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4 November 2021

Consultation Paper

Draft Regulatory Technical Standards on Initial Margin Model Validation (IMMV) 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. Responding to this consultation

The EBA invites comments on all proposals put forward in this paper and in particular on the specific questions summarised in 5.2.

Comments are most helpful if they:

- respond to the question stated;
- indicate the specific point to which a comment relates;
- contain a clear rationale;
- provide evidence to support the views expressed/ rationale proposed; and
- describe any alternative regulatory choices the EBA should consider.

Submission of responses

To submit your comments, click on the 'send your comments' button on the consultation page by 4 February 2022. Please note that comments submitted after this deadline, or submitted via other means may not be processed.

Publication of responses

Please clearly indicate in the consultation form if you wish your comments to be disclosed or to be treated as confidential. A confidential response may be requested from us in accordance with the EBA's rules on public access to documents. We may consult you if we receive such a request. Any decision we make not to disclose the response is reviewable by the EBA's Board of Appeal and the European Ombudsman.

Data protection

The protection of individuals with regard to the processing of personal data by the EBA is based on Regulation (EC) N° 45/2001 of the European Parliament and of the Council of 18 December 2000 as implemented by the EBA in its implementing rules adopted by its Management Board. Further information on data protection can be found under the Legal notice section of the EBA website.

2. Executive Summary

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 (EMIR¹) on uncleared over-the-counter (OTC) derivatives.

The risk-management procedures referred to in the above-mentioned Article and further elaborated in the Delegated Regulation (EU) 2016/2251² 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, then 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 Models 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 changes³, and the Draft RTS on the assessment methodology for market risk internal models⁴.

In the design of the requirements for the IMMV, the EBA paid great attention to the variety of the 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 on model validation processes. For this reason, a dual process is foreseen in the proposed draft RTS on IMMV, where the most significant market participants⁵ 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 industry-wide level, the possibility for competent authorities to avoid

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

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

³ [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.](#)

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

⁵ 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.

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.

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 Europe 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 Annex.

3. Background and rationale

These RTS on the Initial Margin Model Validation (IMMV) complement the ESAs RTS on uncleared OTC derivatives⁶, which establish that counterparties, within the scope of the EMIR, must exchange Initial Margins when they enter in 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 to the Basel Working Group on Margin Requirements (WGMR) framework⁷.

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 SIMM⁸) with the requirements of the EU regulation was internally assessed, at the ESAs level, under the Joint Assessment Team⁹ (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 a 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

⁶ 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)

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

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

⁹ 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 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, and the final draft RTS on “assessment methodology for market risk internal models”.

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.”

3.1 Main policy decisions and structure of the RTS

In developing these RTS, two main policy issues had to be considered: the great variety of the counterparties under the scope of the Initial Margin Model validation and 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 Consultation Paper contains two distinctive 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.

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)¹⁰, i.e., the annual computation that counterparties must perform to meet the requirements of the Delegated Regulation (EU) 2016/2251. Consequently, approximately 20 institutions would fall under the scope of the standard validation, while the rest would only need to comply with the simplified validation¹¹.

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 ongoing validation. After the request is submitted, together with the proper documentation, competent authorities assess a list of aspects, both 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.

In particular, in Article 7, specific provisions were included on 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 (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.

¹⁰ 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.

¹¹ No official list of these institutions is available at the moment, mainly because many of them are not yet in the scope of application of the IM exchange (final implementation is set to be 09/2022); according to unofficial estimations provided by the industry to the WGMR, at the moment there are 20 subjects in the EU exchanging IM. For the last 2 phases of IM implementation the number of these subjects should increase to approximately 450, of which 50% actually exchanging IM (i.e. above the 50 Mil. minimum amount for exchange). Corroborating these figures is at the moment very challenging. A survey among competent authorities will be launched in the consultation phase of these RTS in order to collect more data.

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 to simplify some aspects of the validation in the case of the outsourcing of the same IM model for a plurality of subjects. In this regard, the simplifications in Articles 8 and 14 should be considered. Competent authorities are expressly allowed to leverage on 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.

The second substantial policy issue addressed in these RTS concerns the vast amount 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 of a prolonged period to prepare.

3.2 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 in 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 with phase-5 counterparties and it is expected to expand in size further once phase-6 counterparties, as defined in the Delegated Regulation (EU) 2016/2251, fall within the scope of the IM exchange¹².

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 divide any 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 approximately 20 subjects¹³, 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 counterparties¹⁴ 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).

3.2.1 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.

a. Section 2 – Subsection 1 of the draft IMMV RTS. Standardised supervisory procedures for applications by counterparties: Article 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.

¹² Above 50bn (phase 5) in scope from 1st of September 2021; Above 8bn (phase 6) in scope from 1st of September 2022.

¹³ An official list of these banks is not available at the moment. This figure is based on periodic exchange with the industry.

¹⁴ No official list of these counterparties is available at the moment, also because they are not yet in the scope of IM exchange requirements (final implementation is set to September 2022). 250+ subjects could be in the scope of the Simplified Process, but this estimation is judgmental, based on discussion with industry stakeholders.

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 the Annex 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 the Annex (e.g. the extension to another location or when declared as material by the competent authority), 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.

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 risk¹⁵ and the European Central Bank (ECB) Guide on materiality assessment (EGMA) for IMM and A-CVA model extensions and changes¹⁶.

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. Standardized supervisory procedures for granting validation: Article 7 through 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 to outsource an IM model (Article 7 - Outsourcing) and provide the conditions to comply with in such case. For example, the RTS require that the 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 unnecessarily repeats the core assessment of the same externally developed model.

¹⁵ 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

¹⁶ https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.egma_guide_201709.en.pdf

After these general provisions, the RTS provide detailed guidance 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 with 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 by the corresponding articles on the same topics in the internal model assessment methodology for market risk¹⁷ in order to facilitate their application by the subjects in the scope of the validation, as they generally already apply such provisions.

c. **Section 2 – Subsection 2 of the draft IMMV RTS. Standardised supervisory procedures for granting validation: Article 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 administration 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 resources allocated to these bodies should be proportionate to the size of the OTC derivatives activity of the counterparties (Article 11 – Model implementation 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.

¹⁷ RTS on the specification of the assessment methodology for competent authorities regarding 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)

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

In this regard, Article 13 of these RTS recognises the possibility to distinguish 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 conservativeness that is in line with the one specified therein (a one-tailed 99 percent confidence interval over the Margin Period of Risk – MPoR). To do so, the internal validation would have to run a backtesting analysis of the model calibration based on the period applied for the actual calibration.

The proposed backtesting of the calibration (and hence conservativeness of the model) is a static backtesting to be run at least once every three months. 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 has to be computed following the application of the historical scenarios that occurred in the period 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 percent 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. Once this classification is completed, the competent authorities will verify that the distribution of the "green", "amber", and "red" netting sets follows the expectation of the model calibration. 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.

Moreover, this backtesting will allow the competent authorities to assess that any IM in the netting sets that are classified as “red” (i.e., where there is evidence that the IM model calibration is not compliant with the Delegated Regulation (EU) 2016/2251) accounts for a very marginal part of the total IM collected. The purpose of this requirement is to ensure that the breaches in the IM model, even if expected from a statistical point of view, are not just limited in numbers but also in the actual amount of IM they involve.

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

The quantitative assessment of the model performance is 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 the problem envisaged.

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 to have a shorter period (i.e., less than 250 days) will imply a re-computation/adjustment of the threshold for the traffic-light categorisation.

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 noticed that the calculation of the netting set's change in the value has been the object of specific consideration. The idea was to be close to what is proposed in the EBA RTS on Backtesting and P&L Attribution under the FRTB framework¹⁸. However, a prescriptive definition of the change in 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.

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 and empirical correlation (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.

3.2.2 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 a 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, the validation process operates in the same 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.

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

¹⁸ https://www.eba.europa.eu/sites/default/documents/files/document_library/EBA-RTS-2020-02%20Final%20draft%20RTS%20on%20Backtesting%20and%20PLA%20requirements.pdf

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 the 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 are 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 the outsourcing and the temporary non-compliance of the model (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, the simple 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 the provision of both static and dynamic backtesting, as required for the standardised validation process¹⁹, 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 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 of 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

¹⁹ See also Article 14.

the receipt of the application and will have to formalise its supervisory validation within the same time window.

3.3 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, remains to be solved the issue of the large number of subjects that may potentially apply for validation.

