

Consultation Paper

Draft Regulatory Technical Standards

On the conditions for assessing the materiality of extensions and changes of internal approaches when calculating own funds requirements for credit, market and operational risk under articles 138(5), 301(3)(a) and 352(3)(a) of Regulation (EU) XX/XXXX of the European Parliament and of the Council on prudential requirements for credit institutions and investment firms [CRR]



Consultation Paper on Draft Regulatory Technical Standards on the conditions for assessing the materiality of extensions and changes of internal approaches when calculating own funds requirements for credit, operational and market risk under articles 138(5), 301(3)(a) and 352(3)(a) of Regulation (EU) XX/XXXX of the European Parliament and of the Council on prudential requirements for credit institutions and investment firms [CRR]

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COMMISSION DELEGATED REGULATION (EU) No .../..

of **XXX**

[...]

supplementing Regulation xx/XX/EU [CRR] of the European Parliament and of the Council of [date] on prudential requirements for credit institutions and investment firms [CRR], with regard to regulatory technical standards for the conditions when assessing the materiality of extensions and changes of internal approaches when calculating own funds requirements for credit, operational and market risk under articles 138(5), 301(3)(a) and 352(3)(a)

of XX Month 2013

THE EUROPEAN COMMISSION,

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

Having regard to the Regulation (...) No xx/xxxx of the European Parliament and of the Council of dmmmmmyyyy on prudential requirements for credit institutions and investment firms [CRR] and in particular Articles 138(5), 301(3)(a) and 352(3)(a) thereof,

Whereas:

- (1) The provisions in this Regulation are closely linked, since they refer to extensions and/or changes to internal approaches for own funds requirements for credit, operational and market risk, and since relevant supervisory issues and procedures are similar for all types of internal approaches. To ensure coherence between those provisions, and to facilitate a comprehensive view and access in a coordinated fashion to them by persons subject to those obligations, it is desirable that they enter into force at the same time and to include all of the regulatory technical standards required by Regulation (..) No xx/xxxx [CRR] on extensions and changes to internal models for credit, operational and market risk, in a single Regulation.
- (2) In accordance with Article 138(3) of Regulation (EC) No xxxx/20xx [CRR] the range of application of a rating system refers to the type of exposures as defined in Article 137(1) no. 2 of Regulation (EC) No xxxx/20xx [CRR], that may be rated with a specific rating system as defined in Article 137(1) no. 1 of Regulation (EC) No xxxx/20xx [CRR].
- (3) The Internal Models Approach (IMA) comprises any internal model which competent authorities have granted permission to be used to calculate capital requirements, including all the risk categories according to Article 352(1) of Regulation (EC) No xxxx/20xx [CRR] as well as market risk modelling approaches required or permitted additionally when approval for the risk categories according to Article 352(1) of Regulation (EC) No xxxx/20xx [CRR] is granted. These additional modelling approaches are: the calculation of the Stressed VaR according to Article 354(2) of Regulation (EC) No xxxx/20xx [CRR], where its calculation deviates from the current VaR calculation; the internal Incremental Default and Migration Risk (IRC) model according to Articles 361 to 365 of Regulation (EC) No xxxx/20xx [CRR]; the internal model for the calculation of own funds requirements for the correlation trading portfolio according to Article 367 of Regulation (EC) No xxxx/20xx [CRR]; and the VaR Spread Methodology where it is applied to the calculation of the advanced CVA risk capital charge according to Article 373 of Regulation (EC) No xxxx/20xx [CRR].
- (4) Regulation (..) No xx/xxxx [CRR] differentiates between material extensions or changes that shall be subject to approval, and all other changes that shall be subject to notification. As to the latter there is no indication in Regulation (..) No xx/xxxx [CRR] on the timing of notification of the extension or change, i.e. whether the change should be notified before or after its implementation. Against this background, extensions or changes of minor importance need not be known to competent authorities in advance. Further, it would also be more efficient and less burdensome for firms to collect such changes of minor importance and notify them to the competent authorities in regular intervals. Indeed, this has been supervisory practice in several Member States. With that in mind extensions and changes requiring notification should be further distinguished into extensions and changes requiring notification before implementation and extensions and changes only requiring notification after implementation. This would further ensure that competent authorities in their daily tasks focus their

attention on extensions and changes with the potential of materially altering own funds requirements or the performance of the models or rating systems. It would also ensure that institutions distinguish between extensions and changes of great significance from extensions and changes of minor importance on the basis of a risk-oriented supervisory approach. Such a distinction between extensions and changes subject to notification before implementation and extensions and changes subject to notification after implementation, would be prudent, given that the notification before implementation would allow competent authorities the possibility to review the correct application of this Regulation. This in return also reduces the supervisory burden on the institutions' side.

- (5) Materiality of extensions or changes in the models will usually depend on the type and category of the extension or change proposed (which should be reflected in qualitative criteria), and on their potential to alter the own funds requirements or, where applicable, the risk-weighted exposure amounts (which should be reflected in the quantitative criteria). The quantitative criteria should take the form of a threshold based on the percentage change of own funds requirements or, where applicable, of risk-weighted exposure amounts before and after the change.
- (6) For the sake of simplicity, for extensions and changes to IMA and AMA models, the quantitative threshold is calculated on the basis of own funds requirements, while for changes to the IRB approach the threshold is calculated on the basis of risk-weighted exposure amounts, to rule out effects stemming from provisions. Moreover, due to the importance of the relative coverage of the own funds requirements or risk-weighted exposure amounts by the internal approaches, the quantitative threshold is designed with regard to the overall impact of internal approaches as well as standardised approaches, for all approaches, except in relation to the threshold for the IRB and IMA which refers to the scope of application of a specific model. In particular, as regards the IMA, as the portfolio subject to the IMA can change significantly every day, the impact of the proposed model changes should be compared over a period of time, both at the level of overall own funds requirements and at the level of the concerned model. The appropriate period for comparison should be set to 60 days [60 days does not achieve this regulatory aim – will be covered in more detail later] as this is also the period over which the daily modelling results are to be averaged to calculate regulatory own funds requirements. For the IRB approach and the AMA, the calculation of the impact of the extension/change before and after the extension/change should be made with reference to the same point in time, given that the set of exposures (in the case of the IRB approach) and the risk profile (in the case of the AMA) are relatively stable in time.
- (7) Competent authorities may at any time take appropriate supervisory measures with regard to model extensions and changes that have been notified, based on the ongoing review of existing permissions to use internal approaches provided in Article 98 Directive xx/xx [CRDIV]. This is in order to ensure that the requirements laid down in Part Three, Title II, Chapter 3, Section 6, or Part Three, Title III, Chapter 4 or Part Three, Title IV, Chapter 5 of Regulation (EC) No xxxx/20xx [CRR] remain satisfied. On the other hand, this Regulation should establish the triggers for new approvals and notifications of extensions and changes to internal approaches and should be without prejudice to supervisory internal model review approaches or administrative processes foreseen by Article 18(7) of Regulation (EC) No xxxx/2012 [CRR].
- (8) Changes to the permanent partial use of internal approaches or, where applicable, to the sequential implementation of internal approaches are covered by Articles 143 and 145 of Regulation (EC) No xxxx/20xx [CRR] for IRB approach; Article 303 of Regulation (EC) No xxxx/20xx [CRR] for AMA; and Article 352 of Regulation (EC) No xxxx/20xx [CRR] for IMA. Therefore these types of changes are not covered by this Regulation.
- (9) In order for competent authorities to be able to assess that institutions have applied the rules on assessing the materiality of extensions and changes correctly, appropriate documentation should be submitted by institutions to competent authorities. In order to reduce the supervisory burden on institutions and to increase the effectiveness and efficiency of competent authorities' procedures in that respect, rules should be laid down to specify documentation requirements to accompany applications for approval or notifications of extensions and changes.
- (10) This Regulation is based on the draft regulatory technical standards submitted by the European Supervisory Authority (European Banking Authority) to the Commission.
- (11) The European Supervisory Authority (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 opinion of the Banking Stakeholder Group established in accordance with Article 37 of Regulation (EU) No 1093/2010.

HAS ADOPTED THIS REGULATION:

TITLE I

General rules for the assessment of the materiality of extensions and changes

Article 1

Categories of extensions and changes

1. The materiality of changes to the range of application of a rating system or an internal models approach to equity exposures, or of changes to the rating systems or internal models approach to equity exposures, for the Internal Rating Based approach ('changes in the IRB approach'); or of the extensions and changes for the Advanced Measurement Approach and Internal Models Approach, ('extensions and changes in the AMA and IMA') shall be classified into one of the following categories:

- (a) Material extensions and changes, which, according to Articles 138(3), 301(2) and 352(2) of Regulation (EC) No xxxx/20xx [CRR], require permission from the relevant competent authorities;
- (b) Other extensions and changes, which require notification to the competent authorities.

2. The extensions and changes mentioned in paragraph 1(b) shall further be classified into:

- (a) Extensions and changes that require notification before their implementation; and
- (b) Extensions and changes that require notification after their implementation.

Article 2

Principles of categorisation of extensions and changes

1. The classification of the materiality of extensions and changes into the categories defined in Article 1 shall be carried out:

- (a) in accordance with Articles 3 and 4, for changes in the IRB approach;
- (b) in accordance with Articles 5 and 6, for extensions and changes in the AMA;
- (c) in accordance with Articles 7 and 8, for extensions and changes in the IMA.

