

# Comments

## **On the EBA Consultation Paper “On non-delta risk of options in the standardised market risk approach under Articles 318(3), 341(6) and 347(4) of the draft Capital Requirements Regulation (CRR)” (EBA/CP/2013/16)**

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## **Comments “On non-delta risk of options in the standardised market risk approach under Articles 318(3), 341(6) and 347(4) of the draft Capital Requirements Regulation (CRR)”**

On 22 May 2013, the European Banking Authority (EBA) published the Consultation Paper “On non-delta risk of options in the standardised market risk approach under Articles 318 (3), 341 (6) and 347 (4) of the draft Capital Requirements Regulation (CRR)”. We appreciate the present opportunity to share our comments.

### **I. General**

We explicitly welcome the fact that the main aspects of the present draft technical standard are geared towards the familiar Basel II framework. After all, under Germany’s national legislation, the Basel framework provisions on the treatment of gamma and vega risks of options and warrants under the market risk standard approach have been implemented in the form of Section 308-311 of the German Regulation Governing the Capital Adequacy of Institutions, Groups of Institutions and Financial Holding Groups (hereafter SolvV). Hence, Germany is one of the countries where the alignment with the Basel framework promotes continuity and also ensures an initial mitigation of the migration burden resulting from the CRR implementation.

However, due to the deviations that still translate into a considerable implementation effort for banks, the scheduled first-time application deadline (i.e. early in the year 2014) is unrealistic. Hence, banks have to be granted sufficient lead time for an appropriate implementation. For this reason, the EBA standard should become effective no earlier than 1 January 2015. Until this deadline, under the provisions of Article 329(4), Article 352(6) 4th sentence, Article 358(4) 4th sentence of the CRR, banks should be allowed to continue applying their existing national rules, provided such rules were applied by them prior to 31 December 2013.

However, we hold the view that it is inappropriate for the present Consultation Paper to only address non-delta risks. A synchronisation with the delta risks would have been more appropriate. Yet, this, in turn, would have required a Level I regulation.

Notwithstanding the separation, banks will witness a sharp increase in the implementation effort both of the simplified approach and of the adapted scenario approach. Similarly, smaller banks will be faced with a higher implementation burden due to the fact that they will now have to quantify non-delta risks.

On page 18, the Consultation Paper sets out that banks that are significant option traders shall rather strive for an internal model approach. We generally object to this proposal. Such a rule is absent from the CRR provisions. Hence, introducing this requirement “through the backdoor” in the form of a technical standard is not only mispremised but also exceeds the regulatory scope of the EBA’s mandate. The scenario approach already constitutes a complex method which reflects option risks in an appropriate manner. Any provision beyond this is devoid of any appropriate cost-benefit ratio.

Furthermore, it is worth noting that – during the Fundamental Review of the Trading Book – the own funds requirements for market price risks will anyway undergo a profound revision at the level of the Basel Committee. From our point of view, requesting banks to implement in a first stage comprehensive adjustments which are triggered by the EBA standard just to overhaul the entire system again in a second stage but a brief period later as part of the trading book review would be unacceptable.

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### II. Specific Comments

#### General Rules

Concerning the two options proposed regarding the combination of different approaches we explicitly advocate in favour of option 2 (Article 1(4) option 2). We object to the prohibition for institutions to combine the use of different approaches at the individual level (Article 1(4), option 1). Both, the extension of the scenario matrix method's scope of application to all portfolios of a bank and also the roll-back of the scenario matrix method for certain portfolios would be extremely onerous. Whilst not limited to, this caveat is particularly owed to the fact that it will be extremely difficult to reflect more complex option transactions by means of the delta-plus approach.

*Q1. Do you agree with the choice to use the Basel Framework to determine the capital requirements for the non-delta risks of options and warrants? Are there other approaches that can effectively be used for the purposes of these RTS? Which ones? Explain your reasoning?*

We welcome the choice to use the three methods from the Basel framework as well as the introduction of the fallback solution for the simplified approach as well as for the delta-plus method.

