms of applicable risk factors. SIMM applies concentration multipliers to each risk factor. Through this mechanism, SIMM reflects the associated liquidity related to the hedging and closeout of any position.

Finally, a respondent recommends a massive amendment of Article 23. Concerning that Article

internal validation, to be aware of the changes in the IM where they would be obtained under different time windows of calibration and different levels (high and low) of correlation.

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23(1)(a) it should be removed, as it refers to implied correlations which affect the valuation of trades, rather than IM modelling. Furthermore, request that Article 23(2)(a) be removed, as it requires quarterly review of model correlation parameters and this seems excessive and contradicts the EMIR model requirements and BCBS-IOSCO Framework which require calibration at least annually, by instead requiring partial recalibration quarterly.

Moreover, a respondent suggests generalizing Article 23(1)(b) to all parameters as follows “that the initial margin does not rely on parameter assumptions that are not appropriately supported by market data”, and moving Article 23(1)(b) to Article 18(1), and then removing the rest of Article 23 (i.e., Article 23(1)(a) and Article 23(2)) for the following reasons:

- Paragraph 1(a) repeats the requirements in Article 19(1) and 19(3) that ensure all material risk factors are included or their omission justified;
- Paragraph 1(b) is already largely covered in point (a) of Article 18(1) but could be generalised and inserted between points (a) and (b) of 18(1) as “that the initial margin does not rely on parameter assumptions that are not appropriately supported by market data”;
- Paragraph 2 introduces a new requirement to review correlations – uniquely among



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	<p>risk factors or parameter types – on a quarterly basis. This goes too far beyond the requirements in the EMIR RTS to calibrate at least annually and neither the frequency or special treatment is justified anywhere else in the regulations.</p>		
<p>Q31: What are the stakeholders' views regarding the Section 2 Subsection 2 in general? Please specify the specific issue by article where possible.</p>	<p>A respondent believes the requirements in Articles 7 to 23 are overly prescriptive. In some cases, they are not possible to implement. In other cases, they would require major changes to firms' model validation processes and controls – creating significant cost and effort and forcing global firms to either follow the EU model validation requirements for all jurisdictions or else maintain separate processes and controls for compliance with EU requirements.</p>	<p>EBA consider this as general statement, and all the rest of rationale linked to it is already reported in the previous question, as well as the analysis.</p>	<p>Text was amended as suggested, as explained in the previous questions.</p>
<p>Q32: What are the stakeholders' views regarding Section 3 in general? Please specify the issue by article where possible.</p>	<p>A respondent believes that the requirement in the proposed Article 25(1) for counterparties to apply for validation by the competent authorities in cases of material changes and extensions to their initial margin model would create unnecessary burden for both banks as well as for competent authorities, and even more so than initial validation, since in the case of the changes to the industry standard, all banks would change their model as soon as possible and thus all submit their application to their competent authorities at the same time.</p>	<p>On the comment concerning the requirement in the proposed Article 25(1) for counterparties to apply for validation by the competent authorities in cases of material changes and extensions would create an unnecessary burden for both banks as well as for competent authorities, all banks would change their model as soon as possible and thus all submit their application to their competent authorities at the same time, the EBA analysis rejects this point. The requirements specify some specific thresholds so that it would be fairly unlikely that all the subjects in scope would simultaneously require the validation for</p>	<p>Article 25 was amended; Articles 27(2), 28(8) and 29(2) were added.</p>





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	<p>A respondent believes that the simplified requirements create a burden to Phase 5 and 6 firms and to the regulatory community. They are disproportionate to the risk, considering the exchange of variation margin which applies broadly and the relatively low levels of IM likely to be exchanged compared to portfolios between Phase 1-4 firms. Furthermore, the respondent asks that the burden be mitigated by either:</p> <p>(a) replacing the granular requirements with a more general obligation to provide evidence as to how they are meeting the IMMV RTS governance requirements, presented once then updated annually as needed; or</p> <p>(b) making it easier for third parties or dealer counterparties to shoulder some of the calculation, monitoring and remediation processes.</p> <p>Moreover, a request that the requirements cater for considerations specific to separately managed accounts by acknowledging and accommodating for the practical limitations is made.</p>	<p>model changes. Moreover, the thresholds for smaller counterparties were set at a limit such that they should not trigger excessive model changes, except, of course, when the model change very significantly. At that point, it would be inappropriate not to have the model change validated by the supervisor.</p> <p>On the comment concerning the belief that the simplified requirements create a burden to Phase 5 and 6 firms and the regulatory community because they are disproportionate to the risk, and the relatively low levels of IM likely to be exchanged compared to portfolios between Phase 1-4 firms, the EBA analysis acknowledges that the validation is a burden. For this reason, the simplified procedure for validation was put in place.</p> <p>Following the comment, the EBA further simplified the validation process and made it more accessible for counterparties to rely on the outsourcing of the service to a counterparty validated in accordance with the requirements of the standardised process. SMAs should take advantage as well of these simplifications in validation. Investment funds are also specified to be distinct entities, to align the validation requirements with the more general requirement to exchange the IM.</p>	
<p>Q33: What are the stakeholders' views regarding the thresholds selected (10% and 20%) to trigger the process for model changes and</p>	<p>A respondent believes that thresholds seem unjustified. The industry standard model (ISDA SIMM) is constantly evolving in order to capture changes in bilateral derivatives and market conditions. When new versions are rolled out,</p>	<p>It should be noticed that the EBA suggested the thresholds for model change or extension for entities in scope of Section 3 that are double with respects the threshold for triggering model changes in Section 2,</p>	<p>Article 25(2)(c) was removed. A new Article 25(4) was added</p>



