

EBA/CP/2023/36

29 November 2023

Consultation Paper

Draft Regulatory Technical Standards

on the conditions for assessing the materiality of extensions and changes to the use of alternative internal models and changes to the subset of the modellable risk factors referred to in Article 325bc under Article 325az(8)(a) of the CRR

Contents

1. Responding to this consultation	3
2. Executive Summary	4
3. Background and rationale	5
3.1 Scope of the materiality assessment of model extensions and changes, and changes to the institution's choice of the subset of modellable risk factors	5
3.2 General methodology for the assessment of the materiality of model extensions and changes	7
3.3 General methodology for the assessment of the materiality of changes to the institution's choice of the subset of modellable risk factors	14
3.4 General provisions for assessing the materiality of model extensions and changes and changes to the institution's choice of the subset of the modellable risk factors	17
4. Draft regulatory technical standards	20
5. Accompanying documents	44
5.1 Draft cost-benefit analysis / impact assessment	44
5.2 Overview of questions for consultation	52

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 29 February 2024. 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 (EU) 1725/2018 of the European Parliament and of the Council of 23 October 2018. Further information on data protection can be found under the Legal notice section of the EBA website.

2. Executive Summary

Regulation (EU) 2019/876 (the Capital Requirements Regulation 2 – CRR2) amended Regulation (EU) No 575/2013 (CRR) and implemented in EU legislation, inter alia, the revised requirements to compute own funds requirements (OFR) for market risk of the Basel III package, i.e. the Fundamental Review of the Trading Book (FRTB).

The CRR allows institutions to calculate their OFR for market risk using the alternative internal model approach (IMA), provided that permission from competent authorities (CAs) is granted. According to the CRR, material changes to the use of the IMA, the extension of the use of the IMA and material changes to the institution's choice of the subset of the modellable risk factors (MRF) require separate permission from CAs. All other extensions and changes to the use of the IMA require notification to the CAs.

Article 325az(8)(a) of the CRR requests the EBA to draft regulatory technical standards (RTS) to specify the conditions for assessing the materiality of extensions and changes to the use of alternative internal models and changes to the subset of the modellable risk factors. The mandate in Article 325az(8)(a) of the CRR is very similar to the mandate in Article 363(4)(a), which constitutes the legal basis for the existing RTS on market risk model extension and changes, therefore the existing RTS is used as a starting point from which the new RTS is developed.

The proposed draft RTS follow the CRR differentiation between material extensions and changes, to be approved by CAs, and non-material extensions and changes, to be notified to CAs four weeks in advance. The latter category is further divided into two sub-categories: notified extensions and changes requiring additional information and other extensions and changes.

For the categorisation of model extensions and changes to the relevant categories/sub-categories, a combination of qualitative and quantitative conditions is proposed. In particular, the quantitative conditions aim at assessing the effect of the extension or change on the IMA OFR and on each component of the FRTB IMA (ES, SS and DRC), before and after the planned extension or change. In addition, for changes to the institution's choice of the subset of modellable risk factors, the effect of the change on the ratio PES_t^{RC} / PES_t^{FC} is also assessed.

Next steps

Following the feedback received from the consultation, the EBA will revise the proposed draft RTS, where appropriate, and submit them in their final form to the European Commission for adoption.

3. Background and rationale

Article 325az(1) and (2) of the CRR allow institutions to calculate its own funds requirements (OFR) for market risk using the alternative internal model approach (IMA), provided that permission from competent authorities (CAs) is granted.

Article 325az(7) of the CRR specifies that material changes to the use of the IMA that an institution has received permission to use, the extension of the use of the IMA that the institution has received permission to use, and material changes to the institution's choice of the subset of the modellable risk factors (MRF) referred to in Art. 325bc(2), shall require separate permission from CAs. Institutions shall notify the CAs of all other extensions and changes to the use of the IMA for which the institution has received permission.

Article 325az(8)(a) of the CRR requests the EBA to draft regulatory technical standards (RTS) to specify the conditions for assessing the materiality of extensions and changes to the use of alternative internal models and changes to the subset of the modellable risk factors referred to in Art. 325bc (“reduced set” of MRF).

The mandate in Article 325az(8)(a) of the CRR is very similar to the mandate in Article 363(4)(a), which constitutes the legal basis for the existing RTS on market risk model extension and changes¹. The only novelty is that the new mandate separately mentions the changes to the “reduced set” of MRF for the rest of model extensions and changes. Considering the similarities between the existing and the new mandates, the existing RTS is used as a starting point from which the new RTS is developed.

This background section provides an overview of the proposed conditions for assessing the materiality of model extensions and changes, and changes to the choice of the subset of MRF, as well as their rationale. In addition, clarification is provided, including by means of examples, around the notion of model extension and change and of changes to the choice of the subset of MRF.

3.1 Scope of the materiality assessment of model extensions and changes, and changes to the institution’s choice of the subset of modellable risk factors

It has been considered that the permission of CAs for the use of the IMA relates to the methods, processes, controls, data collection, organisation of the risk management and internal validation function, and IT systems used. As a consequence, ongoing alignment of the model to the dataset used,

¹ [Commission Delegated Regulation \(EU\) No 529/2014 of 12 March 2014 supplementing Regulation \(EU\) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards for assessing the materiality of extensions and changes of the Internal Ratings Based Approach and the Advanced Measurement Approach, as amended by Commission Delegated Regulation \(EU\) 2015/942 of 4 March 2015 as regards regulatory technical standards for assessing the materiality of extensions and changes of internal approaches when calculating own funds requirements for market risk.](#)

correction of errors or minor adjustments necessary for the day-to-day maintenance of the model are all elements that should not be considered as changes to the model, if they occur within the already approved methods, processes, controls, data collection, organisation of the risk management and internal validation function, and IT systems used.

This understanding remains unchanged compared to the current RTS (see in particular recital 7 of the amending RTS on market risk model extensions and changes²) and is also in line with current supervisory practices on materiality assessment for changes to internal models in other areas, such as counterparty credit risk and credit valuation adjustments.

3.1.1 Clarification of the notion of model extensions and changes

Similarly to the case of model maintenance, there exist other modifications to the IMA which should not be considered as model extensions or changes. In fact, it should be considered that some modifications to the IMA are automatically triggered by the regulation when specific conditions materialise and are not at the bank's initiative. In general, those modifications should not be considered as model changes if they intervene within the approved methods, processes, controls, data collection, organisation of the risk management and internal validation function, and IT systems used. On the contrary, modifications to the IMA performed at the bank's initiative should generally be considered as model extension or changes and should be covered under the scope of these RTS if they constitute a change of the approved methods, processes, controls, data collection, organisation of the risk management and internal validation function, and IT systems used.

For example, changes of

- the valuation methodology for the use of the sensitivity-based pricing methods for the determination of the loss for some financial instruments or commodities in the SSRM context (as set out in Art. 9(3) RTS SSRM),
- the bucketing approach from the regulatory bucketing approach to the use of the own-bucketing approach for the risk factor modellability assessment (as set out in Art. 5(1) RTS RFET)
- the parametric representation of an interest rate curve from principal components to the Nelson-Siegel approach

should be considered model changes when they represent a change of the approved methods and approaches, for which it should be ensured that they are implemented in accordance with the regulatory requirements.

In addition, it should also be considered that some cases are already covered in other parts of the regulatory framework and as such they should not be considered under these RTS, to avoid duplicate

² [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](#)

requirements. An example of these cases is represented by changes to the IRB model which produces the PDs and/or LGDs used for the purpose of the FRTB IMA DRC.

3.1.2 Grouping or splitting model extensions and changes

Another aspect to consider is the granularity which should be applied to define a model extension or change, i.e. whether a group of modifications should be considered as a single model change or as different changes. It is EBA's view that a guiding principle, in this sense, should be to consider similarities in the type of modification at hand. For example, changes of the parametric representation of interest rate curves from principal components to the Nelson-Siegel approach should constitute a unique model change if the methods, processes, controls, data collection, and IT systems used to model these curves are the same among the curves.

On the other hand, it is also EBA's view that timing should not be considered as a reason to justify the grouping or splitting of modifications into one or several model changes, respectively. For example, if the methodology to represent interest rate curves is changed in a phased approach, where the methodological change is first applied to some curves and subsequently to others, such modifications constitute one unique model change, if they constitute the same change to the approved methods, processes, controls, data collection, organisation of the risk management and internal validation function, and IT systems used. As a consequence, one unique materiality assessment should be performed encompassing all such modifications. Similarly, where a change in booking models leads to products, for which the institution was transferring the market risk to another entity of the group outside the scope of the highest level of consolidation within the Union/EEA, being progressively internally hedged and significantly changes the scope of positions of a given trading desk covered by the IMA, such progressive modification should be considered as one unique model extension.

3.1.3 Clarification of the notion of changes to the institution's choice of the subset of modellable risk factors

The choice of the reduced set of MRF is part of the institution's approved and documented set of internal policies and procedures. Changes to the choice of the reduced set of MRF should be intended as modifications to such policies and procedures, and as such should be covered by these draft RTS.

It may happen in practice, however, that changes to the number of risk factors included in the reduced set occur within approved internal policies and procedures, for example, as a consequence of reduction of data availability. Such cases do not constitute changes to the institution's choice of the reduced set as approved and consequently are out of the scope of these draft RTS, because they do not entail a change in the approved policies and procedures defining the reduced set.

3.2 General methodology for the assessment of the materiality of model extensions and changes

These new draft RTS follow the same approach of the existing RTS regarding the classification of model extensions and changes into different levels of materiality. The CRR differentiates between material

extensions or changes that are subject to approval, and all other extensions and changes that are subject to notification.

Differently from the existing RTS, the new draft RTS propose to further differentiate extensions and changes subject to notification into two sub-categories: notified extensions and changes requiring additional information and other extensions and changes. The former sub-category encompasses all those extensions and changes which are not material but nonetheless are still of particular interest from a supervisory perspective, either because they produce a significant impact or because of their qualitative aspects. The latter sub-category includes all those extensions and changes which are neither material nor requiring additional information.

In relation to the extensions and changes subject to notification, the timing of notification is not specified in the CRR, i.e. the CRR does not clarify whether the extension or change should be notified before or after implementation. Differently from the existing RTS, the EBA considers that non-material extensions and changes should be notified to competent authorities four weeks in advance of their implementation. This approach ensures that sufficient time is given to supervisors to review the notified extensions and changes, and to take follow-up actions, if necessary.

For the categorisation of model extensions and changes to the relevant categories/sub-categories, these new draft RTS follow the same approach as in the existing RTS by employing a combination of qualitative and quantitative conditions. However, compared to the existing RTS, such qualitative and quantitative conditions have been streamlined. In what follows, the conditions for assigning model extensions and changes to each of the categories/sub-categories will be presented.

3.2.1 Conditions for assessing model extensions and changes as material

These new draft RTS provide (in Part I of the annex) a list of qualitative criteria for categorising material extensions and changes to the internal models. Such criteria are the following:

- significant changes to the structure or organisation of an institution's trading desks under the IMA, as it could be the case for significant changes to the business strategy, including the case where the institution aims at applying internal risk transfers for the first time, the booking models or the risk management structure;
- inclusion in the IMA scope of a trading desk, which was not part of the granted permission at the moment of the request;
- reverse extensions where an institution aims at applying the standardised approach to trading desks which are under the IMA permission at the moment of the request;
- changes in the fundamental approach to calculate the IMA partial expected shortfall measures, as it could be the case where there is a change between historical simulation, parametric or Monte Carlo approach;

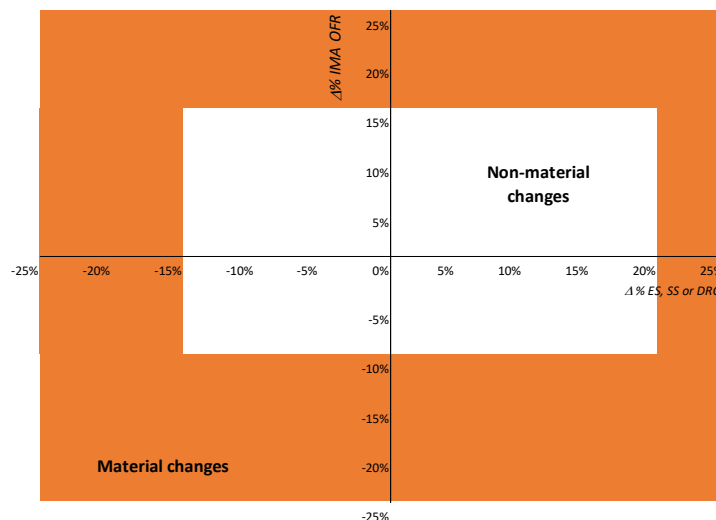
- changes in the fundamental approach to calculate the default risk charge, as it could be the case where there are significant changes to the choice of the systematic risk factors or to the correlation structure of the model.

