

EBA/Op/2014/05

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30 June 2014

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## Technical advice

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On the prudential filter for fair value gains and losses arising from  
the institution's own credit risk related to derivative liabilities

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# 1. Executive summary

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## Reasons for publication

As publicly communicated by the EBA on 16 April 2014<sup>1</sup>, the EBA received a Call for Advice (CfA) by the Commission which seeks EBA's technical advice to assess the appropriateness of the application of Article 33(1)(c) of Regulation (EU) No 575/2013 of the Capital Requirements Regulation (CRR). The intention expressed by the EBA was to advise on the level of prudence of alternative methods of treating fair value gains and losses arising from an institution's own credit standing, as well as the reasons why these methods would be necessary.

Article 33(1)(c) of the CRR stipulates that institutions shall not include in any element of own funds, fair value gains and losses on derivative liabilities of the institution that result from changes in the own credit standing of the institution. Additionally, under Article 33(2) of the CRR, institutions shall not offset the fair value gains and losses arising from the institution's own credit risk with those arising from its counterparty credit risk.

Article 502 of the CRR states that the Commission shall review and report by 31 December 2014 on the application of Article 33(1)(c) and shall submit that report to the European Parliament and the Council, together with a legislative proposal if appropriate. As envisaged in Article 502, with respect to the potential deletion of the Article 33(1)(c) of the CRR and its potential application at the Union level, this review shall in particular ensure that sufficient safeguards are in place to ensure financial stability in all Member States.

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The requirements of Article 33(1)(c) of the CRR reflect the prudential concerns that an increase in an institution's own funds due to a deterioration of its own credit standing could appear as counterintuitive and might also undermine the quality and the loss-absorbency of own funds. This is because the own funds of an institution would increase when the risk of default of that institution increased. Therefore, under the CRR, institutions are required to exclude from own funds any gains and losses due to changes in own credit standing for both derivative liabilities and non-derivative liabilities.

As a reminder, under Article 64 of Directive 2006/48/EC (CRD III), institutions were not allowed to include in own funds any gains or losses on their liabilities measured at fair value that were due to changes in the institution's own credit standing, but there was no specific treatment for derivatives.

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<sup>1</sup> <http://www.eba.europa.eu/-/eba-updates-its-work-programme-for-2014>

Article 33(1)(c) of the CRR refers to the 'own credit standing of the institution' and it is understood that this term is narrower than the term 'institution's own credit risk' under Article 33(2). Own credit risk includes the consideration of the own credit standing of an institution as well as a number of other valuation inputs.

For accounting purposes, own credit risk encompasses 'Debit Valuation Adjustment' ('DVA'), which is an adjustment to the measurement of a derivative to reflect the default risk of the institution. 'CVA' is an adjustment to the measurement of a derivative so as to reflect the counterparty's default risk.

Due to the specificities of derivatives, the measurement of own credit risk of a derivative includes a higher level of complexity. This is due to the use of several valuation inputs (such as interest rates, the institution's own credit standing and other market factors that can affect the exposure value) and other assumptions when compared to the measurement of a non-derivative liability. As a result, the isolation of fair value gains and losses, which are only due to the changes in an institution's own credit standing, might be difficult. This raises prudential concerns over the consistent and robust application of the current requirements under the CRR.

In this regard, Basel III rules were changed in July 2012 to require for derivatives a full derecognition from own funds of all accounting valuation adjustments arising from the bank's own credit risk<sup>2</sup>. This was changed from the original Basel III requirements, which included similar requirements to the current Article 33(1)(c) of the CRR, as well as to the current requirements for non-derivatives under both the CRR and Basel III.

This advice provides a qualitative analysis of the challenges in applying the current Article 33(1)(c) of the CRR and the alternative methods of treating fair value gains and losses arising from the own credit standing of an institution (including the Basel III approach). The final part of the advice includes an overall assessment of the current challenges and the appropriateness of the possible alternative approaches. It also provides the EBA's considerations for addressing the prudential concerns.

To provide this advice, the consultative document which was published by the Basel Committee on Banking Supervision (BCBS) on the application of own credit risk adjustments to derivatives<sup>3</sup>, the existing best practices and industry analysis have been considered, and a brief outreach to some large EU institutions and professional associations was performed.

The analysis of the issues in the application of the current Article 33(1)(c) of the CRR highlighted the following.

- International Financial Reporting Standard (IFRS) 13 *Fair Value Measurements* does not prescribe the approach to be used when calculating own credit risk. The valuation practices for own credit risk are still evolving and there is, in some situations, no

<sup>2</sup> <http://www.bis.org/press/p120725b.htm>

<sup>3</sup> <http://www.bis.org/press/p120725b.htm>

consensus on the best approach to be applied; therefore different valuation approaches are currently used by institutions to measure own credit risk.

- Due to the specificities of measuring derivatives (including the estimated exposure mainly being influenced by the volatility of an underlying value; the several valuation inputs involved; and the netting with other exposures within a netting set), the measurement of own credit risk can be heavily reliant on the particular valuation method applied and the assumptions used by an institution, which could be different from one institution to another.
- One of the main conceptual concerns regarding the recognition of own credit risk in own funds is the uncertainty of its realisation. In addition, the appropriateness of the recognition and the measurement of any funding valuation adjustments is still under discussion, in particular defining the extent of the possible interaction between own credit risk and funding valuation adjustments.
- During the EBA's brief outreach, some respondents explained that they currently apply a full derecognition of own credit risk mainly due to the lack of clarity of the CRR text and its objective, and to be consistent with Basel III requirements.

Following the above, it is challenging for institutions to measure own credit risk robustly and, in addition, to isolate the changes in own credit risk, which are only due to the change in their own credit standing, in a sufficiently robust, consistent and cost-efficient manner.

## EBA's considerations

Several caveats need to be considered when reading this advice:

- the timeline between the acceptance by the EBA of the CfA (16 April) and the deadline (30 May) was very limited;
- DVA is a highly complex topic, for which some conceptual developments are still being developed and for which some experience still has to be gained by institutions and supervisors;
- the CfA mainly focuses on a qualitative analysis of the different possible methods under consideration as it was not possible to enter into either a more detailed or a quantitative analysis within the given timeframe.

The analysis of the alternative methods of treating fair value gains and losses arising from the own credit standing of an institution (including the Basel III approach) indicated that the challenges in the application of the current CRR requirements may be addressed to some extent. However, all the alternative methods have drawbacks, which are detailed below.