It should be recalled that many subjects in the scope of the supervisory validation already use the IM model today, and many more will likely join them in the near future²⁰. It will be the first time that counterparties and supervisors go through a massive validation exercise such as the supervisory 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 suggestions²¹ 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

²⁰ 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.

²¹ https://www.isda.org/a/Y3tME/2019.05.17_EU-Letter_IM-Models_FINAL.pdf

process. This option is conditioned by a decision of the competent authorities (Article 2.3), which can choose when to deviate from the standard supervisory 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 the IM model to collect margins, and many other subjects will likely join 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 of 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.

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 suggested in Article 31. Three phases are proposed for consultation: 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.

4. Draft regulatory technical standards

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 repositories²², and in particular the fifth subparagraph 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) 2016/2251²³, it is necessary to specify supervisory procedures in this Regulation only 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 this Regulation, 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. 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

²² 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)

²³ 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).

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 the initial margin model falls under the discretion of the competent authorities and is indeed related to the particularities and specific circumstances of each counterparty, rules for the supervisory procedures relating to the validation of initial margin models should provide for the possibility for competent authorities to deviate from the standard criteria and to decide the appropriate set of supervisory procedures to be applied.

- (3) In order 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 model or such extensions and 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 2019²⁴ 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 and changes to such a model, and to be able to finalise the use of the model or of the extensions and 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 the 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 and 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 and 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 and changes to it, they should be given a maximum timeframe within which to complete their assessment of such model or extensions and changes to it. This is because of the need to 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/or extensions or changes to such models that competent authorities would have to review before granting to their validation, it would be reasonable to set this maximum

²⁴ 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*).

timeframe for the competent authorities to a year from the date of the notification of the application by each counterparty.

- (4) For the biggest and most sophisticated 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 margins 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 avails more in general of all appropriate governance aspects of the implementation of that initial margin model. These include, for example, internal policies and accountability mechanisms; involvement of the senior 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; 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 can be applied from a plurality of counterparties. As a result, competent authorities may face the possibility of having 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 which is subject to the same Regulation.
- (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 that is 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, for the actual implementation of the model, 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, should be assessed by means of backtesting, as in the case of models for capital requirements purposes, to ensure the conservatism of the model. This is appropriate given that the objective of the backtesting programme is to compare the margin values given by the model, for a specific static netting set, with the series of hypothetical changes in the same netting sets' values over a certain period of time. As a result, the backtesting should be used both at the initial approval of the model so that competent authorities can have a broad view of whether the model is fit for purpose or not; but also on an ongoing basis so as to allow competent authorities to follow 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)²⁵ should be used to classify the results of the backtesting also in this Regulation. The backtesting results, however, can only be used to detect the presence of a deficiency, but not to explain it. Therefore, the counterparties should be required to investigate further any potential poor results of the model (i.e., 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 backtesting is in itself 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 backtesting is crucial for the assessment of the performance of the initial margin model.
- (9) In order to ensure the continuous monitoring of the performance of the model mentioned in the previous recital, a dynamic process should be applied, i.e. the backtesting comparison should be done with respect to changing netting sets. As a result, 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 backtesting, the BCBS 'traffic-light' methodology and the requirements for counterparties to analyse overshootings should apply also here, for the purposes of the continuous monitoring of the performance of the model.
- (10) Article 11(15)(aa) of Regulation (EU) 2019/834 establishes the requirement of validation of initial margin models and the extensions and changes to such models and it also clarifies, in recital 20, that such validation needs to be provided before the model or the extensions and changes to it are applied. As this Regulation further specifies the supervisory procedures applicable to such validation, such *ex ante* validation of initial margin models and extensions and changes to them, applies with regard to any such requests that are submitted following the date of entry into force of this Regulation.

²⁵ 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>

Nevertheless, Regulation (EU) No 648/2012 already provided for initial margin model 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 at the date of entry into force of this Regulation. As a result, the entry into force of this Regulation cannot be assumed to automatically result in disruption of an already well-functioning market of counterparties who interact with others internationally, by requiring the automatic withdrawal of any of these models currently in use, and the return to the standardized 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 in light of this Regulation, which could require some time, a transitional period should be allowed during which they could object to the use of such models.

- (11) Counterparties in the non-centrally cleared OTC derivative markets are relatively numerous, especially the smaller and less sophisticated, 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. In order to allow additional time for the counterparties to prepare for the new regime and to 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, which should start applying one year after the date of entry into force of this Regulation. On the other side, because of the expected significant number of counterparties in the scope of the simplified supervisory procedures, a further dilution of the implementation is appropriate. These simplified supervisory procedures should start applying two years, for counterparties above the 50 euro billion of AANA, and three years after the date of entry into force of this Regulation, for the rest of the counterparties.
- (12) This Regulation is based on the draft regulatory technical standards submitted by the European Supervisory Authority (European Banking Authority) (EBA) to the Commission.
- (13) 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 1093/2010²⁶. The European Banking Authority has also consulted the European Securities Markets Authority (ESMA) and the European Insurance and Occupational Pensions Authority (EIOPA) before submitting the draft technical standards on which this Regulation is based.

²⁶ 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).

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 loss in market values of the non-centrally cleared OTC derivative contracts in a netting set exceeds the amount of initial margin as defined by Article 1 of Delegated Regulation (EU) 2016/2251, computed by making use of an initial margin model.

Article 2

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

1. For the purpose of validating either initial applications or applications for material extensions and changes of an initial margin model, the supervisory procedures applicable shall be as follows:
 - (a) the Simplified supervisory procedures set out in Section 3 shall be applicable where the counterparty meets any of the following conditions:
 - (i) where the counterparty is not one of the entities referred to in point (3) of Article 4(1) of Regulation (EU) No 575/2013²⁷;
 - (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 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 EUR 750 billion;
 - (b) the Standardised supervisory procedures set out in Section 2 shall be applicable in all other cases.
2. By way of derogation from paragraph 1(a), competent authorities may decide, based on the complexity and interlinkages of the counterparty activity in OTC derivatives, that the Standardised supervisory procedures set out in Section 2 are applicable instead, where the

²⁷ 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).

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 least EUR 50 billion.

3. Where the Simplified supervisory procedures apply in accordance with paragraph 1(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. In such cases, competent authorities have to communicate their assessment on supervisory validation on the use of the model or the relevant extension or change within a year from the date of the relevant notification by the counterparty.
4. Where competent authorities take any of the decisions referred to in paragraphs 2 and 3, they shall notify the counterparty accordingly within a month from the date of receipt of the application by the counterparty. Where competent authorities apply paragraph 2, the relevant counterparty shall submit any other relevant documentation required in accordance with the Standardised supervisory procedures set out in Section 2.
5. A competent authority may exclude types of OTC derivative contracts from the scope of the validation requested.

Explanatory text for consultation purposes and questions to stakeholders

Article 2 Supervisory procedures for validation of initial applications and material extensions and changes of initial margin models.

For proportionality reasons, the RTS establishes a standard validation process for banks subjects with AANA above Euro 750 bn, and a simplified validation process for the rest of the subjects in the scope of validation.

The Euro 750 bn threshold has been selected to balance the significance of the OTC portfolios and the capability of CAs and counterparties to undergo a standard validation approval process.

Nonetheless, there is some degree of flexibility for CAs to apply the more demanding standard validation process.

Q1: What are the stakeholders' views regarding the split between standard and simplified validation processes?

Q2: What are the stakeholders' views regarding the Euro 750 bn threshold selected?

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?

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?

Q5: What are the stakeholders' views regarding section 1? Please specify the issue by article where possible.

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 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 and changes to the initial margin model

1. In order to have material changes and extensions to their initial margin model validated by competent authorities, counterparties shall submit their application to those competent authorities in writing together with the information set out in Article 6.
2. Extensions and changes to the initial margin model shall be considered material for the purposes of paragraph 1, where they fulfil any of the following conditions:
 - (a) they fall under any of the extensions referred to in Annex I, Part I, Section 1, and they result in a change of 5% or more in terms of the absolute value calculated in accordance with paragraph 3;
 - (b) they fall under any of the changes referred to in Annex I, Part II, Section 1, and they result in a change of 5% or more in terms of the absolute value calculated in accordance with paragraph 3;
 - (c) they result in a change of 5% or more in terms of the absolute value calculated in accordance with paragraph 3, and the competent authorities assess such change as material.
 - (d) they result in a change of 10% or more in terms of the absolute value calculated in accordance with paragraph 3 of the total initial margins.
3. The changes referred to in paragraph 2 shall be equal to the highest absolute 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 using the initial margin model without the extensions or changes.