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<p>extensions in Article 25 for the simplified assessment?</p>	<p>banks will change their model as soon as possible, and if thresholds are triggered, banks with similar positions will thus submit their applications to their competent authorities at the same time. Changes in the industry standard model might create larger changes for banks with smaller or concentrated positions, triggering an application to change the model, while banks with bigger or non-concentrated positions might not experience a similar change in their position. Competent authorities would need to have enough resources to validate multiple applications at the same time.</p> <p>A respondent does not support the subjective approach in Article 25(2)(c) whereby each competent authority may determine whether a change between 10% and 20% is material enough to require model change approval, thus they suggest Article 25(2)(c) and 25(5) be removed. In the case where Articles 25(2)(c) and 25(5) are not removed, the respondent requests that for ISDA SIMM a joint authority determination be made based on the documentation submitted by ISDA, so that all SIMM users subject to EU requirements could be informed by ISDA of the requirement to apply for model change approval.</p> <p>A respondent requests that Article 25(4) be revised in accordance with a possible proposed wording: “For counterparties belonging to a group, the changes referred to in paragraph 2 shall be calculated at the group level where it is practicable and appropriate to do so”. The respondent expects</p>	<p>in order to trigger less model changes, for the counterparties in scope with Section 3.</p> <p>The calibration was excluded from the model changes, and EBA clarified in the final text that the changes in the model are netted from the recalibration effect.</p> <p>The suggestion to remove article 25(2)(c) was endorsed, and with it, the removal of the proposed article 25(5).</p> <p>The article 25(4) was also reviewed to consider the investment funds' specificity, similar to the provision of the Delegated Regulation 2251/2016.</p>	<p>specifying that the changes referred to in paragraph 2 shall not consider the changes in calibration input.</p> <p>Art 25(5) (previous 25(4)) was amended to consider “Investment funds” as separate entities.</p> <p>Art 25(6) was added to simplify the model change implementation within a group.</p> <p>Art 25(7) was added to avoid the circumvention of the requirement on the model change.</p>



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	<p>a greater use of GRID or a combination of SIMM and GRID for these portfolios, and therefore any group level calculation would only be relevant for entities within the group that have previously applied for approval to use the same IM model.</p>		
<p>Q34: What are the stakeholders' views regarding the scope of the documentation requirements in Articles 27 and 28 for the simplified assessment?</p>	<p>A respondent welcomes additional guidance as regards the meaning of "self-assessment of the compliance with this Regulation". The respondent asks for a confirmation that the requirement of a self-assessment would be satisfied by a statement that the credit institution complies with the Regulation together with a brief description and, where relevant, supporting document.</p> <p>The respondent considers that a formal approval of the internal procedures related to the initial margin model could serve as sufficient evidence of understanding and involvement of the senior management and management body, as it is not practicable to submit the documents mentioned in Article 28 to the competent authority.</p> <p>Another respondent believes that requiring application for initial validation, material and non-material extensions and changes would create unnecessary burden for banks as well as for competent authorities. The respondent's understanding, validating (either standard or simplified) an industry standard model multiple times would not create any added value - nor would it increase the robustness of the model.</p>	<p>A "self-assessment of the compliance with this Regulation" is meant to be a concise document reporting the areas of compliance, partial compliance or not with the regulation. On the actual content, it is left to the competent authority the flexibility to decide where the content of the document is sufficient for their purpose.</p> <p>On the issue that requiring application for initial validation, material and non-material extensions and changes would create unnecessary burden for counterparties as well as for competent authorities and validating (either standard or simplified) an industry standard model multiple times would not create any added value - nor would it increase the robustness of the model, EBA disagree since the performance of the model differ with regards to the different business. The competent authority cannot assume that a solution that is working for subject A is working as well for subject B, without appropriate evidence, thus the need of the validation process.</p> <p>On the issue concerning that documentation requirements under Articles 27 and 28 are too burdensome and not efficient in light of the vast number of funds or sub-funds qualifying as counterparties under EMIR and for which the same</p>	<p>Articles 27 and 28 were amended (Articles 27(2) and 28(8) were added) in order to simplify the documentation requirements.</p>