2. In the course of the classification of changes in the IRB approach and extensions and changes in the AMA and IMA in accordance with paragraph 1, institutions shall calculate the quantitative impact of any extension or change on own funds requirements or, where applicable, on risk-weighted exposure amounts, by applying the following methodology:

- (a) For the purpose of the assessment of the quantitative impact institutions shall use the most recent data available.
- (b) Where the detailed and precise assessment of the quantitative impact is not feasible, institutions shall instead perform an assessment of the impact based on a representative sample or other reliable inference methodologies. [\[the subsequent prescriptive nature of requirements further back, undermines this article.\]](#)

3. Where, in accordance with paragraphs 1 and 2, a single change or extension is classified as a change that does not require the competent authorities' permission, in order to avoid slicing one change into several changes of lower materiality, institutions shall also assess the aggregate impact of that particular extension or change together with the impact of all other extensions or changes which are triggered by the same underlying reasons and which, following the completion of the last internal validation process according to Articles 181 and 184 for the IRB approach, Article 310(f) for the AMA and Article 358 for the IMA of Regulation (EC) No xxxx/20xx [CRR], have, in the meantime, been classified as not requiring the competent authorities' approval, and which have therefore been implemented without such an approval.

4. In case of doubt, institutions shall assign extensions and changes to the category of the highest potential materiality. [Higher categorisation should always be open to institutions, not only when in doubt.]

5. Where an extension or change is classified as one requiring competent authorities' permission, and where competent authorities have provided this permission, institutions shall implement the approved extension or change on the date specified in the new permission in replacement of the permission in place. The non-implementation of an extension or change for which permission from competent authorities has been given, shall require a new permission from competent authorities. [It is a common occurrence that changes to model are delayed for operational reasons. Examples are reprioritisations as a result of other implementation projects, resource constraints, need for additional testing (either of the model change or of other projects), bug fixes, etc. often for other projects) IT freezes due to other projects. We suggest that regulators and institutions can agree a period during which implementation should take place.]

6. Where an extension or change is classified as one requiring ex ante notification to competent authorities, and where, subsequently to the notification, institutions decide not to implement the extension or change at all, institutions shall inform competent authorities of this development.

Text for consultation purposes

Q1: Are the provisions included in this draft RTS that specify the principles of categorisation of extensions and changes, sufficiently clear? Are there aspects which need to be elaborated further?

TITLE IV

Conditions for classification of IMA extensions and changes

Article 7

Material extensions and changes to the IMA

1. Extensions and changes to the IMA shall be considered as material if they fulfill any of the following conditions:
 - (a) they fall under any of the extensions described in Annex 3, Part I, Title I;
 - (b) they fall under any changes described in Annex 3, Part II, Title I; or
 - (c) they result in any of the following:
 - (i) in a change of 5% or more of the overall EU parent institution's consolidated own fund ~~measurement requirements~~ for market risk or of the overall own funds requirements for market risk in the case of an institution which is neither a parent institution, nor a subsidiary;
 - (ii) in a change of 5% or more of the overall own funds ~~requirements~~ for market risk at the consolidated level of a parent institution which is not an EU parent institution or of the overall own fund requirements for market risk of a subsidiary where the parent institution has not received the permission to use the IMA;
 - (iii) in a change of 10% or more of the model calculation result associated with the scope of application of the specific IMA model. [not clear if this is on a solo basis, or wider consolidated basis]

[We suggest that the word requirements be changed to the word measurement instead. This is to ensure that it does not have to meet the accounting accuracy standards that capital requirements have. The rationale is that a materiality assessment, by definition does not require the same standard, in particular as models are also subject to on-going supervision and internal independent validation.]

2. For the purposes of paragraph (1)(c)(i), and taking into consideration Article 2(2), the impact of any extension or change shall be assessed as the average of changes in the overall own funds requirements at the EU parent institution's consolidated level or at the institution level which is neither a parent institution, nor a subsidiary, over 60 days [see below], calculated as the ratio of: in the numerator, the difference between the own funds requirements for market risk associated with the scope of application of the model before and after the extension or change; and, in the denominator, the overall own funds requirements for market risk before the extension or change.
3. For the purposes of paragraph (1)(c)(ii), and taking into consideration Article 2(2), the impact of any extension or change shall be assessed as the average of changes in the overall own funds requirements at the consolidated level of a parent institution which is not an EU parent institution or at the subsidiary level where the parent institution has not received the permission to use the IMA, over 60 days [see below], calculated as the ratio of: in the numerator, the difference between the own funds requirements for market risk associated with the scope of application of the model before and after the extension or change; and, in the denominator, the overall own funds requirements amounts for market risk before the extension or change.
4. For the purposes of paragraph (1)(c)(iii), and taking into consideration Article 2(2), the impact of any extension or change shall be assessed as the highest value of the comparison over 60 days [see below], each comparison calculated as the ratio of, in the numerator, the difference between the model calculation result associated with the scope of application of the specific model before and after the extension or change, and, in the denominator, the ~~the~~ model calculation result associated with the scope of application of the specific model before the extension or change.

[The 60 day calculation is problematic on a number of fronts:

- Often materiality can be identified even by a single day calculation. We therefore suggest that as long as an institution does identify materiality based on these thresholds this should be enough.
- 60 days is not more likely to identify materiality than let's say 10 days. If 10 days do not identify materiality, then it is likely that to reach materiality would be a result of portfolio changes or changes in market conditions. Neither would be identified by the 60 day calculation. We therefore suggest that the requirement be reduced to 1 to 5 days, but certainly not more than 10 days. More meaningful might be an additional consideration of how the model would be affected under some still to be agreed market conditions.
- The level of accuracy implied in these paragraphs goes far beyond what is implied in Article 2.2.(b). We suggest that a "appropriate level of accuracy to assess materiality" is sufficient. For example it does not seem to add to the calculation that those positions for which capital is calculated on the standardised basis require to be re-calculated 60 times.

Article 8

Other extensions and changes to the IMA

Extensions and changes to the IMA, other than those described in Article 7, which need to be notified to competent authorities according to Article 352(2) of Regulation (EC) No xxxx/20xx [CRR], shall be notified in the following manner:

- (a) Extensions and changes falling under Annex 3, Part I, Title II, and Part II, Title II, shall be notified to competent authorities one month before their planned implementation;

[We view a simple one month notification on the basis of the requirements in Annex 3 is workable without a number of costly consequences (both for institutions and competent authorities. We will provide example for this in the Annex. Please note that in our view the one month notification period is not required by the regulation, and very much strays into the separate approval process RTS that the EBA is working on, as it is not relevant to the materiality assessment under discussion here.]

(b) All other changes shall be notified to the competent authorities after implementation at least on an annual basis. [\[In our view a more frequent notification is preferable to the significant list of pre-notification changes. In our view the EBA struck in an inappropriate balance in the present consultation\]](#)

Text for consultation purposes

Clarification to Article 7, paragraph 1: If an extension or change does not fall under one of the categories of extensions or changes as described in Annex 3, Part I, Title I, or Annex 1 [\[should this be Annex 3?\]](#), Part II, Title I, but results in a change as described in Article 7, paragraph 1(c), it must be considered as material. If an extension or change does not result in a change as described in Article 7, paragraph 1(c), but falls under one of the categories of extensions or changes as described in Annex 3, Part I, Title I, or in Annex 3, Part II, Title I, it must also be considered as material.

Clarification to Article 7, paragraph 1(c): The proposed metrics for the identification of material changes to the IMA cover different levels of aggregation: letter (i) is dedicated to the EU parent institution's consolidated level defined according to Article 4(65) of Regulation (EC) No xxx/20xx [CRR] or an institution on a stand-alone basis; letter (ii) is dedicated to the parent institution including its subsidiaries on a sub-consolidated basis or subsidiaries of parent institutions which use the IMA on a stand-alone basis where the parent institution does not use the IMA; and letter (iii) is dedicated to the scope of application of the specific model affected by the extension or change (the list of models is expressed in recital 3 of the draft CP).

Clarification to Article 7(2) and 7(3)

$$change = \frac{\sum_{t=1}^{60} \text{Capital new model}_t - \text{Capital approved model}_t}{\sum_{t=1}^{60} \text{Overall capital approved model}_t}$$

$$change = \frac{\sum_{i=1}^d (\text{Capital new model}_i - \text{Capital approved model}_i)}{\sum_{i=1}^d (\text{Overall capital approved model}_i)}$$

[Where d denotes the number of days over which the materiality measure is to be computed.](#)

Capital new/approved model = own fund requirements for market risk, based on scope of application of the (proposed) new model (or the model with extended scope), and on the approved model (or scope), respectively.

Overall capital approved model = overall own fund requirements for market risk, including standardised approach, based on the approved model (or scope).

Clarification to Article 7(4)

$$impact = \max \left\{ \frac{\text{Outcome new model}_t - \text{Outcome approved model}_t}{\text{Outcome approved model}_t} : t=1, \dots, 60 \right\}$$

Outcome = result of calculation of the (proposed) new model and of the approved model, respectively, for the real-life portfolios as input to the model over 60 consecutive days. [\[We request clarification that the standardised calculations are only required to be undertaken where significant changes in portfolio have occurred. This is on the basis that their volatility is relatively low, and the cost of repeated calculations outweigh the benefits. We also request clarification that there is no requirement to have the 60 day average recalculated for 60 days, as the IT infrastructure to go back so far would be substantial\]](#)

Q9: Are the provisions included in this draft RTS on the calculation of the quantitative threshold for the IMA sufficiently clear? Are there aspects which need to be elaborated further?

Q10: Do you support the calculation proposal of the quantitative thresholds for the IMA in terms of design of the metrics and level of thresholds? (Please also take into account the arguments provided in Tables 2 to 5 of the Impact Assessment)

Q11: Do you support for the IMA the one month period for notification of the changes before implementation? [No, there are practical issues associated with this proposal]

Q12: Do you support for the IMA the 60-day observation period for the purpose of comparing the modelling result before and after a proposed change? [No, for the reasons made earlier, we do not feel that the 60-day observation period gives supervisors the information they require, while be very costly to implement for the industry]

Q13: Do you support that for the IMA for those modelling approaches which are only required to be calculated once a week (stressed VaR, IRC, CRM) to compare only twelve numbers for Article 7 paragraph 1(c)(iii)?

Q14: Do you support that for the IMA no quantitative differentiation between changes requiring notification prior vs. post implementation is made?