4. For counterparties belonging to a group, the changes referred to in paragraph 2 shall only be calculated at the group level.
5. Competent authorities shall inform the counterparty applying for changes and extensions to their initial margin model about the effective materiality of changes and extensions, in accordance with paragraph 2(c), and the eventual need for supervisory validation of their initial margin model before implementation.

Explanatory text for consultation purposes and questions to stakeholders

Article 4 - Standardised supervisory procedures for validation of material extensions and changes to the initial margin model.

The quantitative threshold for material changes is set as the “total IM” i.e. as the sum of IM collected/posted by the counterparties. It would be possible to establish a more granular threshold at the asset class level or derivative type level. Nonetheless, the threshold at “total IM level” has been set for the sake of simplicity of the framework.

The combination of a quantitative threshold (5% of change) with some case-specific events or with the competent authorities assessment of materiality (paragraphs 2 a, b, and c) is meant to focus the processes of ongoing validation of model changes and extensions on only the most significant ones.

Q6: What are stakeholders’ views regarding the methodology applied to identify material changes and extensions in the IM model?

Q7: What are the stakeholders’ views regarding the threshold selected (5% and 10%) in order to trigger the process?

Q8: What are the stakeholders’ views regarding the selected extensions and changes in the Annex I Part I and II?

Article 5

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

Extensions and changes to the initial margin model, which are not material, shall be notified to competent authorities in accordance with the following:

- (a) extensions and changes falling under Annex I, Part I, Section 2, and Part II, Section 2, shall be notified to competent authorities at least two months before their planned implementation date, in accordance with Article 6(2);
- (b) all other extensions and changes shall be notified to the competent authorities after implementation, at least on an annual basis, in accordance with Article 6(2).

Article 6

Documentation requirements for applications under the Standardised supervisory procedures

1. For applications for initial use of the initial margin model in accordance with Article 3, or for material extensions and changes to the 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 extension or change has been approved in accordance with the counterparties' internal approval processes by the relevant competent bodies and 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. For applications for extensions and changes not deemed material pursuant to Article 4, counterparties shall submit, together with the application, the documentation outlined in points (a) to (e) and (i) of paragraph 1.

Questions to stakeholders

Q9: What are the stakeholders' views regarding the documentation to be provided for the application under the Standardised supervisory process.

Q10: What are the stakeholders' views regarding the section 2 subsection 1 in general? Please specify the issue by article where possible.

Subsection 2

Standardised supervisory procedures for granting validation

Article 7

Outsourcing

Where a counterparty has delegated some or all tasks, activities or functions 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 delegation or purchase does not hinder the application of the assessment methodology referred to in this Regulation and, more 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 tasks, activities or functions delegated to a third party and over the initial margin model obtained from third parties;
- (b) that the counterparty's own staff has sufficient knowledge and understanding of the tasks, activities or functions 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 or processes is ensured, including by means of appropriate contingency planning;
- (d) that the internal audit or other control of the tasks, activities and functions delegated to third parties is not limited or inhibited by the involvement of the third party;
- (e) that full access is granted to competent authorities in relation to all relevant information.

Article 8

Use of Validation Results

1. For the purposes of verifying compliance of the general structure of the model with the governance requirements referred to in Article 13
2. (2a) and (3), where the conditions of paragraph 2 are met, a competent authority may rely on the available results, findings, and measures of another assessment conducted in either of the following ways:
 - (a) an assessment conducted by the competent authority itself of an initial margin model applied by a third counterparty;
 - (b) an assessment conducted by another competent authority subject to this Regulation, of an initial margin model applied by a third counterparty.

3. A competent authority may apply the process referred to in paragraph 1(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 of the initial margin model already validated.
4. A competent authority may apply the process referred to in paragraph 1(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 of 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) that 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).

Explanatory text for consultation purposes and questions to stakeholders

Article 7 Outsourcing and Article 8 Use of Validation results.

Article 7 on Outsourcing and Article 8 on the Use of Validation results are provisions designed to deal with the models that have been outsourced. In particular, Article 8 specifies the possibility that an EU competent authority relies on the validation of the methodology of another EU competent authority. Also, Non-EU approval from jurisdictions with equivalent regulation would fall under the scope of this requirement, i.e., useable for validation. This provision, i.e. to rely on the assessment of another competent authority, is not mandatory. It is just a prerogative available to any competent authority. The cooperation among the competent authorities is not addressed in the present RTS since it would be out of the scope of these RTS, and it is left to competent authorities practice and agreement on cooperation among each other.

Q11: What are the stakeholders' views regarding the outsourcing provisions proposed by Article 7 in the RTS?

Q12: What are the stakeholders' views regarding the use of validation results proposed by Article 8 in the RTS?

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?

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 15.
3. In order to assess whether a counterparty is compliant with the requirements on internal governance, including requirements on senior management and management body, internal organisation, the model implementation 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 senior management and the management body, in accordance with Article 10;
 - (b) the independence and resources of the model implementation 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 senior management and management body as referred to in point (a) of Article 9(3), competent authorities shall verify that a counterparty's senior management and management body is actively involved in, and ensures 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 that they 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 implementation 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 senior management of the counterparty takes appropriate corrective action where weaknesses of the initial margin model are identified by the model implementation unit, the qualified parties tasked with the internal validation of the model, the audit function or any other control function of the counterparty;
- (c) that the senior management is aware of and follows up on at least once a year, the recommendations raised by the audit, or the model implementation unit or the validation function in relation to the initial margin model;
- (d) that, following a proposal from the model implementation 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 applied in the initial margin model;
- (e) that the senior management of the counterparty is aware of the number of overshootings calculated at the different levels of aggregation in accordance with the backtesting programme referred to in Article 14 and 17;
- (f) that the model implementation unit provides notice to the management body or the committee designated by it, of material changes to or extension of the use of initial margin models.

Article 11

Model implementation unit

1. In assessing the internal governance of the counterparty in relation to the model implementation unit in accordance with point (b) of Article 9(3), competent authorities shall verify in particular all of the following:
 - (a) that the model implementation unit is independent from units responsible for originating, renewing, or trading exposures;
 - (b) that the model implementation 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 changes or extensions 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 implementation unit is adequate and proportionate to the size of the counterparty and to the risks of the business of the counterparty, and that it has the appropriate resources to perform its tasks effectively;
 - (d) that the model implementation unit reports to the senior management;
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- (e) that the model implementation 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 implementation unit is responsible for producing reports on the output of the initial margin model, for controlling input data integrity, and for 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, referred to in Article 18(1) of Delegated Regulation (EU) 2016/2251, in accordance with points (c) and (d) of Article 9(3) of this Regulation, 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 includes the conclusions of that review in a report submitted to senior management and the management body, as referred to in point (c) of Article 10
 - (b) that the report referred to in point (a) provides sufficient information to the senior management and the management body of the counterparty on the compliance of the initial margin model with all applicable requirements referred to in Article 18(1) 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 shall 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 compliance of the counterparty with the provisions of 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 meets the requirements in Art. 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 any way 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 and in both of the following cases:
 - (i) where the backtesting referred to in Article 14(3) of Delegated Regulation (EU) 2016/2251 shows large market losses in cases of overshooting of the model predictions;
 - (ii) where changes or extensions of the initial margin model are sought, in accordance with Article 4;
 - (d) that the findings resulting from the internal validation process are reflected in a validation report and remediated in a timely manner;
 - (e) that the validation report is comprehensive and sound.
2. Competent authorities shall verify that, as part of the initial and ongoing internal validation of its 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 backtesting 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 backtesting and other suitable statistical tests;
 - (iii) the accuracy of the model implementation.
3. For the purpose of paragraph 2(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 Art. 18(1) of Delegated Regulation (EU) 2016/2251 and of 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 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 that has staff that is sufficiently skilled in the area of market risks and counterparty credit risks in trading activities.

Explanatory text for consultation purposes and questions to stakeholders

Article 10 – 11 – 12

These articles deal with the assessment of the senior management, the implementation unit, and the audit function. The requirements are generally designed based on capital requirements internal model assessment methodologies. Stakeholders are welcomed to provide feedback on these specific parts of the governance requirements of these RTS.