- The Basel approach (full deduction of own credit risk adjustment from capital at inception) ensures a more conservative outcome. As acknowledged by the BCBS when finalising its approach, this treatment however involves an effect on own funds at the inception of each derivative transaction and it implies a relatively higher impact for institutions with lower credit rating. This treatment could also be pro-cyclical, due to the fact that when there is a deterioration of the own credit standing of an institution, CET1 (Common Equity Tier 1) will be further impacted.
- The Basel approach has the merit of being the simplest approach to implement in an area which is complex to address, and for which developments are still ongoing and experience by institutions and supervisors still needs to be gained. Therefore, it seems premature to envisage implementing any other approach in a sufficiently consistent and robust manner. In addition, it ensures a level playing field at the international level.
- The other alternatives analysed did not sufficiently address the prudential concerns regarding the challenges in isolating the change in own credit risk only due to change in own credit standing, and some alternatives were conceptually not developed enough (and even less experienced in practice) to be able to conclude whether they would be preferable when compared to the current treatment under CRR.

**In conclusion, considering the challenges in the application of the current CRR requirements, the limitations in performing a thorough assessment of the alternatives and in the absence of strong evidence to support the feasibility of any alternative approach, the EBA would consider, as appropriate, not deviating from the prudential treatment which is currently applied at the international level under Basel III rules (full deduction of own credit risk). It seems premature to envisage implementing any other approach in a sufficiently consistent and robust manner at present.**

**Additionally, the CRR requirements could be refined to avoid any unintended divergence and different interpretations in practice, for example, making appropriate changes in the wording of Article 33(1)(c) of the CRR if the objective of the CRR text is to be aligned with Basel III.**

**The prudential requirements could possibly be revised in the future, if necessary, when there is a consensus on the current issues under debate and when there is further development and experience of the best practices for valuation.**

**In the meantime, a close monitoring of institutions' practices for measuring own credit risk, their practices related to the application of the current CRR requirement, as well as the evolution of the related adjustment within the calculation of CET1 might seem appropriate.**

## 2. Background and rationale

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1. As publicly communicated by the EBA on 16 April 2014<sup>4</sup>, the EBA received a CfA from the Commission, which seeks EBA's technical advice to assess the appropriateness of the application of Article 33(1)(c) of Regulation (EU) No 575/2013 of the CRR. The intention expressed by the EBA was to advise on the level of prudence of alternative methods to treat fair value gains and losses arising from an institution's own credit standing, as well as the reasons why these methods would be necessary.
2. The CfA requires the EBA to analyse the alternative methods of treating fair value gains and losses arising from the own credit standing of an institution. The EBA has also taken into account the consultative document which was published by the BCBS on the application of own credit risk adjustments to derivatives<sup>5</sup>.
3. Article 33(1)(c) of the CRR stipulates that institutions shall not include in any element of own funds, fair value gains and losses on derivative liabilities of the institution that result from changes in the own credit standing of the institution<sup>6</sup>. Additionally, under Article 33(2) of the CRR, institutions shall not offset the fair value gains and losses arising from the institution's own credit risk with those arising from its counterparty credit risk.
4. As a reminder, under Article 64 of Directive 2006/48/EC (CRD III), institutions were not allowed to include in own funds any gains or losses on their liabilities measured at fair value that were due to changes in the institution's own credit standing, but there was no specific treatment for derivatives.
5. When the CRR was published in the Official Journal on 26 June 2013, Article 33(1)(c) of the CRR stipulated that institutions shall not include in any element of own funds, all fair value gains and losses arising from the institution's own credit risk related to derivative liabilities. In November 2013, Article 33(1)(c) of the CRR was amended through a corrigendum and the amended text refers to consistent requirements with the Article 33(1)(b) of the CRR, which applies to liabilities measured at fair value, and it requires institutions not to include in any element of own funds any gains and losses that result from changes in the own credit standing of the institution. The CRR came into force on 1 January 2014.
6. In accordance with the third paragraph of Article 502 of the CRR, the Commission shall review and report by 31 December 2014 on the application of Article 33(1)(c) and shall submit that

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<sup>4</sup> <http://www.eba.europa.eu/-/eba-updates-its-work-programme-for-2014>

<sup>5</sup> <http://www.bis.org/press/p120725b.htm>

<sup>6</sup> Article 468(4) of the CRR contains transitional provisions for the application of Article 33(1)(c) of the CRR, where during the period from 1 January 2013 to 31 December 2017, institutions shall not include in their own funds the applicable percentage, as specified in Article 478 of the CRR, of the fair value gains and losses from derivative liabilities arising from changes in the own credit standing of the institution.

report to the European Parliament and the Council, together with a legislative proposal if appropriate. The fourth paragraph of this article also states that, with respect to the potential deletion of Article 33(1)(c) CRR and its potential application at the Union level, the review shall in particular ensure that sufficient safeguards are in place to ensure financial stability in all Member States.

7. The requirements of Article 33(1)(b) and (c) stem from the prudential concerns that an increase in an institution's own funds due to a deterioration of its own credit standing could appear as counterintuitive and it might undermine the quality and the loss-absorbency of own funds. This is because the own funds of an institution would increase when the risk of default of that institution increased. Therefore under the CRR, institutions are required for both non-derivative and derivative liabilities to exclude from own funds any gains and losses due to changes in their own credit standing.
8. However, due to the specificities of derivatives, the measurement of own credit risk in a derivative includes a higher level of complexity. This is due to the use of several valuation inputs (such as interest rates, the institution's own credit standing and other market factors that can affect the exposure value) and other assumptions when compared to the measurement of a non-derivative liability. As a result, the isolation of fair value gain and losses, which are only due to the changes in an institution's own credit standing, might be difficult. This raises prudential concerns over the consistent and robust application of the current requirements under Article 33(1)(c) of the CRR.
9. In this regard, Basel III rules were changed in July 2012 to require for derivatives a full derecognition from own funds of all accounting valuation adjustments arising from the bank's own credit risk<sup>7</sup>. This was changed from the original Basel III requirements which included similar requirements to the current Article 33(1)(c) of the CRR, as well as to the current requirements for non-derivatives under both the CRR and Basel III.
10. It also needs to be mentioned that the current practice applied by some institutions is full derecognition of own credit risk mainly due to the lack of clarity of the CRR text and its objective, and to be consistent with Basel III requirements.
11. Therefore, this advice discusses the challenges in the application of the current Article 33(1)(c) of the CRR and other alternative methods of treating fair value gains or losses arising from the institution's own credit standing, including the Basel III approach, to assess whether an alternative prudential treatment could address the above mentioned concerns considering both the benefits and the drawbacks an alternative might entail.