TITLE V

Documentation of extensions and changes

Article 9

1. For extensions and changes classified as requiring competent authorities' approval, institutions shall submit, together with the application, the following documentation [we are concerned that this article confuses the model approval process and the materiality assessment. The provision of the data below appears to be more relevant to the approval process than the materiality assessment.]
 - a. description of the extension or change, its rationale and objective;
 - b. Proposed implementation period/date; [institutions should be allowed to implement during an agreed period, as opposed to a specific date]
 - c. scope of application affected by the model extension or change, with volume characteristics;
 - d. technical and process document(s);
 - e. reports of the institutions' independent review or validation;
 - f. confirmation that the extension or change has been approved through the institution's approval processes by the relevant bodies; including the approval committee and date of approval;
 - g. quantitative impact, according to Titles II, III and IV, of the expected effects on the risk weighted exposure amounts or the own funds requirements;
 - h. record of the institution's current and past version of internal models [even for the approval process this seems exceedingly onerous and should be timelimited. Also what is meant by "records", is it the software, the inputs, the outputs? We would even question the need for keeping the "software", as model changes cannot be categorised as neatly as an upgrade on a home computer;
 - i. details of all extensions and changes planned for the internal approaches over the next 12 months, where the risk weighted exposure amounts or, where applicable, the own funds requirements are expected to decrease in the case of the IRB approach or the AMA, or expected to change in the case of the IMA. [this appears to require a two year planning cycle. As discussed at the public hearing, model changes are more frequent and reactive to market conditions in practice. Also the level of project-co-ordination implicit in this requirement could only be done by either very small firms or by curtailing model changes to once or twice a year. It also increases project management risks as it suddenly requires banks (for no obvious benefit) to co-ordinate project management across distinct projects. This in our view would increase risks rather than reducing them.]
2. For extensions and changes classified as requiring notification before implementation, institutions shall submit, together with the notification, the documentation elements referred to in points 1(a), 1(b), 1(c), 1(e), 1(f), 1(g) and 1(h).
3. For extensions and changes classified as requiring notification after implementation, institutions shall submit, together with the notification, the documentation elements referred to in point 1(a), 1(b), 1(c), 1(f) and 1(h) and the result of the assessment required under Article 2(3).

Text for consultation purposes

Q15: Are the provisions included in this draft RTS on the documentation requirements sufficiently clear? Are there aspects which need to be elaborated further?

ANNEX 1 - CHANGES TO THE IRB APPROACH

Part I- Changes to the range of application of rating systems or internal models approaches to equity exposures

Title I – Changes requiring competent authorities' approval ('material')

Changes falling under any of the categories listed below shall be classified as material:

- (1) extending the range of application of a rating system to exposures in any of the following cases:
 - (a) to exposures of the same type of product or obligor in an additional business unit;
 - (b) to exposures of an additional type of product or obligor unless the additional type of product or obligor falls within the range of application of an approved rating system based on the criteria as laid down in point c i) and ii);
 - (c) where the lending decision has been taken by a third party to the group, unless the institution can prove that the additional exposures fall within the range of application of an approved rating system, based on all of the following criteria:
 - (i) the 'representativeness' of the data used to build the model to assign exposures to grades or pools with respect to the key characteristics of the institution's additional exposures where the lending decision has been taken by a third party, according to Article 170(1)(c) of Regulation (EC) No xxxx/20xx [CRR];
 - (ii) the 'comparability' of the population of exposures represented in the data used for estimation, the lending standards used when the data was generated and other relevant characteristics with the ones of the additional exposures where the lending decision has been taken by a third party, according to Article 175(1)(d) of Regulation (EC) No xxxx/20xx [CRR].

Institutions shall provide for a complete description of the criteria and measures for classifying the materiality of changes into 'representativeness' and 'comparability' according to Articles 170(1)(c) and 175(1)(d) of Regulation (EC) No xxxx/20xx [CRR].

- (2) extending the range of application of an internal models approach to equity exposures to one of the following type of exposures:
 - (a) from the Simple risk weight method according to Article 150(2) of Regulation (EC) No xxxx/20xx [CRR], from the PD/LGD approach according to Article 150(3) of Regulation (EC) No xxxx/20xx [CRR], or from the temporary partial use provision according to Article 472 of Regulation (EC) No xxxx/20xx [CRR];
 - (b) of the same type of product in an additional business unit;
 - (c) of an additional type of product unless the institution can prove that it falls within the range of application of an existing internal models approach to equity exposures.

Title II – Changes requiring ex ante notification to competent authorities

Changes falling under one of the categories listed below shall be classified as requiring notification to the competent authorities before implementation:

- (1) reducing the range of application or the scope of use of a rating system;
- (2) reducing the range of application of an internal models approach to equity exposures;
- (3) extending the range of application of a rating system for which it can be shown that it does not fall under Part I, Title I, (1) of this Annex;
- (4) extending the range of application of a rating system for which it can be shown that it does not fall under Part I, Title I, (2) of this Annex.

Part II- Changes to rating systems or an internal models approach to equity exposures

Title I – Changes requiring competent authorities' approval ('material')

Changes falling under one of the categories listed below shall be classified as material:

- (1) changes in the methodology of assigning exposures to exposure classes and rating systems. These include:
 - (a) changes in the methodology used for assigning exposures to different exposure classes according to Article 142(1) of Regulation (EC) No xxxx/20xx [CRR];
 - (b) changes in the methodology used for assigning an obligor or a transaction to a rating system according to Article 165(1) of Regulation (EC) No xxxx/20xx [CRR].
- (2) the following changes in the algorithms and procedures used for: assigning obligors to obligor grades or pools; for assigning exposures to facility grades or pools; or for quantifying the risk of obligor default or associated loss ('changes in the rating methodology for IRB systems'):
 - (a) changes of the modelling approach for assigning an obligor to grades or pools and/or exposures to facility grades or pools according to Article 167(1) and Article 170(1)(a) to (c) and (e) of Regulation (EC) No xxxx/20xx [CRR];
 - (b) changes to the institution's approach to the 'one-obligor-one-rating principle' according to Article 168(1)(e) of Regulation (EC) No xxxx/20xx [CRR];
 - (c) changes in the rating system's philosophy. These refer to the assumptions behind ratings which relate to the extent by which a change in economic conditions is expected to result in a net migration of a large number of exposures, obligors or facilities across grades or pools of the model, as opposed to migration of only some exposures, obligors or facilities due only to their individual characteristics the measure and significance levels of which are defined by the institution;
 - (d) changes to the rating criteria as referred to in Article 166(1)(c) and (e) and Article 166(4) of Regulation (EC) No xxxx/20xx [CRR] and/or their weights, sequence or hierarchy, if any of the following conditions are met:
 - (i) they significantly change the rank ordering referred to in Article 166(1)(c) and 3(c) of Regulation (EC) No xxxx/20xx [CRR] the measure and level of which are defined by the institution;
 - (ii) they alter the distribution of obligors, facilities or exposures across grades or pools according to Article 166(1)(d) and (f) and Article 166(3)(b) of Regulation (EC) No xxxx/20xx [CRR].
 - (e) introduction or withdrawal of an external rating as a primary factor determining an internal rating assignment according to Article 167(2) of Regulation (EC) No xxxx/20xx [CRR];
 - (f) change in the fundamental methodology for estimating PDs, LGDs including best estimate of expected loss, and conversion factors according to Articles 176, 177, 178 of Regulation (EC) No xxxx/20xx [CRR], including the methodology for deriving a margin of conservatism related to the expected range of estimation errors according to Article 175(1)(f) of Regulation (EC) No xxxx/20xx [CRR]. For LGDs and conversion factors this includes also changes in the methodology for accounting for an economic downturn according to Articles 177(1)(b) and 178(1)(b) of Regulation (EC) No xxxx/20xx [CRR];
 - (g) inclusion of additional types of collateral into the LGD estimation according to Article 177(1)(c) to (g) of Regulation (EC) No xxxx/20xx [CRR] if their treatment differs from procedures that have already been approved.
- (3) changes in the definition of default according to Article 174 of Regulation (EC) No xxxx/20xx [CRR];
- (4) changes in the validation methodology and/or validation processes which lead to changes in the institution's judgement of the accuracy and consistency of the estimation of the relevant risk parameters, the rating processes or the performance of their rating systems according to Article 181(a) of Regulation (EC) No xxx/20xx [CRR];
- (5) changes in the internal models approach to equity exposures. These include:
 - (a) changes in the value-at-risk modelling approach to estimate risk weighted exposure amounts for equity exposures according to Article 150(4) of Regulation (EC) No xxxx/2012 [CRR];

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- (b) changes in the methodology for adjusting estimates of potential loss to achieve appropriate levels of realism and/or conservatism, or changes in the analytical method to convert shorter horizon period data to quarterly data according to Article 182(a) of Regulation (EC) No xxxx/20xx [CRR];
 - (c) changes in the model capture of material risk drivers considering the specific risk profile and complexity, including non-linearities of the institution's equity portfolio according to Article 182(b) and (c) of Regulation (EC) No xxxx/20xx [CRR];
 - (d) changes in the fundamental methodology for mapping of individual positions to proxies, market indices or risk factors according to Article 182(d) of Regulation (EC) No xxxx/20xx [CRR].

