Final Report

Draft Regulatory Technical Standards amending Delegated Regulation on mapping of derivative transactions to risk categories, on supervisory delta formula for interest rate options and on determination of long or short positions in the Standardised Approach for Counterparty Credit Risk under Article 277(5) and Article 279a(3)(a) of Regulation (EU) No 575/2013 (Capital Requirements Regulation)

Contents

1. Executive Summary

Regulation (EU) 2024/1623 (CRR3) includes amendments to the EBA mandate under Article 279a(3)(a) of Regulation (EU) No 575/2013 (Capital Requirements Regulation – CRR), according to which the EBA shall specify, in accordance with international regulatory developments, not only the formula that institutions shall use to calculate the supervisory delta of interest rate options compatible with market conditions in which interest rates may be negative, but also the one for options mapped to the commodity risk categories compatible with market conditions in which commodity prices may be negative. The supervisory volatility suitable for those formulas should be specified as well.

The existing RTS on SA-CCR, which already specify the supervisory delta formula for interest rate options compatible with negative rates, should therefore be expanded to specify the formula that should be used to calculate the supervisory delta of commodity options, compatible with negative commodity prices (and the corresponding supervisory volatility). The legal deadline for the submission of the draft RTS is 10 July 2025.

The proposed supervisory delta formula suitable for commodity negative prices is as the one set out in Article 279a(1)(a) of the CRR, but it additionally includes a λ shift to the terms P and K to move them into positive territory when they are negative. The value of the λ shift is determined such that a certain threshold on the smallest (i.e. more negative) term between P and K is not crossed. The formula is applied at transaction level. This approach is in line with what the approach for interest rate options set out in the existing RTS.

The existing RTS on SA-CCR is also reviewed to align with the CRR text, as amended by the CRR3.

Next steps

The draft regulatory technical standards will be submitted to the Commission for endorsement following which they will be subject to scrutiny by the European Parliament and the Council before being published in the Official Journal of the European Union.

2. Background and rationale

1. In December 2019, the EBA finalised and published draft Regulatory Technical Standards (RTS) on the Standardised Approach for Counterparty Credit Risk (SA-CCR). The adopted RTS were published in the Official Journal in March 2021[1].

2. Those RTS specify key aspects of the SA-CCR, such as 1) the method for identifying the material risk drivers of derivative transactions on the basis of which the mapping to one or more of the risk categories is to be done; 2) the formula that institutions are to use to calculate the supervisory delta of options, when mapped to the interest rate risk category, which is compatible with negative interest rates; and 3) a method suitable for determining the direction of the position in a material risk driver.

3. The RTS have been developed by the EBA according to Article 277(5) and Article 279a(3) of Regulation (EU) No 575/2013 (Capital Requirements Regulation – CRR), as amended by Regulation (EU) 2019/876 (CRR2). In particular, Article 279a(3)(a) mandates the EBA to specify, in accordance with international regulatory developments, the formula that institutions shall use to calculate the supervisory delta of call and put options mapped to the interest rate risk category compatible with market conditions in which interest rates may be negative as well as the supervisory volatility that is suitable for that formula.

4. Regulation (EU) 2024/1623 (CRR3) includes amendments to the EBA mandate under Article 279a(3)(a). According to the amended legal text of Article 279a(3)(a), the EBA shall specify, in accordance with international regulatory developments, the formula that institutions shall use to calculate the supervisory delta of call and put options mapped to the interest rate risk or commodity risk categories compatible with market conditions in which interest rates or commodity prices may be negative as well as the supervisory volatility that is suitable for those formulas.

5. The existing RTS on SA-CCR should therefore be expanded to specify the formula that should be used to calculate the supervisory delta of commodity options, compatible with negative commodity prices (and the corresponding supervisory volatility). The legal deadline for the submission of the draft RTS is 10 July 2025.

6. In addition, the existing RTS on SA-CCR should be comprehensively reviewed to ensure that the text is still fit with the CRR text, as amended by the CRR3.

2.1 Supervisory delta formula for commodity risk category

7. The proposed approach for the specification of the supervisory delta formula suitable for commodity negative prices should be as close as possible to the one suitable for negative interest

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[1] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R0931

rates, as this latter approach is the result of a consultation process and it represents a methodology already known and used by institutions.