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<sup>7</sup> <http://www.bis.org/press/p120725b.htm>



### 3. Scope

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12. Article 33(1)(c) of the CRR requires institutions to exclude from any element of own funds fair value gains and losses on derivative liabilities of the institution that result from changes in the own credit standing of the institution.
13. Article 33(1)(c) of the CRR refers to the ‘own credit standing of the institution’ and it is understood that this term is narrower than the term ‘institution’s own credit risk’ under Article 33(2). Own credit risk includes the consideration of the own credit standing of an institution as well as a number of other valuation inputs, such as interest rates. Additionally, in this advice, the term ‘institution’s own creditworthiness’, which is commonly used in practice, is considered to be identical to the term ‘institution’s own credit standing’.
14. Additionally, Article 33(1)(c) of the CRR refers to own credit standing related to derivative liabilities rather than own credit standing related to derivative transactions. Considering that in a derivative transaction the exposure can switch between counterparties over the life of the derivative, and a borrower could become a lender and vice versa, own credit risk is embedded in all derivative exposures (although it could be negligible in some cases). Therefore, in preparing this advice, Article 33(1)(c) of the CRR is understood to refer to all derivative exposures, irrespective of the measurement of their exposure at a specific point in time (derivative asset or liability).
15. For accounting purposes, own credit risk encompasses the term ‘Debit Valuation Adjustment’ (‘DVA’), which according to the BCBS<sup>8</sup> and the International Valuation Standards Council (IVSC<sup>9</sup>) is understood to be the difference between the value of the derivative, assuming the institution is default-risk free, and the value of the derivative reflecting the default risk of the institution. ‘CVA’ refers to the adjustment to the measurement of a derivative which reflects the counterparty’s default risk.

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<sup>8</sup> <http://www.bis.org/publ/bcbs214.htm>

<sup>9</sup> <http://www.ivsc.org/sites/default/files/IVSC%20CVA%20-DVA%20%20ED.pdf>

## 4. Analysis

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### 4.1 Introduction

16. The analysis is structured in three parts. The first part of the analysis (section 4.2) includes the consideration of the challenges in measuring own credit risk, hence the issues with implementing the current CRR requirements. In addition, it includes a discussion on the accounting developments, the conceptual issues in recognising own credit risk and the challenges in the measurement of own credit risk of derivatives. The second part of the analysis (section 4.3) includes the consideration of possible alternative methods for treating fair value gains and losses arising from an institution's own credit standing; the third part of the analysis (section 4.4) includes an overall assessment of the current challenges and the appropriateness of the possible alternative approaches. It also provides the EBA's view on possible ways to address the prudential concerns under these alternatives.

17. The input for performing the analysis was the existing prudential treatment of own credit risk under Basel III, the existing best practices and industry analysis, as well as the feedback received from a brief outreach to some large institutions and professional associations.

### 4.2 Analysis of challenges in the application of current Article 33(1)(c) of the CRR

#### 4.2.1 Changes in the accounting requirements drive the development of practices for measuring own credit risk

18. Under the CRR rules, there are no prudential rules for institutions on how to measure own credit risk. Own credit risk measurement is performed on the basis of the principles in the accounting framework.

19. The analysis in this section is highly relevant to institutions using IFRS, while for institutions that apply national generally accepted accounting principles (GAAPs) the measurement basis of derivative transactions may vary. Derivatives are measured using fair value accounting principles as described under IFRS 13 *Fair Value Measurements*. For institutions that are not applying IFRS (or similar standards), own credit risk measurement will depend on whether derivatives are measured at fair value under these standards and, if so, whether own credit risk is required to be included in the valuation of the derivative. In this case, for those institutions including the own credit risk in the fair value of the derivative, some of the observations of this analysis could also be relevant to them.

20. Under International Accounting Standard (IAS) 39 *Financial Instruments: Recognition and Measurement* derivative assets and liabilities are measured at fair value at initial recognition,

with subsequent changes in fair value recognised in profit or loss<sup>10</sup>. (This excludes instruments designated as hedging instruments in cash flow hedges where changes in fair value are recognised in other comprehensive income.)<sup>11</sup>

21. IFRS 13 is mandatory to be applied for annual periods beginning on or after 1 January 2013<sup>12</sup> and it includes the principles for the measurement of fair value. IFRS 13 does not prescribe the particular valuation method that should be used for each instrument, but it does provide a framework of accounting principles that entities shall use to measure fair value. For that reason, entities are required to use judgement and to tailor the use of fair value accounting to the particular circumstances and the characteristics of each instrument.

22. Based on industry analysis published on institutions' application of IFRS, not all institutions incorporated own credit risk before the effective application of IFRS 13 (1 January 2013). From 1 January 2013, all institutions are required to take into account own credit risk in fair value measurements, where relevant and applicable.

23. Some of the requirements which were introduced in IFRS 13 could have a particular impact on the measurement of own credit risk. More specifically:

- The definition of fair value has changed and IFRS 13 describes it as the price that would be received to sell an asset, or the price that would be paid to transfer a liability in an orderly transaction between market participants on the measurement date<sup>13</sup>. Therefore, fair value is defined as an 'exit' price and for a liability particularly, it uses the notion of transferring the liability rather than settling it. The Standard also explicitly mentions that the fair value measurement is performed from the perspective of a market participant that holds the asset or owes the liability<sup>14</sup>, instead of from the perspective of the entity.
- A fair value measurement assumes that the transaction to sell the asset or transfer the liability takes place either in the principal market for the asset or liability, or in the absence of a principal market, in the most advantageous market for the asset or liability<sup>15</sup>. However, the Standard requires that an entity needs to have access to the principal or the most advantageous market and taking into account that not all entities have access to the same principal and/or advantageous markets, the selection of the market will be from an entity's perspective<sup>16</sup>, and a difference in fair value measurements for the same exposure

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<sup>10</sup> Paragraphs 9 and 43 of IAS 39

<sup>11</sup> Paragraph 95 of IAS 39

<sup>12</sup> Commission Regulation (EU) No 1255/2012 of 11 December 2012 amending Regulation (EC) No 1126/2008 adopting certain international accounting standards in accordance with Regulation (EC) No 1606/2002 of the European Parliament and of the Council as regards IAS 12, IFRS 1 and 13, and Interpretation 20 of the International Financial Reporting Interpretations Committee

<sup>13</sup> Paragraph 9 of IFRS 13

<sup>14</sup> Paragraph 2 of IFRS 13

<sup>15</sup> Paragraph 16 of IFRS 13

<sup>16</sup> Paragraph 19 of IFRS 13

could exist between two entities which have access to different principal and/or advantageous markets.