Title II - Changes requiring ex ante notification to competent authorities

Changes falling under one of the categories listed below shall be classified as requiring notification to the competent authorities before implementation:

- (1) changes in the treatment of purchased receivables according to Article 148(6) and (7) and Article 149(5) of Regulation (EC) No xxxx/20xx [CRR];
- (2) the following changes in the rating methodology for IRB systems:
 - (a) changes in the internal procedures and criteria for assigning risk weights to specialised lending exposures according to Articles 148(5) and 166(2) of Regulation (EC) No xxxx/20xx [CRR];
 - (b) changes from the use of direct estimates of risk parameters for individual obligors or exposures to the use of a discrete rating scale or vice versa according to Article 165(3) of Regulation (EC) No xxxx/20xx [CRR], unless already classified as material according to Part II, Title I of this Annex;
 - (c) changes to the rating scale in terms of the number or structure of rating grades according to Article 166(1) of Regulation (EC) No xxxx/20xx [CRR], unless already classified as material according to Part II, Title I of this Annex;
 - (d) changes to the rating criteria and/or their weights or hierarchy according to Article 166(1)(c) and (e) and 166(4) of Regulation (EC) No xxxx/20xx [CRR], unless already classified as material according to Part II, Title I of this Annex;
 - (e) changes to the grade or pool definitions or criteria according to Articles 167(1) and 170 of Regulation (EC) No xxxx/20xx [CRR], unless already classified as material according to Part II, Title I of this Annex;
 - (f) changes in the scope of information used to assign obligors to grades or pools according to Article 167(2) of Regulation (EC) No xxxx/20xx [CRR] or inclusion of new or additional information in a model for parameter estimation according to Article 175(1)(d) of Regulation (EC) No xxxx/20xx [CRR].
 - (g) changes in the rules and processes for the use of overrides according to Article 168(3) of Regulation (EC) No xxxx/20xx [CRR], unless already classified as material according to Part II, Title I of this Annex;
 - (h) changes in the methodology for estimating PDs, LGDs including best estimate of expected loss, and conversion factors according to Articles 176, 177, 178 of Regulation (EC) No xxxx/20xx [CRR] including the methodology for deriving a margin of conservatism related to the expected range of estimation errors according to Article 175(1)(f) of Regulation (EC) No xxxx/20xx [CRR], unless already classified as material according to Part II, Title I of this Annex. For LGDs and conversion factors this includes also changes in the methodology for accounting for an economic downturn according to Article 177(1)(b) and Article 178(1)(b) of Regulation (EC) No xxxx/20xx [CRR];
 - (i) changes in the way or extent to which conditional guarantees are accounted for in the LGD estimation according to Article 179(1)(c) of Regulation (EC) No xxxx/20xx [CRR];
 - (j) inclusion of additional types of collateral into the LGD estimation in accordance to Article 177(1)(c) to (g) of Regulation (EC) No xxxx/20xx [CRR], unless already classified as material according to Part II, Title I of this Annex;
 - (k) if an institution maps its internal grades to the scale used by an ECAI and then attributes the default rate observed for the external organisation's grades to the institutions' grades according to Article 176(1) f of Regulation (EC)

No xxxx/20xx [CRR], changes in the mapping used for this purpose unless already classified as material according to Part II, Title I of this Annex;

- (3) changes in the validation methodology and/or process according to Articles 181 and 184 of Regulation (EC) No xxxx/20xx [CRR], unless already classified as material according to Part II, Title I of this Annex.
- (4) changes in processes. These include:
 - (a) changes in the credit risk control unit according to Article 186 of Regulation (EC) No xxxx/20xx [CRR] as regards its position within the organisation and its responsibilities;
 - (b) changes in the validation unit's position according to Articles 186(1) and (2) of Regulation (EC) No xxxx/20xx [CRR] within the organisation and its responsibilities;
 - (c) changes in the internal organisational or control environment or key processes that have an important influence on a rating system;
 - (d) changes in the lending practices, lending standards or process for pursuing recoveries according to Article 175(1)(c) of Regulation (EC) No xxxx/20xx [CRR] with the potential of rendering the rating system no longer suitable;
 - (e) changes to the process for assigning exposures to grades or pools according to Articles 167(1) and 170(a) to (c) and (e) of Regulation (EC) No xxxx/20xx [CRR], unless already classified as material according to Part II, Title I of this Annex.
- (5) changes to the design of the stress testing framework according to Article 173(2) of Regulation (EC) No xxxx/20xx [CRR] or to the frequency of its application.
- (6) changes in the data. These include:
 - (a) if an institution starts or ceases to use data that is pooled across institutions according to Article 175(2) of Regulation (EC) No xxxx/20xx [CRR];
 - (b) changes in the composition of the data pool for institutions using data pooling according to Article 175(2) of Regulation (EC) No xxxx/20xx [CRR];
 - (c) change of the data sources used in the process of allocating exposures to grades or pools or for parameter estimation according to Articles 172(5)(a) and 171(4)(a) of Regulation (EC) No xxxx/20xx [CRR].
 - (d) change in the length and composition of time series used for parameter estimation according to Article 175(1) (a) that goes beyond the annual inclusion of the latest observations, unless already classified as material according to Part II, Title I of this Annex.
- (7) changes in the use of models, if an institution starts using risk parameter estimates for internal business purposes that are not those used for regulatory purpose and, where this was previously not the case, within the lines set out according to Article 175(1) of Regulation (EC) No xxxx/20xx [CRR];
- (8) changes in the internal models approach to equity exposures. These include:
 - (a) changes of the data used to represent return distributions for equity exposures under the internal models approach according to Article 182(a) of Regulation (EC) No xxxx/20xx [CRR];
 - (b) changes in the stress testing programme for the internal models approach for equity exposures according to Article 182(g) of Regulation (EC) No xxxx/20xx [CRR];
 - (c) changes in the internal organisational or control environment or key processes that have an important influence on internal models approach to equity exposures.

ANNEX 2 – EXTENSIONS AND CHANGES TO THE AMA

Part I- Extensions

Title I- Extensions requiring competent authorities' approval ('material')

Changes falling under any of the categories listed below shall be classified as material:

- (1) first-time introduction of measures to capture expected losses in the institutions' business practices offset according to Article 311(2)(a) of Regulation (EC) No xxxx/20xx [CRR];
- (2) first-time introduction of operational risk mitigation techniques such as insurance or other risk transfer mechanisms according to Article 312(1) of Regulation (EC) No xxxx/20xx [CRR];
- (3) first-time recognition of correlations in operational risk losses according to Article 311(2)(d) of Regulation (EC) No xxxx/20xx [CRR];
- (4) first-time introduction of methodology for allocating operational risk capital among the different entities of the group according to Article 18(1)(b) and 311(2)(a) of Regulation (EC) No xxxx/20xx [CRR];
- (5) the introduction of the AMA within parts of the institution or group of institutions not yet covered by the approval or the approved roll out plan according to Article 303(1) of Regulation (EC) No xxxx/20xx [CRR], if those areas account for more than 5 % of the institution or group as measured at the end of the last financial year using the amount of the relevant indicator assigned to those areas.

Title II – Extensions requiring ex ante notification to competent authorities

The introduction of the AMA within parts of the institution or group of institutions not yet covered by the approval or the approved roll out plan according to Article 303(1) of Regulation (EC) No xxxx/20xx [CRR], if those areas account for more than 1 % and less than or equal to 5 % of the institution or group as measured at the end of the last financial year using the amount of the relevant indicator assigned to those areas.

Part II- Changes to the AMA

Title I – Changes requiring competent authorities' approval ('material')

Changes falling under one of the categories listed below shall be classified as material:

- (1) changes in the organisational and operational structure of the independent risk management function for operational risk according to Article 310 of Regulation (EC) No xxxx/20xx [CRR] which:
 - (a) reduce the ability of the operational risk management function to oversee and inform the decision making processes of the business and support units they control;
 - (b) reduce the hierarchical level of the operational risk management function or of its head.
- (2) changes to the measurement system for operational risk if they fulfil any of the following criteria:
 - (a) they change the architecture of the measurement system regarding the combination of the four data elements of internal and external loss data, scenario analysis, business environment and internal control factors, according to Article 311(2)(b) of Regulation (EC) No xxxx/20xx [CRR];
 - (b) they change the logics and drivers of the methodology for allocating the operational risk capital between the different entities of a group according to Article 18(1)(b) and 311(2)(a) of Regulation (EC) No xxxx/20xx [CRR].
- (3) changes to the procedures relating to internal and external data, scenario analysis and business environment and internal control factors if they:

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- (a) reduce the level of controls regarding the completeness and quality of operational risk data collected according to Article 311(3) and (4) of Regulation (EC) No xxxx/20xx [CRR];
 - (b) change the external data sources to be used within the measurement system according to Article 311(4) and 311(5) of Regulation (EC) No xxxx/20xx [CRR].
- (4) changes to the overall method on how insurance contracts and/or other risk transfer mechanisms are recognized within the calculation of the AMA capital charge according to Article 312(1) of Regulation (EC) No xxxx/20xx [CRR].
- (5) reducing the part of the operational risk captured by the AMA within the institution or group of institutions using the AMA according to Article 303(2) and (3) of Regulation (EC) No xxxx/20xx [CRR], if those areas account for more than 5 % of the institution's or group's overall own funds requirements for operational risk as measured at the end of the last financial year.