Q14: What are the stakeholders' general views regarding the senior management requirements as stated in article 10? Also, please highlight specific issues.

Q15: What are the stakeholders' general views regarding the model implementation unit requirements as stated in article 11? Also, please highlight specific issues.

Q16: What are the stakeholders' general views regarding the audit requirements as stated in article 12? Also, please highlight specific issues.

Article 13 - Internal validation

Internal validation requirements distinguish the general structure of the model from the actual implementation of the model. This split recognises the possibility for the same IM model to be applied to more subjects and for the documentation on the internal validation of the general structure and methodology of the model to be provided by an external third party to a plurality of counterparties that apply for the same model. In such case, the counterparty must internally validate only the specific application of the model.

Q17: What are the stakeholders' general views regarding the internal validation requirements as stated in article 13? Also, please highlight specific issues.

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)?

Article 14

Internal validation of model calibration - static backtesting;

1. In assessing that the performance of the 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 requirements:
 - (a) that the unit of the counterparty responsible for the static backtesting programme, in accordance with Article 13 paragraph 2(b), complies with both of the following requirements:
 - (i) it is independent from the trading units responsible for originating, renewing or trading exposures;
 - (ii) it assesses the performance of the initial margin model via static backtesting;

(b) that, when carrying out the assessment referred to in point (a)(ii), the counterparty performs the following steps in sequence, at the least at the end of each quarter, and at least 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 the following steps, and applying the initial margin computed at the end of the period applied for the backtesting:

- (i) it identifies the MPoR used for the calculation of the initial margin in accordance with Article 15(1) of Commission Delegated Regulation (EU) 2016/2251;
 - (ii) it identifies the period that is used for the calibration of the initial margin model's parameters in accordance with Article 16(1) of Commission 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, and for all risk factors that are used to price the netting set in its current composition, it calculates the return observed between that date and the corresponding date identified in point (iii);
 - (v) for each date, it computes a loss by applying the returns obtained in point (iv) to the current value of the corresponding risk factors and measuring the change of the market values of the non-centrally cleared OTC derivative contracts in the netting set.
 - (vi) it builds a time series of the losses obtained as a result of point (v), and it shall count the number of overshootings.
2. Competent authorities shall verify that in the course of computing the change in the market value of the non-centrally cleared OTC derivative contracts in the netting set, referred to in paragraph 1(b) point (iv), the counterparty meets all of the following requirements:
- (a) it applies the same pricing methods, model parametrisations, market data and any other technique as those used in the end-of-day valuation process, and it reflects only changes in valuation adjustments that are included in the counterparty's initial margin model and that are calculated on a daily basis;
 - (b) that 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 positions covered by the initial margin model;
 - (c) that it ensures that, where the model does not cover all of the 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 both of the following:
- (a) that the counterparty analyses all overshootings in detail, in order to determine their causes;

- (b) that the counterparty documents the result of the analysis referred to in point (a).
4. Competent authorities shall verify that, with regard to the analysis of the overshootings referred to in paragraph 3(a), 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.
 5. Competent authorities shall verify that the counterparty communicates to them the result of the static backtesting, including the analysis referred to in paragraph 3, for each netting set where more than 10 overshootings are observed over the relevant period.
 6. Competent authorities shall verify that all the netting sets are classified in the following manner:
 - (a) a netting set shall be considered “green” where the number of overshootings resulting from paragraph 1(b) is lower than or equal to the number $N_{g,s}$ obtained by the counterpart in accordance with paragraph 7;
 - (b) a netting set shall be considered “red” where the number of overshootings resulting from paragraph 1(b) is greater than the number $N_{r,s}$ obtained by the counterpart in accordance with paragraph 7;
 - (c) a netting shall be considered “amber” where it is neither green nor red in accordance with points (a) and (b).
 7. Competent authorities shall verify that the counterparty determines the numbers $N_{g,s}$ and $N_{r,s}$ referred to in paragraph 6, applying the following steps:
 - (a) They assume, based on proper empirical evidence, 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 as follows:

$$Y = \sum_{i=1}^{MPOR} X_i$$

Where all X_i are distributed like X and are independent one from the other.

- (b) They obtain the value of K as the value for which the following condition is met:

$$\text{Probability}(Y \leq K_s) = 0.99$$

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

$$Probability (0 \leq N_{g,s}) = 0.95$$

Where O is a random variable counting the number of overshootings that occur in a period that is as long as the one identified in paragraph 1(b)(ii), when comparing a time series of the losses 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 d in the period identified in paragraph 1(b)(ii), it corresponds a daily loss X_d distributed as X ;
- (iii) For each business day d in the period identified in paragraph 1(b)(ii), it corresponds the following loss over MPoR business days:

$$L_d = \sum_{i=d}^{d+MPoR} X_i$$

where:

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

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

$$Probability (0 \leq N_{r,s}) = 0.9999$$

Where O is defined as in the point (c).

8. Competent authorities shall verify that the number of all the netting set defined as ‘green’, ‘amber’ and ‘red’ in accordance with paragraph 6 is compatible with the quantiles used to define those thresholds.
9. Competent authorities shall assess that the counterparty performs all the following steps:
 - (a) The counterparty identifies all dates for which there has been an overshooting in a red netting set.
 - (b) For each date identified in point (a), the counterparty applies the following steps:
 - (i) For each red netting set, it calculates the difference between the initial margin applied for the purpose of this backtesting, and the change in market values of the non-centrally cleared OTC derivative contracts in the netting set on the given date.
 - (ii) It sums all the differences calculated in accordance with point (i) across red netting sets.
 - (iii) The counterparty verifies that the number resulting from point (b) is lower than 1% of the total initial margin computed for the static backtesting for all the netting sets in the scope of initial margin model computation.
10. Competent authorities shall assess that the total initial margin for the netting sets defined as ‘red’ in accordance with paragraph 6(b) is not greater than the 1% of the total initial margin for the netting sets defined as ‘green’ in accordance with paragraph 6(a).

11. Competent authorities shall verify that, in accordance with Article 14(2)(k) of Delegated Regulation (EU) 2016/2251, the following are considered an event triggering a model change, recalibration or other remediation action:
- (a) The occurrence of an overshooting for which the analysis referred to in paragraph 4 identifies a material weakness or inaccuracy in the initial margin model,
 - (b) The number of all the netting set defined as ‘green’, ‘amber’ and ‘red’ in accordance with paragraph 6 is not compatible, in accordance with paragraph 8, with the quantiles used to define those thresholds,
 - (c) The breach of any thresholds identified in paragraphs 9 and 10.

Explanatory text for consultation purposes and questions to stakeholders

Article 14 – Static Backtesting

The internal validation process will have to be corroborated with the static backtesting of the calibration of the IM Model. The process proposed is meant to promote convergence on the methodology applied in the internal validation, but also keeping it flexible for any kind of IM model adopted. On this regard a plurality of questions could shed some lights on the backtesting for validation purposes.

Q19: What are the stakeholders’ views regarding the thresholds suggested to trigger for the CAs notification, as described in paragraph 5 of article 14?

Q20: What would be the stakeholders’ choice on the value of K_s , as described in paragraph 7 of article 14?

Q21: What would be the stakeholders’ choice on the distribution of X_i 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 X_i , e.g., by means of an analytical approximation or a plot of the empirical distribution density, with the normal distribution included as comparison?

Q22: What would be the stakeholders’ choice on the values of $N_{g,s}$ and $N_{r,s}$. Would you please provide a concise description of the methodology to obtain $N_{g,s}$ and $N_{r,s}$?

Q23: What are the stakeholders’ methods applied to transactions maturing in less days than the MPoR?

Q24: What are the stakeholders’ views on the static backtesting proposal as stated in article 14?

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) that the IT systems related to the initial margin calculation and exchange provide accurate results in a timely manner;
 - (b) that appropriate remediation capabilities are in place in case of problems encountered in the process in relation to the IT systems referred to in point (a).