*Q2. Do you prefer the first option (exclusion of a combination of methods within a single institution) or the second option (exact definition of the scope of the scenario approach)? Explain your reasoning. If you prefer the second option, what additional conditions and controls should be established?*

Both, in terms of their business volume and also in terms of the complexity of their transactions, the business units within a bank in charge of options trading may feature large differences. For instance, there may be comprehensive trading in interest rate products / equity products whilst trading of foreign currency exposures will be confined to but a limited amount of plain vanilla products for position hedging purposes. In the aforementioned example – provided that the bank currently applies the scenario matrix method in the interest rate business line and / or equity business line and the delta-plus method in the foreign currency business line - the need to apply a unified method for measuring the “non-delta risks” across the entire bank would lead to a situation where the scenario matrix method would have to be introduced also in the foreign currency business line. However, due to the quality and the relative volume of this business line, the introduction of the scenario matrix method would not yield any additional insight with a view to the capital adequacy. Furthermore, this compulsory requirement would, instead, lead to a deterioration of the bank's market footprint. Other banks with comparable trading activity (which, however, are exclusively active in foreign currency options) would be allowed to apply the delta-plus method. As a result of the lower costs for calculating the non-delta risks, these banks would have a competitive advantage.

Hence, we explicitly endorse option 2 under Article 1(4) which allows combining the delta-plus method with the scenario matrix method under a set of specifically predefined preconditions. By its endorsement of the proportionality principle at the level of the product types (risk sensitivity) in the preamble, the EBA itself provides the reasoning for this in the Consultation Paper ((2), page 7 (third last paragraph), page 18 (first paragraph), page 23 (third paragraph)).

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Furthermore, we would like to point out that, in terms of the methods employed - under Germany's national jurisdiction, to date, section 308(3) SolvV, the use of different methods was generally allowed. Whilst the number of banks which actually use this right is very low (<5%) this may, however, change due to the fact that the scope of application of the more straightforward approaches' (simplified method and delta-plus method) is being narrowed down as a result of the EBA standard; consequently, banks might have to face a choice between the fallback solution for the simplified / delta-plus method and the scenario matrix method. Hence, whether they shall be entitled to apply the scenario matrix method entirely or only regarding certain transactions could be decision-relevant for the banks concerned. In other words, this question may have far-reaching implications.

*Q3. Do you believe that it is useful to implement the simplified approach established in the Basel text?*

### **Simplified Method**

We welcome the introduction of the “simplified approach”. Currently, in Germany, there is no simplified approach. Due to the CRR requirements, also non-trading book banks will henceforth be subject to regulatory capital requirements for non-delta risks. Therefore, we welcome the introduction of a simplified approach the application of which shall be based on the size and complexity of options and warrants transactions at the level of the individual bank. At this juncture, the option of choosing methods featuring varying degrees of complexity is an adequate reflection of the proportionality principle.

### **Delta-plus Method**

Under the provisions of Article 4(2), the determination of the implied volatility shall be based on the market value. However, already when it comes to simple (OTC) options which only differ from listed options in terms of strike or expiry there is no readily observable market price. In such cases, already for determining the delta factor, Article 329(formerly 318)(1), 352 (formerly 341)(1), Article 358 (formerly 347) (3) CRR require the use of an internal pricing model in need of supervisory approval, during the calculation of which the implied volatility will have to be used as an input parameter. Consequently, in such cases the “implied volatility” under Article 4(2) has to refer to said input parameters. This should be taken into account in the proposed requirements.

We kindly suggest the following more detailed specifications: First, it is unclear whether the shift in Article 6 lit. b shall be seen as an absolute figure or as a relative figure. In our preliminary understanding, it is a relative figure and we would appreciate a confirmation of this. Second, it is unclear which shift (+25 % and/or -25 %) shall be applied under Article 6 lit. b in order to be multiplied with vega under the provisions of Article 6 lit. c.

*Q4. Do you agree with this prudential treatment, not contemplated in the Basel Framework, for non-standard options?*

In the absence of a more appropriate proposal, the fallback solution under Article 4(3) is essentially fit for purpose; this is due to the fact that neither the simplified approach and nor the delta-plus method can be applied on a 1:1 basis to the option types specified in the Consultation Paper. However, for options featuring non-steady gamma and vega there may, perhaps, be less conservative, risk sensitive mathematical finance alternatives.