Title II- Changes requiring ex ante notification to competent authorities

Changes falling under one of the categories listed below shall be classified as requiring notification to the competent authorities before implementation:

- (1) relevant changes to the way the operational risk measurement system is integrated into the day-to-day management process through operational risk processes and policies according to Article 310(a) and (c) of Regulation (EC) No xxxx/20xx [CRR], if they change any of the following:
- (a) the extent to which the operational risk measurement system contributes to relevant information in the institutions' risk management and related decision making processes, including the approval of new products, systems and processes and definition of the operational risk tolerance;
 - (b) the scope, recipients and frequency of the reporting system for informing all relevant parts of the institution about the results of the operational risk measurement system and decisions taken in response to operational risk events.
- (2) changes in the organisational and operational structure of the independent risk management function for operational risk according to Article 310(b) of Regulation (EC) No xxxx/20xx [CRR] if they fulfil any of the following criteria:
- (a) they change the duties and responsibilities of the operational risk management function;
 - (b) they lead to a reduction of the available resources in terms of budget and headcount of more than 10 % since the last approval according to Article 301(2) of Regulation (EC) No xxxx/20xx [CRR] was granted.
- (3) changes to validation processes and the internal review according to Article 310(e) and (f) of Regulation (EC) No xxxx/20xx [CRR] if they change the logic and methods used for internally validating or reviewing the AMA framework;
- (4) changes to the calculation of the operational risk capital charge which change one of the following:
- (a) structure and characteristics of the data set used for the calculation of the operational risk capital requirement (the 'calculation data set'), including any of the following:
 - (i) the definition of gross loss amount to be used within the calculation data set according to Article 311(3)(d) of Regulation (EC) No xxxx/20xx [CRR];
 - (ii) the reference date of loss events to be used within the calculation data set according to Article 311(2)(a) of Regulation (EC) No xxxx/20xx [CRR];
 - (iii) the length of the time series of loss data to be used within the calculation data set according to Article 311(2)(a) of Regulation (EC) No xxxx/20xx [CRR];
 - (iv) the criteria to group losses caused by a common operational risk event or by related events over time according to Article 311(3)(b) and (3)(e) of Regulation (EC) No xxxx/20xx [CRR];
 - (v) the number or the type of risk classes over which the operational risk capital requirement is calculated;
 - (vi) the method for setting the threshold for the level of losses above which the model is fitted to the data according to Article 311(2)(a) of Regulation (EC) No xxxx/20xx [CRR];

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- (vii) where applicable, the method for setting the threshold for differentiating the body and tail regions of the data, when fitted by different methods according to Article 311(2)(a) of Regulation (EC) No xxxx/20xx [CRR];
 - (viii) the processes and criteria for assessing the relevance, for scaling or for doing other adjustments to the operational risk data according to Article 311(3)(f) of Regulation (EC) No xxxx/20xx [CRR];
 - (b) the criteria for the selection, update and review of used distributions and methods for the estimation of their parameters according to Article 311(2)(a) of Regulation (EC) No xxxx/20xx [CRR];
 - (c) criteria and procedures for the determination of the aggregated loss distributions and for the calculation of the pertinent operational risk measure at the regulatory confidence level according to Article 311(2)(a) of Regulation (EC) No xxxx/20xx [CRR];
 - (d) methodology for the determination of expected losses and their capturing within internal business practices according to Article 311(2)(a) of Regulation (EC) No xxxx/20xx [CRR]; or
 - (e) methodology about how correlations in operational risk losses across individual operational risk estimates are recognised according to Article 311(2)(d) of Regulation (EC) No xxxx/20xx [CRR].
- (5) changes to the standards relating to internal and external data, scenario analysis and business environment and internal control factors if they:
- (a) change the internal processes and criteria for collecting internal loss data according to Article 311(3) of Regulation (EC) No xxxx/20xx [CRR], including any of the following:
 - (i) increase of the threshold for the collection of internal loss data according to Article 311(3)(c) of Regulation (EC) No xxxx/20xx [CRR];
 - (ii) criteria for assigning loss data arising from loss events in a centralized function or activity that spans more than one business line according to article 311(3)(b) of Regulation (EC) No xxxx/20xx [CRR];
 - (iii) methods or criteria for the exclusion of activities or exposures from the scope of the internal data collection according to article 311(3)(c) of Regulation (EC) No xxxx/20xx [CRR];
 - (b) change the internal processes and criteria for one of the following:
 - (i) performing scenario analysis according to Article 311(5) of Regulation (EC) No xxxx/20xx [CRR];
 - (ii) determining business environment and internal control factors according to Article 311(6) of Regulation (EC) No xxxx/20xx [CRR].
- (6) changes to the standards relating to insurance and other risk transfer mechanisms according to Article 312 of Regulation (EC) No xxxx/20xx [CRR], if they fulfil one of the following conditions:
- (a) they cause a relevant alteration of the level of coverage provided;
 - (b) they modify the method used for calculating if the reduction of the own funds requirements exceed 20% of the own fund requirement for operational risk before the recognition of risk mitigation techniques according to article 312(5) of Regulation (EC) No xxxx/20xx [CRR]; or
 - (c) they alter the processes and criteria for calculating the haircuts in the amount of insurance recognition, introduced to capture the uncertainty of payment, the mismatches in coverage and the policy's residual and cancellation terms, where less than one year according to article 312(4) of Regulation (EC) No xxxx/20xx [CRR].
- (7) relevant changes to the IT systems used to process the AMA, including the collection of data and their administration, reporting procedures and the measurement system for operational risk according to article 301(2) of Regulation (EC) No xxxx/20xx [CRR] and the general risk management standards set out in article 73 of Directive (EC) No xxxx/20xx [CRDIV];
- (8) reducing the part of the operational risk captured by the AMA within the institution or group of institutions using the AMA according to Article 303(2) and (3) of Regulation (EC) No xxxx/20xx [CRR], if those areas account for more than 1 % but less than 5 % of the institution's or group's overall own funds requirements for operational risk as measured at the end of the last financial year.

ANNEX 3 - EXTENSIONS AND CHANGES TO THE IMA

Part I- Extensions

Title I -Extensions requiring competent authorities' approval ('material')

Extensions of an IMA falling under any of the categories listed below shall be classified as material:

- (1) extension of the risk categories captured by the IMA according to Article 352(1) of Regulation (EC) No xxxx/20xx [CRR]; [can the EBA clarify that debt instruments include derivatives based underlyings incorporating interest rate risk]
- (2) extensions of the market risk model to an additional legal entity or to a location not included in the range of application yet; [it does seem to be excessive to classify new trading locations as material extensions. This can happen on a relatively frequent basis, and is more of an issue of wider strategy than modelling. We suggest that new trading locations that are not representative of a large strategic change be part of post notification.]
- (3) integration of a portfolio such as in cases of portfolio acquisitions and corporate takeovers; [can the EBA clarify that combination of trading desks would not be deemed material?]
- (4) first time application of the VaR spread methodology for the calculation of the advanced CVA risk charge;
- (5) 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.

Title II –Extensions requiring ex ante notification to competent authorities

Extensions falling under either of the categories listed below shall be classified as extensions requiring notification to competent authorities prior to implementation:

- (1) inclusion of product classes requiring other [risk?] modelling techniques than those applied to existing products such as path-dependent products, or multi-underlying positions, according to Article 356 of Regulation (EC) No xxxx/20xx [CRR];
- (2) an increase in the use of or percentage of proxies arriving from an extension according to Article 356 of Regulation (EC) No xxxx/20xx [CRR]. [for the sake of practical implications we suggest that this be deemed as requiring ex-ante notification only if increase is above 5%, otherwise this could happen on a daily basis. Anyway, this issue is one that would be better dealt with under a more frequent post notification basis.]

Part II- Changes to the models

Title I- Changes requiring competent authorities' approval ('material')

Changes to the models falling under any of the categories listed below shall be classified as material:

- (1) changes in the calculation of the effects of changes in market risk factors on instruments such as including additional sensitivity measures or a move from Taylor-approximation to full revaluation, according to Article 356 of Regulation (EC) No xxxx/20xx [CRR]; [this seems extremely broad requirement to have all additional sensitivity measures caught. This would undermine institutions ability to manage their business and would create an malign divergence between regulatory capital and risk management]
- (2) changes in the aggregation scheme such as where a simple aggregation scheme is replaced by an improved one, according to Article 356 of Regulation (EC) No xxxx/20xx [CRR]; [it is not clear what aggregation is meant?Does this refer to the type of aggregation for consolidation purposes?]
- (3) inclusion of material risk factors beyond those necessary when the model is extended to new product types; [it is unclear what this is trying to get at. It is difficult to see how you could have a material risk factor that is not necessary?]
- (4) changes to external data sources or the IT data landscape, in particular to the interfaces which result in amendments in the calculation of the internal model; [very unclear what this is trying to get at. One reading is that every time a new feed into the calculation engine is changed this will require approval. Surely that is not the level that competent authorities want to micro-manage firms? We suggest that intent is clarified.]
- (5) out-sourcing or in-sourcing of components which are material to calculating risk or validating the model, such as obtaining market data relevant to calculating risk and P/L, or the switch from licence-based use of a system ('computational module') to use of an application service provider ('ASP'); [very unclear what this is trying to get at. One reading is that every time a new feed into the calculation engine is changed thiw will require approval. Surely that is

not the level that competent authorities want to micro-manage firms? We suggest that intent is clarified. Does it mean that every time an institution engages an outside provider to help with internal validation, this needs to be pre-approved, even before the model approval request comes in?

- (6) comprehensive technical or methodological changes to the risk management process such as migration of the calculation of VaR to another technical infrastructure, according to Article 357(1)(a) of Regulation (EC) No xxxx/20xx [CRR]; again can be read as being very broad and going much further than 357(1)(a). Indeed this paper itself will make it more difficult (if not impossible) for firms to meet the objectives of 357(1)(a). Does this mean that everytime a risk not in VaR, however small, is incorporated into the VaR methodology needs pre-approval?
- (7) change in the assumptions regarding the loss given default rate (LGD) for models capturing IRC, correlation trading or advanced CVA risk according to Articles 363(1), 367(3)(e) and 373(6)(a) of Regulation (EC) No xxxx/20xx [CRR]; not clear what is meant by assumptions. Does it relate to the specific LGD for each position, or does it refer to the internal LGD methodology (in which case should be addressed via IRB requirements)

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- (8) changes to the approach for identifying the stressed period in order to calculate a Stressed VaR measure, according to Article 354(2) of Regulation (EC) No xxxx/20xx [CRR].

