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The European Banking Authority
Floor 45 One Canada Square
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United Kingdom

Subject: Industry's views on the Consultation Paper on draft RTS on assessment methodology on the use of internal models for market risk (EBA/CP/2015/27)

ISDA and AFME (the Associations) welcome the opportunity to comment on the European Banking Authority's (EBA) consultation paper on the draft Regulatory Technical Standards (RTS) that specify the conditions under which competent authorities assess the significance of positions included in the scope of market risk internal models, as well as the methodology that competent authorities shall apply to assess an institution's compliance with the requirements to use an Internal Model Approach (IMA) for market risk.

According to the Capital Requirements regulation (CRR) article 363 (4)(b) and (c), EBA's mandate relates to the assessment methodology under which competent authorities permit institutions to use internal models and the conditions under which the share of positions covered by the internal model within a risk category shall be considered significant. However in the EBA consultation we note a number of areas where EBA sets out overly prescriptive criteria on internal models methodology, which we believe is a deviation from its CRR mandate. In addition, we believe that the EBA should proceed cautiously in requiring banks to invest in model changes at this juncture while the Targeted Review of Internal Models (TRIM) exercise is being carried out by the ECB with similar objectives and more fundamental changes to internal models are on the pipeline.

While we agree with EBA's objective to harmonise supervisory practices with regards to model assessment methodologies, in our view some of the recommendations are too detailed and result in an unnecessarily rigid rules that do not allow for sufficient supervisory discretion. It is important that the rules reflect the diversity of EU regulated banks' business models, their regional footprints and governance structures. To avoid extending the objectives of this RTS beyond the mandate, the proposed methodology should allow supervisors to use discretion particularly when assessing bank specific governance structures and if they are adequate. We provide more detailed comments on these issues in our answers to EBA's questions. In addition, some of the changes proposed in the draft RTS will require material changes to models and significant investment on the part of firms that are currently applying for IMA or want to extend their existing IMAs. In our view, the overall cost of change to models needs to be balanced carefully against the temporary benefits that can be achieved by implementing the RTS while the overall market risk framework is in a flux. The draft RTS imposes detailed control processes and governance across all aspects of the assessment methodology at the same time when banks prepare for the implementation of the fundamental Review of the Trading Book (FRTB). Therefore, while the EBA recognizes that the model approval requirements are likely to change again if the FRTB is implemented in Europe according to the proposed BCBS timeline in 2019, it is unclear if the costs and uncertainty that the proposed short-term changes create have been fully considered against any supervisory benefits that would result from the RTS. Therefore, we kindly advise the EBA to consider ongoing as well as setup costs in their cost-benefit analysis, particularly in areas that are not directly mandated in the CRR.

We also strongly suggest that the EBA avoid any contradiction with the FRTB proposals as part of the EBA standards that may need to be dismantled once the FRTB is implemented. More specifically we note below areas that appear not to align with the FRTB requirements:

- The level of significance of positions prescribed in the EBA RTS are very high at 90-95% level against 10% of market risk capital requirements coming from IMA approved desks as per FRTB requirement;
- The requirement for sequencing general approval before specific approval, while superficially understandable and neat, is not appropriate in our view. It is not required under the FRTB, and for Debt-General and Debt-Specific is not as logical as it appears on the surface, given that those two risk categories essentially represent different asset classes (IR and Credit Spread, respectively) and not variants of the same asset class;
- While the final FRTB rules make reference to monitoring intraday risk, this is a new requirement for many firms. According to the proposed FRTB implementation timeline, firms will have until 2019 to implement these potential requirements and therefore we believe EBA should not front run the yet evolving FRTB requirements that may change in the EU Level one legislation.
- The requirement for 250 days of stable backtesting before application for internal model approval is overly rigid compared to the approach set out in the FRTB that allows the regulators some discretion to observe the model's performance post approval;
- Calculation of VaR and SVaR at consolidated level: The requirement to calculate profit and loss historical time series or Monte Carlo simulation of risk factors simultaneously, across multiple time zones is too prescriptive and impractical, especially considering that backtesting process should be the appropriate tool to assess model performance;
- Although we agree with the principle that limits should be set and monitored, and that any breaches should be resolved in a formally documented manner, we believe that certain aspects of the proposed committee structure are not practical. This is particularly relevant to traded market risk limits, timeliness and the requirement for the committee to review and approve the full suite of limits across different measures and levels.

To conclude, we broadly support the EBA's aim to introduce consistency in the determination of assessment methodology to assess an institution's compliance with the requirements to use an IMA for market risk. However, we strongly believe that some areas of the draft RTS are unnecessarily descriptive and create uncertainty at a time when practitioners and regulators all expect significant changes to the overall market risk framework and the use of internal models in particular. We believe that the technical recommendations outlined in our detailed responses are critically important in ensuring that firms have the required clarity to implement the rules and to avoid contradiction with the FRTB requirements that the banks may need to implement already in 2019.

Please do not hesitate to contact the undersigned associations with questions or if you would like to discuss our recommendations further. We remain committed to assisting policymakers in achieving the objectives of this important RTS.

Yours sincerely,



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Q1: What are stakeholders' views regarding the two proposed interpretations for the capture or exclusion of an institution's own creditworthiness as a risk factor in internal models (non-default only), and consistent treatment for back-testing purposes?

Own debt credit worthiness on trading assets and liabilities should be captured within the VaR and SVaR calculation since any P&L realised from trading own debt would also be recognised in P&L (and so should also be included for back testing purposes). This treatment should only apply to trading positions where P&L is generated through buying and selling of securities in line with accounting practices, i.e. financing positions should be excluded as well as derivative liabilities.

Q2: What is industry current practice in this regard for VaR, SVaR and IRC?

There is no consensus across the industry. Some banks include and others exclude own debt specific risk in their VaR and SVaR. For IRC, most banks do include migration risk in their IRC.

Q3: What are the main operational challenges?

For banks moving from inclusion to exclusion, it would require identifying positions where there is exposure to own debt, not only in cash positions but also where they are a constituent part of an index or other multi name products. This would also have consequences for sourcing appropriate time series which exclude the own debt component for these products.

For banks which currently exclude own debt from their VaR modelling, it may be challenging for them to include since this would potentially require new risk feeds for the VaR model, new time series data as well as changes in accounting policy to align their P&L.

Additionally, the inclusion of DVA in the model would require significant work, not to mention that under FRTB it is required that DVA is removed from P&L for back-testing purposes, so a requirement from EBA for inclusion would be conflicting with FRTB

Q4: Do stakeholders agree with the General-Specific model application hierarchy introduced by the RTS?

The proposed General-Specific model application hierarchy rests on a couple of important assumptions which are not reflected in either the CRR or the Final FRTB rules, and indeed are not conceptually clear-cut; furthermore in practice the proposed hierarchy might unfairly penalise new entrants.

First, the text in Art.363 does not specify a hierarchy, and clearly allows any of the risk categories to be modelled independent of permissions for any of the others. Similarly, there is nothing in Art.367 or Art.370 that makes specific risk permissions contingent on general permissions: in order to qualify for the specific risk permissions, the requirements that also need to be met for general risks must be satisfied, but that does not logically mean that the general risk component must also be modelled for capital purposes.