8. According to the RTS on SA-CCR (and in line with the Basel standards), the formula that should be used for options mapped to the interest rate risk category is the following:

$$\delta = \text{sign} \cdot \text{N} \left(\text{type} \cdot \frac{\ln\left(\frac{P + \lambda}{K + \lambda}\right) + 0.5 \cdot \sigma^2 \cdot T}{\sigma \cdot \sqrt{T}} \right)$$

where

$$\lambda = \max\left(threshold - \min(P, K), 0\right)$$

and

$$threshold = 0.10\%.$$

9. Such a formula is transaction-specific, i.e. it is determined at the level of every single option, and the supervisory volatility to be used is $\sigma = 50\%$ (i.e. the level set out in the Basel standards with no adjustment).

10. The consultation paper (CP) proposed to determine the λ shift to be used for commodity options using the same formula applied for negative interest rates, with the only amendment being a change in the threshold level. Three alternatives have been set out in the CP to select the adequate threshold level: EUR 0.1, EUR 1 and EUR 10. However, the feedback received highlighted that none of the three offered options would provide an adequate general solution for setting the threshold level in the context of commodity options. As part of such feedback, an alternative formulation of the λ shift has been proposed, which overcomes the identified issues and provides a general solution:

$$\lambda = \max\left(-(1 + threshold) \cdot \min(P, K), 0\right)$$

where

$$threshold = 0.10.$$

For the supervisory volatility to be used, the CP has proposed to maintain unchanged the levels set out in the CRR2 (which are the ones set out in the Basel standards), i.e. $\sigma = 150\%$ where the underlying instrument is electricity and $\sigma = 70\%$ for other commodities. Also in this case, the proposed approach is the same as the one specified for the interest rate options. Considering that no specific issues has been flagged with the proposed levels of the supervisory volatility, such levels have been maintained.

2.2   Other amendments to the existing RTS on SA-CCR

Article 4(4) of the RTS on SA-CCR references Article 325a of the CRR in order to identify institutions exempted from the FRTB-SA reporting requirements: "*4. Institutions that either meet the conditions set out in Article 94(1) of Regulation (EU) No 575/2013, or are exempted from the reporting requirement in accordance with Article 325a(1) of that Regulation, […]*".

The FRTB-SA will become capital requirements under the CRR3 and Article 325a is amended accordingly. Therefore, the wording of the first subparagraph of Article 4(4) of the RTS should be amended in line with the changes to Article 325a.

3. Draft regulatory technical standards

COMMISSION DELEGATED REGULATION (EU) …/…

of XXX

amending Commission Delegated Regulation (EU) 2021/931 with regard to regulatory technical standards specifying the method for identifying derivative transactions with one or more than one material risk driver for the purposes of Article 277(5), the formula for calculating the supervisory delta of call and put options mapped to the interest rate risk category and the method for determining whether a transaction is a long or short position in the primary risk driver or in the most material risk driver in the given risk category for the purposes of Article 279a(3)(a) and (b) in the standardised approach for counterparty credit risk

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to Regulation (EU) No 575/2013 of 26 June 2013 of the European Parliament and of the Council on prudential requirements for credit institutions and amending Regulation (EU) No 648/2012[2], and in particular Article 279a(3), third subparagraph, thereof,

Whereas:

(1)   Regulation (EU) 2024/1623 of the European Parliament and of the Council of 31 May 2024[3] amended Article 279a(3), point (a), of Regulation (EU) No 575/2013, to include the case in which the formula to be used for the calculation of the supervisory delta is to be applied to call and put options mapped to the commodity risk category, compatible with market conditions in which commodity prices may be negative, in addition to the formula for supervisory delta of call and put options mapped to the interest rate risk category, compatible with market conditions in which interest rates may be negative, as already specified in Commission Delegated Regulation (EU)

2021/931 of 1 March 2021[4]. Such formula is to be specified in accordance with international regulatory developments. According to the Standards published by the Basel Committee on Banking Supervision (BCBS), and in particular the Frequently Asked Questions n. 2 of paragraph CRE52.40, the supervisory delta for options, when the ratio between the underlying and strike prices is zero or negative, such that its natural logarithm cannot be computed, should be determined in accordance with a specific formula, in which a lambda (λ) shift is applied to both the underlying and strike prices of the option, to ensure that that the underlying and strike prices of the option are positive.