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Yet, in our opinion this approach is not immediately understandable; this is particularly due to the lack of a definition for the “risk weighted delta equivalent amount”. The EBA is kindly invited to provide explanatory examples in order to illustrate the application of Article 4(3).

Furthermore, without taking into account the risk mitigating impact of micro hedges, Article 4(3) suggests different calculation methods for options that have been bought (lit. a) and sold (lit. b). In the presence of micro hedges, we feel it is appropriate that the individual transactions shall be netted off against an effective overall option position, which shall subsequently become the basis for applying the newly defined methodology.

*Q5. Do you agree that the RTS should require that the conditions of Articles 318(1), 341(1) and 347(3) of the CRR are met for the calculation of gamma and vega?*

Under the provisions of Article 4(4), gamma and vega shall be calculated in line with Article 329 (formerly 318(1)), 352 (formerly 341(1)), 358 (formerly 347(3)) CRR. These provisions, however, only refer to using the delta factor of the exchange concerned – if available. Otherwise, institutions have to use an internal model that is subject to supervisory approval or, respectively, the fallback solution. Due to the fact that neither gamma nor vega can be obtained from an exchange, these factors – and also the delta – would have to be calculated by the bank itself using an appropriate model. Hence, a reference to said CRR articles would appear constructive only if an explicit link is being made to the valuation model specified thereunder.

Due to the fact that individual product types are frequently admitted to trading separately, the requirements under Article 4(4) would imply that a supervisory approval would become necessary for every new OTC traded product type, the option parameters of which are not being provided by an exchange. This will prove to be a drain on innovation. As an alternative regulatory choice we propose a solution where a reporting of the new calculation algorithms ought to be sufficient.

Under the delta-plus method, gamma and vega for options and bond warrants primarily have to be provided by stock exchanges; only on a subsidiary basis will they have to be determined on the basis of an internal model subject to supervisory approval. At this point, the price of the option / the warrant is no longer assessed on the basis of the price of the underlying – instead it is being assessed depending on the yield-to-maturity of the underlying. If and when this method is being applied to bonds, we kindly suggest considering that this approach may immediately lead to a considerable adjustment need.

*Q6. Do you think that the unified treatment of interest rate risk is sound? Could there be difficulties in implementing it in practice?*

On principle, there are no objections to this approach. A technical implementation is possible without any difficulties.

Under the current EBA proposals, the future calculation of bond option gamma and vega will no longer depend on the bond price; instead, it shall be calculated based on the yield to maturity. This is merely a change in the mathematical formula. It is, however, difficult to understand why this conversion should lead to an inflation of the underlying risk charge/increase regulatory capital requirements. Whilst a synchronisation with risk management may indeed be a point in case, a bond option is not the same as an interest rate option which justifies the use of different formulations. Conversely, one may argue that the

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basic principle in the pricing of options consists in the dependence on the price of the underlying (which corresponds to the mechanics of an option); hence, the existing formulation is consistent with this principle. Stock option prices inter alia depend on the share price, the price of an interest rate option depends on the interest rate and the price of a bond option depends on the bond price. The fact that the bond price in turn depends on interest rates is not necessarily a game changing observation. In our view, the proposal does not necessarily improve consistency.

Furthermore, the proposal gives rise to the following issues:

- Combined with the rule that gamma and vega shall generally be provided by the respectively affected exchanges (cf. Q5) this begs the question whether banks are dependent on the respectively affected exchanges and their capacity to provide information under these changed information requirements.
- Unless gamma and vega can be supplied by the respectively affected exchange, a bank would have to use either the method set out under Article 4(3) or it would have to develop its own model which would require supervisory approval. In case a bank currently already uses its own models which provide gamma and vega, this bank would have to adjust these models to the new definition.

In our view it is unclear whether – in each and every case – the ensuing imponderability and costs are entirely justified by the benefits of a unified treatment. We therefore advocate for the right to choose between either the calculation of gamma and vega of bond options depending on the bond price or on the yield-to-maturity.