Title II - Changes requiring ex ante notification to competent authorities

Changes falling under one of the categories listed below shall be classified as changes requiring notification to competent authorities prior to their implementation as discussed at the EBA public hearing, we are of the view that the pre-notification process proposed is hugely burdensome to institutions and unimplementable from the perspective of competent authorities:

- (1) changes in the fundamentals of statistical methods according to Article 354 of Regulation (EC) No xxxx/20xx [CRR], including any of the following:
 - (a) changes in the assumptions about the joint distribution of risk factors ('general distribution model');
 - (b) introduction of variance reduction methods;
 - (c) changes to the algorithms to generate the random figures;
- (2) changes in how the effects of risk factor changes are calculated such as change from analytical to simulation-based pricing model, according to Article 356 of Regulation (EC) No xxxx/20xx [CRR]; I does this imply that competent authorities also now propose to review pricing models?
- (3) changes in the assumptions or the modelling of risk factors incorporated in the internal VaR model according to Article 356(2) of Regulation (EC) No xxxx/20xx [CRR], including a move between zero rates, par rates or swap rates, or an extension of risk factors where there was previously only one risk factor such as more grid-points on a curve of interest rates or an extended surface of implied volatilities;
- (4) changes in the effective length of the historical observation period, including a change in a weighting scheme of the time series according to Article 354(1)(d) of Regulation (EC) No xxxx/20xx [CRR];
- (5) changes in the calculation of the effects of changes in market risk factors on instruments, including changes in pricing models used to calculate sensitivities to modelled risk factors or to re-valued positions for the value-at-risk model or for the purpose of back-testing, according to Article 356 of Regulation (EC) No xxxx/20xx [CRR];
- (6) changes in the statistical method to estimate volatilities or correlations between risk factors according to Article 356(3) of Regulation (EC) No xxxx/20xx [CRR];
- (7) changes in the definition or methodology of appropriate proxy risk factors for the VaR and the stressed VaR model according to Article 356(2)(e) of Regulation (EC) No xxxx/20xx [CRR]; while change in the methodology required to estimate spreads is fine, the wording can be read as requiring each individual change in proxy to be pre-notified. This would not work in practice.
- (8) change of the period on which the stressed VaR calculation is based ('stressed period') according to Article 354(2) of Regulation (EC) No xxxx/20xx [CRR]; some competent authorities are pushing firms towards a dynamic calculation of the stressed VaR, which is incompatible with this proposal. Does it therefore mean that institutions are being stopped from implementing a dynamic approach to stressed VaR?
- (9) changes to the criteria for mapping positions to relevant risk factors according to 356(1) of Regulation (EC) No xxxx/20xx [CRR];
- (10) changes in the methodology for defining appropriate proxy spreads, including regarding the advanced CVA approach according to Article 373(6) of Regulation (EC) No xxxx/20xx [CRR];
- (11) change between internal and external rating used for IRC and / or correlation trading models according to Article 361 of Regulation (EC) No xxxx/20xx [CRR];
- (12) changes in the methodology used for assigning exposures to individual exposure classes in the IRC and / or correlation trading models according to Article 363(1) and (2), Article 367(2) of Regulation (EC) No xxxx/20xx [CRR];
- (13) change of methods for estimating exposure or asset correlation for IRC and / or correlation trading models according to Articles 363(2) and 367(2) of Regulation (EC) No xxxx/20xx [CRR];
- (14) changes in the implementation of internally developed and implemented pricing models or use of proxy models;
- (15) change in the validation methodology and/or process according to Article 357(1)(h) of Regulation (EC) No xxxx/20xx [CRR];

[many of the above would also impact on independent validation functions to an extent that it can take them away from their main function of validating models]

(16) changes to the valuation method with regard both to the economic profit and loss and to the clean profit and loss, such as move from mark-to-model to mark-to market, or vice versa, according to Article 355(3) and 358(2) of Regulation (EC) No xxxx/20xx [CRR]; requiring pre-notification of valuation methodology changes is a significant addition to regulatory requirement that are not justified by the regulation. Process wise it would inhibit financing processes for accounting purposes and would involve competent authorities in the micro-management of trading activities. We would urge the EBA to work with the industry on how these aims can be achieved without going beyond their remit.

In particular there is a lack of clarity around what exactly triggers a notification event: are these intended to be one off changes to valuation methodologies (eg migration to OIS discounting framework, implementation of FVA on uncollateralised positions) which can be considered as "significant events" or do we need to cover each and every change to a methodology. This latter aspect would a) be difficult to capture from a completeness viewpoint b) overly onerous to collate across multiple business areas c) create delays in having to pre-notify. It is not fully clear whether pre-notification automatically leads to acceptance of new methodology or whether there would be challenge.

While a quantitative level for materiality is discussed in terms of % of RWA levels - the wording suggests impacts to economic / clean p&l would be notifiable so a better metric may be to look at the P&L impact in setting materiality. This links into the above point as it would then be useful in determining the scope. Ideally one would convey the major issues to a Regulator but, for example, if a controller changes a bid offer methodology that creates a small p&l impact would the Regulator really be requiring notification of this? It would not particularly add value to any party. There is a risk that more important changes get lost in a morass of insignificant updates.]

(16)(17) change to the organisational and operational structure of risk management and internal governance process, according to Article 357(1) of Regulation (EC) No xxxx/20xx [CRR] including any of the following:

- (a) organisational changes;
- (b) the limit setting framework;
- (c) the reporting framework;
- (d) stress testing changes;
- (e) the new product process;
- (f) internal organisation and staff changes;

[the above can be read as any change, even the making of a single individual redundant as one month pre-notification. We urge the EBA to revisit (17) to ensure it only applies when it has material consequences.

As an example, the scope of an Organisational change requiring notification is not well defined. It talks of staff changes - clearly the departure of a Senior manager may have some bearing on an overall department and may warrant notification to the Regulator - but there's limited value if any in notifying Regulators of junior staff changes.]

(18) transfer of significant product groups to another position keeping or front office system according to Article 357(1) of Regulation (EC) No xxxx/20xx [CRR];

[The concept of "significant" product groups is not well defined. We would need more guidance on what that means and whether it covers geographic locations. Clearly the migration of positions across systems may be of interest to a Regulator but there would need to be some metric to assess what constitutes significant (eg number of trades > "X", "£Ym" pv of trades migrating from A to B, risk levels eg PV01 > "Z") . There is again the issues of being able to track such changes and ensuring completeness.]

(17)(19) changes in the IT environment, including any of the following:

- (a) applying vendor pricing models;
- (b) Outsourcing of central data collection functions [it is unclear what is meant by data collection functions];
- (c) Change of the market data provider for input data for the risk model [feeds are changed relatively frequently, this implies significant micro management and is incompatible with the aim of the RTS towards assessing materiality];
- (d) Opening or closing down of trading locations. [it is not clear why the IT environment of new locations is a pre-notification event.]

5. Accompanying documents

5.1 Draft Cost- Benefit Analysis / Impact Assessment

Problem identification (Market failure and/or Regulatory failure)

Problem definition and objectives of the RTS

As documented in the Impact Assessment accompanying the Regulation of the European Parliament and the Council on prudential requirements for credit institutions and investment firms (CRR), the objectives of own funds requirements are: i) ensuring that institutions have robust risk managed and measurement systems in place against the risks arising from their activities (own funds requirements contribute to aligning the risk-taking incentives of institutions' shareholders with the ones of creditors and depositors) and ii) ensuring that institutions are financially sound and are able to absorb unexpected losses in a going-concern situation.

The introduction of the possibility of using internal approaches for the computation of own funds requirements ensures that:

- A. Own funds requirements which apply to individual institutions better reflect their specific risk profile.
- B. The use and development of internal approaches support institutions in improving their risk management practices.

In order to guarantee on an on-going basis the fulfilment of these conditions and in order for own funds requirements to fulfil their objectives, the necessity of implementing changes to internal approaches arises whenever, for instance, one or more of the following conditions occur:

- i. Institution-specific business conditions change, due to, for instance, the introduction of/expansion towards new businesses, to merger and acquisition operations, to changes in the organisational structure, etc.
- ii. Relevant external events within the markets where institutions operate, technology and/or macro-economic systems.
- iii. Developments in the risk management and measurement systems and practices.
- iv. Changes to own funds and/or other regulatory requirements.

The supervision of extensions and changes to internal approaches is therefore justified by the importance of extensions and changes for the achievement of regulatory objectives.

Institutions have to ensure that internal approaches comply with regulatory requirements at all times, also after changing internal or external conditions, and that all potential factors affecting the reliability of internal approaches are effectively identified and addressed. Among others, two set of factors may play an important role:

- The technical challenges to which internal approaches are unavoidably exposed.
- The economic incentives influencing the development of internal approaches that result in less conservative own funds requirements, hence allowing for the minimisation of the costs related to regulatory capital.

The proposed draft RTS establishes the conditions for categorising extensions and changes of internal approaches which require authorisation or notification, in order to foster more risk-sensitive and harmonised supervision.

Enhanced sensitivity to risk is ensured by the provision of a supervisory treatment of extensions and changes to internal approaches that varies as a function of the impact of the extensions and changes. In particular:

- The definition of „material“ extensions and changes, as mandated by the CRR text, allows the supervisory work of model authorisation to focus exclusively on those extensions and changes to internal approaches that could potentially pose risk management and measurement concerns.
- The distinction between extensions and changes that are to be notified „ex-ante“ (before implementation) and extensions and changes that can be notified after implementation, allows supervisory activity on non-material extensions and changes to be tighter on changes that could potentially pose more severe risk management concerns.

The harmonizing role of the draft RTS ensures that further steps are taken towards the following regulatory objectives:

- A Single Market where institutions operate in a condition of level playing, as relates to the management of internal approaches.
- A Single Market where opportunities of regulatory arbitrage in the use of internal approaches for the calculation of own funds requirements are minimised.
- A Single Market where supervision of cross-border institutions that adopt internal approaches is more cost-efficient and where legal clarity is enhanced for both market participants and regulators.