(2)   In line with the approach set out in Delegated Regulation (EU) 2021/931 for options mapped to the interest rate risk category, the λ shift should be large enough to enable institutions to calculate the supervisory delta of an option mapped to the commodity risk category in accordance with the formula laid down in Article 279a(1) of Regulation (EU) No 575/2013, but at the same time small enough not to introduce unnecessary bias in the outcome of the supervisory delta calculation.

(3)   In line with the approach set out in Delegated Regulation (EU) 2021/931 for options mapped to the interest rate risk category, the value of the supervisory volatility for put and call options in the commodity risk category as determined in the international standards adopted by the BCBS should be used, as it is deemed suitable for its use under Union law.

(4)   Delegated Regulation (EU) 2021/931 should be amended to adapt its text to the new wording of Regulation (EU) No 575/2013, as amended by Regulation (EU) 2024/1623.

(5)   Commission Delegated Regulation (EU) 2021/931 should therefore be amended accordingly.

(6)   This Regulation is based on the draft regulatory technical standards submitted to the Commission by the European Banking Authority.

(7)   The European Banking Authority has conducted open public consultations on the draft regulatory technical standards on which this Regulation is based, analysed the potential related costs and benefits and requested the advice of the Banking Stakeholder Group established in accordance with Article 37 of Regulation (EU) No 1093/2010 of the European Parliament and of the Council[5],

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[4]   Commission Delegated Regulation (EU) 2021/931 of 1 March 2021 supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards specifying the method for identifying derivative transactions with one or more than one material risk driver for the purposes of Article 277(5), the formula for calculating the supervisory delta of call and put options mapped to the interest rate risk category and the method for determining whether a transaction is a long or short position in the primary risk driver or in the most material risk driver in the given risk category for the purposes of Article 279a(3)(a) and (b) in the standardised approach for counterparty credit risk (OJ L 204, 10.6.2021, p. 7).

[5]   Regulation (EU) No 1093/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Banking Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/78/EC (OJ L 331, 15.12.2010, p. 12).

HAS ADOPTED THIS REGULATION:

Article 1

Commission Delegated Regulation (EU) 2021/931 is amended as follows:

(1)   in Article 4(4), the introductory wording is replaced by the following:

'Institutions that either meet the conditions set out in Article 94(1) of Regulation (EU) No 575/2013, or meet the conditions set out in Article 325a(1) of that Regulation, may identify the most material risk driver by applying the following steps at inception of the transaction, and then at least on a quarterly basis:'.

(2)   Article 5 is amended as follows:

    (a)   in paragraph 1, the introductory wording is replaced by the following:

        '1.   Institutions shall calculate the supervisory delta (δ) of call and put options, when mapped to the interest rate risk or the commodity risk categories, that is compatible with market conditions in which interest rates or commodity prices may be negative, as follows:';

    (b)   paragraph 2 is replaced by the following:

        '2.   For the purposes of paragraph 1, institutions shall calculate the shift (λ) for any call and put options as follows:

$$\lambda_j = \begin{cases} \max\{threshold_j - \min\{P_j, K_j\}, 0\} & \text{if option } j \text{ is mapped to the interest rate risk category;} \\[2mm] \max\{-(1 + threshold_j) \cdot \min\{P_j, K_j\}, 0\} & \text{if option } j \text{ is mapped to the commodity risk category.} \end{cases}$$

        where:

        P_j = the spot or forward price of the underlying instrument of the option j;

        K_j = the strike price of the option j;

$$threshold_j = \begin{cases} 0.10\%, & \text{if option } j \text{ is mapped to the interest rate risk category;} \\[2mm] 0.1, & \text{if option } j \text{ is mapped to the commodity risk category.} \end{cases}$$

    (c)   in paragraph 3, the Table is replaced by the following:

Table

Risk category	Underlying instrument	Supervisory volatility
Interest rate	All	50 %
Commodity	Electricity	150%
	Other commodities (excluding electricity)	70%

Article 2

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

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

Done at Brussels,

For the Commission
The President

4. Accompanying documents

4.1 Draft cost-benefit analysis / impact assessment

Article 279a(3)(a) of the CRR, as amended by the CRR3, requires the EBA to develop draft RTS to specify, in accordance with international regulatory developments, the formulas that institutions shall use to calculate the supervisory delta of call and put options mapped to the interest rate risk or commodity risk categories compatible with market conditions in which interest rates or commodity prices may be negative as well as the supervisory volatility that is suitable for those formula.