For example: a firm might meet all the modelling standards but not have "significant" (%) coverage of a general risk category within a particular Line of Business that wishes to seek model approvals. That should not prevent the firm applying for permission to model the specific risk element, again assuming that all qualitative and quantitative criteria are met. This could be the case, for example, where a firm has a line of business trading credit risk primarily through CDS. These products attract relatively little general interest rate risk, but have significant specific credit risk – so the line of business, under these draft standards, would be prevented from submitting a new application for approval to model its specific credit risk, only because it does not have a significant enough share of the general risk.

We do not believe that there is a valid reason for such limitation. The risk categories Debt-General and Debt-Specific relate to different asset classes (IR and Credit respectively) and are often traded on different systems by different Lines of Business using different risk and valuation methodologies. By contrast the relationship between Equity-General and Equity-Specific risk categories is closer and better-defined, since both risk categories belong to the same asset class (Equities) and are generally traded on the same systems by the same lines of business and often using the same risk and valuation methodologies. In the Equities case it seems fair to require Equity-General model approval to precede or simultaneously accompany Equity-Specific model approval. It is not clear however that the same logic can and should be applied to Debt-General and Debt-Specific risk categories.

It is recognised in the EBA explanatory text that FX and Commodities have the consideration of general risks and thus are treated independently for these purposes. We consider there is a strong argument for considering Interest Rate Risk (namely Debt-General risk category) in the same way as FX and Commodities since it is similarly a “general risk” by construction. On this basis we consider there would be no requirement for Debt-General model approval automatically to precede or accompany an application for Debt-Specific model approval.

Q5: Do Stakeholders consider that the categories of instruments listed above provide an appropriate guide to assess the complexity of an internal model?

Although the EBA's proposed product categories are broadly consistent with the categories of position for market risk set out by certain regulators in Europe, there are nonetheless some differences worth mentioning. In particular we note the Bank of England's product categories¹, which as per SS13/13 para 9.4, distinguish between 4 types of positions (see below).

9.4 A VaR model permission will generally set out the broad classes of position within each risk category within its scope. It may also specify how individual products within one of those broad classes may be brought into or taken out of scope of the VaR model permission. These broad classes of permission are as follows:

- (1) Linear products, which comprise securities with linear pay-offs (such as bonds and equities), and derivative products which have linear pay-offs in the underlying risk factor (such as interest rate swaps, FRAs, and total return swaps).*
- (2) European, American and Bermudan put and call options (including caps, floors, and swaptions) and investments with these features.*
- (3) Asian options, digital options, single barrier options, double barrier options, look back options, forward starting options, compound options and investments with these features.*
- (4) All other option based products (such as basket options, quantos, out performance options, timing options, and correlation-based products) and investments with these features*

The EBA seems to have combined path dependent options (Category 3 of BoE classification) with the slightly more complex category of correlation-based products and products with multiple underlyings (Category 4 of BoE classification). It will be important for the EBA to engage with other regulators and supervisors to understand if there are significantly divergent practices across Europe and harmonise those as much as possible.

¹ <http://www.bankofengland.co.uk/prd/Documents/publications/ss/2013/ss1313.pdf>

Q6: Do stakeholders agree with the use of two differentiated approaches for general and specific risk to assess the significance of positions included in the scope of the model?

Proposed use of Standard Rules as measure in initial application

We interpret that the proposed assessment for measuring significant share should only be applicable where an institution applies on a consolidated or solo basis for a given risk category. As such the proposed measure using Standardised Approach RWA will only be required for risks previously capitalised under this approach.

The proposed measurement of significant share through standard rules RWAs is consistent with the ongoing requirements to measure using RWA both under the continuing assessment and looking further ahead the overall capital measure under FRTB.

As such we agree with the proposal to use RWAs as a measure of Significance by Risk Category.

General & Specific risk approaches

We do not believe that the assessment for significant share should be extended to consider the case where a Competent Authority is comfortable granting a permission for certain product types or categories (e.g. per the categories listed under article 7 of the draft RTS), but not all products.

We agree, therefore, that it is appropriate to consider the measurement of significance taking into account positions excluded by a Competent Authority in granting of a permission, but do not agree that the measure proposed (of a reduced percentage) is an appropriate methodology to address this. We also highlight that there can be reasons for exclusion at a product or position rather than a risk basis (either from permission or from operational ability to process risk categories separately – e.g. under Full Revaluation) level.

The need to take into account excluded positions, therefore, should cover any risk category under the IMA permission, not just specific risk.

As an alternative, we propose that the significant share calculation should be a single calculation based upon only those positions for which the permission is granted.

Q7: What levels do stakeholders consider are appropriate for the proposed thresholds? Please provide your answer considering the calculation before and after positions have been excluded by the competent authority.

The term “Significant share” used in CRR 363.2 as acknowledged in the CP is there to avoid “empty models” which were given Permission, but not used.

We question the EBA’s interpretation of the term “Significant Share” in arriving at a value of 90-95%, which does not seem consistent with the usual meaning of the term. A “significant share” would suggest that a notable share or share worthy of attention, rather than the vast majority or materially all.

We would compare the significance threshold directly to the minimum modelled threshold in the FRTB, which is set at 10% of Market Risk capital requirements coming from IMA approved desks, when considering the eligibility of a bank to calculate using Internal Models.

Implementing a threshold of 90-95% under the current regulatory requirements, in the knowledge of a 10% threshold under future requirements implies a strong dichotomy of opinion by regulators which could call into question the applicability of any short term requirement. As such we believe that it is appropriate to adopt a consistent definition of terms where possible throughout European regulation and impose a 10% level as appropriate.

Q8: Do stakeholders agree with the two metrics required to assess regularly the relevance of positions excluded from the scope of the internal model?

The own fund RWAs are measures which are already reported, are well defined and understood. We agree that this represents an applicable measure for a share of significance. This is also consistent with the direction of travel under FRTB, where the overall level of RWAs included under IMA vs. Standardised Approach is measured in this way, and the proposal for initial assessment, which also looks at RWAs.

The daily P&L measure whilst similar to existing metrics may require additional operational and technical development in allocating P&L explicitly to the 6 risk categories. For example, splitting P&L from bonds across IR general and specific risk or allocating rho from equity products.

We do not believe that the proposed additional P&L measure would result in a materially different approach from banks to positions that are excluded from the IMA. As a result we do not believe that implementing this measure on a temporary basis ahead of FRTB represents a reasonable cost-benefit decision.

Q9: What are stakeholders views regarding the proposed requirements on the internal committee structure?

Our concerns are primarily around prescriptive nature of the text across articles 17, 18 & 21

Effective governance within an organisation often includes committees as part of the structure, in order to ensure that decisions take into account various different stakeholder views. It should be noted, however, that committees can also be bureaucratic and slow to react and therefore not well suited to the day to day decisions of an institution.

The text as written is very prescriptive regarding the management body or committee designated by it being required to:

- *Approve overall committee structure including: function, membership and frequency of any such committee(s).*

Prescribing this as a Management body requirement prevents an institution from assigning any such responsibilities to a function or individual in charge of such a function and allowing their discretion regarding whether a committee is required to address particular elements of risk management.

Whilst certain committees are likely to be incorporated into this structure, a direct designation from the Management Body may not always be appropriate in this regard.