These new draft RTS also propose quantitative thresholds to be applied as a ‘back-stop’ measure in addition to the lists of qualitative criteria when determining the materiality of model extensions and changes. Two types of quantitative conditions are included: one condition that relates to the effect of the extension or change on the IMA OFR before and after the planned extension or change, and one condition that relates to the effect of the extension or change on each component of the FRTB IMA, namely the ES, the SS and the DRC, before and after the planned extension or change.

For model changes, the following threshold levels are used (as represented in Figure 1):

- +15% for increases in the IMA OFR;
- 10% for decreases in the IMA OFR;
- +20% for increases in at least one of ES, SS and DRC;
- 15% for decreases in at least one of ES, SS and DRC.

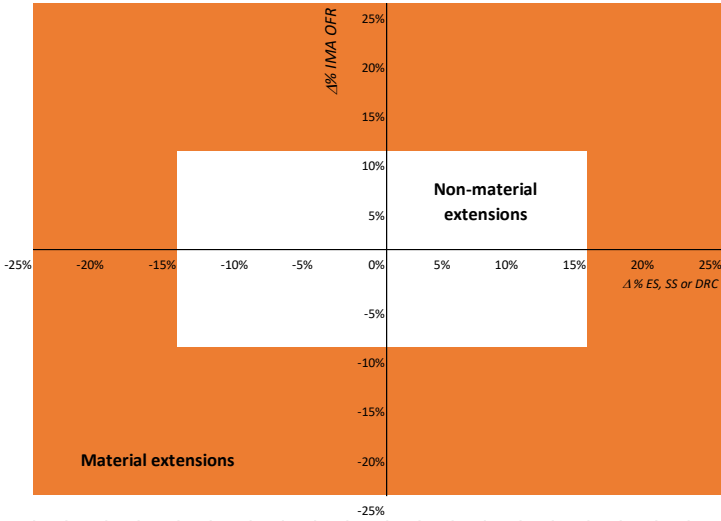
Figure 1 Graphic representation of the quantitative conditions for identifying material changes



For model extensions, the following threshold levels are used (as represented in Figure 2):

- +10% for increases in the IMA OFR;
- 10% for decreases in the IMA OFR;
- +15% for increases in at least one of ES, SS and DRC;
- 15% for decreases in at least one of ES, SS and DRC.

Figure 2 Graphic representation of the quantitative conditions for identifying material extensions



The indicators on the change in requirements are to be calculated for an observation period of 15 consecutive business days, starting from the first business day of the testing of the impact of the model extension or change. Such an observation period should be representative of the trading and hedging activity under normal market conditions for the portfolio of positions affected by the change. In addition, such an observation period should furthermore not be older than nine months from the notification date or request of permission to competent authority.

Specific provisions have been also included in order to maintain the general approach proportionate.

Firstly, where some of the risk measures ES_{t-1} , SS_{t-1} and DRC_{t-1} represent a small proportion of the OFR, even small impacts on such risk measures may have the unintended consequence of triggering the corresponding quantitative conditions. In order to avoid such unintended consequence, these new draft RTS specify that only the relevant risk measures should be checked as part of the quantitative conditions. For being considered relevant, a risk measure should represent more than 5% of the sum of all the risk measures. Such condition should be checked for all the 15 days observation period, both with and without the extension or change.

Secondly, it has been considered more appropriate to set out quantitative conditions on the most recent FRTB IMA risk numbers only (i.e. on ES_{t-1} , SS_{t-1} and DRC_{t-1}). The averages of such risk numbers over the preceding 60 business days (i.e. ES_{avg} , SS_{avg} and DRC_{avg}) are therefore disregarded for the purpose of assessing the quantitative conditions, including for assessing the impact on the IMA OFR (i.e. the IMA OFR are approximated by $m_c * ES_{t-1} + SS_{t-1} + DRC_{t-1}$).

Thirdly, it should be noted that an additional pre-condition is included that exempts from the computation of the two conditions on IMA OFR and risk numbers for 15 business days. In fact, in order to avoid excessive burden on institutions, extensions and changes that lead to changes in the relevant

risk numbers of less than 1% in absolute terms, on the first business day of the testing, should be directly considered non-material (unless any of the qualitative conditions is met).

3.2.2 Conditions for assessing model extensions and changes requiring additional information

In order to identify non-material extensions and changes which require additional information to be submitted to the CA as part of their notification, these new draft RTS provide (in Part II of the annex) a list of qualitative criteria. Such criteria are the following:

- the inclusion in the scope of a trading desk under the IMA of product classes requiring risk modelling techniques that are not part of the current IMA permission, such as
 - when more complex products (e.g. path-dependent or multi-underlying instruments) are included under the scope of the IMA, or
 - when a change in booking models leads to products, which were previously back-to-back to another entity of the group outside the scope of the highest level of consolidation within the Union/EEA at the time when IMA permission was granted, start being risk-managed within the institution;
- changes in the methodology used to assess the modellability of risk factors;
- changes in the methodology for calculating actual or hypothetical profit and loss (P&L), when such changes have the effect of reducing the number of overshootings and lead a desk to pass the back-testing requirements set out in Article 325bf of the CRR after the change is implemented;
- changes in the methodology for calculating hypothetical or theoretical P&L, when such changes have the effect of increasing the Spearman correlation coefficient and/or reducing the Kolmogorov-Smirnov test metric and lead a desk to changing its classification in accordance with the RTS on P&L attribution (e.g. from yellow to green);
- fundamental changes in the internal validation methodology according to Article 325bj of the CRR, which lead to significant changes in the way the institution assesses the overall performance and integrity of the alternative internal models, such as
 - when the scope of the internal validation review, its frequency or the quantity and/or quality of the tests and controls performed are reduced, or
 - when there are significant changes to the decision-making process in place to ensure that the findings and recommendations resulting from the validation process are properly taken into account by the senior management of the institution;

- structural, organisational or operational changes to the core processes in risk management or risk controlling functions, according to Article 325bi(1) of the CRR, such as
 - significant changes to the limit setting framework,
 - changes to the reporting framework leading to a loss of information or to a change of addresses in the senior management,
 - changes to the stress testing methodology leading to significant differences in the stress testing results,
 - changes to the policies and approval processes for new products, or
 - changes to the policies and approval processes for internal model changes;
- fundamental extensions and changes in the IT infrastructure relevant for the calculation of the own funds requirements for market risk using the alternative internal models, such as
 - extension of the IT system to vendor pricing models, or
 - outsourcing of central data collection functions.

Also for the identification of non-material extensions and changes which require additional information, these new draft RTS propose quantitative conditions to be applied in addition to the qualitative criteria, employing the same measures used for assessing the materiality of extensions and changes (i.e. IMA OFR, ES, SS and DRC).

For model changes requiring additional information, the following threshold levels are used (as represented in Figure 3):

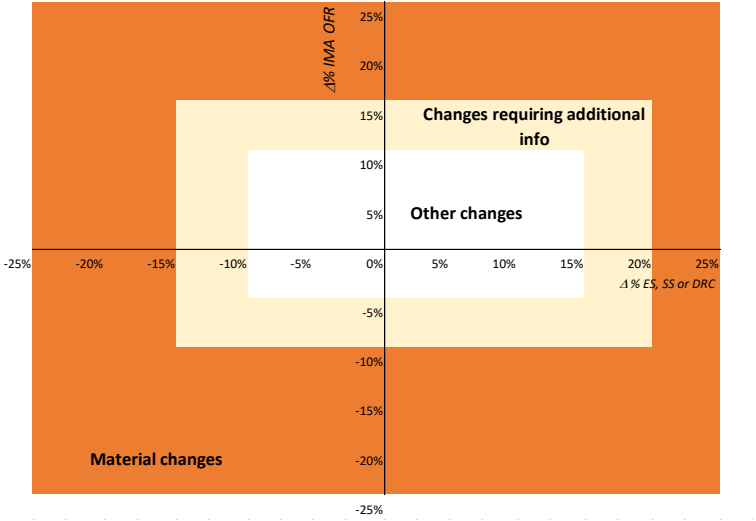
+10% (but less than +15%) for increases in the IMA OFR;

-5% (but less than -10%) for decreases in the IMA OFR;

+15% (but less than +20%) for increases in at least one of ES, SS and DRC;

-10% (but less than -15%) for decreases in at least one of ES, SS and DRC.

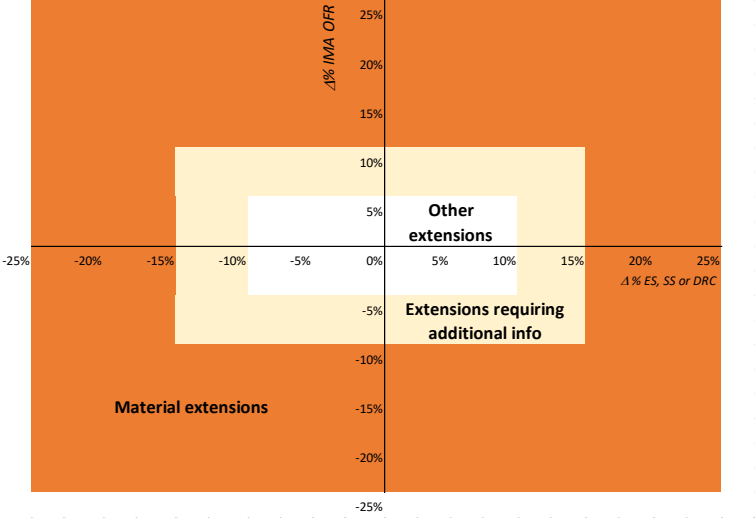
Figure 3 Graphic representation of the quantitative conditions for identifying changes requiring additional information



For model extensions requiring additional information, the following threshold levels are used (as represented in Figure 4):

- +5% (but less than +10%) for increases in the IMA OFR;
- 5% (but less than -10%) for decreases in the IMA OFR;
- +10% (but less than +15%) for increases in at least one of ES, SS and DRC;
- 10% (but less than -15%) for decreases in at least one of ES, SS and DRC.

Figure 4 Graphic representation of the quantitative conditions for identifying changes requiring additional information



The same provisions applying in the case of the quantitative materiality conditions, in terms of proportionality, apply also here (i.e. a 1% pre-condition to be verified on the testing date is included, only the most recent FRTB IMA risk numbers should be checked and only if they are relevant).

3.3 General methodology for the assessment of the materiality of changes to the institution's choice of the subset of modellable risk factors

The reduced set of MRF identifies those risk factors to which scenarios of futures shocks are applied in order to calculate PES_t^{RS} , $PES_t^{RS,i}$, PES_t^{RC} and $PES_t^{RC,i}$. Article 325bc(2)(a) of the CRR requires that such reduced set of MRF is chosen to the satisfaction of the competent authorities, and that the following quantitative condition is met with the sum taken over from the preceding 60 business days:

$$\frac{1}{60} \cdot \sum_{k=0}^{59} \frac{PES_{t-k}^{RC}}{PES_{t-k}^{FC}} \geq 75\%$$

If an institution at some point no longer meets the above condition, it shall immediately notify the CA and update the reduced set of MRF within two weeks in order to restore compliance with that condition. If, after two weeks, the institution still does not comply with that condition, it shall revert to the SA to calculate the market risk OFR for some trading desks, until it is not able to demonstrate to the CA that such a condition is fulfilled.