- The Standard explicitly states that the fair value of a liability reflects the effect of non-performance risk, with non-performance risk including, but not limited to, an entity's own credit risk<sup>17</sup>. Therefore, own credit risk needs to be reflected in the fair value of a liability.
- IFRS 13 also requires entities to measure fair value using valuation techniques which are appropriate in the circumstances and for which sufficient data is available to measure fair value by maximising the use of relevant observable input data and minimising the use of unobservable inputs<sup>18</sup>.
- The Standard introduced an optional exception when certain criteria are met. Under this exception, a group of financial assets and liabilities could be measured on the basis of the price that would be received to sell a net asset position, or to transfer a net liability position for the particular risk exposure that is managed on a net basis for the exposure to market or credit risks<sup>19</sup>.

**The issues mentioned above indicate that currently there is no prescribed approach for the calculation of own credit risk under IFRS, and therefore there is no prescribed valuation method to be used. The valuation practices for own credit risk are still evolving and in some situations there is no consensus on the best approach to be used, while the valuation of a financial instrument could vary according to each entity's valuation model. This could result in a divergence in the valuation of the same financial instrument (and therefore of the embedded own credit risk) among different entities with a similar level of own credit risk. These arguments on the current evolution of the valuation practices for own credit risk, and the existence of different methods for the valuation of own credit risk have also been expressed by respondents to EBA's brief outreach and in different industry reports.**

#### **4.2.2 Conceptual issues on the measurement of own credit risk from derivatives adversely impact the development of a common consensus**

24. According to analyses of the industry practices for measuring own credit risk, own credit risk was not incorporated in fair value measurements for some institutions largely because of the following reasons: (i) the counterintuitive effect of recording a gain when the credit standing of an institution deteriorates; (ii) uncertainty on the ability to realise the gain; (iii) potential negative impact on hedging own credit risk, for example, by issuing self-referencing instruments such as Credit Default Swaps (CDS); (iv) not explicitly required by accounting standards before IFRS 13; and (v), negligible amounts. Based on these considerations, the uncertainty around the ability to realise the gain is one of the main reasons for not measuring

<sup>17</sup> Paragraph 42 of IFRS 13

<sup>18</sup> Paragraph 61 of IFRS 13

<sup>19</sup> Paragraphs 48 and 49 of IFRS 13

own credit risk, as also explained in the IVSC's Exposure Draft on Credit and Debit Valuation Adjustments<sup>20</sup>.

25. More specifically, in this Exposure Draft, the IVSC mentions that realisation of own credit risk could perhaps be achieved by terminating the contract earlier (or novation to another counterparty), or assessing the claim value in the event of default, or hedging using, for example, the CDS of correlated entities. However, there is no strong evidence on the use of any of these alternatives that ensures the realisation of own credit risk. Additionally, determining the appropriate fair value (exit price) of a derivative and therefore of the own credit risk embedded in it might include a significant degree of judgement, because in many cases derivative instruments are not transferred after inception, and market observable data for their measurement might not be available.
26. Additionally, since the financial crisis, there have been several discussions on whether funding costs are properly reflected in the measurement of derivative instruments. The concept of the 'funding valuation adjustment' ('FVA') has been used to address the adjustment of the measurement of a derivative due to the cost of funding an uncollateralised exposure by the entity. However, currently, there is no consensus on whether this type of adjustment should be incorporated in the fair value and how to measure it. One of the arguments on the recognition of the existence of FVA is that funding cost could be in many cases entity-specific information and available only to the entity. Therefore, including this type of adjustment in the valuation of a derivative might be inconsistent with IFRS 13, which requires the valuation to be performed from a market participant's perspective.
27. Besides the arguments on the consideration of these adjustments in the fair value, the funding costs could also be considered to be related to the own credit standing of an entity. Considering that the FVA would be a component of the fair value measurement of a derivative, to some extent there could be instances of double-counting between the FVA and the DVA. If this is the case, any overlap between these adjustments would need to be appropriately defined and addressed to ensure that ultimately the appropriate adjustment is performed under Article 33(1)(c) of the CRR. However, in the absence of consensus on the topic, it is not currently possible to assess reliably the possible implications, if any, from the recognition of this notion in the fair value measurement.

### Summary of accounting developments and conceptual issues

#### Accounting developments under IFRS

IFRS 13 provides a principle-based framework for fair value accounting

Revised definition of fair value as an 'exit' price from a market participant's perspective

Own credit risk required to be included in the fair value measurement

<sup>20</sup> <http://www.ivsc.org/sites/default/files/IVSC%20CVA%20-DVA%20%20ED.pdf>

### Summary of accounting developments and conceptual issues

	Maximum use of market observable data in the fair value measurement
	Different fair value measurements between entities depending on the market they have access to
	Netting of exposures to credit and market risks allowed under certain criteria
<b>Conceptual issues and institutions' reporting practices</b>	Not all institutions recognised own credit risk before IFRS 13
	Among others, mainly due to uncertainty on the realisation of own credit risk gains
	No strong evidence on the realisation of own credit risk
	No consensus on the inclusion in fair value of the concept of FVA and its measurement
	FVA could overlap with own credit risk (DVA) leading to double-counting

#### 4.2.3 Specificities of derivatives create challenges in measuring the own credit risk robustly, consistently and cost-efficiently

28. As explained previously, there is no prescribed approach under IFRS for measuring the own credit risk for derivatives, but rather principles to be used.

29. A simplified calculation formula which is commonly used by entities for the estimation of own credit risk could be as follows.

$$DVA = LGD_O * \sum_0^T PD_{O,t} * Expected\ Negative\ Exposure_t$$

This is similar to the commonly used formula for the estimation of counterparty credit risk which could be written for simplicity as

$$CVA = LGD_C * \sum_0^T PD_{C,t} * Expected\ Positive\ Exposure_t$$

with LGD being the loss in the event of default of the institution (O) or the counterparty (C);  $PD_t$  being the probability of default of the institution (O) or the counterparty (C) at a specific point in time (t); and *Positive* or *Negative Exposure<sub>t</sub>* being the exposure from the derivative transaction at that time (t) for a transaction that expires in time (T).

**Essentially, the main inputs in the estimation of own credit risk in a derivative are the estimated future exposure, the discount rate and the institution's own credit standing. The following paragraphs explain why own credit risk estimation depends on other factors besides the institution's own credit standing.**

30. Derivatives have some particular features which differentiates them from non-derivative liabilities and they need to be taken into account when measuring the own credit risk from these exposures. As also explained also in the Exposure Draft of the IVSC on Credit and Debit Valuation Adjustments, some of the main features could be described as follows.