We would propose that this requirement is amended so that a function or member of the Management Body can be given responsibilities for designating the responsibility to an individual or committee where required, rather than this being required from the Management Body or related committee directly.

An example of this might be where the Head of Market Risk is given the responsibility by the CRO (as management body member) for ensuring appropriate governance around IMA model development and usage (excluding independent validation). A decision over whether a committee is appropriate for this purpose and the governance around any such committee should therefore fall within the remit of the Head of Market Risk.

Q10: Do stakeholders agree that the internal validation requirements are relevant and capture all material risks?

While we agree with some of the proposed validation requirements which are indeed consistent with the current practice of most firms, we note that there are other requirements which go further than existing requirements and may overstep what is appropriate in the context of the current RTS.

Article 23 para 1(a) requires the institution has performed and documented a complete validation process for all methodologies applied in the internal model. While we agree that the request for using new internal models shall be supplemented by complete validations, we would like to highlight that the validation standards have continuously evolved during the years and complete initial validations according to current standards shall not be expected for older internal models. This means that requirements for initial validations shall not be stipulated retrospectively. Nevertheless, institutions may complete their existing validations gradually as part of the periodic review process. Therefore, we propose to reword or omit the paragraph in subject.

Article 23 para 2(b) connects requirements in Article 40 and Article 25 and sets a minimum level of portfolio granularity for which both actual and hypothetical P&L back-testing analyses shall be performed. This article requires more granularity than the CRR and goes into a granularity definition which is not fully aligned with FRTB. Although most institutions would meet such requirement, we believe the article goes beyond the mandate of the RTS. Therefore, we advise to omit this part of the paragraph. We believe institutions should rather focus on and converge to the back-testing granularity requirements set in the FRTB, which are linked to the trading desk concept.

Article 23 para 2(b) refers to assessing the importance of intra-day or new trades in daily P&L. While we agree that intraday activity is important there will be new requirements for many firms where ongoing dialogue with local national competent authorities is underway. We would also note that while the FRTB final rules makes reference to capturing intraday risk the framework must still be transposed into national legislation and firms will have until the end of 2019 to implement these requirements. We believe it is therefore unnecessary for the EBA to be anticipating such requirements, which may well be clarified or transposed in Level 1 text differently.

Besides analysing the number of back-testing excesses, *Article 23 para 2(b)* requires also to perform statistical tests that account for the timing of the excesses. Although theoretically such statistical tests are interesting, these tests are not commonly accepted because of their foundation and power. Therefore, performing such tests should not be a common requirement for each institution. We advise to omit in the RTS the requirement for such specific statistical analysis.

Furthermore, while the CRR requires to back-test only negative excesses (losses, 99th percentile of the loss distribution), *Article 23 para 2(b)* requires to back-test also positive excesses (gains). Moreover, positive excess back-tests are required both for actual and hypothetical P&Ls. We believe this requirement goes beyond the mandate of the RTS, and should be challenged also from theoretical point of view, especially the requirement for back-testing positive excesses (gains) of actual P&L. Such level of specification of requirements is not warranted in our view and should not be included in the final RTS.

Finally, *Article 23 para 5* explicitly assumes and requires that any methodology change produces a better capture of the particular risks relevant to the portfolio or instruments affected by the change. However, we have examples where for instance the size of a revaluation grid had to be decreased, because it contained several grid points that were rarely used during simulations while their computation had heavy burden. The removal of some grid points had negligible effect on the risk representation. We believe such changes should be allowed and the RTS, therefore, should not assume that methodology change can only be an improvement for risk representation.

Q11: Are there any missing elements that should be incorporated or current elements that may be too burdensome?

We are concerned by Article 22 para 1(d)(ii) which seems to suggest that, where a firm is a Global Systemically Important Institution (GSII), it will be required to ensure its validation function is organisationally separate from the risk control unit with separate reporting lines. This seems to be in direct contradiction with CRR Article 369 para 1(b) which requires that the risk control unit conducts the initial and on-going validation.

"the institution shall have a risk control unit that is independent from business trading units and reports directly to senior management. The unit shall be responsible for designing and implementing any internal model used for purposes of this Chapter. The unit shall conduct the initial and on-going validation of any internal model used for the purposes of this Chapter, being responsible for the overall risk management system."

This degree of prescription is unhelpful and indeed inconsistent with the way that some firms choose to manage their internal validation processes. Some firms choose to have an independent validation function where organisational separation is required to ensure that an objective view of the model is taken, which is then complemented by a separate validation function that is responsible for ongoing activities such as back-testing, model assessment and managing model risk on a continuous basis. The ongoing validation function in this type of organisational structure plays an important role in ensuring that the day-to-day management, governance and performance of the model is maintained and introducing mandatory separation would break this important oversight relationship.

Q12: Do stakeholders agree that the proposed requirements on limit structure, regular limit update and limit breach approval processes are appropriate?

We agree with the principle that limits should be set, monitored and breaches resolved in a formally documented manner. We also agree with the proposals regarding the requirements to document the cause and size of any limit breach and that usage and limit breaches should be considered when setting limits.

We do not agree, however, with some of the proposals within the CP, in particular that a committee is unlikely to:

- meet on a daily basis in order to approve Traded market Risk limits where breaches occur
- review and approve the full suite (often thousands) of limits across different measures and levels

In particular we would raise the following concerns:

- 1) Requirement for a Committee to own limits and the day to day management of those limits
Whilst we agree that the top of the house VaR limit should be approved by a Committee designated by the Management Body, we do not believe that the Committee must enact the day to day approval of limit breaches, but should be able to delegate limit authority to an appropriate individual (e.g. Head of Market Risk) to grant temporary limits up to a documented amount.
- 2) Sub-limits owned by Management Body or designated committee
We understand the rationale for the same committee responsible for the Group VaR as having responsibility for the level directly below the Group VaR. We would seek clarification that this can be interpreted as either asset-class or business level.

We would recommend that the day to day management of this level of limits also has the ability to be delegated in a similar fashion to the Group level limit.

3) Jurisdiction level limits

We do not believe that it is appropriate to mandate limits to be set at the level of different jurisdictions / Competent Authorities or that these must follow the same governance structure as Group level limits.

Where material market risk exists and local regulation requires, then limits should be in place and the control around these limits comparable to the Group level. However, in many cases these limits may be owned by the local management body or delegate rather than being required to revert to the responsible Group committee. The magnitude of risk and number of entities that this may come from is likely to be inappropriate for ownership at the senior level of the institution in many cases. We recommend that legal entity or local jurisdiction limits should follow similar principles and the approach should be formally documented.

4) Approval of all limits by committee

Where limits of a more granular level are set and non-VaR limits are set, we do not believe that it is appropriate to mandate a committee to approve these limits or that a business should be the proposer of these limits. We believe that it is also reasonable for the CRO and Head of Market Risk to take responsibility and to delegate authority to independent Risk Managers (within the Risk Control Function), provided that these authorities are clearly documented and limit setting, tracking and breaches are recorded and tracked appropriately.

5) Consistency between VaR and other risk limits

Different limit types are used to measure different elements of risk (for example single name exposures measure concentrations whereas VaR measures portfolio risk). If limit types were directly scaled without consideration for the risk each is trying to measure, there would be little need to establish a range of limits to measure different elements of the risk profile.