As per Article 10(1) of Regulation (EU) No 1093/2010 (EBA Regulation), any regulatory technical standards developed by the EBA shall be accompanied by an Impact Assessment (IA), which analyses 'the potential related costs and benefits'.

This section presents the cost-benefit analysis of the provisions included in the draft amending RTS. The analysis provides an overview of identified problems, the proposed options to address those problems and the costs and benefits of those options. Given the nature and the scope of the draft amending RTS, the IA is high-level and qualitative in nature.

A. Problem identification

In March 2014, the Basel Committee has published its final standard on the standardised approach for measuring counterparty credit risk exposures. The new Standardised Approach for Counterparty Credit Risk (SA-CCR) replaces all non-internal model approaches (i.e. the Current Exposure Method (CEM) and the Standardised Method).

The SA-CCR consists of two components: the replacement cost (RC) and the potential future exposure (PFE). An alpha factor is applied to the sum of these components to calculate the exposure at default (EAD).

As part of the calculation of PFE, banks need to apply a supervisory delta adjustment to the adjusted notional amount at trade-level to reflect the direction of the transaction (i.e. short or long) and its non-linearity. For options, the supervisory delta adjustment is based on the Black-Scholes option pricing model. The Black-Scholes model assumes that the underlying risk factor is positive. In particular, the supervisory delta formula contains the term $\ln(P/K)$, i.e. the natural logarithm of the ratio between the spot or forward price P of the underlying instrument of the option and the strike price K of the option. Given that the natural logarithm is only defined for values greater than zero, a negative P or K (e.g. negative commodity prices) would make the supervisory delta adjustment inoperable.

During the Covid-19 pandemic, some commodity prices went below zero for a certain time. In such cases, the supervisory delta adjustment could not be calculated. CRR3 introduces therefore the possibility to apply to commodity options a different treatment, as it is already the case for interest rate options.

For interest rate options, the EBA has delivered regulatory technical standards (as mandated under the CRR2), specifying the supervisory delta formula for interest rate options compatible with negative rates and the corresponding supervisory volatility suitable for such a formula. Those technical standards have been subsequently adopted by the European Commission and published on the Official Journal.

The CRR3 revision of Article 279a (including the revision of the RTS mandate) requires the EBA to review the already delivered and published RTS. The lack of such revision would result in a misalignment between the CRR3 and RTS.

B. Policy objectives

The specific objective of the draft amending RTS is to establish a harmonised methodology for computing the supervisory delta adjustment applied to options under the SA-CCR when commodity prices are negative. Operationally, this would provide institutions with a practical solution for computing the supervisory delta adjustment in a negative commodity prices environment.

Generally, the RTS aim to create a level playing field, promote convergence of institutions practices and enhance comparability of own funds requirements across the EU. Overall, the RTS are expected to promote the effective and efficient functioning of the EU banking sector.

C. Baseline scenario

In terms of regulatory environment, the baseline scenario assumes the entry into force of the CRR3. It is also expected that institutions are compliant with the key elements included in the existing RTS adopted under CRR2.

D. Options considered, Cost-Benefit Analysis and Preferred Options

This section presents the main policy options discussed during the development of the RTS, the costs and benefits of these options, as well as the preferred options included in the RTS.

Value of λ shift

Option 1a: Based on the formula $\max\left(threshold - \min(P,\ K), 0\right)$, where P is the spot or forward price of the underlying instrument of the option and K is the strike price of the option

Option 1b: Based on the formula $\max\left(-(1 + threshold) \cdot \min(P, K), 0\right)$, where P is the spot or forward price of the underlying instrument of the option and K is the strike price of the option

Option 1c: Based on an alternative methodology (e.g. market convention)

Option 1a provides for a mechanistic way that ensures that the supervisory delta formula will be workable and that the shift is the same across institutions for the same transactions. It is aligned with the guidance provided in the Basel FAQs on SA-CCR and with the methodology for interest rate options already set out in Commission Delegated Regulation (EU) 2021/931. This has the potential to reduce the compliance costs for institutions, which only need to extend to commodity options the already implemented methodology for interest rate options.