Baseline

1. The Baseline is a scenario defined by the market and regulatory practices existing prior to the implementation of the rules that the draft RTS aim to introduce. The EBA circulated a questionnaire among Competent Authorities (CAs) in order to consult regarding the current supervisory practices in the area of extensions and changes to internal approaches as well as the expected impacts and costs of the draft RTS.
2. 17 CAs provided feedback to the EBA questionnaire. Based on 2010 data on total assets within the Single Market the jurisdictions that contributed to the collection of evidence cover approximately 90% of total assets in the EU.
3. Evidence provided by respondents highlighted heterogeneous supervisory practices both across Member States and across types of risk (i.e. credit, operational and market risk).
4. All but one respondent engages in regular reviews of the internal models for credit risk, while only half of them regularly review internal models for operational and market risk. The revision of models for credit risk is carried out annually, for most of the respondents, and occurs every two to four years for others. The revision of models for operational risk and market risk tends to be carried out less frequently. Only four respondents report to adjust the frequency of model revision according to institution-specific characteristics such as size, portfolio risk profile and overall comfort with the specific internal models.
5. Guidelines defining criteria for assessing the materiality of extensions and changes to internal approaches appear to be implemented by approximately 2/3 of the respondents, for both credit and operational risk. As far as market risk is concerned less than half of the respondents report to have implemented guidelines on materiality of extensions and changes to internal

approaches. In some of the jurisdictions where guidelines are not implemented, model change policy requirements exist which require institutions to adopt own criteria. Those internal policies are typically to be approved by the competent authorities.

6. Almost 2/3 of the currently existing guidelines on materiality to extensions and changes to internal approaches for all the risks covered, already distinguish between ex-ante and ex-post notification requirements.
7. 2/3 of the respondents also report to require some form of documentation covering matters of extensions and changes to internal approaches. These requirements exist even in jurisdictions which currently do not have any regulation or guidelines on materiality of extensions and changes to internal approaches.
8. Six jurisdictions implement backstop thresholds for the identification of extensions and changes to internal approaches which are to be authorised and/or ex-ante notified. Only in one jurisdiction backstop thresholds are currently in use for all three risk types covered by this draft RTS, i.e. credit, operational and market risk. In three Member states backstop thresholds are applied on only two types of risk: credit and operational risks in one case, credit and market risks in another case, operational and market risks in the third one. Lastly, two jurisdictions only implement backstop thresholds in the supervision of internal model changes for credit risk.
9. The different approaches to the use of backstop thresholds for the identification of material extensions and changes to internal approaches are summarised in Table 1 (see end of this section).

Table 1: Backstop Thresholds for material extensions and changes to internal approaches in the current non-harmonised regulatory frameworks.

Jurisdiction 1	Credit risk: Threshold 1	5%	Decrease of the RWA at portfolio level
	Credit Risk: Threshold 2	1%	Change in the RWA at consolidated level within the jurisdiction
	Operational risk: Threshold 1	10%	Decrease in the own funds requirements for operational risk
Jurisdiction 2	Credit risk: Threshold 1	10%	Decrease in the own funds requirements for credit risk
Jurisdiction 3	Credit risk: Threshold 1	20%	Change in the RWA at portfolio level
	Credit risk: Threshold 2	5%	RWA change at total level
	Operational risk: Threshold 1	10%	Change in the own funds requirement for operational risk
Jurisdiction 4	Market risk: Threshold 1	10%	Change in the own funds requirement for market risk at portfolio level
	Credit risk: Threshold 1	3%	Change in the RWA
	Credit risk: Threshold 2	15%	Change in the RWA resulting from change in the range of application of a model/rating system
	Market risk: Threshold 1 (material change to be authorised)	20%	Change in the own funds requirement for market risk compared to average VAR of last 60days
Jurisdiction 5	Market risk: Threshold 2 (significant change to be pre-notified)	10%	Change in the own funds requirement for market risk compared to average VAR of last 60days
	Credit risk: Threshold 1	5%	Change in the RWA or own funds requirement at portfolio level
Jurisdiction 6	Credit risk: Threshold 2	1%	Change in the RWA or capital requirement at consolidated level
	Operational risk	>20%	Relative change in model result: (new-old)/new
	Market risk: Threshold 1	>10%	Change in VAR output

	(significant change)		
	Market risk: Threshold 2 (material change)	>20%	Change in VAR output

Technical decisions: options considered and preferred options

Table 2: Materiality conditions that combine qualitative criteria and quantitative backstop thresholds.

Option 1: Qualitative criteria as the only regulatory measure for the assessment of materiality of extensions and changes to internal approaches	<p>Advantages:</p> <p>The qualitative approach to the specification of materiality criteria allows the competent authority to ensure that all relevant dimensions that relate to the appropriateness and reliability of internal approaches are taken into account or when determining whether an extension or change is material or not. The implementation of qualitative criteria ensures that an extension or change which materially changes the functioning of an internal approach must be submitted to a supervisory assessment even though it might, at the specific time when the model change is implemented, not result in a significant change in the risk-weighted exposure amounts or own funds requirements or in any other measure of risk.</p> <p>Disadvantages:</p> <p>The qualitative approach to the specification of materiality criteria allows for judgement and discretion both on the side of institutions, implementing extensions and changes to internal approaches and on the side of competent authorities, evaluating on a case-by-case basis the materiality of those extensions and changes. Due to the high variety and complexity of modelling techniques qualitative criteria alone cannot ensure that extensions and changes to internal approaches resulting in significant changes of risk-weighted exposure amounts or own funds requirements, are duly captured for supervisory assessment.</p> <p>As opposed to quantitative, „automatic“ measures, qualitative criteria are more likely to generate less harmonised application of the rules.</p>
Option 2: The draft RTS proposes both, qualitative criteria and quantitative backstop thresholds for the assessment of materiality of extensions and changes to internal approaches	<p>Advantages:</p> <p>As opposed to a framework with only qualitative criteria, quantitative criteria ensure that the limits to the possibility of identifying qualitative circumstances for the materiality of extensions and changes to internal approaches do not imply that extensions or changes resulting in significant variations in risk-weighted exposure amounts or own funds requirements escape supervisory assessment.</p> <p>In addition, being an automatic quantitative rule that does not require intervention of the CA, the backstop threshold approach contributes to the harmonisation of the supervisory framework for the assessment of materiality of extensions and changes to internal approaches across member states.</p> <p>Disadvantages:</p> <p>Quantitative backstop thresholds, on top of the qualitative criteria, may increase the number of changes or extensions subject to approval and thus result in additional supervisory costs for CAs. (As further discussed below, however, the chosen levels for the thresholds are such that most of the extensions and changes to internal approaches subject to supervisory assessment should be identified in the first instance by the qualitative criteria).</p> <p>In addition, institutions implementing extensions and changes to internal approaches will have to carry out modelling activity in order to compute the quantitative implications. The expectation is, however, that the required modelling work is already being carried out by the majority of institutions adopting internal approaches, independently of the backstop rules.</p>
Proposed	As a result of the discussed advantages and disadvantages of Options 1 and 2, the

Option:	draft RTS proposes the approach described in Option 2. It has to be considered that the Option 2 option of establishing an approach only based on quantitative rules has not been considered as it does not allow integrating the qualitative principles on the materiality of extensions and changes to internal approaches that are included in the CRR mandate.
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Table 3: Quantitative Thresholds as Backstop Rule for the assessment of materiality of extensions and changes to internal approaches as regards to Credit, Operational and Market Risk

Proposed Options: Option 1	Credit Risk
	<ul style="list-style-type: none"> - decrease of 1.5% or more of the overall EU parent institution’s consolidated risk-weighted exposure amounts for credit and dilution risk or of the overall risk-weighted exposure amounts for credit and dilution risk in the case of an institution which is neither a parent institution, nor a subsidiary; - decrease of 15% or more of the risk-weighted exposure amounts for credit and dilution risk associated with the range of application of the internal rating system or internal models approach to equity exposures.
	Operational Risk
	<ul style="list-style-type: none"> - decrease of 10% or more of the overall EU parent institution’s consolidated own funds requirements for operational risk or of the overall own funds requirements for operational risk in the case of an institution which is neither a parent institution, nor a subsidiary; - decrease of 10% or more of the overall own funds requirements for operational risk at the consolidated level of a parent institution which is not an EU parent institution or of the overall own funds requirements for operational risk of a subsidiary where the parent institution has not received the permission to use the AMA.
	Market Risk
	<ul style="list-style-type: none"> - change of 5% or more of the overall EU parent institution’s consolidated own fund requirements for market risk or of the overall own funds requirements for market risk in the case of an institution which is neither a parent institution, nor a subsidiary; - change of 5% or more of the overall own funds requirements for market risk at the consolidated level of a parent institution which is not an EU parent institution or of the overall own funds requirements for operational risk of a subsidiary where the parent institution has not received the permission to use the IMA; - change of 10% or more of the model calculation result associated with the scope of application of the specific IMA model.
Alternative Options considered for all 3 risk types	
Option 2:	Lower Thresholds
	<p>Advantages:</p> <ul style="list-style-type: none"> - Lower thresholds allow the automatic trigger of the rule to bind more frequently, increasing the supervisory assessment over extensions and changes to internal approaches. Lower thresholds widen the scope of materiality of extensions and changes to internal approaches and allow for a reduced fluctuation of risk-weighted exposure amounts or own funds requirements and/or model outcomes resulting from extensions and changes to internal approaches. In this respect lower thresholds implement a more conservative approach to the supervision of own funds requirements. <p>Disadvantages:</p> <ul style="list-style-type: none"> - Lower thresholds are not consistent with their purpose, since they should kick in only once the exhaustive list of qualitative criteria have not been able to identify “material” extensions and changes. - Lower thresholds increase the expected supervisory assessment over extensions and changes to internal approaches, incrementing the overall costs of implementation for CAs. - Lower thresholds increase the probability that extension or change to internal approaches deemed non-material according to the exhaustive list of qualitative criteria might cause inefficient supervisory workload for the processing of applications due to the automatic quantitative trigger. - Lower thresholds increase the likelihood for institutions of erroneously identifying material extensions or changes to internal approaches in those cases where

	quantification of the impacts requires estimation/inference type of analysis. The latter is inevitably subject to estimation errors. Estimation/inference is often required since not all extensions and changes to internal approaches can be assessed in their impact before the actual implementation.
Option 3:	Higher Thresholds
	<p>Advantages:</p> <ul style="list-style-type: none"> - Higher thresholds decrease the expected supervisory assessment over extensions and changes to internal approaches, decreasing the overall costs of implementation for CAs. - Higher thresholds are less likely to result in erroneous classification of material extensions and changes to internal approaches in the cases where estimation/inference analysis is necessary in order to assess the impacts of the extensions and changes. <p>Disadvantages:</p> <ul style="list-style-type: none"> - Higher thresholds allow the automatic trigger of the rule to bind less frequently, decreasing the supervisory assessment over extensions and changes to internal approaches. Higher thresholds narrow the scope of materiality of extensions and changes to internal approaches and allow for an increased fluctuation of risk-weighted exposure amounts or own funds requirements and/or model outcomes resulting due to extensions and changes to internal approaches. In this respect higher thresholds implement a less conservative approach to the supervision of own funds requirements.