- The exposure to a derivative can potentially be either positive or negative (asset or liability) over the life of the transaction, in contrast to a debt instrument for example, where the exposure is unilateral and one counterparty is the borrower and the other is the lender.
- In a derivative transaction the current exposure on inception is usually low, if not zero. However, over the life of the instrument the exposure can change quickly and significantly. A change in the exposure would be driven mainly by the volatility of the underlying variable of the derivative transaction. Therefore, to estimate the exposure to a derivative transaction, it is common for entities that have more sophisticated technological capabilities to model the potential exposure using modelling techniques (such as Monte Carlo<sup>21</sup>). Other methods commonly used are the semi-analytical methods<sup>22</sup> and the calculation of current market value plus an entity-specific add-on related to the particular terms of the transaction.
- The estimation of the exposure might usually take into account any collateral requirements (such as 'Credit Support Annex' ('CSA')) as well as any netting agreements between counterparties (such as the 'ISDA Master Agreement'), which allow for the transactions under the agreement to be netted and in the event of default of a counterparty of the transaction, the net exposure would be the claim of the other counterparty. Therefore, the valuation of the exposure to a derivative can be non-derivative specific, since in many cases it is performed on a net basis, rather than on an instrument basis.
- When a new derivative transaction is added to an existing netting set, the effect on own credit risk (as well as on counterparty risk) could be either an increase or a decrease of the own credit risk on a netting set basis, depending on how the particular transaction interacts with the existing types of exposures within the existing netting set. Additionally, in many cases portfolios of trades are non-static, with new trades being added to existing ones within the context of a constantly changing market.
- The measurement of counterparty credit risk could be performed on a unilateral or bilateral basis. The unilateral approach considers that only one of the counterparties is exposed to the other counterparty's credit risk. The bilateral approach considers that both counterparties are potentially exposed to each other. In the latter, the estimation of

<sup>21</sup> Monte Carlo simulations identify multiple different paths for the value of a derivative over its life, assign a probability to each path and identify the expected average path.

<sup>22</sup> Semi-analytical methods identify specific risk factors that may impact the expected exposures over the life of the trade and an estimate is performed on the evolution of these factors.

counterparty and own credit risk could be performed under independent scenarios for the event of default of either counterparty, or under scenarios which simultaneously consider the possible evolution of the risk of default for either counterparty.

- It is also assumed that default occurs when predetermined events occur (such as the downgrade of one counterparty), besides the non-fulfilment of the contractual obligations (such as payments), which would be the case for a non-derivative liability. The estimation of the occurrence of these events is complex and involves extensive use of assumptions.
- With regards to the probability of default (PD), entities use a variety of approaches to estimate it with some using historical approaches and others market approaches, which could include market observable data as well as proxy data, when the former are not directly available. This estimation could also involve an extensive use of assumptions by entities.
- In many cases, loss in the event of default (LGD) derives from the available estimated data and depending, among other factors, on the type of the counterparty. This data could be derived from credit rating agencies, for example.

31. From the EBA's brief outreach to the industry, respondents measure own credit risk considering the existing netting and collateral agreements, with some of them using more advanced methods for the estimation of the future exposure and using their own credit spreads (for instance from CDS) to measure their own credit standing.

32. From the analysis above, and according to current practices of institutions for measuring own credit risk, the measurement of own credit risk depends on the level of sophistication of an entity, the availability of resources of the entity, the business model applied and the assumptions used. In more detail, a higher level of sophistication allows entities to use more complex valuation techniques for modelling credit risk from derivatives. The development of these techniques would require the investment of available resources in technology and expertise. Additionally, depending on the business model and the risk management practices applied (for example, the volume of transactions, the type of transactions, the credit quality of counterparties, the existence of netting agreements and/ or collateral requirements), an entity could be particularly interested in developing more sophisticated valuation methods of own credit risk. Additionally, market data might not be available in all cases, and when valuation techniques are used, entities would possibly need to make use of assumptions.

**Therefore, considering the different valuation inputs involved in the measurement of own credit risk, and in the absence of a consistent best practice for this measurement, it could be challenging for entities not only to measure own credit risk robustly, but also to isolate the changes in own credit risk which are only due to the change in their own credit standing. In addition to this concern, it is also questionable whether there is a sufficiently robust valuation method of own credit risk which could be applied consistently and in a cost-efficient manner.**



### Summary of the main challenges of own credit risk measurement of derivatives

<b>Derivatives' features considered in valuation</b>	Estimated exposure is mainly driven by the volatility of the underlying value of derivative
	The incremental change of own credit risk when a new trade is added to a netting set could be either positive or negative
	Modelling techniques commonly used to estimate exposure depend on institution's business model and resources
	Market observable data is not always available –use of assumptions is necessary
	Several valuation inputs are needed for the measurement of own credit risk
	Collateral and netting agreements within exposure estimation: entity-specific valuation
<b>Drivers of own credit risk measurement at the entity-level</b>	Level of sophistication of institution
	Available resources to be invested
	Assumptions and valuation methods used
	Business model and risk management practices applied

#### 4.2.4 Assessment of the current treatment under Article 33(1)(c) of the CRR

33.The previous analysis considers the challenges stemming from the relevant accounting developments, the current conceptual issues under discussion and the specificities of derivatives. To summarise, these include the absence of a consensus on the most appropriate valuation approach of own credit risk to be applied, the uncertainty over the realisation of gains related to own credit risk and the several valuation inputs involved in the measurement of own credit risk which make it difficult to isolate the changes in own credit risk which are only due to the changes in an institution's own credit standing. The following paragraphs explain and assess the challenges in applying the current requirements under Article 33(1)(c) of the CRR.

34.Article 33(1)(c) of the CRR requires a similar treatment of both derivative and non-derivative liabilities. Subsequently, **own credit risk would be adjusted to neutralise in CET1 any changes in own credit risk due to changes in the institution's credit standing, but changes in own credit risk due to changes in other factors would be considered (included in CET1)**. This approach would require an institution to estimate own credit risk by using its credit standing at the time of the inception of the trade and neutralising in CET1 any change in own credit risk due to changes in own credit standing. Therefore, for prudential purposes, own credit risk

calculated for accounting purposes would be replaced by own credit risk calculated under regulatory rules. The calculation could be as follows.

$$DVA_{adjustment} = \sum_{i=1}^{trades} [DVA_i(t, s_{it}) - DVA_i(t, s_{i0})]$$

In which for each valuation date ( $t$ ) the DVA of each transaction ( $i$ ) (*i.e.*  $DVA_i$ ) is calculated using the current credit spread ( $s_{it}$ ) and the inception date credit spread ( $s_{i0}$ ), with  $DVA_i$  being the netting set's DVA at time ( $t$ ).