Requiring a link between limits of different types assumes that appetite to different risk events is demonstrable and consistent. Requiring banks to document a link across the numerous limits employed is likely to result in significant bureaucratic overhead, for unclear benefit, and could have the adverse effect of reducing the number of limits an institution employs in response. As such we recommend removing 25.1(e)

6) Authorisation of products by trader

Article 25.1(f) proposes that trader level authorities must be approved by the committee responsible for setting limits. We do not believe that these two controls (risk appetite and individual trader product mandates) need be considered by the same body, but that the establishment of Trading Mandates / authorities can be governed through alternative channels (e.g. alongside New Products and trading controls). We recommend removing this sub-article from the text.

Given these concerns, we recommend that articles 18, 21 and 25-28 are re-written to provide a pragmatic and workable proposal.

Q13: Do stakeholders agree with the rationale to provide some flexibility for the introduction of new products?

We are in favour of some flexibility in the introduction of new products – in line with the current market practice - as it would be quite detrimental to innovation to require any new product to be fully incorporated to the standard risk framework before being traded (notably considering that the ratio of products that are reviewed by new product committees and that lead to effective transactions is low).

Q14: What are stakeholders' views regarding the specific limitations introduced in the RTS regarding the delegation of authority to the new product committee?

We do not believe that a Committee is required to ensure the effective functioning of the New Products process and as such should not be a mandatory requirement.

The requirement to limit:

- 1) the delegation to the new product committee/Delegated authority for New products, and
- 2) the authorization to trade new products which are not fully incorporated to the standard risk framework

to a volume of trades avoiding material losses and to a 6 months + 6 months period of time sounds acceptable as a general rule.

However, exceptions to this 1 year time limit, if properly justified by trading and under the approval of the management body or the committee designated by it, should be envisaged

Q15: Do stakeholders agree that the model should have been working in a stable way during a minimum period of 250 days prior to application for permission to use the model?

We acknowledge that it is desirable from both a regulator's and a bank's perspective that an internal model used for calculating own funds requirements has a proven track record of reasonable accuracy in measuring risks. That said, our view is that three months – which is in effect the current standard applied by some regulators (for example UK PRA, SS13/13 para 9.10) – is a sufficient time to demonstrate stability of the systems and processes supporting IMA models. The approach set out in the FRTB (Appendix B II, p.73) in effect allows the regulators some discretion to observe the model post-approval until such time as a one-year back-testing record, among other tools, can confirm the quality of the model submitted for approval.

We think that this “pre-application/discretionary” approach set out in the FRTB is more appropriate than the rigid requirement of submitting 250 days of “stable” back-testing pre-application, which is the interpretation we understand the EBA intends to be applied under the Draft RTS. This seems to be an area of inconsistency with the FRTB, and we consider there is little value prescribing an approach for EU banks that would be effectively superseded by the FRTB.

Furthermore a key reason to have 250 days back-testing is to determine a multiplier for modelled capital which applies only on day 1 after approval. Taking into account the time-lag between application submission and actual approval (which can often be of 6-9 months' duration) the requirement would extend to over 400 days of stable period back-testing in practice.

Finally we consider that the requirement as stated might unfairly penalise new entrants, in the following sense: a bank with an existing model approval would be demonstrating its track record on a continuous basis as part of the model approval, and thus would not have to fulfil the requirement of maintaining a stable model for a full year pre-application, as well as during the approval process itself. In some cases the national regulators' approval process can be lengthy, in effect forcing new

entrant banks to operate on different standards to already-approved banks for periods which could turn out to be well over a year. We think the incentive for “new entrant” banks to apply for internal model approval should not be adversely skewed in comparison to banks with existing model approvals, who are not required to maintain a stable back-testing portfolio for a lengthy ongoing period.

Q16: Do stakeholders agree that the results obtained for the portfolios published by the EBA during this period are useful for validation purposes?

What really matters is how a bank’s internal model performs to its own portfolio. In that respect, we consider that the use of hypothetical portfolios is not really relevant and of little added value for IMA validation purposes.

Q17: Do stakeholders agree with the requirements related to the model accuracy track record and Stress Testing programme?

Although many of the requirements mentioned with regard to stress testing programmes are reasonable there are others which appear to be overly prescriptive and moreover proposing scenarios which are unrealistic, very rarely if ever likely to materialise. We note Article 33 para 2(b)(ii):

"institutions shall address event risk for equities and jump-to-default risk for credit positions by considering eight instantaneous defaults with zero recovery of the four specific interest rate risk long positions in the current portfolio with the largest exposure and the four largest equity long positions in the current portfolio. Alternatively, the event risk stemming from a sharp rise in equity prices should also be considered for the four largest short positions."

We do not agree with the definition of Event risk as the simple sum of the largest 4 single names JTD zero for each category. If this were to be read across to the requirement under VaR (article 370.f), the implication for specific risk Pillar 1 capital would be far beyond an appropriate capitalization requirement.

In particular we would note the potential effect in comparison with the IRC, where the 4 largest names with zero recovery could easily sum to a larger number than the IRC given large high grade Sovereign holdings held by banks that either do not default or show significant expected recovery.

We would propose that:

- the term Event risk is removed from this section, in order to remove potential confusion in this way; and
- assuming zero recovery and simultaneous default without consideration of rating is an assumption that is overly conservative. A more appropriate measure would be to align the number of defaults with rating grades and recovery to be below expected, rather than zero.

It is unclear why this degree of detail is necessary. Finally we would note that there is another EBA consultation on stress testing focusing on:

“(1) institutions’ stress testing; (2) supervisory assessment of the institutions’ stress testing; and (3) supervisory stress testing”².

Many of the requirements mentioned in this consultation on market risk are far less prescriptive and inconsistent with those in the EBA’s RTS on IMA assessment methodology.

² [https://www.eba.europa.eu/documents/10180/1314203/EBA-CP-2015-28+\(%20CP+on+the+GL+on+stress+testing+and+supervisory+stress+testing\).pdf](https://www.eba.europa.eu/documents/10180/1314203/EBA-CP-2015-28+(%20CP+on+the+GL+on+stress+testing+and+supervisory+stress+testing).pdf)

Q18: Do Stakeholders have any additional comments or concerns regarding the requirements outlined in the governance section?

Governance

It is not clear to us how the different organisations described in article 22 should be interpreted: Indeed, (b) and (c) organisation differs only by the reporting lines of the risk control unit and the function responsible for the validation. In option (b), units are reporting to different members of the senior management, while in option (c), both units are reporting to the same member of the senior management.

We believe, as also stated in answer to question n°11, that a totally separate reporting line from the validation function to the management body is not necessary to ensure its independence. Indeed, globally, in large financial institutions, lower layers of hierarchy are necessary to ensure the right level of involvement in risk management while reporting the right level of information to the upper layers. In the case of the heads of the risk control unit and of the validation function, we believe the heads of these units could be "members of senior management" reporting directly to the same member of the management body, i.e. the CRO, without jeopardising the requested independence of the validation function.