The respondent to the CP flagged that spot commodity prices, unlike interest rate, trade at prices at a range of magnitudes (Propane – 0.78 USD/gal, Crude Oil – 70 USD/bbl, Gold – 2,000 USD/oz), which combined with daily volatility determines the range of strikes for outstanding options. As a result, the formula under Option 1a which is based on a universal fixed threshold will not work across all commodities for any of the values proposed in the CP (EUR 0.1, EUR 1, EUR 10). They instead proposed setting λ for a transaction according to the formula under Option 1b, which serves the same goal but offsets the negative values via a multiplication rather than addition. This provides for a more general solution than Option 1a and is independent of the absolute value of the commodity prices.

Option 1c would require institutions to apply a new methodology (which may entail the risk that institutions set different values of λ for the same transactions, as it will be the case if the λ shift is determined using market convention), increasing the complexity of implementing the SA-CCR framework.

Hence, option 1b is preferred, with a threshold of 0.1.

Volatility adjustment

Option 2a: No adjustment to supervisory volatility

Option 2b: Adjustment to supervisory volatility

Despite option 2b could provide a technically more sound solution, option 2a represent a pragmatic approach, reducing the operational burden for institutions and avoiding additional complexity. Option 2b is also in line with the international standards, ensuring a global level playing field. The respondent to the CP was of the view that supervisory volatilities are not reflective of the current market environment implied volatilities from which the true delta of an option may be calculated; hence they supported the use of the implied volatilities in the determination of option deltas. While acknowledging remarks expressed by the respondent, the EBA is of the view that adjusting supervisory volatilities for commodity options only will create an inconsistency with the framework applied to interest rate options, where no adjustment was made.
Given that no other specific concerns have been raised with this approach, option 2a is retained.

4.2   Feedback on the public consultation

The EBA publicly consulted on the draft proposal contained in this paper.

The consultation period lasted for three months and ended on 14 March 2024. One [1] response was received, which was published on the EBA website.

This paper presents a summary of the key points and other comments arising from the consultation, the analysis and discussion triggered by these comments and the actions taken to address them if deemed necessary.

In case the respondent repeated its comments in the response to different questions, the comments, and EBA analysis are included in the section of this paper where EBA considers them most appropriate.

Changes to the draft RTS have been incorporated as a result of the response received during the public consultation.

Summary of key issues and the EBA's response

In relation to the proposed approach for adjusting the supervisory delta of commodity options to make it compatible with negative prices (i.e. to apply a λ shift, determined at transaction level, in both price and strike values), no specific issues have been raised. However, general remarks have been made around the extension of the application of the λ shift to all asset classes and different specification/application of the general supervisory delta formula.

In relation to the three options (EUR 0.1, EUR 1 or EUR 10) for the threshold in the proposed formula $\lambda = \max \{$threshold - $\min(P, K), 0\}$, the respondent remarked that none of the three offered options would provide an adequate general solution for setting the threshold level in the context of commodity options. In this respect, the EBA recognises that the alternative formulation of the λ shift proposed by the respondent (i.e. $\lambda = \max \{-1.1 * \min(P, K), 0\}$), provides a more general solution and should be retained.

The respondent expressed a general preference for using implied volatilities instead of supervisory ones. However, the EBA is of the view that, in line with international standards, supervisory volatilities should be used. In light of the fact that neither specific issues have been raised on the proposed approach for the supervisory volatility (i.e. maintain 150% for electricity and 70% for other commodities), nor alternative levels have been proposed, the proposed approach has been retained.

Summary of responses to the consultation and the EBA's analysis

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
General comments			
	The respondent expresses concern regarding the current SA-CCR calibration and the fragmentation of regulatory requirements pertaining to SA-CCR across jurisdictions. The respondent remarks the importance of performing a holistic review of the SA-CCR framework at international level to improve SA-CCR risk sensitivity and minimise the risk of market fragmentation.	Considerations on the current SA-CCR calibration or the fragmentation of SA-CCR implementation across jurisdictions are outside the scope of this regulatory product.	N/a.
Responses to questions in Consultation Paper EBA/CP/2023/40			
Question 1. Do you agree with the proposed approach for the supervisory delta of commodity options (i.e. to apply a λ shift, determined at transaction level, in both price and strike values)?	The respondent welcomes the application of deltas for options in scope of Article 279a(1)(a). However, the respondent remarks that negative values of the instrument or risk factor underlying an option contract can occur in other asset classes as well. For example, whenever an option contract references the difference between the values of two instruments or risk factors, the underlying spread of this option contract can be negative. Such option contracts are commonly traded in the over-the-counter derivatives market, including option contracts on the spread between two commodity prices and on the difference in performance across two equity indices. The respondent also brings to the attention of the EBA, that the US Agencies have proposed an extension of the λ shift to all asset	The EBA acknowledges the remarks expressed by the respondent around the extension of the application of the λ shift to all asset classes. However, the EBA recalls that the scope of the mandate is determined under the CRR, which requests the EBA to specify a formula for the supervisory delta of options compatible with market conditions in which interest rates or commodity prices may be negative. Therefore, the scope of any adjustment to the general supervisory delta formula for options (including the λ shift) is limited by the CRR to interest rate risk and commodity risk categories only.