35. The following arguments could be made regarding this approach.

- From a conceptual point of view, this approach addresses the prudential objective of the isolation of the change in the institution's own credit standing and is consistent with the prudential treatment of non-derivative liabilities. It may also address some of the disadvantages that other alternatives might entail, for example, changes in own credit standing being isolated from other changes in own credit risk; no initial impact of removing own credit risk from CET1 at trade inception; less adverse impact on institutions of lower credit rating; and possibly no adverse impact on risk management behaviour (see section 4.3 for a more detailed explanation).
- However, the practical application of these requirements might be challenging in dynamic netting sets, which include trades of different inception dates. More specifically, in these cases, own credit risk would have to be recalculated retrospectively each time a new trade is added to an existing netting set, and the value of own credit risk at each point in time would have to be allocated appropriately to the individual trades of this netting set. Therefore, the consistent and robust application of this approach would also depend on the appropriateness of the allocation method of own credit risk to the individual trades within netting sets.
- Additionally, this approach seems to be reliant on the appropriateness of the initial measurement of own credit risk, which would also depend on the valuation method applied and the robustness of the input data.
- Furthermore, this approach might not be consistent with the risk management practices of an institution and its business model, since it would not take into account the possible interrelation between counterparty credit risk and own credit risk within a netting set. However, offsetting counterparty credit risk with own credit risk is not permitted under Article 33(2) of the CRR.

36. The current approach under Article 33(1)(c) of the CRR was one of the alternative prudential approaches discussed in the BCBS consultative document (December 2011) before the revision of the Basel III rules, which requires the deduction of all accounting valuation adjustments related to the own credit risk of derivatives. The BCBS rejected this alternative because it seemed complex, it could entail significant operational requirements (storing credit spread curves for each trade at the inception date) and it introduced the new concept of using own

credit risk for regulatory purposes. Additionally, the appropriateness of this approach would depend on the details of the allocation method of own credit risk in netting sets, which was not defined at the time. Indeed, the allocation method of own credit risk in netting sets would be key in ensuring that own credit risk is properly reflected in each trade according to the terms of the trade and its impact on the net exposure.

37. It should also be mentioned that during the EBA's brief outreach, several respondents explained that they currently apply a full derecognition of own credit risk (rather than to derecognise only the changes in their own credit standing), which may be attributed to a lack of clarity in the CRR requirements and their objective, and also to be consistent with Basel III requirements.

38. Considering the challenges in applying the current CRR requirements in a consistent and robust manner, other possible alternative approaches are analysed in the following section, which consider both the positive and negative aspects of each one.

<b>Arguments in favour of limiting the exclusion to own credit standing</b>	<b>Arguments against limiting the exclusion to own credit standing</b>
Changes in own credit risk (other than own credit standing) will be recognised in CET1	Capital filter methodology will depend on diverse valuation models, assumptions and availability of observable market data
Avoids derecognition of own credit risk initially when there has been no impact on CET1	Complex
Avoids being more punitive to institutions with lower credit rating	Concerns over representativeness, appropriateness and prudence of the allocation method of own credit risk in netting sets
Possibly no adverse impact on risk management behaviour	Does not reflect risk management practices and business model (netting of CVA and DVA)
Consistent with the prudential treatment of non-derivative liabilities under CRR and Basel III	

## 4.3 Analysis of alternative approaches

39. This section includes an analysis of possible alternative approaches to the current CRR requirement under Article 33(1)(c) of the CRR. It includes a description of each alternative and a qualitative assessment of the possible benefits and drawbacks of each one. The identification of alternatives is based on the Basel III work on own credit risk requirements, the common practices applied by institutions (using industry surveys) and the input received from a brief outreach performed to the industry.

40. The BCBS performed a public consultation on the regulatory treatment of valuation adjustments to derivative liabilities in December 2011<sup>23</sup>. The public consultation included the discussion of a baseline scenario (removing all adjustments stemming from own credit risk from CET1), but also three alternative methods which would not require the deduction of own credit risk on trade inception (one being the treatment envisaged in Article 33(1)(c) of the CRR as discussed in the previous section). After the consultation, paragraph 75 of Basel III was amended to make specific reference to own credit risk from derivative liabilities and to require an institution to exclude from CET1 all accounting valuation adjustments arising from own credit risk (both at inception and subsequently<sup>24</sup>).

41. The BCBS considered this amendment to be the most prudent approach on the basis that valuation adjustments to derivative liabilities raise a wide range of prudential concerns and that, at the time, it was unfeasible to implement any alternative approach in a consistent and sufficiently robust manner. These alternatives seemed complex, lacked conservatism or relied too heavily on modelling assumptions, while the baseline option was a simple and transparent method.

- Full deduction of accounting valuation adjustments of own credit risk from CET1 (the BCBS baseline scenario).

42. This approach is required under the current Basel III rules. Under this approach, at each reporting date, the full amount of own credit risk for derivatives should be deducted in the calculation of CET1, by deducting the spread premium over the risk-free rate for derivatives. In effect, this requires institutions to value their derivatives for CET1 purposes as if they were risk free, and deduct at inception the spread premium and afterwards, deduct for example the unrealised gains when the credit standing of the institution deteriorates. The following aspects could be noted on this approach.

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<sup>23</sup> <http://www.bis.org/press/p120725b.htm>

<sup>24</sup> Similarly to Article 33(2) of the CRR, Basel III rules prohibit the offsetting between valuation adjustments arising from the bank's own credit risk and those arising from its counterparties' credit risk.

- As the BCBS mentions, this option is generally more conservative than the initial requirement of paragraph 75 of Basel III<sup>25</sup>, as it requires the deduction of the institution's own credit risk from CET1 at trade inception ('all accounting valuation adjustments').
- Under this approach, CET1 will not increase when an institution's own credit standing deteriorates, and therefore these gains will not undermine the quality of capital and its loss-absorbency. As a result, it could address the concern of the capital being increased when the credit quality of the institution deteriorates.
- This approach avoids the possible increase in systemic risk in the banking system that could occur if institutions hedge own credit risk.
- This approach is both more transparent and simpler to implement than the other approaches discussed, since it avoids a reliance on the valuation technique applied and the assumptions used. Therefore, this approach is not dependent on the issue of limited observable market data (for the realisation of gains and losses occurring from changes in own credit risk), as well as on the difficulty of isolating the impact of the changes in an institution's own credit standing (from the impact of other valuation inputs included in the measurement of own credit risk).
- This approach could align the CRR with the requirements of Basel III and therefore enable a level playing field.

43. Besides the arguments in favour of a full deduction of own credit risk as explained above, there could be concerns over this approach which are, more specifically, as follows.