Article 20, §1-(a) "Internal Audit", p20, states that: "the internal audit of the institution reviews at least annually all internal models, including those used for capital calculation purposes, and reflects the conclusions obtained from this review in a report submitted to senior management and the management body, as referred to in point (c) of Article 18(1);". We believe Internal audit should assess the fulfillment of the conditions referred to in article 22 related to the independence of the validation function, as well as the adequacy, completeness and frequency of the internal validation process as described in article 23, and widely rely on the validation function notably for quantitative matters, instead of performing a second time the same assessments as the validation function.

Regarding the robustness of IT infrastructure, it is not feasible for the RTS to state that *"no major system breakdowns shall occur"* during the 250 days prior to the initial approval of the model. Instead the RTS should acknowledge that if major system breakdowns occur, the firm should undertake appropriate governance and remediation. This would include investigation of the root cause, resolution of related IT issues and recalculation of affected risk metrics where applicable.

With respect to the integrity of positions, the RTS is unnecessarily prescriptive in stating that all internal model position and instruments should be reconciled daily between risk management, front and back office systems. The RTS should recognize that position reconciliations are not the only way to ensure completeness and accuracy of position data. For example, a bank may use a combination of controls over the scope of trading books, risk feeds, system performance and daily variances. Furthermore, typically not all position and instrument data is fed to back office systems, therefore it may not be possible to perform such reconciliations between the risk management system and the back office system. We would propose that this requirement be amended to state that the institution should have adequate controls in place over the integrity of positions included within the internal model and note that if the firm has chosen to implement daily reconciliations it should ensure that positions not fully reconciled are documented and monitored. The list of circumstances where justifiable differences can exist (points a – c) would then apply whichever approach the firm has taken to ensure the integrity of positions.

Market data

While it is desirable for a firm to retain documentation on the specification of its market data provider's industry codes as well as any automatic data filtering or detection that takes place for market data, we consider that it is not practicable to document the precise time of capture of each data point. Large, internationally active banks capture many data points on a daily basis and there can be variations in the time of capture which could be driven by a variety of factors. It would impose a significant operational burden if a firm had to document the precise time that each one was captured every day in order to use it in an IMA model. Instead, we suggest that the RTS should require a firm to document the source of market data and the way in which it is applied in the internal model (for example how it feeds in to the end-of-day valuation), as well as documenting the validation controls over the integrity and consistency of market data.

Q19: What are stakeholders' views on the proposed requirements for the computation of VaR and P&L at consolidated level?

We agree with requirement 3(a) that positions (in particularly, the market data corresponding to the positions such as their prices) should be consistently captured at the close of business for the particular market in the particular time zone (note that different markets e.g. bond vs stock, do not necessarily close at the same time even within the same country and time zone). This is consistent with the practice of end of day process for marking each book and consistent with how P&L is calculated for desks in each region (time zone). For example, if an Asia One Delta desk has a position of a Japanese stock traded on the Tokyo Stock Exchange, the market data (to determine the market value of the position) should be the Tokyo Stock Exchange close. The P&L of this position would be from the TSE close from one day to the TSE close to the next day. It would not be particularly meaningful to calculate the P&L for this position from a NYSE close to close time interval even though the bank having this position is a US based firm.

However, we find requirement 3(b), which is a requirement on the time interval over which a historical risk factor return is calculated for historical simulation, to be too prescriptive and impractical. The same is also true for 3(c) which is a similar requirement on calibration of parameters for Monte Carlo simulation of risk factors over different time zones. On this time zone issue, EBA has proposed 3 alternatives. Our view is that all 3 have problems. For alternative (1), as in the previous example, it is not meaningful to calculate say the NY close to close return of a Japanese stock traded on the TSE. Furthermore, not every market (even if they are in the same time zone) close at the same time. Alternative (2) is also problematic as there are many time zones, it is not practical e.g. to always calculate asset returns at every possible time zone as that would significantly balloon the number of risk factor time series to be simulated without much benefit. This undertaking is costly and burdensome to do. Alternative (3) of adding up regional (or entity VaR) is punitive and disproportional to the issue of inconsistent time zone.

According to CRR the market risk own-funds requirements are to be computed to capitalise potential market losses on 10-day horizon. While not using the same cut-off time for each risk factor globally when obtaining perturbations may cause slight inconsistencies on 1-day horizons, i.e. the 1-day correlation of risk factors may be misrepresented, it is expected that such inconsistencies would become negligible on a 10-day horizon. With regards to VaR computations, the abovementioned inconsistency on 1-day usually results in a slight overestimation of VaR. Therefore, such potential inconsistency shall not be ruled out. Moreover, some institutions may compute the VaR for capital calculation purposes directly based on 10-day returns. In such a situation the potential de-synchronisation of risk factors may have an even smaller effect on the capital measure. Therefore,

institutions shall be allowed to use their own methodology, even if including slight inconsistencies, unless it can be shown that it would endanger the prudent nature of the capital computations.

In our view, the most important aspect as described in the first paragraph is the consistency between P&L and the market data for the position. Again, market data here means the base scenario (before any shocks) that defines our exposures as in the simple example above of a Japanese stock traded in TSE. We would agree to 3(d) only if this is what it meant by “the two P&L are computed at the same time as the VaR”. How risk factors are simulated should be left to the discretion of the firm. For instance, a firm might use return data from an outside vendor for which there is not always possible to identify the exact time (from a certain hour/minutes a day before to certain hour/minutes of the next day) over which the return is calculated. A firm might also choose to use a factor model or some randomly generated time series to model specific risk. Or a firm might find it useful to proxy the returns from one time zone by the returns in another time zone for which the underlying asset is more frequently traded. There should not be a strict prescription on what firms should do in modelling the perturbation. Instead, the back-testing process should be a good control on how well the firm models the shocks and the resulting simulation distribution.

As far as hypothetical and actual daily changes are computed at the “close of business” for each one of the different institutions, undertakings or desks, instead of computing them at the same time as the VaR, it may occur that hypothetical and/or actual daily changes show back-testing events that are due only to the cut-off time of the risk factors. As the effect of risk factor de-synchronisation would become negligible on the 10-day horizon, which is the VaR based capital horizon, we believe that such back-testing events are only technical. Therefore, they shall not be considered as VaR excesses. Although we acknowledge that such technical back-testing events could be avoided by calculating additional types of P&Ls fulfilling the requirements in Article 36.3.d, we believe that such setup would unnecessarily increase the computational efforts, would deteriorate the quality of use tests, and would be inconsistent with the requirement in Article 36.3.a.

Q20: Do stakeholders’ agree with the distinction between ‘global’ and ‘local’ price risk factors?

We do not agree with the distinction between global and local price risk factors. From a P&L perspective, a particular desk in a certain region would have to close its book at the particular market close to obtain its P&L for the day. We do not perceive the value of computing some local risk factor returns for the desk based on local market close while some global risk factor of the same desk based on the market close in another region. This would violate requirement 3(a) as this would be inconsistent with the definition of the position and the market data used to define exposures.

Furthermore, calculating additional types of P&L figures would result in deteriorating the quality of use tests.

Q21: What are stakeholders’ views on the burden a more frequent update than monthly creates? What are stakeholders’ views on the burden a daily update for the historical VaR might create?

Required frequency for market data updates is dependent on the choice of VaR model. The longer the window, the less important it is to update frequently. We believe a minimum of monthly is appropriate to specify as a regulatory rule. Back-testing results will dictate whether more frequent updates are required for individual banks.