Table 4: Quantitative Thresholds as Backstop Rule for changes in IRB approach based on the risk weighted-exposure amounts metric.

Proposed	The proposed backstop thresholds for the identification of material changes of the IRB approach are based on the metric of the risk weighted exposure amounts	Option:
Option 1	<p>The proposed backstop thresholds for the identification of material changes of the IRB approach are based on the metric of the own funds requirements.</p> <p>This alternative is discarded due to rule out effects from provisioning and as for certain changes in credit risk parameters or model features, the resulting changes in the risk weighted exposure amounts, on the one hand, and on the expected loss amounts (EL amounts), on the other hand, can go in different directions and hence partly or fully balance out. The own funds requirements, which depend on both risk weighted exposure amounts and EL amounts, can hence vary very little as a result of model changes.</p> <p>Two thresholds are proposed in terms of two different metrics: risk-weighted exposure amounts and own funds requirements.</p> <p>This option is discarded given that it would increase the complexity of the implied assessment work. Increased complexity is less desired given the aim of designing a threshold mechanism that only binds as a backstop measure.</p>	

Option 2:

Option 3:

Table 5: Different backstop thresholds are defined for each risk category to cover different levels of consolidation.

Proposed	The proposed metrics for the identification of material extensions and changes to internal approaches cover different levels of aggregation for each risk category: consolidated/stand alone and scope of application level for credit risk, consolidated/stand alone and sub-consolidated level for operational risk, consolidated/stand alone, sub-consolidated and scope of application level for market risk.	Option:
Option 1	The proposed metrics for the identification of material extensions and changes to internal approaches focus on the scope of application impact (for credit and market risk) and the sub-consolidated impact for operational risk.	

	<p>Advantages: Reduces the complexity of the assessment if compared to the proposed option 1.</p> <p>Disadvantages: Such metric would capture only those extensions and changes in credit and market risk whose impact is material with respect to the size and characteristics of the scope of application to which the model applies. The metric might not capture extensions and changes that have a relatively reduced impact on the scope of application to which the model applies, but that result in large quantitative impacts on the risk-weighted exposure amounts of the institution, due to the very large weight of the scope of application under consideration on the overall credit risk profile of the institution. In the case of operational risk the approach on scope of application impact is not considered due to the development of the models for overall operational risk.</p>
Option 3: The proposed metrics for the identification of material extensions and changes to internal approaches focus only on the “consolidated/stand alone level” for all of the risk categories.	
	<p>Advantages: Reduces the complexity of the assessment work if compared to the proposed option.</p> <p>Disadvantages: Such metric would capture only those extensions and changes to internal approaches implemented on scope of applications that have a relatively large weight in the overall credit risk or market risk profile of the institution. It might not capture extensions or changes that are very material for the risk management of relatively small scope of applications held by the institution. Moreover, for operational risk material extensions and changes from a sub-consolidated perspective may cumulatively result in non-material aggregate extensions or changes at the level of the EU parent (consolidating) institution.</p>

Impacts on Markets and Institutions

10. By proposing common qualitative criteria and quantitative backstop thresholds for the assessment of materiality of extensions and changes to internal approaches and of the extensions and changes to be pre/post-notified, the draft RTS harmonises an EU regulatory framework that is currently heterogeneous, as described in the „Baseline” section.
11. The objectives defined in the section „Problem definition and objectives of the RTS” constitute the main benefits of the proposed draft RTS.
12. The implications of the proposed draft RTS in terms of costs for market participants and competent authorities are expected to be twofold. On the one hand, both stakeholders are likely to incur additional costs as a result of some of the proposed provisions. On the other hand, the achievement of the mentioned objectives is expected to result in cost-saving/cost-optimising outcomes. Estimating the resulting aggregate balance would be a very difficult task, given that available data do not allow quantifying the benefits and costs-saving outcomes stemming from those benefits.
13. In addition, it is important to note that part of the costs and benefits associated to the provisions introduced by the RTS would materialise in the Single Market, against the current framework, even in the absence of the RTS itself, given the fact that the requirements for the authorisation of material extensions and changes to all internal approaches and for the notification of all changes for the IRB approach and the IMA and are included in the level 1 text of the CRR.
14. The extent to which the costs and benefits would materialise in the absence of the RTS cannot though be neither estimated, nor quantified.

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15. The EBA asked Competent Authorities (CAs) to provide for a separate estimate of the expected impact (increase, no change, decrease) of the proposed qualitative criteria and quantitative backstop thresholds on the yearly number of granted authorisations for material extensions and changes. The aim of the exercise is twofold:
- i. Based on the feedback received, this impact assessment provides a picture of how the proposed qualitative criteria and quantitative thresholds compare, in terms of their conservatism in identifying material extensions and changes, to the current supervisory practices of CAs that responded to the questionnaire.
 - ii. Based on the estimates received, this impact assessment provides a tentative picture of the expected supervisory workload, in the EU, related to the authorisation of material extensions and changes.
16. The exclusive focus of the impact analysis on the costs, for CAs, of carrying out authorisations of material extensions and changes to internal approaches, stems from the following assumptions:
- i. The proposed provisions are not expected to materially affect institutions' decisions to implement extensions and changes to internal approaches, nor are they expected to increase to a material extent the costs institutions face in implementing those decisions. In the current baseline institutions already have to comply at all times with the requirements on the use of internal approaches. Because of this, institutions are expected to have already processes in place for mapping extensions and changes according to their materiality. Documentation requirements for extensions and changes to internal approaches, that would likely generate compliance costs on institutions, are already in use in more than 2/3 of the jurisdictions who responded to the questionnaire. The harmonisation of the documentation and communication requirements increases legal clarity and can result in a more efficient reporting framework.
 - ii. The costs on CAs related to the activities of monitoring and processing pre/post-notifications, resulting from the proposed draft RTS, is expected to be of a lower scale of magnitude with respect to the costs of authorisation activities. Hence the lack of focus, in the present analysis, on the supervisory costs of notification operations.

Text for consultation purposes

Q16: Do you support the view that costs arising for institutions from the documentation requirements included in the draft RTS are not expected to be material? If not, could you please indicate:

- the main cost driver: i) additional IT equipment, ii) additional ongoing Staff/hours, iii) other (please specify).

- the % increase in total yearly costs to internal models management for credit/operational/market risk induced by the proposed documentation requirements (specify whether the costs arise only for some of the risk categories covered by the provisions).

- indicative monetary amount related to those additional costs (specifying currency and unit)

Q17: Do you support the view that the additional costs, for institutions, of computing the quantitative impacts of the implemented model extensions/changes are expected to be non-material, given that institutions already carry out impact analysis in the current framework? If not please indicate:

- the main cost driver: i) additional IT equipment, ii) additional ongoing Staff/hours, iii) other (please specify).

- the implied % increase in total yearly costs of internal model management for credit/operational/market risk induced by the quantitative impact analysis (specify whether the costs arise only for some of the risk categories covered by the provisions).

- indicative monetary amount of these additional costs (specifying currency and unit).

Q18: Do you support the view that, for institutions, the costs of ex-ante/ex-post notification of extensions/changes are expected to be non-material? If not, please indicate:

- the main cost driver: i) additional IT equipment, ii) additional ongoing Staff/hours, iii) other (please specify).

- the % increase in total yearly costs of internal models management for credit/operational/market risk induced by the notification requirements (specify whether the costs arise only for some of the risk categories covered by the provisions).

- an indicative monetary amount of these additional costs (specifying currency and unit).

The main costs stem from (in order of magnitude):

- o Delays to model upgrades
- o Additional ongoing Staff/hours in all areas
- o Additional IT equipment

There is also an unknown but potential cost from regulatory distraction as management focus switches even more in the direction of compliance and away from risk management.

It is the driver away from risk management which will be the most pernicious effect of this RTS.

17. 14 CAs⁵ responded on the expected impact in the number of authorisations stemming from the qualitative and quantitative criteria in the area of **Credit Risk**. Overall:

- i. 7 out of 14 respondents (50%) report an expected increase in the number of authorisations.
- ii. 5 out of 14 respondents (36%) don't expect the number of authorisations to change.
- iii. 2 out of 14 respondents (14%) report an expected decrease in the number of authorisations.

18. 11 CAs⁶ responded on the expected impact in the number of authorisations in the area of **Operational Risk**. The results slightly vary depending on whether the qualitative or quantitative criteria are considered:

- i. 7 out of 11 respondents (64%) don't expect the number of authorisations to change as a result of the proposed qualitative criteria.
- ii. Among the remaining respondents, 2 CAs (18%) report an expected increase in the number of authorisations and 2 CAs (18%) report an expected decrease in the number of authorisations.
- iii. As relates to the quantitative criteria, 9 out of 11 respondents (82%) don't expect the number of authorisations to change. 1 CA (9%) reports an expected increase in the number of authorisations.

19. 10 CAs⁷ responded on the expected impact in the number of authorisations in the area of **Market Risk**. The results slightly vary depending on whether the qualitative or quantitative criteria are considered:

- i. 6 out of 10 respondents (60%) do not expect the number of authorisations to change as a result of the proposed qualitative criteria.
 - ii. Among the remaining respondents, 3 CAs (30%) report an expected increase in the number of authorisations and 1 CA (10%) reports an expected decrease in the number of authorisations.
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- ⁵ Institutions operating in these jurisdictions hold almost 90% of total assets in the EU according to 2010 data.
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