Article 16

Quality and auditability of the documentation

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

- (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 type, author, reviewer, authorising agent and owner, dates of development and approval of the document;
- (d) it is numbered version and provides a comprehensive overview of the history of 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

Dynamic Backtesting programme

1. In assessing that the performance of the 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 requirements:
 - (a) that the unit of the counterparty responsible for the dynamic backtesting programme, in accordance with Article 11(f), complies with both of the following requirements:
 - (i) it is independent from the trading units responsible for originating, renewing or trading exposures;
 - (ii) it assesses the performance of the initial margin model via dynamic backtesting;

- (b) that, when carrying out the assessment referred to in point (a)(ii), the counterparty performs the following steps in sequence at the least at the end of each quarter, and at least 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 dates corresponding to the most recent 250 business days, where available;
 - (ii) for each date identified in point (i), it identifies the non-centrally cleared OTC derivative contracts within the netting set on that date, it calculates the value of those contracts on that date and the subsequent business day, and it obtains the change in those values;
 - (iii) it determines the initial margin for that netting set over a 1-business-day MPoR by either computing the initial margin over that MPoR or rescaling the initial margin resulting from the model with the actual MPoR of the netting set 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 values of the non-centrally cleared OTC derivative contracts resulting from point (ii) with the initial margin resulting from the model for that netting set using 1 business day as MPoR, and it counts the overshootings.
2. Competent authorities shall verify that in the course of computing the change in the market value of the non-centrally cleared OTC derivative contracts in the netting set, referred to in paragraph 1(b) point (ii), the counterparty complies with all of the following requirements:
- (a) it applies the same pricing methods, model parametrisations, market data and any other technique as those used in the end-of-day valuation process, and it reflects only changes in valuation adjustments that are included in the counterparty's initial margin model and that are calculated on a daily basis;
 - (b) that 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 positions covered by the initial margin model;
 - (c) that it ensures that, where the model does not cover all of the 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 encompass 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 both of the following:
- (a) that the counterparty analyses all overshootings in detail, in order to determine their causes;
 - (b) that the counterparty documents the result of the analysis referred to in point (a).
4. Competent authorities shall verify that, with regard to the analysis of the overshootings referred to in paragraph 3, 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.
5. Competent authorities shall verify that the counterparty communicates to them the result of the dynamic backtesting programme, including the analysis referred to in paragraph 3, for each netting set where more than two overshootings are observed over the relevant period.
 6. Competent authorities shall verify that all the netting sets are classified in the following manner:
 - (a) a netting set shall be considered “green” where the number of overshootings resulting from paragraph 1(b) is lower than or equal to the number $N_{g,d}$ obtained by the counterpart in accordance with paragraph 7;
 - (b) a netting set shall be considered “red” where the number of overshootings resulting from paragraph 1(b) is greater than to the number $N_{r,d}$ obtained by the counterpart in accordance with paragraph 7;
 - (c) a netting shall be considered “amber” where it is neither green nor red in accordance with points (a) and (b).
 7. Competent authorities shall verify that the counterparty determines the numbers N_g and N_r referred to in paragraph 6, applying the following steps:
 - (a) They assume, based on proper empirical evidence, a distribution X of the changes in the value of the netting set over a period of 1 business day, where all X_i are independent one from the other.

- (b) They obtain the value of K as the value for which the following condition is met:

$$\text{Probability}(X \leq K_d) = 0.99$$

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

$$\text{Probability}(O \leq N_{g,d}) = 0.95$$

Where O is a random variable counting the number of overshootings when comparing daily changes against the initial margin over a 1-business day MPoR that occur in a period that is long as the one identified in paragraph 1 and assuming:

- (i) A model for which the initial margin over a 1-business MPoR has been set to K_d ;
- (ii) All daily changes over the period to be distributed as X ;

- (d) The number N_r shall be the number for which the following condition is met:

$$\text{Probability}(O \leq N_{r,d}) = 0.9999$$

Where O is defined as in the point (c).

8. Competent authorities shall verify that the number of all the netting set defined as ‘green’, ‘amber’ and ‘red’ in accordance with paragraph 6 is compatible with the quantiles used to define those thresholds.
9. Competent authorities shall assess that the counterparty performs all the following steps:
 - (a) The counterparty identifies all dates for which there has been an overshooting in a red netting set.
 - (b) For each date identified in point (a), the counterparty applies the following steps:
 - (i) For each red netting set, it calculates the difference between the initial margin applied for the purpose of this backtesting and the change in market values of the non-centrally cleared OTC derivative contracts in the netting set on the given date.
 - (ii) For each date, it sums all the differences calculated in accordance with point (i) across red netting sets.
 - (iii) The counterparty verifies that the number resulting from point (b) is lower than 1% of the total initial margin computed for the dynamic backtesting for all the netting sets in the scope of Initial Margin model computation.
10. Competent authorities shall assess that the total initial margin for the netting sets defined as ‘red’ in accordance with paragraph 6(b) is not greater than the 1% of the total initial margin for the netting sets defined as ‘green’ in accordance with paragraph 6(a).
11. Competent authorities shall verify that, in accordance with Article 14(2)(k) of Delegated Regulation (EU) 2016/2251, the following are considered an event triggering a model change, recalibration or other remediation action:
 - (a) The occurrence of an overshooting for which the analysis referred to in paragraph 4 identify a material weakness or inaccuracy in the initial margin model,
 - (b) The number of all the netting set defined as ‘green’, ‘amber’ and ‘red’ in accordance with paragraph 6 is not compatible, in accordance with paragraph 8, with the quantiles used to define those thresholds,
 - (c) The breach of any thresholds identified in paragraphs 9 and 10.

Questions to stakeholders

Article 17 – Dynamic Backtesting

Q25: What are the stakeholders’ views regarding the thresholds suggested to trigger for the CAs notification, as described in paragraph 5 of article 17?

Q26: What would be the stakeholders’ choice on the value of K_d , as described in paragraph 7 of article 17?

Q27: What are the stakeholders’ views regarding the dynamic backtesting as set in article 17?

Explanatory text for consultation purposes and questions to stakeholders

Article 14 And 17 - Backtesting programmes

Before discussing the options proposed in the RTS, it should be recalled that the notion of “Profit and Loss” (P&L) is not present in the EMIR. But to keep the discussion simple, in this explanatory box, the term P&L is adopted. P&L is used in place of the more formal definition, applied in EMIR and in the RTS IMMV legal text, and is defined as a change in the market values of all OTC derivative contracts calculated in accordance with Article 11(2) of Regulation (EU) No 648/2012 and Articles 16 and 17 of Delegated Regulation (EU) No 149/2013 in the netting set”.

The Backtesting proposal in the RTS

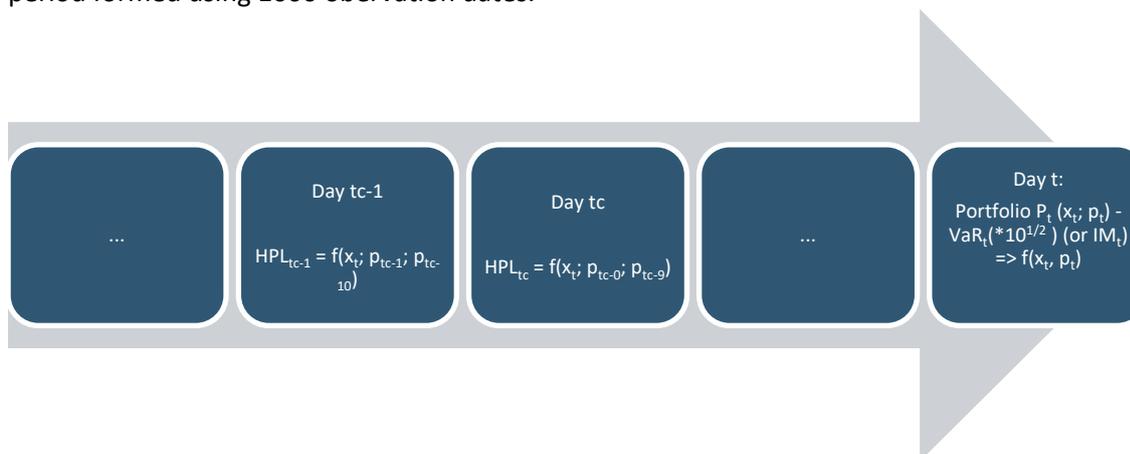
The backtesting requirement in the RTS are applied in a proportionate manner. Section 2 (Subsection 2 – Articles 14 & 17) defines the backtesting requirements for the most significant counterparties, while in Section 3 (Subsection 2 – Article 29) there are the backtesting requirements for the subject in the scope of the simplified validation process.

The proposal would be that most significant subjects will have to present to their competent authorities a static backtest (Article 14) results, based on a long series of past observations, along with a dynamic backtest (Article 17).