For banks using a large number of time series (or requiring significant post-processing of time series data as for Monte Carlo VaR) daily updates will not be feasible / desirable, as very little internal governance around release into production can be in place given the short timeline. The risk of forcing

banks to release market data daily, increases the risk of errors being discovered at a later time with restatements more frequent and limit management more difficult as a result.

Q22: For “partial use” IMA, do you agree with the use of a hypothetical P&L calculated from market P&L including all pricing factors of the portfolio’s positions?

As a first point relating to this question, we would clarify that Article 367 para. 1 of the CRR is interpreted by the industry that “all material price risks” refers only to risk factors within the scope of application of IMA, i.e. to risk factors within the IMA scope relevant risk categories as defined in Article 363(1). Otherwise, the implication is that in effect an institution would have to apply for IMA for all risk categories in which it has material risk factors from the outset. This would preclude the possibility of a phased implementation of IMA across risk categories, which we do not believe was the intention of the CRR. Therefore, with regards to risk factors to be perturbed when calculating hypothetical P&L, the question whether to perturb non-material risk factors within the scope of application of VaR/sVaR shall be distinguished from the question of perturbing material and/or non-material risk factors outside the application of the VaR/sVaR.

We believe that the hypothetical P&L computation shall be in line with the scope of the VaR/sVaR. Accordingly, the hypothetical P&L figures shall be computed, in principle, by perturbing those risk factors that are within the scope of application of the VaR/sVaR and that are not risks which would be capitalised by other types of measures. This means also that, in principle, risk factors from outside the application of the VaR/sVaR shall not be perturbed when computing the hypothetical P&L figures.

We say above “in principle”, because we are aware of that some institutions may not be able to strip out some effects from the hypothetical P&L that are out of the scope of the VaR/sVaR or which are capitalised by other measures. For instance, an institution may have approval to use IMA for general risk measurement only but may not be able to strip out the specific risk component from the hypothetical P&L. In another example, an institution may not be able to exclude from the hypothetical P&L the effect due to an issuer default, which is capitalised otherwise by IRC/CRM. In such cases, we believe that the institution shall justify the prudence of the chosen back-testing methodology. However, the approval of this methodology shall be to the discretion of the competent authorities. Therefore, we believe the EBA RTS shall not prescribe the effects to be included in or excluded from the hypothetical P&L. We consider such prescription would go beyond the mandate of EBA.

Similarly, Article 40.4.d of the proposed RTS says that valuation adjustments shall be excluded from the hypothetical P&L. Again, we believe that such prescription of rules goes beyond the mandate of this RTS. In specific cases, for instance when sensitivities to FVA and other reserves are included in the VaR computations, we believe also the corresponding P&L effects shall be included in the hypothetical P&L. Otherwise, the hypothetical P&L computation would not be in line with the scope of the VaR/sVaR. Nevertheless, if sensitivities to specific valuation adjustment or reserve are not included in the Monte-Carlo VaR or, analogously, if the specific valuation adjustment or reserve is not recomputed in the course of Historical VaR simulations, we agree that the corresponding effects may be excluded from the hypothetical P&L.

We would like to clarify also that in the specific case when a capital add-on has been defined and approved by the competent authorities for a risk factor to which the institution’s position became material but which, because of its properties like scarcity, could not be modelled and included in VaR, we believe such risk factor effect shall be excluded from hypothetical P&L.

Even if we believe that risk factors from outside the application of the VaR/sVaR shall not be perturbed when computing the hypothetical P&L figures, we would like to highlight that in our view the abovementioned rules ensure that non-material risk factors within the scope of application of VaR/sVaR are accounted for when computing hypothetical P&L. If risk factors deemed earlier being

non-material become material without being capitalised by VaR or by a capital add-on, via back-testing excesses they will affect the VaR multiplier and hence indirectly the capital. Therefore, we believe the interpretation described above complies with Article 367 para. 1 of CRR requiring to capture all material price risk.

Furthermore, this requirements seems to be front-running the P&L attribution test in the FRTB framework where the risk theoretical P&L seeks to provide more complete coverage between risk management and front office models. The P&L attribution test is recognised to be one of the more challenging areas of the new FRTB framework and is likely to undergo further calibration throughout 2016. We therefore believe that it is inappropriate to introduce a requirement to calculate partial hypo P&L ahead of the finalisation and transposition of the FRTB framework in Europe.

Q23: If your answer to Q22 is no, what impact does this have on the P&L used for back-testing purposes and how do you monitor the appropriateness of the model? Are there alternatives to ensure a proper reporting to senior management?

As stated above the overall appropriateness of the model can still be checked through the Actual P&L back-testing, with the caveat of the interpretation of Article 367 para 1, i.e. “appropriateness” should not mean that Actual P&L back-testing excesses arising from risk categories not modelled result in an increased multiplier since these risks will already be covered by standard charges. Regarding reporting to senior management, certainly it is desirable to present a clear and fair comparison with regard to the VaR model’s performance. In the case of partial IMA application, the senior management will in any case be aware of the materiality of the risk categories not covered in the VaR by virtue of the standard charges applied to them as well as any internal risk measures. In addition, with regard to unmodelled risks, many banks have in place P&L explain processes, one of the purposes of which is to test the materiality of unmodelled risk factors.

Q24: What are stakeholders’ views regarding the relative merits of the inclusion of all risk factors for the actual P&L computation?

We believe that the EBAs intention of using actual P&L from all risk categories is not consistent with the CRR. Back-testing for both hypothetical and actual changes is defined under CRR article 366 as in reference to the “portfolio”. Whilst not defined further in the CRR, a consistent interpretation of the scope of position coverage appears reasonable.

Further, by including risks which are capitalised under standardised approaches into the P&L used via back-testing to calculate the IMA addend multiplier, there is a penalty implied for having partial model approval, which does not apply to institutions either with permission for all risk categories or fully on the standardised approach. We do not believe that this is appropriate when considering consistent treatment across institutions.

We propose that article 40.5 (c) should be amended to reflect that the scope should be the same as that of the internal model permission granted.

Q25: What are stakeholders’ views regarding the proposed definition of ‘Net interest income’?

We agree with the proposed inclusion of internal transfer rate paid/received under Net interest income. However, given that there is a range of practices across firms/jurisdictions with regard to the treatment of coupon payments/receipts in hypothetical P&L and VaR from a backtesting perspective, the focus should be on ensuring that hypothetical P&L and VaR are computed with consistent treatment of such cashflow to ensure the validity of backtesting. Beyond that, there is no need to be overly prescriptive on the exact treatment one way or the other.

Q26: What are stakeholders' views regarding the requirement to assess the importance of intra-day and new trades to determine the VaR and SVaR multipliers?

We believe that the existing requirement to back-test using clean P&L (and consequent VaR multiplier for ≥ 5 vaR exceptions) is already taking the effect of intra-day and new trades into account to determine the VAR and SVaR multipliers.