The classification of changes to the institution's choice of the subset of MRF resembles the one proposed for the model extensions and changes, differentiating between material changes to reduced set of MRF (that are subject consequently subject to approval), and other changes to the reduced set that are subject to notification. The latter is further differentiated into two sub-categories: changes to reduced set of MRF requiring additional information and other changes reduced set of MRF.

In relation to the changes to the reduced set of MRF which are subject to notification, the timing of notification is aligned to the one set out for the non-material model extensions and changes, i.e. four weeks in advance of their implementation, with one exception. The exception is represented by the case where the quantitative condition in Article 325bc(2)(a) of the CRR is breached. In such a case, it is important that the institution takes urgent actions on the choice of the reduced set of MRF to restore compliance with the regulatory requirements, and that the CA is duly and promptly informed. Therefore, exclusively in such a case, the institution may notify the CA immediately before the change is implemented.

In what follows the conditions for assigning the changes to the reduced set of MRF to each of the categories/sub-categories will be presented.

3.3.1 Conditions for assessing changes to the institution's choice of the subset of modellable risk factors as material

These new draft RTS provide quantitative criteria for determining the materiality of changes to the reduced set of MRF. Such criteria should take into account that 1/ differently from other model changes, changes to the reduced set are expected to produce effects on ES only (via PES_t^{RS} , $PES_t^{RS,i}$, PES_t^{RC} , $PES_t^{RC,i}$) and no impact is expected on SS and DRC, and 2/ the ratio PES_t^{RC} / PES_t^{FC} , as highlighted in the L1 text, is of primary importance in the definition of the subset of modellable risk factors, and as such it should be considered as a criterion for assessing the materiality of changes to the reduced set.

Three types of quantitative conditions are included: 1/ a condition related to the effect of change to the reduced set on the IMA OFR, 2/ a condition related to the effect of the change on the ES, and finally 3/ a condition related to the effect of the change on the requirement set out in Article 325bc(2)(a) of the CRR (i.e. the 75% threshold for the ratio PES_t^{RC} / PES_t^{FC}).

As for the other model changes, an additional pre-condition is also included to exempt from the computation of the three conditions (on IMA OFR, ES and ratio PES_t^{RC} / PES_t^{FC}) for 15 business days. In fact, if the change to the reduced set leads to a change in the ES of less than 1% in absolute terms, on the first business day of the testing, the change to the reduced set should be considered non-material.

As in the assessment of the materiality of model extensions and changes, for the quantitative conditions 1/ and 2/ the following threshold levels are used:

+15% for increases in the IMA OFR;

-10% for decreases in the IMA OFR;

+20% for increases in the ES;

-15% for decreases in the ES.

For the quantitative condition 3/, these draft RTS set out two alternatives for consultation:

(option 1)

decreases of the ratio PES_t^{RC} / PES_t^{FC} , with the change implemented, to a level below 80% (i.e. $R_{change} \leq 80\%$) are material

(option 2)

decreases of the ratio PES_t^{RC} / PES_t^{FC} , with and without the change implemented (i.e. $R_{change} - R_{no_change}$), which are equal to or higher than $\max(1\%, 50\% \cdot (R_{no_change} - 75\%))$, in absolute terms, are material.

Under both alternatives, the ratio PES_t^{RC}/PES_t^{FC} is calculated over 15 business days starting from the test date and is considered as a forward-looking proxy of the ratio set out in Article 325bc(2)(a) of the CRR (which considers the preceding 60 business days).

The first alternative, which is simpler, aims at capturing all the changes to the reduced set which are very likely to lead institutions to be very close to the 75% threshold set out in Article 325bc(2)(a).

The second alternative, a bit more complex, has the same purpose of the first alternative but introduces a certain degree of proportionality. In fact, under this option, if the average ratio PES_t^{RC}/PES_t^{FC} without the change implemented is high, for example 95%, then there is more room for maneuver for the institution when redefining the reduced set before the materiality condition is triggered (in this example, any change in the reduced which produces a reduction below 10% in absolute term is not considered material). On the contrary, if the average ratio PES_t^{RC}/PES_t^{FC} without the change implemented is relatively low, for example 80%, then there is less room for maneuver for the institution when redefining the reduced set before the materiality condition is triggered (in this second example, any change in the reduced which produces a reduction above or equal to 2.5% in absolute term is considered material). A floor of 1% is also included in order to avoid that very minor changes to the reduced set trigger the materiality condition.

3.3.2 Conditions for assessing changes to the institution's choice of the subset of modellable risk factors requiring additional information

The approach to identify non-material changes to the reduced set which require additional information is similar to the one proposed for model extensions and changes, but it is adjusted to reflect the considerations made around the specificities of the changes to the reduced set (i.e. only quantitative criteria are included and only on IMA OFR and ES). The following threshold levels are used (as in the case of model extensions and changes requiring additional information):

+10% (but less than +15%) for increases in the IMA OFR;

-5% (but less than -10%) for decreases in the IMA OFR;

+15% (but less than +20%) for increases in the ES;

-10% (but less than -15%) for decreases in the ES.

Also in this case, the additional 1% pre-condition applies.

3.4 General provisions for assessing the materiality of model extensions and changes and changes to the institution's choice of the subset of the modellable risk factors

3.4.1 Principles for the categorisation of model extensions and changes and changes to the institution's choice of the subset of the modellable risk factors

In order to facilitate the categorisation of model extensions and changes and changes to the reduced set, some guiding principles that institutions should follow have been included in these new draft RTS, as it is already the case for the existing RTS.

In particular, for the purposes of the assessment of the quantitative impacts, institutions are requested to use the most recent model setup and calibration. In addition, the data inputs used shall be the ones corresponding to the selected 15 days period.

If a precise calculation of the quantitative impact is not feasible, institutions are instead requested to perform an assessment of the impact based on a representative sample or using other reliable inference methodologies.

When extensions and changes have no direct quantitative impact, then institutions are not required to perform any quantitative assessment.

As set out in section 3.1.2, an important aspect to consider is the granularity which should be applied to define a model extension or change. If a group of modifications to the model are considered by the institution as separate model changes and as such are submitted to the CA for notification or approval, but they are interlinked, then the CA should consider them as a unique model change. Similarly, CAs should consider groups of modifications to the model as separate model changes, in case such modifications to the model are not interlinked.

In case of doubt on the correct allocation of a model extension or change or change to the reduced set to the proper category and/or sub-category, institutions are requested to inform the CA regarding the difficulties encountered in the categorization, provide the CA with an explanatory note justifying the choices of category and/or sub-category, also presenting possible alternatives. In such a case, the CA has the power to change the category and/or sub-category, provided in the request or notification, of the model extension or change, or change to the reduced set.

3.4.2 Implementation of model extensions and changes and changes to the subset of the modellable risk factors

Some considerations should also be made around the implementation of model extensions and changes and changes to the reduced set.

In particular, in case CAs have provided permission to implement a material model extension or change, or change to the reduced set, institutions are required to calculate the OFR based on the new version of the IMA, which includes the approved extension or change, from the date specified in the permission.

In case of delay of the implementation of a material model extension or change, or material change to the reduced set, for which permission has been granted, the institution is requested to notify without undue delay the CA and present a plan for a timely implementation of the approved extension or change, to be agreed with the CA.

In case a non-material model extension or change, or non-material change to the reduced set, is notified to the CA but, subsequently to the notification, the institution decides not to implement it, the institution is requested to notify the CA without undue delay.

3.4.3 Documentation requirements

Regarding the documentation that institutions are requested to submit as part of the notification or approval request, these draft RTS set out the following requirements, which are broadly in line with the ones set out in the existing RTS.

For material model extensions and changes, and for material changes to the reduced set of MRF, institutions are requested to submit, together with the application, the following documentation:

- a) a description of the model extension or change, or the change to the reduced set, its rationale and objective;
- b) implementation date;
- c) scope of trading desks affected, with volume characteristics;
- d) technical and process documents;
- e) reports of the institutions' independent review or validation;
- f) confirmation that the model extension or change, or the change to the reduced set, has been approved through the institution's approval processes by the competent bodies and date of approval;
- g) where applicable, the quantitative impact of the model extension or change, or the change to the reduced set, on the basis of the relevant quantitative conditions applied, and the justification of representativeness of the 15 days period selected for the quantitative impact;
- h) records of the current and previous version number of the institution's IMA.

For model extensions and changes requiring additional information, and for changes to the reduced set requiring additional information, institutions are requested to submit, together with the notification, all the documentation referred to in points a) to h) above. For other model extensions and changes, and other changes to the reduced set, institutions are requested to submit, together with the notification, the documentation referred to in points a), b), c), f) and g) above.

Compared to the existing RTS, the new draft RTS propose to clarify the minimum content of the reports of the institutions' independent review or validation, considering that such reports could provide

significant help to CAs when reviewing the requested or notified extensions and changes. The reports of the institutions' independent review or validation must include all the following:

- a) verification of the materiality assessment as well as the representativeness of the data period used;
- b) a critical review of the characteristics of the model extension or change, or change to the reduced set, performed in accordance with Articles 325bi(2) and 325bj of the CRR;
- c) a plan for a timely implementation of necessary corrective measures suggested as part of the independent review or validation process.

4. Draft regulatory technical standards

In between the text of the draft RTS/ITS/Guidelines/advice 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) .../...

of **XXX**

supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards specifying the conditions for assessing the materiality of extensions and changes to the use of alternative internal models and changes to the institution's choice of the subset of the modellable risk factors referred to in Article 325bc

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,
Having regard to Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and amending Regulation (EU) No 648/2012³, and in particular Article 325az(8), first subparagraph, point (a), and third subparagraph thereof,

Whereas:

- (1) Permission of competent authorities for the use of the alternative internal models relates to the methods, processes, controls, data collection, organisation of the risk control unit and internal validation function, and IT systems, in accordance with Articles 325bh, 325bi and 325bj of Regulation (EU) No 575/2013. Modifications to the approved methods, processes, controls, data collection and IT systems, performed at the institution's initiative, should be approved by or notified to the competent authority. This also apply to modifications triggered by the regulatory framework, where those modifications entail the use of methods or approaches that are not part of the existing competent authority's permission. Modifications occurring within the already approved methods, processes, controls, data collection and IT systems, and recorded accordingly, do not have to be approved by or notified to the competent authority.
- (2) The choice of the subset of the modellable risk factors referred to in Article 325bc of Regulation (EU) No 575/2013 should be part of the institution's approved and documented set of internal policies and procedures. Modifications to such policies and procedures should be approved by or notified to the competent authority, as constituting changes to the choice of the subset of the modellable risk factors. On the contrary, changes to the number of risk factors included in the subset referred to in Article 325bc of that Regulation, which do not occur as a consequence of changes in the institution's policies and procedures, as it could be the case for a reduction in data availability, should not be considered as changes to the institution's choice of the subset of modellable risk factors.

³ OJ L 176, 27.6.2013, p. 1.