The firms in the scope of Standard validation process will compute Static BT applying the period that coincides with the calibration period, to obtain the observations of hypothetical 10-days P&L to be compared with the IM computed. This backtesting has to be run at least every 3 months.

Here below a graphic representation of the static backtesting:

The IM computed at the end of the day “t” for the portfolio P_t , as a function of the products in the netting set (x_t) and price p_t . This IM will be backtested with the hypothetical P&L (HPL_{tc}), which is a function of instruments in the netting set (x_t) and the change in price $p_{tc} - p_{tc-9}$. The same IM_t will be compared with HPL_{tc-1} ($p_{tc-1} - p_{tc-10}$) till HPL_{tc-999} ($p_{tc-999} - p_{tc-1008}$), assuming for example a calibration period formed using 1000 observation dates.



The serie of 10-days overlapped P&L will be generated and compared to the end of the quarter IM, computed by the IM model. Upon this comparison, the netting sets will be classified into different categories, based on a traffic light methodology.

Once the netting sets are classified in terms of traffic light methodology, some cheks are requested to assess the adequacy of the modeling assumptions:

- A. Total number of green, amber and red portfolios are in line with the distribution assumption of the changes of values of the netting sets adopted to define the thresholds.
- B. Total amount of shortfall for the red portfolios is smaller than 1% of the IM.
- C. Total IM of red portfolio is smaller than 1% of total IM of green portfolio.

It should be noted that points B & C are required because the supervisors should focus in particular on the frequency and volume of the “non-green” portfolios. Empirical evidence provided by the industry reports that usually, the red portfolios’ exposures are “small”, but this cannot be guaranteed, and it should be a factor to take into consideration in the supervisory validation. It is understood that this requirement does not drastically change the current industry practice, and therefore it should not be overly burdensome to be applied.

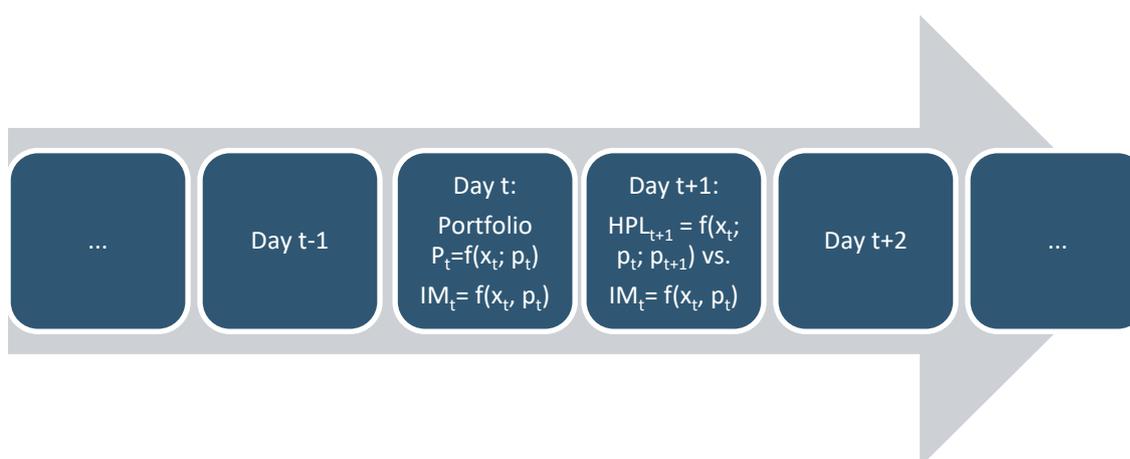
Furthermore, to comprehensively monitor the IM model (article 14.3 of the DR 2016/2251), the most significant counterparties will be asked to run, on a continuous basis, also a dynamic BT (Article 17).

The dynamic backtesting will be run over a 1 year period, i.e. 250 observations. The IM, usually computed on a 10 days basis, can be rescaled to 1 day IM (applying an appropriate methodology to rescale them), and then IM will be compared with a vector of 1-day hypothetical P&L.

Here below is a graphic representation of the dynamic backtesting.

The IM computed at the end of the day “t” for the portfolio P_t , as a function of the products in the netting set (x_t) and price p_t . This IM_t is going to be recalibrated at 1-day basis.

This IM_t is backtested with the (hypotetical) P&L (HPL_{t+1}), which depends on the netting set (x_t) and the price changes on a one day horizon $p_{t+1} - p_t$. The following day, the next IM_{t+1} will the be backtested with HPL_{t+2} (x_{t+1} ; $p_{t+2} - p_{t+1}$). The backtesting series will go on till IM_{t+249} which will the be backtested with HPL_{t+250} (x_{t+249} ; $p_{t+250} - p_{t+249}$).



The serie of 1-day P&Ls will be generated and compared to the series of correspondent IMs, computed by the IM model. Upon this comparison, the netting sets will be classified into different cathegories, based on a traffic light methodology.

Once the netting sets are classified in terms of traffic light methodology, some cheks, analoguous to those used for the static beckttesting are requested to assess the adequacy of the modelling (cf. “A”, “B” and “C” above).

In the dynamic backtesting, The provision to request the hypothetical P&L only, instead of both actual and hypothetical, is made not to overburden the counterparties in the scope of these requirements.

The dynamic backtesting requirements suggested in article 17 will also be adopted for the backtesting for the counterparties in the scope of the simplified validation process (see Section 3)

Explanatory text for consultation purposes and questions to stakeholders

Article 14 and 17 - Backtesting programmes & valuation adjustments

A point of concern during the drafting of the backtesting programme and the definition of the change in the value of the netting set (i.e., the P&L of the portfolio) is the specification of the valuation adjustments treatment.

As a term of paragon, the FRTB RTS on PLA published by EBA can be recalled:

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 a nutshell, the EBA FRTB RTS on PLA specifies three types of PL, as defined by Basel and CRR definitions, among which the Actual PL (APL) and the Hypothetical PL (HPL).

APL and HPL notions have been utilised for a long time to test VaR models, with a light specification of the treatment of the different valuation adjustments (VAs). The treatment of VAs in the EBA RTS on PL specifies more in detail the VAs to be included in the APL and HPL under the FRTB IMA framework.

For the moment, in these CP RTS on IMMV, the treatment of the VAs is not granularly specified in detail in the initial margin Backtesting programmes, to keep the framework simple and also because outside the banking system the application of this concept could be particularly problematic for some of the subjects in the scope of EMIR. Nonetheless, EBA would welcome the opinion of the stakeholders in this regard.

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?

Explanatory text for consultation purposes and questions to stakeholders

Article 14 & Article 17 – Static Backtesting and Dynamic Backtesting

There is an additional element for the Backtesting to be considered, i.e. which IM (collected/posted/both of them) to be backtested. The options taken into consideration are two: a) not specify which IM to consider, so be flexible and accepting computation considering both collected and posted IM or b) strictly requiring computation only on collected IM to be considered. The current draft proposes the validation of the IM without specification to keep flexibility in the process, but a more restrictive view could be considered.

The further specification could take into consideration the legal framework specified in the RTS on uncleared OTC derivatives (DR 2016/2251), where the reference to the collected IM are explicit, as defined in Article 1(1): *(1),[...] 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.*

The fundamental purpose of the IM is to protect the counterparty from the potential future exposure to which it can be exposed in case of default of the other counterparty. Therefore, each counterparty has to pay great attention to the IM collected to protect itself.

Also, in general, article 11 (calculation of IM) refers to the IM to be collected, which can be done either by IM model or by Standardised Method (Article 11. 1. *Counterparties shall calculate the amount of initial margin to be collected using either the standardised approach set out in Annex IV or the initial margin models referred to in Section 4 or both.*).

In article 2, Par 2(b) *“the calculation and collection of margins for non-centrally cleared OTC derivative contracts in accordance with Section 3”*; equally Section 3 (Calculation and collection of margins) references directly to Section 4 (Initial margin models) as a way to compute IM. All these references support that counterparties, when collecting the IM computed via IM Model, have to follow the procedure in Section 4 and by extension, the forthcoming procedure on IM Model validation.

Therefore, it could be argued that the wording of these RTS IMMV could be further specified in order to be applied solely to IM collected. On the other side, industry practice seems to converge toward a backtesting run upon collected and posted IM, and the RTS do not want to disrupt industry practice on this matter.

EBA would welcome stakeholders’ feedback on this matter.

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?