- It could be argued that this approach leads to a 'one approach fits all' treatment of own credit risk. As explained by constituents in the BCBS public consultation, this approach does not take into account the diversity in the business models and the risk management practices applied by institutions, and may not provide incentives for institutions to improve their valuation framework. For example, own credit risk might be managed on a net basis with own credit risk being offset against the estimated counterparty credit risk for risk management purposes (bilateral methods). However, this argument could also be applied to the current CRR approach (Article 33(2)).
- As also mentioned by some respondents to the BCBS consultation, the full deduction of own credit risk could be more punitive to institutions with lower credit rating. These types of institutions might experience a relatively larger impact on their capital because the deduction of own credit risk is proportionally larger than that of institutions with a higher credit standing. Additionally, this approach could be considered to be pro-cyclical because the capital impact from the initial deduction of own credit risk will be lower when the credit standing of an institution is high. The worse an institution's own credit standing

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<sup>25</sup> Derecognition in the calculation of CET1 of all unrealised gains and losses that have resulted from changes in the fair value of liabilities due to changes in the bank's own credit risk, rather than all valuation adjustments.

becomes, the more the CET1 will be adversely affected, and the credit standing of the institution could further deteriorate.

- Another argument against this approach could be that, although the initial recognition of own credit risk on the inception of a trade might not impact CET1, there will be derecognition from CET1 of own credit risk for prudential purposes.
- Additionally, the full deduction of own credit risk of derivative liabilities under Basel III is inconsistent with the treatment of non-derivative liabilities under the Basel III prudential rules (as well as the CRR rules).
- This approach ignores the ongoing debates regarding the appropriateness of the valuation approaches used (for example, identification and measurement of any funding valuation adjustment in the valuation or the ability to realise own credit risk gains and losses).
- Additionally, the full deduction of own credit risk could undermine risk management behaviour, as mentioned by some respondents to the BCBS consultation. More specifically, an institution which has an uncollateralised derivative with an expected negative exposure (i.e. liability) will need to deduct on trade inception the own credit risk adjustment. However, the institution may decide to avoid this deduction by signing a collateral agreement in which it will only be required to post collateral, and not to receive any (such as 'one-way CSA'). However, this approach would be less optimal from a funding perspective, because the institution will not receive any collateral when there is a positive expected exposure, which, in this case would improve its liquidity position.

**Overall, when compared to the current CRR approach, the approach under the Basel III rules could be both more prudent and less reliant on the assumptions used and the valuation technique applied.**

#### Arguments in favour of a full deduction of own credit risk

The most prudent approach (highest charge and addresses the counterintuitive concern of increasing CET1 when credit standing deteriorates)

Simple

Transparent

Capital filter methodology will not depend on diverse valuation models, assumptions and

#### Arguments against a full deduction of own credit risk

'One-size-fits-all' approach without reflecting risk management practices, the business model and possibility of adverse impact on risk management behaviour

More punitive to institutions with lower credit rating

Could be pro-cyclical

Decrease of own funds on initial recognition of derivative transactions

### Arguments in favour of a full deduction of own credit risk

### Arguments against a full deduction of own credit risk

availability of observable market data

No need to isolate the impact of the changes in own credit standing from other valuation inputs

Inconsistent with prudential treatment of non-derivative liabilities under CRR and Basel III

Consistent with the CRR approach to the extent that changes in own credit standing are neutralised

Ignores issues under debate (FVA, realisation of own credit risk)

#### ▪ Recognition of the initial DVA assuming a linear decay (the BCBS alternative)

44. This approach would require an initial full recognition of the own credit risk of derivatives, and subsequently this amount would be reduced until the trade reaches maturity (similar to depreciation). Therefore, on trade inception, the incremental own credit risk added to a netting set is calculated. After trade inception, own credit risk under accounting rules would be replaced by the amount of own credit risk adjusted (reduced) for the amount of linear decay. The calculation could be as follows.

$$DVA_{adjustment} = \max(0, \sum_{i=0}^{trades} DVA_{inception} \frac{\text{remaining time until maturity}}{\text{initial time until maturity}})$$

- The BCBS rejected this approach because it seemed complex (regarding the operational requirements for storing the own credit risk for each trade, on trade inception, until the maturity of the trade), and it introduced a new concept of own credit risk for regulatory purposes. Additionally, the pattern of reduction of own credit risk over the life of the transaction (which was linear) was deemed to be neither representative nor conservative in all cases. Indeed, a linear decay might not be representative of the change in own credit risk during the life of a derivative, as it would result in adjustments to CET1 even if all the market factors (valuation inputs) did not change. This approach might be less prudent than the full deduction of own credit risk, because the initial own credit risk would be recognised in CET1 and afterwards it would only be reduced (until the maturity of the transaction) to reflect the passage of time. All other sources of own credit risk changes would be derecognised from CET1.
- In addition, this treatment might not be consistent with the risk management practices of an institution and its business model, since it would not take into account how own credit risk is managed and the relationship between counterparty credit risk and own credit risk within a netting set.
- When compared to the current CRR approach, this alternative seems to achieve the prudential objective being the isolation of the change in the institution's own credit standing and it is less reliant on the applied valuation technique and the assumptions used in the estimation of own credit risk.

- This alternative is also inconsistent with the treatment of non-derivative liabilities under prudential rules (both Basel III and the CRR).
- Besides the above considerations, this approach could address some current challenges, such as the difficulty in isolating the changes in own credit standing in the measurement of the changes of own credit risk, the initial impact on CET1 at inception and the more punitive treatment of institutions with lower credit rating.

Arguments in favour of linear decay	Arguments against linear decay
Avoids being more punitive to institutions with lower credit rating	Complex
Avoids initial derecognition of own credit risk when there has been no impact on CET1	Concerns over representativeness and prudence of the use of linear decay
No need to isolate the impact of the changes in own credit standing from other valuation inputs	Inconsistent with risk management practices and the business model
Consistent with the CRR approach to the extent that changes in own credit standing are neutralised	Inconsistent with the prudential treatment of non-derivative liabilities under CRR and Basel III

▪ Adjustment based on the liquidation claim and balance-sheet value (the BCBS alternative)

45. This approach considers the terms of the derivative transactions and, if necessary, an institution's CET1 would be adjusted to reflect the claim of the institution's counterparty in insolvency. If the claim cannot be measured with certainty, then the claim would be the maximum claim that could be made regarding the derivative. This approach would be applied to both derivative assets and liabilities, and aims to reflect in CET1 the available protection in the event of an institution's insolvency. The institution would be required to compare the current value of the derivative on the balance sheet to the claim of its counterparty in insolvency under the terms of the derivative to adjust CET1 for any positive difference.