- (3) Ongoing alignment of the alternative internal models to the dataset used, correction of errors or minor adjustments necessary for the day-to-day maintenance of the models that occur within the already approved methods, processes, controls, data collection and IT systems and are recorded accordingly, do not have to be approved by or notified to the competent authority.
- (4) Qualitative and quantitative criteria should be set out in order to classify model extensions and changes into the categories requiring prior approval by competent authorities or notification. Some changes, such as organisational changes, internal process changes or risk management process changes, may not have direct quantitative impact but may influence the accuracy, soundness and use of the model. In this case, only the qualitative criteria should be used for the assessment of the materiality of those changes.
- (5) In order to allow competent authorities to review the extensions and changes to the use of the alternative internal models, and changes to the institution's choice of the subset of the modellable risk factors, which are subject to a notification procedure in accordance with Article 325az(7) of Regulation (EU) No 575/2013, all extensions and changes should be notified before their implementation.
- (6) For the changes to the institution's choice of the subset of the modellable risk factors referred to in Article 325bc of Regulation (EU) No 575/2013 that are undertaken as a consequence of failing to meet the condition set out in Article 325bc(2), point (a), of that Regulation, it is important that institutions take urgent actions on their choice of the subset to restore compliance with the regulatory requirements, and that competent authorities are duly and promptly informed. Therefore, competent authorities should be immediately notified when the change is implemented.
- (7) In order to permit competent authorities to adequately review the notified extensions and changes to the use of the alternative internal models, and the changes to the institution's choice of the subset of the modellable risk factors, sufficient time should be given to competent authorities to review the notified extensions and changes and to take follow-up actions, if necessary.
- (8) For the purpose of the review by competent authorities of extensions and changes to the use of alternative internal models, and changes to the institution's choice of the subset of the modellable risk factors, it is necessary to specify the content of the documentation that needs to be submitted together with the authorisation request or notification of extensions and changes.
- (9) Quantitative thresholds should be designed to take into account the overall impact of an extension or change to the use of the alternative internal models, and changes to the institution's choice of the subset of the modellable risk factors, on some relevant risk numbers, as well as on the capital requirements. In order to facilitate the computation of these quantitative thresholds, it is appropriate to consider the most recent risk numbers only.
- (10) When calculating the required risk numbers, an observation period of 15 business days should be considered rather than a single point in time, in order to take into account the effect of possible large changes to trading book positions which typically happen on a daily basis. The ability to perform the calculation of the required risk numbers is not required from credit institutions when granting initial permission to calculate own funds requirements by using alternative internal models. However, institutions should comply with this requirement, when they need to assess the materiality of model extensions and changes, and of changes to the choice of the subset of the modellable risk factors. In order

to include a certain degree of proportionality in the assessment of quantitative impact of extension and changes, the general observation period of 15 business days should be subject to exemptions in case the assessed quantitative impact is very minor on the first testing date and there is a presumption that the quantitative thresholds would not be breached during the 15 business days period.

- (11) Competent authorities may at any time take appropriate supervisory measures with regard to notified extensions and changes to internal approaches, based on the ongoing review of existing permissions to use internal approaches provided in Article 101 of Directive 2013/36/EU of the European Parliament and of the Council⁴. The conditions for new approvals and notifications of extensions and changes to internal approaches should not affect supervisory internal approaches review.
- (12) In order to ensure that competent authorities take, at any time, appropriate supervisory measures with regard to extensions and changes to the alternative internal models, and changes to the institution's choice of the subset of the modellable risk factors, competent authorities should consider a group of related modifications to the model, submitted separately, as a unique model extension or change. In such a case, the materiality assessment should be performed at the level of the unique model extension or change.
- (13) This Regulation is based on the draft regulatory technical standards submitted to the Commission by the European Banking Authority.
- (14) The European Banking Authority has conducted open public consultations on the draft regulatory technical standards on which this Regulation is based, analysed the potential related costs and benefits and requested the advice of the Banking Stakeholder Group established in accordance with Article 37 of Regulation (EU) No 1093/2010 of the European Parliament and of the Council⁵,

HAS ADOPTED THIS REGULATION:

CHAPTER 1

CONDITIONS FOR ASSESSING THE MATERIALITY OF EXTENSIONS AND CHANGES TO THE USE OF ALTERNATIVE INTERNAL MODELS

Article 1

Categories of extensions and changes to the use of alternative internal models

1. Institutions shall assign extensions and changes to the use of alternative internal models to one of the following categories, in accordance with Article 325az(7) of that Regulation:

⁴ Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC (OJ L 176, 27.6.2013, p. 338).

⁵ 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. 12–47).

(a) material extensions and changes to the use of alternative internal models, identified in accordance with Articles 2(1) and 2(2), which require permission from the competent authorities;

(b) non-material extensions and changes to the use of alternative internal models, which require notification to the competent authorities.

2. Institutions shall assign extensions and changes to the use of alternative internal models referred to in paragraph 1, point (b), to one of the following sub-categories:

(a) extensions and changes, identified in accordance with Articles 3(1) and 3(2), that require additional information;

(b) other extensions and changes.

Explanatory text for consultation purposes

For some notified extensions and changes, it is proposed to identify additional information which would be useful for supervisory purposes – in particular, the one included in the report of the institution's independent review or validation. Therefore, it is proposed to introduce the sub-category of notified extensions and changes that require additional information.

This proposal should be seen in conjunction with other amendments to and novelties from the existing RTS on model extensions and changes, which are set out for simplifying the assessment process of model extensions and changes on both institutions' and competent authorities' sides, reducing the number of extensions and changes categorised as material.

As it is expected that some extensions and changes previously categorised as material under the existing RTS would be categorised in the future as non-material under these new draft RTS, it is important that the non-material extensions and changes which lead to a significant impact are still adequately assessed. In order to enable competent authorities to adequately review and take actions where needed outside the formal approval process, additional information should be provided for such extensions and changes.

Question

Q1. What are your views on requiring additional information for specific extensions and changes?

Article 2

Material extensions and changes to the use of alternative internal models

1. Institutions shall categorise changes to the use of alternative internal models as material, in accordance with Article 1(1), point (a), if they fulfil any of the following conditions:

(a) they meet any of the qualitative criteria set out in the Annex, Part I;

(b) they result in a change of 1 % or more, in absolute terms, computed for the first business day of the testing of the impact of the change of any of the risk numbers set out in paragraph 4 which are relevant in accordance with paragraph 5, and in any of the following cases :

(i) an increase of 15 % or more, in absolute terms, of the sum of the risk number referred to in Article 2(4), point (a), scaled up by the multiplication factor (m_c) referred to in Article 325ba(1), point (b)(i), of Regulation (EU) No 575/2013, and the risk numbers referred to in Article 2(4), points (b) and (c);

(ii) a decrease of 10 % or more, in absolute terms, of the sum referred to in point (b)(i);

(iii) an increase of 20 % or more, in absolute terms, of any of the risk numbers set out in paragraph 4 which are relevant in accordance with paragraph 5;

(iv) a decrease of 15 % or more, in absolute terms, of any of the risk numbers referred to in point (b)(iii).

2. Institutions shall categorise extensions of the use of alternative internal models as material, in accordance with Article 1(1), point (a), if they fulfil any of the following conditions:

(a) they meet any of the qualitative criteria set out in the Annex, Part I;

(b) they result in a change of 1 % or more, in absolute terms, computed for the first business day of the testing of the impact of the extension of any of the risk numbers set out in paragraph 4 which are relevant in accordance with paragraph 5, and in any of the following cases:

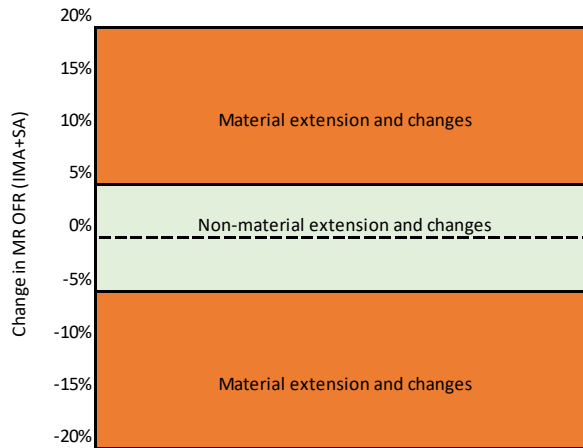
(i) a change of 10 % or more, in absolute terms, of the sum referred to in paragraph 1, point (b)(i);

(ii) a change of 15% or more, in absolute terms, of any of the risk numbers set out in paragraph 4 which are relevant in accordance with paragraph 5;

Explanatory box for consultation

The existing RTS on model extensions and changes set out quantitative conditions for assessing the materiality of extensions and changes, which are triggered by both increases and decreases in capital and risk numbers. This symmetric approach takes into account the fact that, in market risk, an increase in capital for a portfolio can become a decrease for a different portfolio, and portfolios may change quickly.

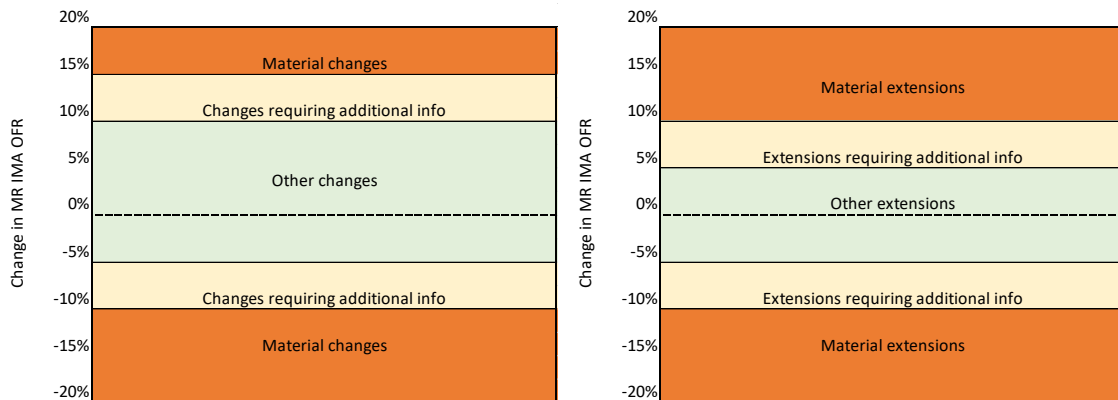
Under such symmetric approaches (see figure below), increases or decreases in overall own funds requirements for market risk (IMA + SA) higher than 5% in absolute terms, or increases or decreases in IMA risk numbers (VaR_{t-1} , $sVaR_{t-1}$, IRC_{t-1}) higher than 10% in absolute terms, trigger the conditions for categorising a change or extension as material.



In these new draft RTS, a slightly revised approach is proposed. In particular:

- The quantitative condition on market risk own funds requirements is revised, focusing now on IMA capital charges only. At the moment, there is still significant uncertainty regarding the scope of the FRTB IMA, but, according to the preliminary information provided by the industry, a reduction in the use of market risk internal models is expected. In particular, cases could be envisaged where the FRTB SA covers a significant part of the total market risk own funds requirements and consequently the effect of a change in the IMA can be significantly diluted, if both SA and IMA are considered in the quantitative condition.
- The risk numbers considered are Es_{t-1} , SS_{t-1} and DRC_{t-1} , which are broad risk measures directly related to the IMA own funds requirements. It has been considered that those measures broadly correspond to the ones included in the existing RTS (VaR_{t-1} , $sVaR_{t-1}$ and IRC_{t-1}).
- Distinct thresholds are proposed for model extensions and changes and a certain degree of asymmetry in the threshold levels is introduced (see figure below) for changes to the use of the IMA. More specifically:
 - increases in IMA own funds requirements higher than 15% or decreases higher than 10% in absolute terms, trigger the conditions for categorising a change as material;
 - increases in risk numbers higher than 20% or decreases higher than 15% in absolute terms, trigger the conditions for categorising a change as material;

- for extensions, symmetrical thresholds are kept as reverse extensions and extensions are deemed of equal importance.



While the threshold levels are not directly comparable with the ones included in the existing RTS, the proposed approach in the new draft RTS enhances the focus on changes entailing a decrease in own funds requirements or risk numbers, as such changes clearly need to be carefully revised from a prudential perspective. This proposal should also be seen as a way for simplifying the assessment process of model changes on both institutions' and competent authorities' sides, reducing the number of extensions and changes categorised as material. In this sense, the revised approach to the quantitative conditions should be considered in conjunction with the proposal of providing additional information to supervisors for some relevant non-material extensions and changes, as both amendments are introduced to keep the set of material model extensions and changes as small as possible.

Questions

Q2. Do you agree with the proposed quantitative conditions for determining the materiality of extensions and changes?

Q3. What are your views on the selected threshold levels?

