



**Response to EBA Consultation on
Draft RTS on Criteria for assessing the modellability of risk factors under the Internal
Model Approach (IMA) under Article 325be(3) of Regulation (EU) No 575/2013
(Capital Requirements Regulation 2 -CRR2)**

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1. INTRODUCTION

In January 2019, Basel Committee on Banking Supervision (BCBS) finalised and published its standards on “Minimum capital requirement for market risk”¹. The text replaces the previous minimum capital requirements for market risk in the global regulatory framework, which are transposed in the EU via Regulation (EU) No 575/2013 (CRR).

After the publication of the final text of the CRR II² in the Official Journal of the European Union, EBA was delegated to develop Regulatory Technical Standards (RTS) to better detail certain aspects of the following topics:

- **Liquidity Horizons [Article 325bd]** – EBA should clarify how institutions shall map risk factors of trading book positions to risk factors categories and subcategories, providing ad hoc treatments for some specific risk factors. Moreover, the RTS shall specify the definition of a large capitalization for equities and, in addition, which currencies for interest rate risk and currency pairs for FX risk constitute are the most liquid.
- **NMRF³ [Article 325be]** – EBA is mandated to specify the frequency and the criteria used in order to assess Risk Factors modellability. In particular, the assessment of modellability shall ensure that the Risk Factors included in its Expected Shortfall model are sufficiently liquid;
- **Back-testing [Article 325bf]** – EBA shall specify the technical elements to be included in the actual and hypothetical changes to the value of the portfolio of an institution;
- **Profit and Loss Attribution [Article 325bg]** – EBA shall better clarify:
 - Criteria necessary to ensure that the theoretical changes in the value of a trading desk's portfolio is sufficiently close to its hypothetical changes and the consequences when this condition is not satisfied;
 - The frequency at which the P&L Attribution is to be performed;

¹ BCBS d457, Minimum capital requirements for market risk, January 2019 (rev. February 2019)

² Regulation (EU) 2019/876 amending Regulation (EU) No 575/2013, June 2019

³ As specified in article 325bk, EBA shall develop draft Regulatory Technical Standards in order to specify how institutions have to compute extreme scenarios of future shock applicable to NMRF. However, this draft should be submitted to the Commission by 28 September 2020 and it is not included in the *RTS June 2019 package*.

- Technical elements to be included in the theoretical and hypothetical changes in the value of a trading desk's portfolio
- The manner in which, under IMA, institutions aggregate the total own funds requirement for market risk for all trading book positions and non-trading book positions that are subject to foreign exchange risk or commodity risk;

Considering the relevance of these topics within the revisited framework to compute own funds requirements for market risk, Intesa Sanpaolo (hereinafter, the Bank) would like to participate to the Consultation phase proposed by EBA on the aforementioned topic.

This document has been prepared with the specific aim of providing feedbacks and observation on the proposals presented in the Consultation paper on draft Regulatory Technical Standards published by EBA on the 27th of June 2019.

2. FRTB – Criteria for assessing risk factors modellability

Q1. Do you agree that a committed quote, to be considered verifiable, should be required to have both a firm bid and offer price? If you think that solely a bid or offer price should be sufficient, please provide a convincing rationale.

In its 2019 Final Text, the Basel Committee of Banking Supervision specifies that a Committed Quote is a “*price from an arm's length provider at which the provider of the quote must buy or sell the financial instrument*”. Hence, it would seem that, in order to be considered as verifiable, it is sufficient for Committed Quote to have either a bid or an offer price. On the other side, in this framework, the rationale behind Non-Modellable Risk Factor should be taken into account: indeed, the main target of the proposed Regulation is to guarantee a conservative field where Risk Factors related to positions in the Trading Book are sufficiently liquid. Therefore, it is also reasonable to believe that a Committed Quote should provide both a bid and an offer price, even if this hypothesis could greatly reduce the number of Risk Factors deemed Modellable.

Generally, Intesa Sanpaolo believes that either a bid or offer price for a Committed Quote should be sufficient to this scope, since in this framework market dynamics have to be taken in consideration. Indeed, financial markets could go through particular situations where both bid and ask price could not be quoted by a single financial institution.

Q2. Please provide an estimation of the impact of requiring solely a firm bid or offer price compared to requiring both. Please provide this impact (e.g. in terms of number of non-modellable Risk Factors, stress scenario risk measure charge or number of eligible committed quotes for different Risk Factors/ Risk Factor categories).

From best effort estimates, the Bank observed that quoting only bid or ask price through own Committed Quote (instead of both prices) does not significantly change the number of Non-Modellable Risk Factors (and hence also the stress scenario risk measure charge), due to its portfolio structure.

Q3. How would you define and check for a "non-negligible volume of a transaction or quote, as compared to usual transaction sizes for the bank, reflective of normal market conditions" for the purpose of assessing the validity of a price observation?

The Bank believes that, in order to assess the validity of a price observation, there is no need to identify an absolute threshold of non-negligible volume of transactions; therefore, we think that defining an *ad hoc* constraint might be suitable to this scope.