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 the non-centrally cleared OTC derivative contracts, in accordance with the requirement of points (a) to (j) of Article 14(2) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify both of 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 parameters used to describe any stochastic process 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 implementation 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 distribution of those number sequences;
 - (c) that the use of variance reduction methods does not introduce inaccuracies in the IM calculation.

Article 19

Risk factors omitted from initial margin model

1. When assessing whether the initial margin model captures a sufficient number of risk factors, in accordance with the requirement of points (a) to (j) of Article 14(2) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify that, where the risk factor is incorporated into a counterparty's pricing model, but not into its initial margin model referred to in that Article, 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 purposes and that incorporation of that risk factor in the institution's pricing model is justified due to its material impact on the pricing accuracy.
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 both of the following:
 - (a) that the counterparty assesses, as part of the validation process referred to in point (b) of Article 14(4) and of Article 17(4), the extent to which the excluded risk factor is immaterial for initial margin purposes;

- (b) that, where assessing the immateriality of the missing factor for initial margin purposes, referred to in point (a), the counterparty takes into account instances where a backtesting exception has been produced by a missing risk factor, as referred to in point (b) of Article 14 (4) and of Article 17(4).

Article 20

Capture of nonlinearities in initial margin model

1. When assessing that the initial margin model captures main nonlinear dependency in accordance with the requirement of point (i) of Article 14(2) 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 nonlinear positions, the counterparty computes at least the material first order and material second order terms of Taylor series approximations to reflect the change in the price for each position due to changes in relevant risk factors;
 - (b) that the counterparty assesses the materiality of the time effect.
 - (c) that the counterparty captures all material risk linked to the nonlinear profile of options and other products and that, with respect to the implied volatility of options:
 - a. it differentiates risk per underlying, where appropriate;
 - b. it considers both of the following:
 - (i) the maturity of the non-centrally cleared OTC derivative contracts in the netting set;
 - (ii) the absolute or relative distance of the price of the underlying to the strike prices of the non-centrally cleared OTC derivative contracts in the netting set.
2. Where a counterparty uses Taylor series approximations to capture nonlinearities, 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 the change in the market value of the non-centrally cleared OTC derivative contracts in the netting set are not material;
3. Where a counterparty includes the passage of time represented by the ‘theta’ in the change in the market value of the non-centrally cleared OTC derivative contracts in the netting set and not in their initial margin, competent authorities shall verify that the effect of this inconsistency is not material.

Article 21

Use of proxies

1. When assessing the use of proxies in accordance with the requirements of points (a) and (b) of Article 16(10) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify that proxy market data is used in the calibration of the initial margin model only for those risk factors where direct market data is insufficient or not reflective of the true volatility of a position, specifically:
 - (a) that the available data within the historical observation period used for the calibration of the initial margin model contains missing data points or stale data;

- (b) that there is insufficient available data within the historical observation period used for the calibration of the initial margin model 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 of points (a) and (b) of Article 16(10) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify that they are appropriately conservative. 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. When assessing the use of proxies in accordance with the requirements of points (a) and (b) of Article 16(10) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify that the proxy used shows a good track record for the actual position held and that the use of the proxy, does not undermine the ability of the model in capturing all material risk in accordance with Article 14(2) of that Regulation. To that end, they shall verify:
 - (a) that the counterparty has documented and assessed any proxy used in the initial margin model;
 - (b) the counterparty's assessment of whether the proxy adequately approximates the risk;
 - (c) that the counterparty's proxy does not underestimate the volatility of the missing risk factor, including under stress conditions.
 4. Competent authorities shall verify that, as part of the periodic internal validation, in accordance with requirements of Article 13 of this Regulation, the counterparty reviews the necessity for the proxies used, assessing 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 the requirement of point (f) of Articles 14(2) and 15(2) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify that counterparties have 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.

Article 23

Risk factor and empirical correlations

1. Where assessing whether the initial margin model reflects correlations in a prudent manner, as referred to in point Article 14(8) of Delegated Regulation (EU) 2016/2251, competent authorities shall verify both of the following:
 - (a) that the counterparty assesses the extent to which the positions are sensitive to correlation risks, where the counterparty holds material positions in instruments sensitive to these implied correlations changes;
 - (b) that the initial margin does not rely on correlation assumptions that are not appropriately supported by market data.
2. Where counterparties use empirical correlations within asset classes, competent authorities shall verify all of the following:
 - (a) that those correlations are reviewed on at least a quarterly basis;
 - (b) that, as part of the validation process referred to in point (c) of Article 21(2), the counterparties assess the potential effect that alternative, historically observed, high and low correlations could produce in the initial margin calculation.

Explanatory text for consultation purposes and questions to stakeholders

Article 18 through Article 23

The last part of Section 2 – Subsection 2, specifically Article 18 through Article 23, deals with the appropriateness of modelling assumptions, risk factor omitted, nonlinearities, use of proxies, less liquid position and risk factor and empirical correlation in a similar manner of what is provided in the EBA RTS on [Internal Model Approach for Assessment Methodology](#). This policy choice is deemed appropriate because of these aspects' similarity between the Market Risk Model and IM Models. Nonetheless, specific feedback is welcomed in the case where these requirements can be clarified or simplified.

Q30: What are the stakeholders' views regarding Articles 18 through 23? Please specify the issue by article where possible.

Q31: What are the stakeholders' views regarding the section 2 subsection 2 in general? Please specify the specific issue by article where possible.

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 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 changes and extensions to their initial margin model validated by competent authorities, counterparties shall submit their application to those competent authorities in writing together with the information set out in Articles 27 and any change of the information set out in Article 28 provided for the purpose of Article 24.
2. Extensions and changes to the initial margin model shall be considered material for the purposes of paragraph 1, where they fulfil any of the following conditions:
 - (a) they fall under any of the extensions referred to in Annex I, Part I, Section 1, and they result in a change of 10% or more in terms of the absolute value calculated as set out in paragraph 3;
 - (b) they fall under any of the changes referred to in Annex I, Part II, Section 1, and they result in a change of 10% or more in terms of the absolute value calculated as set out in paragraph 3;
 - (c) they result in a change of 10% or more in terms of the absolute value calculated as set out in paragraph 3 of the total initial margins, and the competent authorities assess such change as material.
 - (d) they result in a change of 20% or more in terms of the absolute value calculated as set out in paragraph 3 of the total initial margins.
3. The changes referred to in paragraph 2 shall be equal to the highest absolute 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 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.

4. For counterparties belonging to a group, the changes referred to in paragraph 2 shall only be calculated at the group level.
5. Competent authorities shall inform the counterparty applying for changes and extensions to their initial margin model about the effective materiality of changes and extensions, in accordance with paragraph 2(c), and the eventual need for supervisory validation of their initial margin model before implementation.

Article 26

Simplified supervisory procedures for validation of extensions and 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 as set out in Articles 27 and 28.

Article 27

General documentation requirements under the Simplified supervisory procedures

For applications for initial validation, material and non-material extensions and changes under this Regulation, counterparties shall submit to competent authorities, together with their application or notification, the general documentation outlined in points (a) to (e) and (i) of Article 6(1), and a self-assessment of the compliance with this Regulation.

Article 28

Documentation requirements specific to governance under the Simplified supervisory procedures

1. Competent authorities shall assess the initial margin model governance arrangements with respect to the requirements of 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 senior management and the management body governance, competent authorities shall receive all of the following documents:

- (a) a description of the organisational structure of senior management and management body;
 - (b) documentation, in the form of reports addressing the management and meeting minutes, reflecting that 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 implementation unit, competent authorities shall receive all of the following documentation from the counterparty:
 - (a) description of the organisational structure of model implementation unit;
 - (b) documentation showing that model implementation unit is independent from units responsible for originating, renewing or trading exposures;
 - (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 documentation:
 - (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 the following documentation from the counterparty:
 - (a) description of the organisational structure of internal validation unit;
 - (b) documentation showing that 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 the following documentation:
 - (a) description of IT systems related to initial margin model calculation;
 - (b) the latest IT reports detailing the accuracy and timeliness of initial margin calculations.
7. 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

In order to validate an initial application for the use of an initial margin model or extensions and changes to that model, competent authorities shall apply Articles 7, 8 and 17. Where the application of Article 17 is not feasible because the numbers of observation specified in Article 17(7) is not available, in order to validate an initial application for use of an initial margin model or extensions and changes to that model, competent authorities shall alternatively apply Article 14.