We note that intra-day risk could be captured by back-testing based on actual P&L only at high level and in very approximate fashion. In principle, intra-day risk's impact on back-testing results could be viewed in context of other non-modelled risk influencing real P&L. However the intraday risk does not carry liquidity assumption implicit in 10-day capital calculations. Specifically, as per example in the explanatory text of a portfolio which "is only 'open' to risk during the day and then all positions are completely unwound" the excesses caused by intra-day trading will overstate, if applied to multiplier according to standard rules, the risk capitalized to 10-day liquidity horizon. Article 366 (4) allows for Actual P&L back-testing exceedances to be effectively discounted, in terms of the multiplier, if not observed on the Hypothetical P&L back-testing. This should be retained, so the excesses due to intra-day trading can be discounted, but should be adequately documented and can be used to provide information to competent authorities as a measure of intraday risk. This information can be complemented by additional measures as per Q27.

Q27: What alternative methodology, if any, might be appropriate to capture this intra-day risk?

Overall, we believe the intra-day risk shall be assessed as any other type of risk not captured in VaR (RNIV). Indeed, the actual P&L back-testing process may be used to spot when the intra-day trading activity becomes material. In such a case, it should be to the discretion of the firm and its competent authority to agree on a methodology to capitalise intra-day risk if necessary. Capitalising the risk via the VaR back-testing multiplier is indeed an option. Otherwise, just as for other RNIV components, we believe that finding an alternative methodology for capturing intra-day risk specifically shall not be a requirement set by this EBA RTS.

Q28: What are stakeholder's practices regarding adjustments computed less regularly than daily?

Individual practices will be conveyed bilaterally.

Question 28 refers to valuation adjustments computed less frequently than daily. Such adjustments are usually resulting from the Independent Price Verification (IPV) process where the independent control unit sets corrections to be taken on the P&L. They are not necessarily one day P&L as these adjustments might occur less frequently than daily. The exact frequency can vary across firms depending on their IPV process. For the purpose of backtesting model accuracy, VaR should not be compared with multiple day P&L / large P&L adjustments that are not what a 1-day VaR measure is designed to capture. In order to avoid infrequent but large P&L effects as a consequence of the IPV process, anticipated P&L corrections (validated by independent control) between IPV's could be used. (These corrections are released when IPV corrections are posted).

If validated corrections are not available, the adjustments computed less frequently than daily may be discounted from the P&L used for backtesting. In some jurisdictions, the practice is to exclude such adjustments from hypothetical P&L which is used for backtesting VaR for model accuracy. However such adjustments are included in actual P&L which is used for backtesting VaR for capital adequacy. At some institutions, large actual P&L adjustments can be discounted either as an ad hoc

management or committee decision, or by an allocation scheme / pre-specified mechanism that spread the P&L adjustment over a period relevant to the adjustments.

In cases when the P&L excess due to adjustments computed less regularly than daily is to be discounted following an ad hoc management or committee decision, we agree with Article 40(12) of the proposed RTS that, in line with Article 366(4) of CRR, competent authorities shall confirm such internal decision every time such excess occurs and the discounting of the particular excess is requested. However, if the institution opts for a specific allocation methodology that can spread the valuation adjustments in subject automatically, we believe the competent authority needs to approve the methodology only initially or when there are changes to this methodology requested. We believe that such allocation methodology would fall under the qualitative criteria defined in Part II Section 2 Paragraph 12 of Regulation (EU) 2015/942.

As for article 40 paragraph 12, it is important to note that there could be additional reasons that an overshoot should be discounted, as such the cases described in paragraph 12 should be viewed as examples where overshoot can be discounted rather than an exclusive list. We believe the discounting of overshooting should be left to the discretion of the competent authorities in which form they would like to control the discounting of effects due to valuation adjustments calculated less frequently than daily.

Q29: What are stakeholders' views regarding the treatment of Theta in VaR and as a component of P&L?

Given that backtesting with hypothetical P&L is meant to test model performance, it is most important to ensure that there is consistency between the treatment of Theta in VaR and as a component of hypothetical P&L. Beyond that, there is no need to be overly prescriptive on whether Theta should be in both or not.

Q30: Taking into account the CRR requirement to capture 'correlation risk' do you consider that the use of stochastic correlations should be required?

Modelling correlations is indeed challenging in the context of the VaR, particularly with regard to sourcing appropriate calibration data; in many cases implied correlations are unobservable model parameters subject to model reserves. Thus the option to assess the risk via other means, e.g. stress testing is reasonable and pragmatic. However one modification we would propose to the text is as follows:

“that the risk control unit assesses the extent to which the price risk of instruments is sensitive to changes in market implied correlations; this ~~shall~~ may be material where institutions hold material positions in instruments included in Category 3 of Article 7”;

Many [single underlying] products classified under Category 3 have no sensitivity to correlation, so a bank having material positions in Category 3 does not necessarily equate to it having material correlation risk.

Q31: Do stakeholders agree with the additional requirements introduced for banks using empirical correlations?

More precision would be appreciated on the scope of this article. All VaR models incorporate the effect of correlation, or more generally dependence, between risk factors and the vast majority are calibrated empirically using historical data. Most banks will test the impact of stressed correlation on their portfolio in some form through their stress testing framework and potentially through the Stress VaR if relevant. However few banks test the impact of stressed risk factor correlation directly by stressing the input parameters. Particularly for those [majority of] banks using Historical Simulation, this would be particularly difficult to apply given the implicit nature of the correlation information. If on the other hand by “correlation” this was aimed rather specifically at the case of banks having models making a Gaussian copula assumption (parametric or Monte-Carlo) this could be achievable. However in that latter case, it would be rather penalising to those banks not using HS VaR to impose this test as the effect of stronger or weaker dependence is equally worthy of consideration in the context of HS VaR. The specificity of the Gaussian copula assumption could be that its impact needs to be considered vis-à-vis the empirical copula. So, in summary, if empirical correlation is to be taken generally in this context as “historically calibrated dependence”, then we would propose to make this concern explicitly part of the Stress VaR calibration and thus propose the following alternative wording for point (b):

“(b) that, as part of the Stress VaR period selection process, the institution explicitly considers periods of high and low correlation and their potential impact on the capital outcomes in accordance with Article 49(2)(c)”.

If on the other hand the more specific meaning of correlation is to be taken then we would re-word point (b) as follows:

“(b) that, as part of the periodic validation process referred to in point (c) of Article 23(2), the institution assesses the potential effect of the copula assumptions with respect to the historical observed dependence and the impact this could have in the VaR calculation.”

Corresponding additions would then be required to clarify that “correlation” is meant to be taken in the context of a model with an explicit copula assumption.

Q33: Do you agree with the elements that should be considered when assessing any internal reserves and/or the VaR and SVaR multiplication factors?

We would propose that the language in article 48.2 is changed per the below, so that Competent Authorities are given appropriate flexibility to consider the potential impact of the elements under consideration and are not forced to increase the multiplier where this is not warranted:

Existing:

“Competent authorities shall verify that the multiplication factors m_c and m_s reflects conservatively at least the following flaws and shortcomings of the VaR and Stressed VaR models related to the risk categories covered by the model scope of application:”

Proposed:

“Competent authorities should consider the following items in relation to VaR and Stressed VaR Models, related to the risk categories covered by the model scope of application in their assessment of the multiplication factors m_c and m_s :”

Q34: Do you agree that the SVaR multiplier should always be the same or higher than the one used for VaR purposes?