In particular, Intesa Sanpaolo believes that a standardized approach may not be fit for this scope, since the volume of a transaction or quote can be affected by market dynamics and other variables: indeed, it could depend on client size or product typology. In summary, these issues cannot be formalized, but it would be more appropriate to define audit activities to verify the transparency and truthfulness of the quotations.

An alternative proposal could be to define a relative threshold as a specific percentage of bank's total amount of Committed Quote on *similar* Risk Factors. For example, a price observation on a COMMO Risk Factor is deemed valid (in terms of volume) only if it has an amount at least equal to a certain percentage of the average bank's COMMO transaction amount in the previous quarter. In this case, also market conditions and seasonality issues would be taken into account.

Q4. How would you define and check for an "unreasonably large bid-offer spread as compared to usual bid-offer spreads, reflective of normal market conditions" for the purpose of assessing the validity of a price observation obtained from a committed quote? In your response, please provide a detailed reasoning.

Similarly to what previous specified, in order to define a reasonable bid-offer spread for assessing the validity of a price observation obtained through a Committed Quote, it is not possible to define an absolute threshold. Also in this case, some technicalities should be taken into account (i.e. track record of bid-ask spread quoted by institutions, relation between size of quote / transactions and spread amount, etc.). Therefore, these variables may not be standardized and they should be assessed through an audit activity.

In addition, requiring that bid/ask prices have to be close means implicitly that institutions have the possibility to do *market making* activities only on liquid markets (while it depends on market dynamics).

Q5. Do you see any problems with requiring that institutions are allowed to use data from external data providers as input to the modellability assessment only where the external data providers are regularly subject to an independent audit (independent of whether the price is shared with the institution or not)? If so, please describe them thoroughly (i.e. for which data providers and the reasons for it).

The Bank agrees that external data providers, which makes input available, must be regularly subjected to an independent audit regarding the validity of their price information, governance and processes. Indeed, this could ensure that prices used in modellability assessment are correct and sound.

Q6. Do you have any proposals on additional specifications that could be included in the legal text in order to ensure that verifiable prices provided by third-party vendors meet the requirements of this Regulation?

No, the Bank does not have further observations about the constraints that prices provided by third-party vendors should meet. Indeed, we think the proposed framework is sufficiently trustworthy.

Q7. How relevant are the provisions outlined above for your institution? How many and which curves, surfaces or cubes are (planned to be) represented by a mathematical function with function parameters chosen as Risk Factors in your (future) internal model? [Article 5, Modellability of Risk Factors belonging to parametric curves, surfaces and cubes]

The provision outlined in EBA Regulatory Technical Standard does not currently affect the bank's risk factor structure: indeed, whereby possible, Intesa Sanpaolo does not apply

mathematical functions to represent a curve, surface or cube since these functions are used to define the Risk Factor (i.e. IR volatility or correlation at bucket level). However, provided the current pricing engine used in Intesa Sanpaolo, the specified provision could potentially impact the Swaption surface volatility pricing (i.e. cash delivery Swaption).

In conclusion, the Bank believes that the general approach is to avoid the use of parameters in the historical simulations by generating a Risk Factor: indeed, defining the modellability assessment at parameter level could potentially lead to market distortion (i.e. the Risk Factor Eligibility Test outcome could depend on the pricing model applied).

Q8. Do you have a preference for any of the options outlined above? For which reasons? Please motivate your response.

As previously specified [cfr. Q7] the Bank does not have mathematical functions which represent curve, surface or cube. However, from a general point of view, between the proposed options, we prefer the first alternative, which specifies that an institution:

- Shall use data inputs from only modellable buckets to determine a first set of parameters of the mathematical function (the aforementioned parameters are therefore deemed as modellable);
- As a second step, it is possible to use inputs from all buckets (both Modellable and Non-Modellable) to determine a second set of parameters, which are hence considered Non-Modellable.

Indeed, between the presented alternative the first seems to be more reasonable (i.e. through a Principal Component Analysis); however, the Bank believes that both proposals are not feasible from a practical point of view, as better specified in the answer below.

Q9. Do you consider any of the options outlined above as impossible or impractical? For which reasons? Please motivate your response.

The first alternative appears impractical since it specifies that data inputs are based only on modellable buckets and do not take into account all the available data, with a resulting loss of information. Directly linked to this consideration, it should take into account that institutions have to redefine the data history of the function parameters according to available modellable buckets underlying the curve, surface or cube.

Similarly, also the second proposal is rather complex from a practical point of view: indeed, it specifies that institutions have to redefine as Risk Factors for that curve, surface or cube in their internal risk-measurement model the data points of the curve, surface or cube represented by the mathematical function. To this purpose, banks have to replace their pricing function in order to take into account the Risk Factor structure and it could make the parametric function almost unusable in the risk engine.

Q10. Do you have alternative proposals to define the consequence on the modellability of the parameters where some buckets of a curve, surface or cube are modellable whilst others are non-modellable?