3. Notwithstanding paragraph 1, extensions and changes to the use of alternative internal models that have been requested by the competent authority and for which implementation have to be notified, shall not be considered material.

4. For the purposes of assessing the fulfilment of the conditions set out in paragraph 1, point (b), and paragraph 2, point (b), the following risk numbers shall be considered:

(a) the institution's previous day's expected shortfall risk measure (ES_{t-1}) referred to in Article 325ba(1)(a)(i) of Regulation (EU) No 575/2013, for the portfolio of all positions assigned to the trading desks for which the institution has been granted permission as referred to in Article 325az(2) of that Regulation;

(b) the institution's previous day's stress scenario risk measure (SS_{t-1}) referred to in Article 325ba(1)(a)(ii) of Regulation (EU) No 575/2013, for the portfolio of all positions assigned to the trading desks for which the institution has been granted permission as referred to in Article 325az(2) of that Regulation;

(c) the most recent own funds requirement for default risk referred to in Article 325ba(2)(a) of Regulation (EU) No 575/2013, for the portfolio of all positions assigned to the trading desks for which the institution has been granted permission as referred to in Article 325az(2) of that Regulation..

5. A risk number Rn_i set out in paragraph 4 shall be considered relevant if it fulfils the following condition on at least one day over the period referred to in paragraph 9:

$$\frac{Rn_i}{\sum_{i=1}^3 Rn_i} > 5\%$$

The condition above shall be checked both with and without the extension or change.

Explanatory box for consultation

It has been considered that in some cases, some of the relevant risk measures set out in paragraph 3 (i.e. ES_{t-1} , SS_{t-1} and DRC_{t-1}) may be very low or near zero, depending also on the characteristics of the portfolio under the IMA. Where model extensions and changes produce impacts on such risk measures, this may have the unintended consequence of triggering the materiality quantitative conditions – which are set in relative terms – even if the absolute amount of the impact is negligible.

In order to avoid such unintended consequence, these new draft RTS set out a condition to identify the relevant risk measures that should be checked as part of the quantitative conditions.

In particular, a relevant risk measure is defined, for the purpose of the materiality assessment of model extensions and changes, as one which is greater than 5% of the sum of all the risk measures set out in paragraph 3. Such condition should be checked for all the 15 days observation period, and it should be checked both with and without the extension or change.

If for example the DRC_{t-1} , represent less than 5% of $ES_{t-1} + SS_{t-1} + DRC_{t-1}$, and that is the case for the 15 days observation period, both when the extension and change is considered and when it is excluded, then the DRC_{t-1} should not be one of the risk measures to be checked as part of the quantitative conditions set out in Article 3(1), points (b)(iii) and (b)(iv).

Question

Q4. Do you agree with the proposal to introduce a condition for assessing the relevance of the risk measures to be checked for the materiality assessment of model extensions and changes?

6. For the purposes of assessing the fulfilment of the conditions set out in paragraph 1, points (b)(i) or (b)(iii), the impact of any change shall be assessed as the highest increase, in absolute terms over the period referred to in paragraph 9, of the ratios set out in paragraphs 7 or 8, respectively.

For the purposes of assessing the the fulfilment of the conditions set out in paragraph 1, points (b)(ii) or (b)(iv), the impact of any change shall be assessed as the highest decrease, in absolute terms over the period referred to in paragraph 9, of the ratios set out in paragraphs 7 or 8, respectively.

For the purpose of assessing the the fulfilment of the conditions set out in paragraph 2, point (b)(i) or (ii), the impact of any extension shall be assessed as the highest increase, in absolute terms over the period referred to in paragraph 9, of the ratios set out in paragraphs 7 or 8, respectively.

7. The ratio to be used for assessing the conditions in paragraph 1, points (b)(i) and (ii), or paragraph 2, point (b)(i), shall be calculated as follows:

(a) in numerator, the difference between the sum referred to in paragraph 1, point (b)(i), with and without the change, or with and without the extension;

(b) in the denominator, the sum referred to in paragraph 1, point (b)(i), without the change, or without the extension.

8. The ratio to be used for assessing the conditions in paragraph 1, points (b)(iii) and (iv), and paragraph 2, point (b)(ii), shall be calculated as follows:

(a) in the numerator, the difference between the relevant risk number set out in paragraph 4, with and without the extension or change;

(b) in the denominator, the relevant risk number set out in paragraph 4, without the extension or change.

9. The ratios referred to in paragraphs 7 and 8 shall be calculated for a period of 15 consecutive business days starting from the first business day of the testing of the impact of the extension or change.

The choice of the 15 consecutive business days period shall be representative of the trading and hedging activity under normal market conditions for the portfolio of positions affected by the extension or change. This period shall not be older than nine months from the notification or request of permission to competent authority.

Explanatory box for consultation

The existing RTS on model extensions and changes request to calculate the ratios set out in the quantitative conditions for a period which is the shorter between (a) 15 consecutive business days and (b) a period ending the first day where one of the quantitative conditions is met.

As a simpler approach, in these new draft RTS it is proposed to always use a 15 consecutive business days period. In such a way, it is ensured that homogeneous information (i.e. 15 data points of testing) is produced for all model extensions and changes with quantitative impact.

On the one hand, as institutions should be able to test model extensions and changes for 15 consecutive business days in any case, the fact of actually performing such calculations and producing results for those 15 business days should entail little to no additional burden. On the other hand, such information could simplify the competent authorities' review, speeding up the approval process.

Question

Q5. Do you agree with the proposal to always assess the quantitative conditions on a 15 consecutive business days period?

Article 3

Non-material extensions and changes to the use of the alternative internal models

1. Institutions shall categorise non-material changes to the use of the alternative internal models as requiring additional information, in accordance with Article 1(2), point (a), if they fulfil any of the following conditions:

- (a) they meet any of the qualitative criteria set out in the Annex, Part II;
- (b) they result in a change in absolute value of 1 % or more, computed for the first business day of the testing of the impact of the change of any of the risk numbers set out in Article 2(4) which are relevant in accordance with Article 2(5), and in any of the following cases:
 - (i) an increase higher or equal to 10% and lower than 15%, in absolute terms, of the sum referred to in Article 2(1), point (b)(i);
 - (ii) a decrease higher or equal to 5% and lower than 10%, in absolute terms, of the sum referred to in Article 2(1), point (b)(i);
 - (iii) an increase higher or equal to 15% and lower than 20%, in absolute terms, of any of the risk numbers set out in Article 2(4) which are relevant in accordance with Article 2(5);
 - (iv) a decrease higher or equal to 10% and lower than 15%, in absolute terms, of any of the risk numbers set out in Article 2(4) which are relevant in accordance with Article 2(5).

2. Institutions shall categorise non-material extensions of the alternative internal models as requiring additional information, in accordance with Article 1(2), point (a), if they fulfil any of the following conditions:

- (a) they meet any of the qualitative criteria set out in the Annex, Part II;
- (b) they result in a change in absolute value of 1 % or more, computed for the first business day of the testing of the impact of the extension of any of the risk numbers set out in Article 2(4) which are relevant in accordance with Article 2(5), and in any of the following cases:
- (i) a change higher or equal to 5% and lower than 10%, in absolute terms, of the sum referred to in Article 2(2), point (b)(i);
- (ii) a change higher or equal to 10% and lower than 15%, in absolute terms, of any of the risk numbers set out in Article 2(4) which are relevant in accordance with Article 2(5).
3. Notification to competent authorities according to Article 325az(7), second subparagraph of Regulation (EU) No 575/2013, shall be made four weeks before implementation of a non-material extension or change to the use of the alternative internal models.

Explanatory box for consultation

The existing RTS on model extensions and changes differentiate between changes requiring notification prior vs. post implementation. According to the existing RTS, extensions and changes requiring *ex-ante* notification should be notified two weeks in advance, while the other extensions and changes should be notified at least on an annual basis.

As a simpler approach, in these new draft RTS it is proposed to require *ex-ante* notification for all non-material model extensions and changes. In such a way, it is ensured that sufficient time is given to supervisors to review the model extension or change.

This proposal should be seen in conjunction with other amendments to and novelties from the existing RTS on model extensions and changes, which are set out for simplifying the assessment process of model extensions and changes on both institutions' and competent authorities' sides, reducing the number of extensions and changes categorised as material.

As it is expected that some extensions and changes previously categorised as material under the existing RTS would be categorised in the future as non-material under these new draft RTS, the number of non-material extensions and changes is expected to increase. In order to enable competent authorities to adequately review and take actions where needed outside the formal approval process, non-material extensions and changes should be notified four weeks before their planned implementation.

Question

Q6. Do you agree with the proposal to require non-material extensions and changes to be notified four weeks before their planned implementation?

4. For the purposes of assessing the conditions set out in paragraph 1, points (b)(i) or (iii), the impact of any change shall be assessed as the highest increase, in absolute terms over the period referred to in Article 2(9), of the ratios set out in Article 2, paragraphs 7 or 8, respectively.

For the purposes of assessing the conditions set out in paragraph 1, points (b)(ii) or (b)(iv), the impact of any change shall be assessed as the highest decrease, in absolute terms over the period referred to in Article 2(9), of the ratios set out in Article 2, paragraphs 7 or 8, respectively.

For the purpose of assessing the conditions set out in paragraph 2, points (b)(i) or (ii), the impact of any extension shall be assessed as the highest increase, in absolute terms over the period referred to in Article 2(9) of the ratios set out in Article 2, paragraphs 7 or 8, respectively.

CHAPTER 2

CONDITIONS FOR ASSESSING THE MATERIALITY OF CHANGES TO THE INSTITUTION'S CHOICE OF THE SUBSET OF THE MODELLABLE RISK FACTORS

Article 4

Categories of changes to the institution's choice of the subset of the modellable risk factors

1. Institutions shall assign changes to choice of the subset of the modellable risk factors referred to in Article 325bc(2) of Regulation (EU) No 575/2013, to one of the following categories, in accordance with Article 325az(7) of that Regulation:

(a) material changes to the institution's choice of the subset of the modellable risk factors, identified in accordance with Article 5(1), which require permission from the competent authorities;

(b) non-material changes to the institution's choice of the subset of the modellable risk factors, which require notification to the competent authorities.

2. Institutions shall assign changes to the institution's choice of the subset of the modellable risk factors referred to in paragraph 1, point (b), to one of the following sub-categories:

(a) changes to the institution's choice of the subset of the modellable risk factors, identified in accordance with Article 6(1), that require additional information;

(b) other changes to the institution's choice of the subset of the modellable risk factors.

Article 5

Material changes to the institution's choice of the subset of the modellable risk factors

1. Institutions shall categorise changes to the institution's choice of the subset of the modellable risk factors referred to in Article 325bc of Regulation (EU) No 575/2013 as material, in accordance with Article 4(1), point (a), if they result in:

(a) a change of 1 % or more, in absolute terms, computed for the first business day of the testing of the impact of the change to the institution's choice of the subset of the modellable risk factors, of the risk number set out in Article 2(4), point (a), and

(b) any of the following cases:

(i) an increase of 15 % or more, in absolute terms, of the sum referred to in Article 2(1), point (b)(i);

(ii) a decrease of 10 % or more, in absolute terms, of the sum referred to in Article 2(1), point (b)(i);

(iii) an increase of 20 % or more, in absolute terms, of the risk number set out in Article 2(4), point (a);

(iv) a decrease of 15 % or more, in absolute terms, of the risk number set out in Article 2(4), point (a);

(option 1)

(v) a decrease of the ratio set out in paragraph 4, which leads to the following condition being met:

$$R_{change} \leq 80\%$$

where R_{change} is the ratio set out in paragraph 4 with the implementation of the change to the choice of the subset of modellable risk factors.

(option 2)

(v) a decrease of the ratio set out in paragraph 4, which leads to the following condition being met:

$$R_{change} - R_{no_change} \leq -\max\left(1\%, 50\% \cdot (R_{no_change} - 75\%)\right)$$

where

R_{change} is the ratio set out in paragraph 4 with the implementation of the change to the choice of the subset of modellable risk factors, and

R_{no_change} is the ratio set out in paragraph 4 without the implementation of the change to the choice of the subset of modellable risk factors.