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	<p>Another respondent believes that documentation requirements under Articles 27 and 28 are too burdensome and not efficient in light of the vast number of funds or sub-funds qualifying as counterparties under EMIR and for which the same process has to be undertaken. ESAs should define specific rules helping national regulators and the asset management industry to comply on the basis of an efficient standardized “one-size fits for all” documentation procedures.</p> <p>A respondent expects that any application for model reapproval would reference the relevant versions of the model, the only meaningful documentation difference is the report for independent validation.</p>	<p>process has to be undertaken, the documentation and process was simplified in the case that the subject is supported by another counterparty validated in accordance with Section 2 of the RTS.</p>	
<p>Q35: What are the stakeholders’ views regarding the transitional provision in Article 30? Are the two years of transition suggested sufficient to have a first validation of the models in place?</p>	<p>A respondent asks to clarify if the competent authority shall confirm that market participants can use the model further, as it is mentioned that the competent authority can object to the use of the model within two years. The respondent asks to clarify the timeframe during which market participants shall submit additional documents in case the competent authority decides to apply Article 2(2) (standard procedure) and considers beneficial to have sufficient time to enable market participants to prepare and submit the required additional documentation.</p> <p>A respondent believes that the proposed timeline (requirement of initial validation within one month at the latest from the date of application) would be</p>	<p>It is not required by the competent authority to confirm that market participants can use the model further, this would be equal to have an explicit validation, voiding the non- object validation after the second year. The competent authority can, of course, before that, raise any issue or explicitly confirm or not the endorsement of in the use of the model.</p> <p>The market participants shall submit additional documents at request of the competent authority; it should be noted that Article 2(2) (standard procedure) was removed in the final draft.</p> <p>On the issue with the given timeline that the transitional supervisory procedures gives two years for competent authorities to object the initial</p>	<p>No change to Article 30 followed the comments received, except the deletion of Article 2(2) of the proposal.</p>



## Comments

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acceptable if smaller banks were to be given enough time to prepare for the application (Article 31:“3 years from the date of entry into force of this Regulation”). There is an issue with the given timeline; transitional supervisory procedures give two years for competent authorities to object the initial application – it is likely that there will changes in the industry standard model between initial validation and initial approval, which will then require at least a notification of changes in industry standard model. Given the formal nature of the process, it could prove difficult for competent authorities to separate the initial application, notifications and the possible application to change the model in cases where the initial application is still under process.

A respondent believes that the transition provisions will not be sufficient to avoid significant disruption and challenges.

A respondent requests clarification in Article 30 that, in the event that the competent authorities object to the use of an initial margin model by a firm, the firm would be afforded a cure period to adjust any insufficiencies in its model application/implementation and a transition period to adjust its internal policies and procedures, and to negotiate the change to IM calculation with its counterparties. The same respondent requests that the IMMV RTS specifically acknowledge that, in the event an EU counterparty does not receive from its competent authority (i) initial approval for an IM

application, and it is likely that there will changes in the industry standard model between initial validation and initial approval, the thresholds for actual model changes and extension are set such that the actual changes to the model should not be as frequent as to create an issue for an excessive number of application for model changes. The annual changes, where are not materials, should be just a notification to the competent authority that does not jam the supervisory validation process.

On the request of clarification in Article 30 that, in the event that the competent authorities object to the use of an initial margin model by a firm, the firm would be afforded a cure period to adjust any insufficiencies in its model application, it is expected that this will be treated on a case-by-case scenario, upon competent authority’s decision, depending on the nature of the issue detected on the model.

On the request to specifically acknowledge that, in the event that an EU counterparty does not receive from its competent authority (i) initial approval or (ii) reapproval for a model, the application of GRID applies only to derivative transactions entered into after a final determination has been made, the EBA does not think the RTS is the proper place to specify the issue (since not related to the assessment methodology of the Initial margin model). Nonetheless, there is the presumption that any decision on the model is not retroactive unless the competent authority would not detect a problem in the previous implementation that would require a