No, the Bank does not have alternative proposals to define the consequence on the modellability of the parameters where some buckets of a curve, surface or cube are modellable while others are Non-Modellable. Indeed, whereby possible, the Bank does not use directly parametric functions while they are used to define the Risk Factor (i.e. IR volatility or correlation at bucket level).

Q11. Do you intend to apply paragraph 4? If so, for which Risk Factors will it be relevant? Do you expect any implementation issues related to it? Please explain expected issues thoroughly [Article 6, Bucketing approaches for risk factors belonging to curves, surfaces or cubes]

Even if this proposal may add complexity to the framework making the modellability assessment outcome dependent on institution's portfolio, the Bank welcomes the opportunity provided by the regulator: indeed, this proposal may be useful for the situations where issuances become Non-Modellable since they crossed into a new maturity bucket even when they maintain an adequate trading volume. Therefore, we believe that, whereby possible, we reallocate the verifiable prices of a specific bucket to the adjacent and shorter maturity bucket for all Credit Spread Risk Factor suitable to this scope.

Q12. Do you agree with the outlined methodology for the assessment of modellability of Risk Factors? If not, please explain why.

The Bank totally agrees with the proposed framework specified for the modellability assessment of Risk Factors: indeed, from the first methodology proposed⁴ a significant number of changes have been defined.

⁴ BCBS d352, Minimum capital requirements for market risk, January 2016

- The BCBS Consultative Document⁵ proposes two alternatives for risk factor bucketing for risk factor eligibility test (RFET). Therefore, institutions shall count all verifiable prices allocated to a bucket to assess whether it passes the RFET for any risk factors that belong to the bucket;
- In the 2019 BCBS FRTB Final Text, in order to overcome the seasonality problem, two different options have been proposed. Indeed, to pass the RFET, a risk factor that a bank uses in an internal model must meet either one the following criteria on a quarterly basis.
 - The bank must identify for the risk factor at least 24 real price observations per year; in addition the “4 in 90” rules replaced the “1 in 30”;
 - The bank must identify for the risk factor at least 100 Real Price Observations (RPOs) over the previous 12 months.

Therefore, we welcome the proposed revisions, which prevent that this framework becomes disproportionate and overly punitive. In addition, this Regulation guarantees a uniform application of the RFET across institutions within EU, while taking into account the relevant international framework defined by BCBS.

Q13. Do you expect any problems for the modellability assessment arising from the upcoming benchmark rate transition that could be addressed via this regulation? If so, please provide a thorough description and potential solutions if any.

As widely known, firms should transition away from the London Interbank Offered Rate (LIBOR) to alternative overnight risk-free rates (RFRs) like the Euro Short Term Rate (ESTER). Given the degree of complexity and uncertainty, this transition could probably be the largest transformation program that many institutions have undertaken; in particular, authorities are concerned about the scarcity of underlying transactions, which could heighten the risk of benchmark manipulation.

In general, risks linked to LIBOR transition are several, for example:

- The broader impacts, including operational issues and existing regulatory rules, lead to delays;
- Insufficient RFRs liquidity makes it difficult to build a curve and price product;
- Financial exposures to LIBOR continue to grow and lead to systemic risk.

Clearly, this transition has remarkable impact also on the Fundamental Review of the Trading Book. Indeed, institutions should take into account the lack of liquidity and observable

⁵ BCBS d436, Revisions to the minimum capital requirements for market risk, March 2018

transactions during the initial transition phase, which may cause some risk factors to become Non-Modellable: if these concerns materialize, the net effect could be a significant increase in stress capital requirements. In order to overcome this situation, the Bank believes that, the upcoming benchmark rate modellability status should be inherit from the previous framework (i.e. since this rate is built on OIS curve, it should be treated in a similar manner). As an alternative, at least for the first phase, the new benchmark rate could be deemed as modellable by definition; this could be a reasonable solution, since this rate is expected to be sufficiently traded (and therefore sufficiently liquid) since it underpins most of the financial contracts.

In a more general way, problems for the modellability assessment could arise from financial product or model innovation (i.e. new Risk Factor or model parameter definition) and therefore the regulatory framework should take into account these market evolutions.

Q14. How do you intend to integrate the Risk Factor modellability assessment (i.e. RFET) into the processes of your institution? Do you expect those data to be used for the purpose of the RFET only or do you think those data would increase the data availability used e.g. for the calibration of your internal model (under para 31.26 of 2019 Basel rules)? What percentage of data used for the RFET do you think will be used also for the calibration of your internal model?

As required by the Regulator, the Banks is going to arrange policies and procedure that describe the mapping of RPOs to Risk Factor, in order to ensure its transparency.

Moreover, Intesa Sanpaolo believes that data used for the Risk Factor Eligibility Test are applied only to this scope (while other data are considered for the calibration of the internal model). Generally, as specified also by the Industry, there is no direct link between the data used for the observation of whether a Risk Factor is modellable and the data used to calculate the SES.