Explanatory box for consultation

Article 325az of the CRR mentions the changes to the institution's choice of the subset of the modellable risk factors separately from all the other changes and extensions to the use of alternative internal models.

The subset of the modellable risk factors identifies those risk factors to which scenarios of futures shocks are applied in order to calculate PES_t^{RS} , $PES_t^{RS,i}$, PES_t^{RC} and $PES_t^{RC,i}$. Article 325bc(2)(a) requires that such subset is chosen by the institution, to the satisfaction of the competent authorities, so that the following condition is met with the sum taken over from the preceding 60 business days:

$$\frac{1}{60} \cdot \sum_{k=0}^{59} \frac{PES_{t-k}^{RC}}{PES_{t-k}^{FC}} \geq 75\%$$

Therefore, the conditions to assess the materiality of changes to the institution's choice of the subset of the modellable risk factors should take into account that:

1. differently from other model changes, they are expected to produce effects on PES_t^{RS} , $PES_t^{RS,i}$, PES_t^{RC} , $PES_t^{RC,i}$ and, in turn, on ES_{t-1} only. No impact is expected on SS_{t-1} and DRC_{t-1} ;
2. the ratio PES_t^{RC}/PES_t^{FC} is of primary importance in the definition of the subset of modellable risk factors, therefore it should be considered as a criterion for assessing the materiality of changes to the choice of the subset.

In order not to deviate too much from the approach proposed for the model extensions and changes in Article 2, the materiality assessment of changes to the choice of the subset follows the same asymmetric approach and uses the same thresholds set out in Article 2. However, in order to take into account the specificities of the changes to the choice of the subset, the quantitative conditions on SS_{t-1} and DRC_{t-1} are replaced by a condition on the ratio PES_t^{RC}/PES_t^{FC} . No need of qualitative conditions is envisaged.

In particular, two alternatives are proposed for a quantitative condition based on the ratio PES_t^{RC}/PES_t^{FC} .

Under the first alternative, a criterion is proposed stating that any decrease in the average ratio PES_t^{RC}/PES_t^{FC} (calculated over 15 business days starting from the test date) which leads to such average ratio falling below 80% should trigger the materiality of the corresponding change to the choice of the subset. The purpose of this simple rule is to avoid that changes to the choice of the subset lead to the bank lying too closely to the 75% threshold.

The average ratio PES_t^{RC}/PES_t^{FC} over the following 15 business days is therefore considered as a forward-looking proxy of the ratio set out in Art. 325bc(2)(a) of the CRR (which considers the preceding 60 business days). If such a proxy falls to a level close to 75% (i.e. if the distance to the 75% threshold is smaller than 5%), there is the presumption that the change to the choice of the subset may lead the bank to fall below the 75% threshold of Article 325bc(2)(a) very quickly.

Under the second alternative, the proposed criterion compares the decrease in the average ratio PES_t^{RC}/PES_t^{FC} over the following 15 business days, to a proportional amount. Such proportional amount is set to be half of the distance between the average ratio PES_t^{RC}/PES_t^{FC} without the change to the choice of the subset and 75%. This amount is therefore proportional to the average ratio PES_t^{RC}/PES_t^{FC} without the change, as it is lower the lower such a ratio is. A floor of 1% is also included in order to avoid very minor changes to the choice of the subset triggering the materiality condition.

For example, if the average ratio PES_t^{RC}/PES_t^{FC} without the change implemented is 95%, then any change to the subset which leads to an average ratio PES_t^{RC}/PES_t^{FC} with the change implemented below 85% (i.e. $95\% - \max(1\%, 50\% * 20\%)$) is considered material.

Questions

Q7. Do you agree with the proposed conditions for determining the materiality of changes to the institution's choice of the subset of the modellable risk factors?

Q8. Which one of the options do you think is more appropriate for a quantitative condition based on the ratio PES_t^{RC}/PES_t^{FC} (option 1 or option 2)? Please provide the rationale for the chosen option.

2. Notwithstanding paragraph 1, changes to the institution's choice of the subset of the modellable risk factors referred to in Article 325bc of Regulation (EU) No 575/2013 that have been requested by the competent authority and for which implementation have to be notified, shall not be considered material.

3. Notwithstanding paragraph 1, changes to the institution's choice of the subset of the modellable risk factors referred to in Article 325bc of Regulation (EU) No 575/2013 that are undertaken as a consequence of failing to meet the condition set out in Article 325bc(2), point (a), of that Regulation, shall be notified to the competent authorities before implementation.

4. For the purposes of paragraph 1, point (b)(v), the following ratio shall be considered:

$$\frac{1}{15} \cdot \sum_{k=0}^{14} \frac{PES_{t+k}^{RC}}{PES_{t+k}^{FC}}$$

where PES_{t+k}^{RC} and PES_{t+k}^{FC} are calculated in accordance with Article 325bc(3) and (4) of Regulation (EU) No 575/2013, t is the first business day of the testing of the impact of the change to the institution's choice of the subset of the modellable risk factors, and the sum shall be taken over the 15 consecutive business days period referred to in Article 2(8).

5. For the purposes of assessing the conditions set out in paragraph 1, points (b)(i) or (b)(iii), the impact of any change to the institution's choice of the subset of the modellable risk factors

shall be assessed as the highest increase, in absolute terms over the period referred to in Article 2(9), of the ratios set out in Article 2, paragraphs 7 or 8, respectively.

For the purposes of assessing the conditions set out in paragraph 1, points (b)(ii) or (b)(iv), the impact of any change to the institution's choice of the subset of the modellable risk factors shall be assessed as the highest decrease, in absolute terms over the period referred to in Article 2(9), of the ratios set out in Article 2, paragraphs 7 or 8, respectively.

Article 6

Non-material changes to the institution's choice of the subset of the modellable risk factors

1. Institutions shall categorise non-material changes to the institution's choice of the subset of the modellable risk factors referred to in Article 325bc of Regulation (EU) No 575/2013 as requiring additional information, in accordance with Article 4(2), point (a), if they result in:

(a) a change of 1 % or more, in absolute terms, computed for the first business day of the testing of the impact of the change to the institution's choice of the subset of the modellable risk factors, of the risk number set out in Article 2(4), point (a), that do not meet the criterion set out in Article 5(1), point (b)(v), and

(b) in any of the following cases:

(i) an increase higher or equal to 10% and lower than 15%, in absolute terms, of the sum referred to in Article 2(2), point (b)(i);

(ii) a decrease higher or equal to 5% and lower than 10%, in absolute terms, of the sum referred to in Article 2(2), point (b)(i);

(iii) an increase higher or equal to 15% and lower than 20%, in absolute terms, of the risk number set out in Article 2(4), point (a);

(iv) a decrease higher or equal to 10% and lower than 15%, in absolute terms, of the risk number set out in Article 2(4), point (a).

2. Notification to competent authorities according to Article 325az(7), second subparagraph of Regulation (EU) No 575/2013, shall be made four weeks before implementation of a non-material change to the institution's choice of the subset of the modellable risk factors.

3. For the purposes of assessing the conditions set out in paragraph 1, points (b)(i) or (iii), the impact of any change to the institution's choice of the subset of the modellable risk factors shall be assessed as the highest increase, in absolute terms over the period referred to in Article 2(9), of the ratios set out in Article 2, paragraphs 7 or 8, respectively.

For the purposes of assessing the conditions set out in paragraph 1, points (b)(ii) or (iv), the impact of any change to the institution's choice of the subset of the modellable risk factors shall be assessed as the highest decrease, in absolute terms over the period referred to in Article 2(9), of the ratios set out in Article 2, paragraphs 7 or 8, respectively.

CHAPTER 3

GENERAL PROVISIONS FOR ASSESSING THE MATERIALITY OF EXTENSIONS AND CHANGES TO THE USE OF THE ALTERNATIVE INTERNAL MODELS AND CHANGES TO THE INSTITUTION'S CHOICE OF THE SUBSET OF THE MODELLABLE RISK FACTORS

Article 7

Principles for the classification of extensions and changes to the use of alternative internal models and changes to the subset of the modellable risk factors

1. Where institutions shall calculate the quantitative impact, in accordance with Articles 2(1), 2(2), 3(1), 3(2), 5(1) and 6(1), they shall use the most recent model setup and calibration and the data inputs corresponding to the period referred to in Article 2(9).

Where a precise calculation of the quantitative impact is not feasible, institutions shall perform an assessment of the impact based on a representative sample or other reliable inference methodologies.

No calculation requirements apply to extensions and changes having no direct quantitative impact.

2. Competent authorities shall consider several modifications to the model, separately submitted by an institution, as a unique model extension or change, in case such modifications are similar in nature or related in scope. Competent authorities shall consider groups of modifications to the model, submitted as a unique model extension or change, as separate model extensions or changes, in case such modifications to the model are not similar in nature or related in scope.

3. In case of doubt on the categorisation as set out in Articles 1 or 4, the institution shall provide the competent authority with an explanatory note justifying its choices of category and/or sub-category, and presenting possible alternatives. The competent authority has the power to change the category and/or sub-category provided in the request or notification. .

Article 8

Implementation of extensions and changes to the use of alternative internal models and changes to the subset of the modellable risk factors

1. Where competent authorities have provided their permission in relation to a material extension or change, institutions shall calculate the own funds requirements based on the approved extension or change from the date specified in the permission.

2. In case of delay of the implementation of an extension or change for which permission from the competent authority has been granted, the institution shall notify without undue delay the competent authority, and present a plan for a timely implementation of the approved extension or change, to be agreed by the competent authority.

3. Where an extension or change has been notified to the competent authority and the institution decides not to implement such extension or change, it shall be notified to the competent authority without undue delay.

Article 9

Documentation of extensions and changes to the use of the alternative internal models and changes to the institution's choice of the subset of the modellable risk factors

1. For material extensions or changes as set out in Article 1(1), point (a), or 4(1), point (a), institutions shall submit, together with the application, the following documentation:

(a) description of the extension or change to the use of the alternative internal models or the change to the institution's choice of the subset of the modellable risk factors, its rationale and objective;

(b) implementation date;

(c) scope of trading desks affected by the extension or change to the use of the alternative internal models or the change to the institution's choice of the subset of the modellable risk factors, with volume characteristics;

(d) technical and process documents;

(e) reports of the institutions' independent review or validation;

(f) confirmation that the extension or change to the use of the alternative internal models or the change to the institution's choice of the subset of the modellable risk factors, has been approved through the institution's approval processes by the competent bodies and date of approval;

(g) where applicable, the quantitative impact of the extension or change to the use of the alternative internal models on the sum referred to in Article 2(1), point (b)(i), or the relevant risk numbers set out in Article 2(4), or the quantitative impact of the change to the institution's choice of the subset of the modellable risk factors on the sum referred to in Article 2(1), point (b)(i), or the risk number set out in Article 2(4), point (a), or the ratio set out in Article 5(4), and the justification of representativeness of the period selected for the quantitative impact;

(h) records of the current and previous version number of the institution's alternative internal models which are under scope.

2. For non-material extensions or changes as set out in Article 1(2), point (a), or 4(2), point (a), institutions shall submit, together with the notification, all the documentation referred to in paragraph 1, points (a) to (h).
3. For other extensions or changes as set out in Article 1(2), point (b), or 4(2), point (b), institutions shall submit, together with the notification, the documentation referred to in paragraph 1, points (a), (b), (c), (f) and (g).
4. The reports of the institutions' independent review or validation referred to in paragraph 1, point (e) shall include all the following:
 - (a) verification of the materiality assessment as well as the representativeness of the data period used;
 - (b) a critical review of the characteristics of the extension or change to the use of the alternative internal models, or change to the institution's choice of the subset of the modellable risk factors, performed in accordance with Articles 325bi(2) and 325bj of Regulation (EU) No 575/2013;
 - (c) a plan for a timely implementation of necessary corrective measures suggested as part of the independent review or validation process.