In addition, the EBA considers any discussion around different specification and/or application of the | No amendments needed. |

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	classes, not only commodities. Therefore, the respondent recommends extending the application of λ shift to all asset classes. In addition, the respondent notes that under EU rules, options other than those in-scope of Article 279a(1)(a) would attract a +1 or -1 delta [see Article 279a(1)(c)], unlike in the Basel text where the supervisory Black-Scholes formula applies to all options [see CRE52.40]. The respondent believes that the CRR should, consistently with Basel, allow the use of calculated deltas for all options. On the other hand, the respondent notes that the Black-Scholes formula may be ill suited for some types of options. Therefore, the respondent advocates for the use of the actual Front Office deltas, or deltas derived from Front Office prices such as in the market risk framework (FRTB Alternative Standardised Approach) at a minimum where the Black-Scholes formula is unsuitable (while where the Black-Scholes formula is suitable, it should be using implied volatilities – see response to Q3). The respondent suggests the use of such internal practices, subject to a firm's internal model governance framework and supervisory oversight.	general supervisory delta formula for options outside the scope of this regulatory product.	
Question 2. Which one of the three options (option a: EUR 0.1, option b: EUR 1 or option c: EUR 10) do you think is more appropriate as a threshold?	The respondent remarks that spot commodities, unlike rates, trade at prices at a range of magnitudes (Propane – 0.78 USD/gal, Crude Oil – 70 USD/bbl, Gold – 2,000 USD/oz), which combined with daily volatility determines the range of strikes for outstanding options. Therefore, the respondent believes that none of the three offered options	The EBA acknowledges that none of the three offered options would provide an adequate general solution for setting the threshold level in the context of commodity options. In this respect, the EBA recognises that the alternative solution proposed by the respondent (i.e. setting λ for a transaction according to the formula λ = max {-1.1 * min (P, K), 0},	Modification to the λ formula, as proposed by the respondent (λ = max {-1.1 * min (P, K), 0}).

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Please provide the rationale for the chosen option.	would provide an adequate threshold. However, the respondent proposes an alternative to a fixed threshold value when calibrating the λ shift. The respondent proposes setting λ for a transaction according to the formula $\lambda = \max\{-1.1 * \min(P, K), 0\}$, where P is the spot price and K is the strike price. The purpose of multiplying $\min(P, K)$ by -1.1 is the same as that for adding 0.1% in case of interest rate derivatives. The respondent remarks that it is challenging to determine a universal additive offset value for all values of commodity reference type or other non-interest rate instrument – performing the offset via multiplication rather than addition provides a more proportionate solution.	where P is the spot price and K is the strike price) provides a more general solution to reach the same goal as the additive offset in the λ formula.	
Question 3. Do you agree with the proposed approach for the supervisory volatility (i.e. maintain 150% for electricity and 70% for other commodities)?	The respondent is of the view that supervisory volatilities are not reflective of the current market environment implied volatilities from which the true delta of an option may be calculated. Hence, the respondent believes that, instead of using supervisory volatilities in the determination of option deltas, the implied volatilities could be used. However, as expressed in the response to Q1, the preferred approach for the respondent would be to use deltas derived from the Front Office prices.	The EBA acknowledges the remarks expressed by the respondent around a general use of implied volatilities instead of supervisory ones. However, the EBA recalls that the use of supervisory volatilities is in line with international standards. In addition, as recalled above, the scope of the mandate is limited by the CRR to interest rate risk and commodity risk categories only. Therefore, for consistency of the overall framework, the EBA is of the view that the same approach, (i.e. the use of supervisory volatilities) should be used for all risk categories. In light of the fact that no specific issues have been raised on the proposed approach for options mapped to commodity risk, the proposed levels for setting the supervisory volatility of commodity options are retained.	No amendments needed.