Explanatory text for consultation purposes and questions to stakeholders

Section 3 – Simplified assessment

The basic idea for this section is to rely on the possibility for smaller counterparties to provide a self-assessment of compliance to the CA, based on a list of a minimum documentation requirements (such as validation report, and backtesting results) to be submitted.

Q32: What are the stakeholders' views regarding section 3 in general? Please specify the issue by article where possible.

Q33: What are the stakeholders' views regarding the thresholds selected (10% and 20%) to trigger the process for model changes and extensions in Article 25 for the simplified assessment?

Q34: What are the stakeholders' views regarding the scope of the documentation requirements in Articles 27 and 28 for the simplified assessment?

SECTION 4

TRANSITIONAL AND FINAL PROVISIONS

Article 30

Transitional supervisory procedures

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) at the latest within one month from the date of application of this Regulation;
- (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;
- (c) where competent authorities apply the option referred to in Article 2(2), the two-year period during which they may object to the use of the model, based on the provisions of this Regulation, shall start from the date of the receipt of the additional documentation that counterparties are required to submit in accordance with Article 2(4).

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*: 3 years from the date of entry into force of this Regulation].

Except that 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 at least EUR 50 billion. Section 3 shall apply [*Instructions to OJ*: 2 years from the date of entry into force of this Regulation],

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

Done at Brussels,

Explanatory text for consultation purposes and questions to stakeholders

Section 4 – Transitional and final provisions

The transitional and final provisions are designed, as explained in the background section, to ensure a smooth implementation of the validation requirements, considering the likely substantial amount of work required from both counterparties in scope and competent authorities.

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?

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?

Q37: What are the stakeholders' views regarding the transitional and final provisions in general? Are there aspects that should further be considered?

*For the Commission
The President*

*[For the Commission
On behalf of the President*

[Position]

ANNEX

ANNEX 1

EXTENSIONS AND CHANGES TO THE INITIAL MARGIN MODEL

PART 1

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 other modelling compared with existing 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 other risk modelling techniques than those forming part of the validated initial margin model, including path-dependent products, or multi-underlying positions.

PART 2

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 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 fundamentals of statistical methods, 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 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 values, including all of the following:
 - (i) changes in instrument valuation models, which are used to calculate sensitivities to risk factors or to re-value positions when calculating risk numbers;
 - (ii) changes from analytical to simulation-based pricing model;
 - (iii) changes between Taylor-approximation and full revaluation;
 - (iv) changes in the sensitivity measures applied.
6. Changes in the methodology used for backtesting.
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.

5. Accompanying documents

5.1 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 this Consultation Paper (CP) on regulatory technical standards (RTS) on Initial Margin Model Validation (IMMV). Importantly, the IA accompanying this document presents the first part of the IA, which is of a high level and qualitative nature. A second part, reflecting the results of a dedicated survey for this topic will be included in the final version of the RTS.

A. Problem identification and background

In July 2012, the European market infrastructure regulation (EMIR)²⁸ 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.²⁹ 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 account 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 off-set 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.³⁰

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)

²⁸ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012R0648&from=EN>

²⁹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R2251&from=EN>

³⁰ 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 margin and the liquidation of positions or hedging of market risk following a default of the other counterparty.

models that do not meet the requirements laid down by the RTS, it does however not provide for a legal basis to validate and officially endorse internal models used for the calculation of initial margins.

The EMIR Refit³¹ 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.³²

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 at establishing common and consistent criteria for the validation by supervisors of counterparties' risk management procedures.

5.1.1 Discussion - PART I

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 will occur by end 2022, where the application of the initial margin will apply whenever AANA of both counterparties is above EUR 8 bn. As of the drafting date of the RTS at hand, initial margin calculation and exchange applies whenever AANA is greater EUR 50 bn.

³¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:2019:141:FULL&from=EN>

³² The term 'risk management procedures' has been interpreted as the use of initial margin models for the computation of initial margins to be exchanged.

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 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 institution 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.³³

The threshold of EUR 750 bn has been chosen as it covers the very vast 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. Nevertheless, 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 substantial number of additional counterparties to be assessed, is not warranted. Furthermore, the application of AANA methodology (in the specific case EUR 750 bn figure) ensures consistency with the RTS on the risk management techniques.

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 CCP³⁴ set out the backtesting requirements for initial margin models in

³³ The RTS establish a minimum. Competent authorities of course can always decide to apply a fully-fledged approach to all counterparties under their remit.

³⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R2251&from=EN>

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 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 portfolio specifications in $t-1$, ..., $t-n$. In other words, the change in the composition of the portfolio over time is ignored. 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 the 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 to. 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 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 is 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, shorter time window (1 day) does not match the time length used for the model calibration (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 back test. 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 form of backtesting requirements.

5.1.2 Discussion - PART II

A survey among competent authorities is conducted in parallel to the consultation period. The results of the survey will be discussed in this section in the final version of the RTS.

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 closely on the RTS on the assessment methodology for internal models from 2016³⁵ and hence CAs are already very familiar with these processes. Importantly, the initial margin models that need to be studied and approved, in the large majority of cases, are the same in the form of the ISDA-SIMM³⁶ and as such CAs have smaller additional incremental costs for each counterparty validated. Furthermore,

³⁵ See EBA RTS on Internal Model Approach for Assessment Methodology

³⁶ 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](#).



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 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.

5.2 Overview of questions for consultation

Q1: What are the stakeholders' views regarding the split between standard and simplified validation processes?

Q2: What are the stakeholders' views regarding the Euro 750 bn threshold selected?

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?

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?

Q5: What are the stakeholders' views regarding section 1? Please specify the issue by article where possible.

Q6: What are stakeholders' views regarding the methodology applied to identify material changes and extensions in the IM model?

Q7: What are the stakeholders' views regarding the threshold selected (5% and 10%) in order to trigger the process?

Q8: What are the stakeholders' views regarding the selected extensions and changes in the Annex I Part I and II?

Q9: What are the stakeholders' views regarding the documentation to be provided for the application under the Standardised supervisory process.

Q10: What are the stakeholders' views regarding the section 2 subsection 1 in general? Please specify the issue by article where possible.

Q11: What are the stakeholders' views regarding the outsourcing provisions proposed by Article 7 in the RTS?

Q12: What are the stakeholders' views regarding the use of validation results proposed by Article 8 in the RTS?

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?

Q14: What are the stakeholders' general views regarding the senior management requirements as stated in article 10? Also, please highlight specific issues.

Q15: What are the stakeholders' general views regarding the model implementation unit requirements as stated in article 11? Also, please highlight specific issues.

Q16: What are the stakeholders' general views regarding the audit requirements as stated in article 12? Also, please highlight specific issues.

Q17: What are the stakeholders' general views regarding the internal validation requirements as stated in article 13? Also, please highlight specific issues.

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?

Q20: What would be the stakeholders' choice on the value of K_s , as described in paragraph 7 of article 14?

Q21: What would be the stakeholders' choice on the distribution of X_i 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 X_i , e.g., by means of an analytical approximation or a plot of the empirical distribution density, with the normal distribution included as comparison?

Q22: What would be the stakeholders' choice on the values of $N_{g,s}$ and $N_{r,s}$. Would you please provide a concise description of the methodology to obtain $N_{g,s}$ and $N_{r,s}$?

Q23: What are the stakeholders' methods applied to transactions maturing in less days than the MPoR?

Q24: What are the stakeholders' views on the static backtesting proposal as stated in article 14?

Q25: What are the stakeholders' views regarding the thresholds suggested to trigger for the CAs notification, as described in paragraph 5 of article 17?

Q26: What would be the stakeholders' choice on the value of K_d , as described in paragraph 7 of article 17?

Q27: What are the stakeholders' views regarding the dynamic backtesting as set in article 17?

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?

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?

Q30: What are the stakeholders' views regarding Articles 18 through 23? Please specify the issue by article where possible.



Q31: What are the stakeholders' views regarding the section 2 subsection 2 in general? Please specify the specific issue by article where possible.

Q32: What are the stakeholders' views regarding section 3 in general? Please specify the issue by article where possible.

Q33: What are the stakeholders' views regarding the thresholds selected (10% and 20%) to trigger the process for model changes and extensions in Article 25 for the simplified assessment?

Q34: What are the stakeholders' views regarding the scope of the documentation requirements in Articles 27 and 28 for the simplified assessment?

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?

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?

Q37: What are the stakeholders' views regarding the transitional and final provisions in general? Are there aspects that should further be considered?