Explanatory box for consultation

The existing RTS on model extensions and changes already envisage the provision of reports of the institutions' independent review or validation, as part of the documentation of model extension or changes to be submitted to CAs.

However, it has been considered that clarification should be provided in relation to the content of such reports, considering that such independent review's or validation's report could provide significant help to CAs when reviewing the requested or notified extensions and changes, speeding up the CAs' approval process.

Question

Q9. What are your views on the proposed clarification to the content of the reports of the institutions' independent review or validation?

Article 10

Entry into force

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

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

Done at Brussels,

*For the Commission
The President*

*[For the Commission
On behalf of the President*

[Position]

ANNEX

PART I

EXTENSIONS AND CHANGES REQUIRING COMPETENT AUTHORITIES' APPROVAL ('MATERIAL')

1. Significant changes to the structure or organisation of an institution's trading desks for which permission has been granted to calculate the own funds requirements for market risk by using the alternative internal models, such as the ones involving significant changes in the business strategy, including the case where the institution aims at applying internal risk transfers for the first time, the booking models or the risk management structure.
2. Inclusion in the scope of the alternative internal model approach of a trading desk, which, at the moment of the request, is not part of the granted permission to calculate the own funds requirements for market risk by using the alternative internal models.
3. Reverse extensions where an institution aims at applying the alternative standardised approach to trading desks for which permission has been granted to use the alternative internal models.
4. Changes of the fundamental approach to calculate the partial expected shortfall measures referred to in Article 325bb(1) of Regulation (EU) No 575/2013, such as between historical simulation, parametric or Monte Carlo approach.
5. Changes of the fundamental approach to calculate the own funds requirement for default risk referred to in Article 325ba(2) of Regulation (EU) No 575/2013, such as significant changes to the choice of the systematic risk factors or to the correlation structure of the model.

Explanatory box for consultation

The existing RTS set out qualitative criteria to identify material extensions and changes. In particular, the following cases are identified under the existing RTS:

- Extension of the market risk model to an additional location in another jurisdiction, including extending the market risk model to the positions of a desk located in a different time zone, or for which different front office or IT systems are used.
- Integration in the scope of an internal model of product classes, for which the VaR number, computed according to Article 364(1)(a)(i) of Regulation (EU) No 575/2013, exceeds 5 % of the VaR number of the total portfolio forming the scope of that internal model before the integration.
- Any reverse extensions such as cases where the institutions aim at applying the standardized method to risk categories for which they are granted permission to use an internal market risk model.

- Changes between historical simulation, parametric or Monte Carlo VaR.
- Changes in the aggregation scheme such as where a simple summation of risk numbers is replaced by integrated modelling.

Such qualitative criteria have been reviewed and streamlined, verifying the relevance in the context of the FRTB IMA.

Question

Q10. Do you agree with the proposed qualitative criteria to identify material extensions and changes, as set out in Part I of the Annex?

PART II

EXTENSIONS AND CHANGES REQUIRING ADDITIONAL INFORMATION

1. The inclusion in the scope of a trading desk under the alternative internal models of product classes requiring other risk modelling techniques than those forming part of the permission to use those alternative internal models, such as path-dependent products, or multi-underlying positions, including cases where a change in booking models leads to products, for which the institution was transferring the market risk to another entity of the group outside the scope of the highest level of consolidation within the Union/EEA at the time when permission for internal model approval was granted and start being risk-managed in the institution.
2. Changes in the methodology used to assess the modellability of risk factors according to Article 325be of Regulation (EU) No 575/2013.
3. Changes in the methodology for calculating actual or hypothetical profit and loss, when such changes have the effect of reducing the number of overshootings of a trading desk for which permission has been granted to use alternative internal models, restoring its compliance with the conditions on back-testing set out in Article 325bf(3) of Regulation (EU) No 575/2013.
4. Changes in the methodology for calculating hypothetical or theoretical profit and loss, when such changes have the effect of increasing the Spearman correlation coefficient and/or reducing the Kolmogorov-Smirnov test metric of a trading desk for which permission has been granted to use alternative internal models, changing its classification in accordance with Article 9 of Commission Delegated Regulation (EU) 2022/2059, for the purpose of meeting the P&L attribution requirements set out in Article 325bg of Regulation (EU) No 575/2013.



5. Fundamental changes in the internal validation methodology according to Article 325bj of Regulation (EU) No 575/2013, which lead to significant changes in the way the institution assesses the overall performance and integrity of the alternative internal models, such as when the scope of the internal validation review, its frequency or the quantity and/or quality of the tests and controls performed are reduced, or when there are significant changes to the decision-making process in place to ensure that the findings and recommendations resulting from the validation process are properly taken into account by the senior management of the institution.
6. Structural, organisational or operational changes to the core processes in risk management or risk controlling functions, according to Article 325bi(1) of Regulation (EU) No 575/2013, such as significant changes to the limit setting framework, changes to the reporting framework leading to a loss of information or to a change of addresses in the senior management, changes to the stress testing methodology leading to significant differences in the stress testing results, changes to the policies and approval processes for new products or internal model changes.
7. Fundamental extensions and changes in the IT infrastructure, including data storage, relevant for the calculation of the own funds requirements for market risk using the alternative internal models, such as extension of the IT system to vendor pricing models, outsourcing of central data collection functions to data vendors or introduction of cloud computing and/or data storage.

Explanatory box for consultation

The existing RTS set out qualitative criteria to distinguish the extensions and changes requiring *ex-ante* notification from the ones to be notified *ex-post*. Under the current proposal of the new draft RTS, all extensions and changes require *ex-ante* notification.

However, it has been considered that some of such qualitative criteria may still be relevant for the identification of extensions and changes requiring additional information. Therefore, such relevant criteria have been reviewed, streamlined and adapted to the context of the FRTB IMA.

New qualitative criteria, not previously included in the existing RTS, have also been set out.

Question

Q11. Do you agree with the proposed qualitative criteria to identify extensions and changes requiring additional information, as set out in Part II of the Annex?

5. Accompanying documents

5.1 Draft cost-benefit analysis / impact assessment

As per Article 10 of Regulation (EU) No 1093/2010 (EBA Regulation), any draft regulatory technical standards RTS 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 on the Draft Regulatory Technical Standards on the conditions for assessing the materiality of extensions and changes to the use of alternative internal models and changes to the subset of the modellable risk factors referred to in Article 325bc under Article 325az(8)(a) of the CRR (“the draft RTS”). The analysis provides an overview of the identified problem, the proposed options to address this problem as well as the potential impact of these options. The IA is high level and qualitative in nature.

A. Problem identification and background

In January 2019, the Basel Committee on Banking Supervision (BCBS) finalised the standards on Minimum capital requirement for market risk (FRTB). The new framework introduces a new IMA that relies upon the use of an expected shortfall metric for modellable risk factors (‘MRF’) and a separate capital requirement for risk factors that are deemed non-modellable. Furthermore, institutions are required to compute an additional own fund requirements for the default risk that positions in their portfolio may be subject to.

CCR2 implements FRTB in EU legislation and introduces the new IMA, referred to as the alternative internal model approach, under Chapter 1b of the CRR.

To calculate their market risk own funds requirements (‘OFR’), institutions may use the internal model approach (‘IMA’) for the portfolio of all positions assigned to trading desks for which they have been granted permission from their respective competent authorities (‘CAs’). CAs shall grant permission to those institutions to use their IMA provided that requirements disclosed in the CRR are met.

Once the permission is received, Article 325az of the CRR states that “Material changes to the use of alternative internal models that an institution has received permission to use, the extension of the use of alternative internal models that the institution has received permission to use, and material changes to the institution's choice of the subset of the modellable risk factors referred to in Article 325bc(2), shall require separate permission from its competent authorities” and that “Institutions shall notify the competent authorities of all other extensions and changes to the use of the alternative internal models for which the institution has received permission.”. As such, in order to dissociate the obligation of requesting permission with the obligation of sending



notification when a change or an extension to the use of the alternative internal models occur, institutions need to assess whether or not this change or extension is material.

However, the CRR does not specify how the materiality assessment of model extensions and changes, and changes to the reduced set, should be performed. The lack of a common framework for the materiality assessment of model extensions and changes, and changes to the reduced set, can result in inconsistent application of the notification or permission requirements across the EU. This may lead to an uneven playing field across member states, an increased risk of regulatory arbitrage and unharmonised supervisory practises.

In this context, Article 325az(8)a mandates the EBA to “develop draft regulatory technical standards to specify the conditions for assessing the materiality of extensions and changes to the use of alternative internal models and changes to the subset of the modellable risk factors referred to in Article 325bc”.

An RTS on the conditions for assessing the materiality of extensions and changes of internal approaches when calculating own funds requirements for market risk (‘the existing RTS’) was developed by EBA in 2014 under the mandate of Article 363(4) of the CRR. However, the materiality assessment included in the existing RTS is based on the previous internal model approach (based on Value-at-Risk) specified in Chapter 5 of Title IV of Part Three of the CRR, which is fundamentally different from the alternative internal model approach (based on Expected Shortfall). Thus, while some parts of the RTS are still relevant for the materiality assessment of model extensions and changes, others are not anymore.

B. Policy objectives

The draft RTS aims at providing support to institutions and competent authorities for identifying the materiality of changes or extension to the use of alternative internal models and of changes to the institution’s choice of the subset of the modellable risk factors.

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

Section C. presents the main policy options discussed and the decisions made by the EBA during the development of the draft RTS. Advantages and disadvantages, as well as potential costs and benefits from the qualitative perspective of the policy options and the preferred options resulting from this analysis, are provided.

As mentioned above, there is already an existing RTS on the conditions for assessing the materiality of extensions and changes of internal approaches when calculating own funds requirements for market risk. Considering that similarities exist between the existing and the new mandates, the existing RTS is used as a starting point from which the draft RTS is developed.



Categories and materiality of model extensions and changes, and changes to the reduced set

As mentioned above, institutions have to differentiate between material and non-material model extensions or changes, or changes to the reduced set, and the EBA has to provide support to institutions and CAs for identifying this materiality. While the CRR only envisages two categories, the EBA analysed whether further distinction within those categories would be appropriate. Two options have been considered:

Option 1a: Setting only two categories of model extensions and changes, and changes to the reduced set (i.e. material requiring permission and non-material requiring notification).

Option 1b: Setting two categories of model extensions and changes, and changes to the reduced set (i.e., material requiring permission and non-material requiring notification) and two sub-categories for the non-material model extensions and changes, and changes to the reduced set (i.e. extensions and changes requiring additional information and other extensions and changes).

On the one hand, setting two categories of extensions and changes only (material requiring permission and non-material requiring notification), has merits in terms of simplicity. On the other hand, this option is very binary as it would lead to either an obligation of requesting permission, undertaking a long approval process, or, on the other extreme, just a notification to CAs. This binary option prevents a more tailored approach and could provoke, depending on the thresholds' levels, either too much request of permission by the institutions, which would create a burden for institutions and CAs, or too few requests and more simple notifications, which is obviously not prudent from a supervisory perspective. Costs related to the shift from two categories to three are not deemed to be significant (the levels of thresholds under the quantitative materiality conditions could have impact on costs and this will be treated in the next option).

On the basis of the above, **option 1b has been chosen as the preferred option** and the draft RTS will set two categories of model extensions and changes, and changes to the reduced set (i.e., material requiring permission and non-material requiring notification) and two sub-categories for the non-material model extensions and changes, and changes to the reduced set (i.e. extensions and changes requiring additional information and other extensions and changes).

Threshold levels for the quantitative conditions for assessing the materiality of model extensions and changes

In order to differentiate between material and non-material model extensions or changes, quantitative conditions are set out in these draft RTS (as it was the case for the existing RTS). Two options have been considered:

Option 2a: Use the same quantitative thresholds to differentiate between material and non-material model extensions and changes ('quantitative materiality thresholds'), as in the existing RTS.

Option 2b: Use different quantitative materiality thresholds, than the ones in the existing RTS.