*Q7. How many hybrid options does your portfolio account for in terms of number of options and notional amounts (i.e. options which can be assigned to more than one underlying type as defined above)? Should the BTS specify the treatment of these hybrid options?*

We kindly suggest specifying the treatment of hybrid options (options referring to more than one underlying) in greater detail. In the absence of such a specification, these will probably have to be treated under the scenario matrix method. Notwithstanding whether this presents the supervisor’s preferred treatment of hybrid options, we would appreciate a clarification.

### **Scenario Matrix Method**

In Germany, the option of applying the scenario matrix method exists since 1998. Its transposition into national law was largely geared towards the Basel framework rules. Compared to the Basel framework, the proposal submitted by the EBA contains various amendments and more conservative approaches in a number of respects. For instance, the request for a separate calculation and recognition of delta and non-delta risks is unprecedented. When it comes to implementing these requirements the respective banks will therefore be faced with a corresponding need for adjustments. Given the fact that the nature of these changes is significant, German banks will only be able to implement these changes after an extended transitional period.

Concerning the application of the scenario matrix method, Article 9 lit. a henceforth calls for a full re-valuation for every scenario. This begs the question whether the additional cost for banks which presently apply the scenario matrix method relying on approximate revaluations is justified by the gain in precision. The Consultation Paper remains silent on whether there have been studies on this matter. We therefore

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feel it would be excessive to carry out a full revaluation for every scenario. Instead, a revaluation by means of an approximation ought to be sufficient.

Compared to the Basel framework, the rules below constitute a more stringent regime. For the above reasons, we explicitly object to these rules:

- There lacks an explicit statement on the inclusion of the hedging positions linked to the options. Under the Basel framework, this is explicitly permitted under the provisions of point 718.LXiii). In our preliminary understanding, this shall remain an option also under the current draft standard proposed in the present EBA Consultation Paper. Should this no longer be permissible under the RTS, this would result in a clear exaggeration of the risks in mixed portfolios featuring both optional and non-optional products.
- Deleting the option of aggregating time bands (Article 8).
- Language on comprehensive operational requirements with regard to the use of the scenario matrix method. The requirements under Article 7 of the EBA draft RTS refer to Article 368 (formerly 357) CRR, which spells out the precondition for using internal models. However, the scenario method is a supervisory standard method which should be generally exempt from any minimum requirements. Due to the simplifications inherent in a standard method, such an approach is generally inappropriate for the purposes of risk management; Hence, the integration into the risk management regime should not be a mandatory requirement (“hard rule”). Also, the implementation of stress tests tends to be more appropriate for an internal model. Due to the parameters imposed by supervisors, when it comes to a standard method, carrying out a bank-specific calibration is not an option. In this context, stress-testing is neither efficient nor effective; this is due to the fact that changes in response to the result are not permitted anyway. In the absence of any benefit, the costs of adjusting processes of risk management within a bank as well as the implementation of stress test scenarios are unwarranted.

*Q8. Do you agree with the rationale behind the exclusion of this provision contemplated in the Basel accord in the RTS? If not, please provide arguments in favour of its implementation.*

To date, in Germany, Section 311 SolvV allows an aggregation of time bands for options and warrants on debt instruments as well as other interest instruments; under the current RTS proposals, however, this shall no longer be allowed. Yet, an aggregation of time bands should not only be an option for “significant option traders”; instead, it should be available to all banks applying the scenario matrix method. Such an approach would be consistent with the principle of proportionality. In banks’ trading practice, more often than not, hedging transactions are being carried out across different time bands meaning that the number of time bands defined will correspond directly to the degree of exaggeration of the underlying risks.

### **III. Miscellaneous**

We would like to share one specific comment on Annex 2 lit. b(ii):

The section on determining the “percentage price change of the underlying” contains an error and should be amended as follows:

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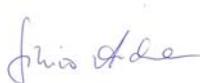
“to the relevant scenario determined in step (c) of Article 9”

Yours faithfully,

On behalf of the German Banking Industry Committee



Dr. Martin Lippert



Dr. Silvio Andrae