Although it is hard to foresee a configuration where this would not be the case, we do not see the necessity of this specific clause. Judged on the same criteria as the VaR plus the additional criteria, the SVaR multiplier would naturally come out at least as high as the VaR one. If on the other hand an institution had an SVaR model that for some reason was less susceptible to a shortcoming than the VaR, e.g. if missing risk factors were immaterial in the SVaR (outweighed by other effects) but not the VaR, then this clause would be unnecessarily restrictive and is better left to the discretion of the Competent Authority.

Q35: Do Stakeholders have any additional comments or concerns regarding the requirements outlined in the VaR section?

The concern raised in Article 43(3)(c) about the use of Taylor series for exotic options is well understood however a total ban on this approach where an institution has significant positions in these products is too restrictive. There are many reasons why in a portfolio context the use of Taylor series may be defensible even for these products. For example, taking into account that many products having significant higher order derivatives only display this behaviour around a certain barrier level, which given the diversification of the portfolio and the scenarios driving the VaR may in fact result in a minimal impact on the aggregate VaR. Banks should thus not be prohibited from using Taylor series approximations unless it is shown to be inappropriate. Additionally many banks employ a hybrid approach utilising a combination of Taylor series and full revaluation grids for the different risk factors affecting a given product. This approach which when used effectively can be nearly as precise as full revaluation should not be discounted by this clause.

We are supportive of article 48.5 (a) which enables Competent Authorities to take into account any reserves held by an institution to mitigate any shortcomings of the IMA.

We would additionally highlight that the demonstration that a model is conservative should also be taken into account when the Competent Authority is reviewing the need for a multiplication factor in excess of the minimum specification.

Q36: Do stakeholders consider that any proxy validated for VaR should be acceptable for SVaR purposes?

In general we agree. Given the requirement that the methodology applied in SVaR should be the same as the one used in VaR, then it follows that any proxy validated for VaR should be acceptable for SVaR purposes. Additionally, the requirement that all data from 2007 onwards be considered in the selection of the Stressed period suggests that proxies should also cover the period from 2007 onwards. Accordingly, the VaR period and Stressed period should be considered as two periods on a continuum from 2007 until the present. It then follows that the selection criteria and the choice of the proxies available should be based on the full data set from 2007 until the present.

Q37: Do stakeholders have any additional comments or concerns regarding the rest of requirements outlined in the Stressed VaR sub-section?

Overall we do not have fundamental concerns with this section, which appears logical and consistent with current practice.

Q38: Do stakeholders agree with the EBA interpretation regarding the treatment of event risk for credit positions after the implementation of IRC?

We agree with the EBA's interpretation regarding the treatment of event risk for credit positions and the conclusion that the requirements for event risk relate entirely to equity risk. A corollary to this point is that back-testing exceptions for credit positions which are driven by events should not be viewed as a deficiency of the VaR model since there is no need to model event risk in VaR.

Q39: What are stakeholders' views regarding the capture of the FX position stemming from Banking Book activities and the treatment proposed in the RTS?

We agree with the overall objective of accurately capturing FX risk from the banking book. We assume that transactions with clients which meet the requirements under article 352.2 of the EBA rule book would be excluded, in which case this should be included in the text. Additionally the treatment of FX positions not determined using the methodology in article 57.2 is not explicitly stated i.e. that where positions can accurately be determined then netting with off-setting positions in the trading book should be allowed. If this could be more explicit it would be beneficial.

Whilst we support in principle, allowing an alternative conservative approach to compliance, we believe that the approach suggested is overly conservative.

Rather than calculating a separate VaR based on the largest FX positions over the previous year, we believe that the best approximation of the current FX positions would be more representative of the risk and that the lack of diversification with the remaining portfolio then sufficiently provides for a conservative capital outcome.

Q40: Do Stakeholders consider appropriate the requirements established in this Article regarding the constant level of risk and constant position assumptions?

We think they provide more precisely defined standards and allow room for the ageing of positions when opting for a constant level of risk (liquidity horizons). Although we still believe that the constant level of positions and the constant level of risk are very strong assumptions for the trading book as by its nature usually all positions are actively traded, giving therefore the possibilities to mitigate or remove the risks when credit conditions deteriorate.

Q41: Do stakeholders agree that internally-derived ratings shall be prioritised for IRC?

In our view, every bank should be able to decide discretionally whether they prefer to prioritize internal or external ratings for IRC purposes. Externally provided ratings often offer high degree of sophistication and suitability. Industry should be free to use modelling choices best suited to model and reflect risk. In prescribing the modelling choices EBA exceeds its mandate of the methodology assessment.

Q42: Do you consider that PDs derived from spreads or external ratings are more appropriate for IRC modelling than those internally-derived?

Please refer to answer to Q41.

Q43: Do stakeholders agree with the exclusion of zero PDs for IRC?

Enforcing non-zero PDs is a reasonable condition, although we note that IRC models can generate non-zero charges through migration, even where the default state is assigned a zero PD. We are also

supportive of the decision not to propose an explicit floor greater than zero (as proposed in FRTB) since if evidence suggests that some PDs should indeed be lower than the floor, the floor may unfairly penalise some assets, creating undesirable economic incentives.

Otherwise in this Article there are two points of concern we would like to raise:

“In particular, competent authorities shall verify that the transition matrices over the one year capital horizon reflect the portfolio of IRC instruments...”

We have the concern that this is a rather stronger constraint than the general considerations described in the CRR. In particular our concern is that this wording may imply that the transition matrices need to be explicitly calibrated for the instruments in the IRC portfolio. This is in practice totally impossible. Given the long term nature of the data required and its very sparse population in some areas of the grid, we have limited scope to refine or tailor the calibration set so are limited to more general checking of the appropriateness. The next issue is again linked to this point.

“...separate transition matrices are applied for specific groups of issuers and specific geographical areas...”

We have studied the possibility of increasing the granularity of the model in this way, specifically by introducing industry and geographical region dimensions. The results of this study have shown that only a very small amount of explanatory power is added but at a great cost in terms of the statistical significance of the result or the importance of the modelling assumptions required. This being detrimental then to the quality of the model, we would strongly advise to remove this clause.

Q44: Do stakeholders consider that losses due to default should be based on the market value or the instrument's principal?

Given the difficulty of performing objective tests of LGD, we support moves towards standardisation of IRC model inputs and choices. The more accurate approach to LGD uses market value, recovery rate applied to notional or other direct calculation of loss (see paras 142-145 of FRTB January 2016 text). In the interests of “avoiding implementation that would need to be dismantled”, we support basing losses due to default on market value. We further advise against prescriptive formulae so that accurate LGDs can be developed according to instrument specifics (and for new products) that will be subject to internal validation in addition to scrutiny under Article 70.3.

For the avoidance of doubt, the Recovery Rate, whether internally or externally derived, is applied to the principal of the instrument to calculate the value at default, which is then subtracted from the current market value to determine the loss.

Q45: Do Stakeholders have any additional comments or concerns regarding the requirements outlined in the IRC section?

Please can you confirm our interpretation of article 64.2a "that the risk control unit establishes a maximum size permitted for the individual positions with inferred ratings" requires size limits to be set on issuer level (as opposed to security or portfolio level). We have no additional comments.