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	<p>model which it started using prior to the application of the IMMV RTS or (ii) reapproval for a model which it received prior approval from its competent authority, the application of GRID apply only to derivative transactions entered into after a final determination has been made by the competent authority to deny the approval and adequate time has been afforded to renegotiate CSA.</p>	<p>retroactive implementation of the GRID; in any case, sufficient time to renegotiate CSA should be provided, upon competent authority's specific decision.</p>	
<p>Q36: What are the stakeholders' views regarding the final provision in Article 31? Is the phase-in of 1, 2 and 3 years appropriate, considering the population of counterparties in the scope of the validation requirement?</p>	<p>A respondent suggests the text should say "above EUR 50 billion" in accordance with Article 36(1)(e) in amending Delegated Regulation (EU) 2016/2251 supplementing Regulation (EU) No 548/2012.</p>	<p>The suggestion to be consistent with Delegated Regulation (EU) 2016/2251 is acceptable.</p>	<p>Text was amended as suggested.</p>
<p>Q37: What are the stakeholders' views regarding the transitional and final provisions in general? Are there aspects that should further be considered?</p>	<p>A respondent considers that three dimensions should be better developed:</p> <ul style="list-style-type: none"> <li>- the types of counterparties and the reason why their business models are using OTC derivatives.</li> <li>- the specificities of the asset classes underlying the OTC derivatives</li> <li>- need of flexibility in the collateral re-use limitations.</li> </ul>	<p>On the request to consider and develop three dimensions (the types of counterparties and the reason why their business models are using OTC derivatives; the specificities of the asset classes underlying the OTC derivatives; the need for flexibility in the collateral re-use limitations), EBA notes the absence of clear proposal in the suggestion, the fact the type of the counterparties is already taken into consideration, and the fact that there is not distinguished treatment in general in the use of the model, depending by the asset class (specific treatment on a different type of asset class and use of</p>	<p>No change in the proposal followed this suggestion.</p>



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	<p>A respondent believes that the type of counterparties and the specificities of the asset classes underlying OTC derivatives should be more detailed and requests the exclusion of the hedging transactions regarding the FX forwards and FX swaps from the clearing thresholds calculation for the UCITS and the AIFs. This exclusion would be justified by several reasons: - The investment funds which represent more than 75% of eligible counterparties use OTC derivatives for hedging purpose mostly; - FX represent a large part of asset classes denominated in different currencies; - As the shares of funds can be subscribed by the public, we consider that these hedging transactions are intended to protect individuals against currency risk. The respondent asks as minimum the exclusion on these FX transactions from the calculation of the AANA as this type of transactions is not eligible to VM nor IM exchange, as the operational set up to implement IM is very burdensome for investment funds and that their exclusion from Phase 6 will be very welcomed.</p> <p>A respondent recommends that a Phase 5 or 6 firm that is not subject to an IM exchange requirement as of the date of application of the IMMV RTS, should not be required to submit an application for use of the IM model that it is using for monitoring.</p> <p>A respondent recommends that counterparties that are not subject to an IM exchange requirement upon the date of application of the IMMV RTS be</p>	<p>collateral are dictated in the Delegated Regulation 2251/2016). Therefore, upon EBA review of this suggestion, no changes were introduced following it.</p> <p>The same can be said for the definition of AANA which is also outside the scope of these RTS.</p> <p>On the recommendation that a Phase 5 or 6 firm that is not subject to an IM exchange requirement as of the date of application of the IMMV RTS should not be required to apply to the use of the IM model that it is using for monitoring, the EBA see this as a clear point with no need for clarification. A counterparty non-in scope of IM exchange does not need to require validation. The validation nonetheless needs to be made if the counterparty will become subject of initial margin exchange obligation (except in the transitional phase).</p> <p>On the recommendation that counterparties that are not subject to an IM exchange requirement upon the date of application of the IMMV RTS be permitted to apply for initial model approval to their competent authority before the first instance in which initial margin is required to be exchanged and that the two-year period for review by the competent authority commences from such application date, the EBA disagree with this recommendation. This would indefinitely prolong the transitional provision. After</p>	

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permitted to submit an application for initial model approval to their competent authority prior to the first instance in which initial margin is required to be exchanged and that the two-year period for review by the competent authority commences from such application date.

A respondent requests that counterparties which are part of a group which newly breaches the EUR 8 billion level during an AANA calculation period during or after 2023 also be permitted to submit an application for initial model approval to their competent authority prior to the first instance in which initial margin is required to be exchanged and that the two-year period for review by the competent authority commences from such application date.

the entry into force of the RTS, the counterparties will have to follow the expected timeline.

On the requests that counterparties which are part of a group which newly breaches the EUR 8 billion level during an AANA calculation period during or after 2023 also be permitted to apply for initial model approval to their competent authority before the first instance in which initial margin is required to be exchanged and that the two-year period for review by the competent authority commences from such application date, the EBA sees as a business choice of the counterparty if it wants to apply in advance to their competent authorities for the use of the model for the actual exchange of IM (simple monitoring can be seen as an application of the model, and the request to validate it is legitimate by the counterparty).