The quantitative materiality conditions set in the existing RTS are triggered by symmetric increases and decreases in capital and risks numbers. Under such symmetric approaches, increases or decreases in overall OFR for market risk (IMA + SA) higher than 5% in absolute terms, or increases or decreases in IMA risk numbers (VaR_{t-1} , $sVaR_{t-1}$, IRC_{t-1}) higher than 10% in absolute terms, trigger the conditions for categorising a change or extension as material. These market risk own funds quantitative materiality thresholds had to be changed since the share of the IMA OFR is likely to, according to the preliminary information provided by the industry, decrease in comparison to the share of the SA OFR and consequently the effect of a change in the IMA can be significantly diluted, if both SA and IMA OFR are considered in the quantitative materiality thresholds.

Then, for model changes, the willingness to increase the focus on decrease of own funds ratios entailed an asymmetric approach in the setting of the quantitative materiality thresholds. Furthermore, in the view of simplifying the assessment process of model extensions and changes on both institutions' and CAs' sides, setting higher quantitative materiality thresholds was seen as an efficient mean in order to reduce the number of permissions requests that have to be done for extensions and changes categorised as material. In the current proposal, material model changes are identified as the ones that produce increases in IMA own funds requirements higher than 15% or decreases higher than 10% in absolute terms and increases in risk numbers⁶ higher than 20% or decreases higher than 15% in absolute terms. For material model extensions, those are the ones that produce increases or decreases in IMA own funds requirements higher than 10% in absolute terms and increases or decreases in risk numbers⁷ higher than 15% in absolute terms.

As this increase of the quantitative materiality thresholds is significant, and with the aim of balancing the need of decreasing the number of permissions requests with the CA's need of information, lower thresholds are foreseen - inside the 'non-material changes and extensions' - that would trigger the obligation for institutions to provide additional information with their notifications to CA's. For these reasons, **option 2a** has been **rejected** and option 2b seen as a better option.

The costs of option 2b are deemed to be lower than the option 2a ones as it should decrease the number of permissions requests. The benefits of option 2a could be higher for CAs as more information would be available but would not warrant the higher costs incurred for institutions.

On the basis of the above, **the option 2b has been chosen as the preferred option** and the draft RTS will use different quantitative thresholds to differentiate between material and non-material model extensions and changes, than the ones in the existing RTS.

⁶ The relevant risk numbers considered in the draft RTS are ES_{t-1} , SS_{t-1} and DRC_{t-1} , which are broad risk measures directly related to the IMA own funds requirements. It has been considered that those measures broadly correspond to the ones included in the existing RTS (VaR_{t-1} , $sVaR_{t-1}$ and IRC_{t-1})

⁷ The relevant risk numbers considered in the draft RTS are ES_{t-1} , SS_{t-1} and DRC_{t-1} , which are broad risk measures directly related to the IMA own funds requirements. It has been considered that those measures broadly correspond to the ones included in the existing RTS (VaR_{t-1} , $sVaR_{t-1}$ and IRC_{t-1})



Relevance of the risk numbers

The fact that the quantitative materiality thresholds for the risk numbers are set in relative terms could have unexpected consequences. In this context, the EBA considered two options:

Option 3a: To introduce a condition for assessing the relevance of the risk numbers to be checked for the materiality assessment of model extensions and changes.

Option 3b: Not to introduce a condition for assessing the relevance of the risk numbers to be checked for the materiality assessment of model extensions and changes.

Under certain circumstances, some of the relevant risk numbers previously mentioned (i.e. ES_{t-1} , SS_{t-1} and DRC_{t-1}) may be very low or near zero and, as the quantitative materiality thresholds are set in relative terms, the impact of model extensions and changes may have the unintended consequence of reaching these thresholds even if the absolute amount of the impact is negligible. Not introducing additional conditions on the relevance of the risk numbers could have, in such cases, the consequence of obligation for the institutions to request permissions for insignificant changes or extensions for which CAs would gain very low supervisory benefits of their reviews. Thus, costs for both institutions and CAs of **option 3b** would exceed the benefits and this option was **rejected**.

On the basis of the above, **the option 3a has been chosen as the preferred option** and the draft RTS will introduce a condition for assessing the relevance of the risk numbers to be checked for the materiality assessment of model extensions and changes.

Period for the assessment of the quantitative conditions

As described above, for the purposes of assessing the materiality of extensions and changes to the use of alternative internal models, institutions have to assess several qualitative materiality conditions and to assess the impact of any extension or change on defined ratios and risk numbers against quantitative materiality thresholds. This impact shall be assessed as the highest increase, in absolute terms over a period starting from the first business day of the testing of the impact of the extension or change. For the duration of this period, the EBA considered two options:

Option 4a: Keeping the duration set in the existing RTS: the period which is the shorter between (a) 15 consecutive business days and (b) a period ending the first day where one of the quantitative conditions is met.

Option 4b: Always use a 15 consecutive business days period.

Having two different durations of periods as in the existing RTS is leading to heterogeneous set of information received by CAs. This heterogeneity is complexifying the CAs' review.



Always setting the duration period to 15 days could lead in certain situations to additional computation of ratios and risk numbers for the institutions. Nevertheless, as they should have in place in any case the process for performing those computations for several days, the fact of actually performing such calculations and producing results for some additional days should entail little to no additional burden.

On the basis of the above, **the Option 4b has been chosen as the preferred option** and the draft RTS will always set the period for the assessment of the quantitative conditions to 15 business days.

Notification timing for non-material extensions and changes

Institutions have to send notification to their CAs for the non-material extensions and changes to the use of the alternative internal models. Regarding the timing for sending these notifications, the EBA considered two options:

Option 5a: Keeping the timing of the existing RTS which, in this context, differentiates two types of non-material extensions and changes (the ones requiring ex-ante notifications and the others) and states that extensions and changes requiring ex-ante notification should be notified two weeks in advance, while the other extensions and changes should be notified at least on an annual basis.

Option 5b: Setting, for all non-material notifications, the timing of notifications at four weeks.

It is expected, with the proposed increase of quantitative material thresholds, that some extensions and changes previously categorized as material under the existing RTS would be categorized in the future as non-material under the draft RTS. As such, some extensions and changes that would have, under the existing RTS, followed the formal approval process for permission, will be subject to notifications under the draft RTS. Those changes and extensions would have higher impact than the changes and extensions that were previously under notifications. In order to enable CAs to adequately review and take actions for those changes and extensions, the length of the notification period (before the extension or change is implemented) should thus be extended and four weeks is viewed as appropriate. Moreover, in order to harmonize the whole process of notifications, it was deemed relevant to set this timing of four weeks for all non-material changes and extensions' notifications. Costs associated with the choice of setting the timing to four weeks instead of two weeks or the yearly notification are deemed to be very low for institutions, and are expected to be exceeded by the benefit that such extension in length can produce on the CA's side.

On the basis of the above, **the Option 5b has been chosen as the preferred option** and the draft RTS will set, for all non-material notifications, the timing of notifications at four weeks.



Material changes to the institution's choice of the subset of the modellable risk factors

Article 325az of the CRR mentions the changes to the institution's choice of the subset of the modellable risk factors separately from all the other changes and extensions to the use of alternative internal models. Institutions have to dissociate material and non-material changes in the subset of modellable risk factors and the EBA has to provide support to institutions and competent authorities for identifying this materiality. The EBA will not set qualitative materiality thresholds but, regarding the quantitative ones, the EBA considered two options:

Option 6a: Following the same asymmetric approach than the one proposed for model changes with some adaptations to the particularities of modellable risk factors.

Option 6b: Following a fully differentiated approach than the one proposed for model changes.

Changes of modellable risk factors are expected to provoke impacts on the IMA own funds requirements. In the view of consistency and harmonization, it was thus deemed relevant to set the same quantitative materiality thresholds related to the impact on IMA own funds requirements for the changes of modellable risk factors than for the model changes. On the other hand, since no impact of changes of modellable risk factors is expected on two risk numbers (SS_{t-1} and DRC_{t-1}) defined in the context of changes and extensions of models, an adaptation related to risk numbers was seen as necessary and a different quantitative condition based on the ratio PES_t^{RC}/PES_t^{FC} was set. Option 6a would have the benefit of more consistency between model changes and changes of modellable risk factors, and costs associated with this option should not differ significantly from the ones associated with option 6b.

On the basis of the above, **the Option 6a has been chosen as the preferred option** and the draft RTS will, for modellable risk factors, follow the same asymmetric approach than the one proposed for model changes with some adaptations to the particularities of modellable risk factors.

Documentation of extensions and changes to the use of the alternative internal models and changes to the institution's choice of the subset of the modellable risk factors

For material extensions and changes to the use of the alternative internal models and for material changes to the institution's choice of the subset of the modellable risk factors, institutions shall submit some documentation together with the application. Amongst this documentation, the institutions need to submit the reports of the institutions' independent review or validation. The existing RTS already envisage the provision of reports of the institutions' independent review or validation but without further guidance on the content. In this context, the EBA considered two options:

Option 7a: As in the existing RTS, not providing guidance for the content of the reports of the institutions' independent review or validation.

Option 7b: Providing guidance for the content of the reports of the institutions' independent review or validation.



Providing guidance on the content of these reports could on one hand create additional costs for institutions as a minimum set of elements would be required in these reports and those elements were not compulsory in the existing RTS. On the other hand, this guidance would give the benefit for institutions to know what should contain those reports and this should lower the costs related to the elaboration of the framework of these reports. In addition, this should decrease the need of exchanges, questions or request of additional information from the CAs to the institutions about these reports and thus save time for institutions. Furthermore, guidance on the content of such reports would enhance the significant help they provide to CAs when reviewing the requested or notified extensions and changes. This harmonization of the reports would also speed up the CAs' approval process and thus save costs on the CAs side.

On the basis of the above, **the Option 7b has been chosen as the preferred option** and the draft RTS will provide guidance for the content of the reports of the institutions' independent review or validation.

D. Conclusion

The Draft Regulatory Technical Standards on the conditions for assessing the materiality of extensions and changes to the use of alternative internal models and changes to the subset of the modellable risk factors referred to in Article 325bc under Article 325az(8)(a) of the CRR will provide guidance to institutions for identifying the materiality conditions – both qualitative and quantitative - triggering the obligation of requesting permission to implement such extensions or changes. It will also provide the institutions with quantitative and qualitative thresholds for differentiating non-material changes or extensions that need additional information when notified from the ones that do not need additional information when notified. For the institutions and CAs, the draft RTS is not expected to trigger significant additional costs compared to the costs associated to the existing RTS. The main benefits will be to further refine the materiality criteria and the institutions will benefit from a lower number of material changes or extensions leading to less obligation of permission requests. Overall, the impact assessment on the draft RTS suggests that the expected benefits are higher than the incurred expected costs.

5.2 Overview of questions for consultation

- Q1.** What are your views on requiring additional information for specific extensions and changes?
- Q2.** Do you agree with the proposed quantitative conditions for determining the materiality of extensions and changes?
- Q3.** What are your views on the selected threshold levels?
- Q4.** Do you agree with the proposal to introduce a condition for assessing the relevance of the risk measures to be checked for the materiality assessment of model extensions and changes?
- Q5.** Do you agree with the proposal to always assess the quantitative conditions on a 15 consecutive business days period?
- Q6.** Do you agree with the proposal to require non-material extensions and changes to be notified four weeks before their planned implementation?
- Q7.** Do you agree with the proposed conditions for determining the materiality of changes to the institution's choice of the subset of the modellable risk factors?
- Q8.** Which one of the options do you think is more appropriate for a quantitative condition based on the ratio PES_t^{RC}/PES_t^{FC} (option 1 or option 2)? Please provide the rationale for the chosen option.
- Q9.** What are your views on the proposed clarification to the content of the reports of the institutions' independent review or validation?
- Q10.** Do you agree with the proposed qualitative criteria to identify material extensions and changes, as set out in Part I of the Annex?
- Q11.** Do you agree with the proposed qualitative criteria to identify extensions and changes requiring additional information, as set out in Part II of the Annex?