- The BCBS rejected this approach on the basis of concerns that institutions are often not in a position to accurately determine the amount of a claim (referred to as the 'close-out' amount). Indeed, as also explained in the IVSC Exposure Draft on Credit and Debit Valuation Adjustments, the practices for determining close-out claims are diverse and there is currently no consensus on the best practice to be applied. The IVSC discussed possible methods for using close-out values, but there is no one method that is sufficiently robust and this area is the subject of extensive research (related to possible amendments of the ISDA or similar netting agreements).



- Compared to the other alternatives, this alternative depends on how the close-out value is measured and it was defined in less detail than the other BCBS alternatives. Additionally, this approach does not have the drawbacks of the other methods regarding the application of an appropriate pattern for the decay of own credit risk or the allocation of own credit risk in a netting set. When compared to the current CRR approach, this alternative seems to achieve the prudential objective of isolating the change in the institution's own credit standing, but is inconsistent with the treatment of non-derivative liabilities under the prudential rules (both Basel III and the CRR). As also mentioned above, these arguments do not take into account the robustness of the method for the estimation of the close-out claim amount, which would be important in assessing the appropriateness of the approach.
- Besides the above considerations, this approach could address some challenges, such as the initial impact on CET1 at inception and the inconsistency with the risk management practices of an institution and its business model.
- It could also be argued that, under this approach, the issues of the diversity in valuation methodologies and data robustness might be addressed to some extent, although the challenge might lie in estimating the close-out value as explained above. This approach was also mentioned during the EBA's brief outreach, as an approach which, if it was sufficiently developed, could provide a practical solution to the current challenges.

#### Arguments in favour of a liquidation claim

#### Arguments against a liquidation claim

Avoids being more punitive to institutions with lower credit rating

Less developed alternative

Avoids derecognition of own credit risk initially when there has been no impact on CET1

Complexity and robustness will depend on the valuation method of the close-out value

Consistent with risk management practices and business model

Inconsistent with the prudential treatment of non-derivative liabilities under CRR and Basel III

Consistent with the CRR approach to the extent that changes in own credit standing are neutralised

#### ▪ Other possible alternative approaches of own credit risk

46. In the responses to the BCBS Consultation Paper there was no consensus regarding an appropriate methodology or prudential treatment, besides the fact that in many cases respondents disapproved of the BCBS proposal for full deduction on the basis of being unnecessarily prudent and inconsistent with the treatment of non-derivative liabilities. Some constituents commented on the BCBS Consultation Paper on alternative methods for treating

own credit risk besides the ones discussed above. The main alternatives proposed are described in the following paragraphs.

- Some constituents supported the netting of counterparty credit risk (CVA) and own credit risk (DVA) within a netting set on the basis that this would be consistent with the business model of an institution and the risk management practices applied. Additionally, some constituents proposed that CET1 should be adjusted if there is a positive change in the net positive amount (if any) of the counterparty credit risk and own credit risk (DVA higher than the CVA), between the inception and the current reporting dates. However, these approaches did not sufficiently address the prudential considerations and the practical challenges regarding the appropriateness of the valuation method used and the availability of input data (credit spread information). Additionally, under Article 33(2) of the CRR, offsetting between own credit risk and counterparty credit risk is not permitted.
- Some constituents also commented that due to the diversity of the business models and risk management practices, there should not be a prescribed approach to the measurement and treatment of own credit risk. For instance, some constituents proposed that each institution should be allowed to agree with the national competent authority on the most appropriate treatment of own credit risk, taking into account the specificities of the institution's business model and risk management practices. Although this option could address the issue of applying prudential rules which are relevant to the particular circumstances, it might limit the comparability and consistency of the treatment of institutions at the EU level, which might be also relevant to institutions which operate across Member States.
- Some constituents also suggested the use of a representative credit spread curve in the valuation of own credit risk, which would allow an institution's own credit risk to be separated from that of the industry's (i.e. a market-index spread). Under this approach, for the measurement of own credit risk, the systemic risk of the industry would be used and, therefore, own funds would not be affected (the effect would be neutralised in CET1) by changes in an institution's own credit standing which are driven by factors other than those affecting the whole industry ('idiosyncratic factors').

$$DVA_{adjustment} = \sum_{i=0}^{counterparties} [DVA_i(s_t, Exposure_t) - DVA_i(s_R, Exposure_t)]$$

For each valuation date ( $t$ ) the total  $DVA_i$  across all netting sets is calculated using the valuation model applied by an entity, and the expected negative  $Exposure_t$  is discounted under the current credit spread ( $s_t$ ) and the representative credit spread ( $s_R$ ).

This alternative might address some of the prudential considerations and the practical challenges of the other proposals and perhaps it deserves further investigation to ensure that an appropriate representative credit spread can address the current challenges as well as the limitations of the other alternatives.

- Additionally, some others suggested discounting the net of counterparty credit risk and own credit risk, by using a discount rate that reflects the funding cost of an institution to mirror the impact of a change in own credit risk in the funding profile of an institution, and therefore in its ability to fulfil its obligations. As with other alternatives, this alternative did not sufficiently address the prudential considerations and the practical challenges regarding the appropriateness of the valuation method used and the availability of input data. Considering that data for the funding cost of an institution might not be available to market participants, this approach could appear to be inconsistent with IFRS 13, which requires the estimation of fair value from a market participant's perspective.
- To address the fact that smaller or medium-sized institutions might have a lower level of sophistication compared to large institutions, constituents proposed that own credit risk should only be fully deducted from CET1 in cases when an institution is unable to measure reliably the change in own credit risk due to the change in own credit standing or when it has a negligible activity in derivatives (i.e. to apply the current rule of Basel III in these cases). In all other cases, an institution should be able to reliably measure this amount. However, similar to the above considerations, this approach does not seem to address the prudential concerns and the challenges in applying the current CRR requirements.
- It was also suggested that it might be more appropriate for the BCBS to retain its previous treatment (consistent with the CRR) because there is no common consensus on the best practices in the valuation of own credit risk. Additionally, there are some concepts relevant to derivatives, such as FVA and close-out valuation methods which are subject to debates and research, and therefore are still being developed. Until a common consensus is reached on these concepts it might be more appropriate for the prudential treatment to remain as it is, with the objective of being revised when there is sufficient progress and consensus on these issues.
- Most respondents to the EBA's brief outreach also suggested that appropriate time should be allocated to a thorough assessment of the possible alternative approaches. Without ignoring the limitations of the EBA's brief outreach, there was no evidence of support by the majority of respondents of any particular alternative approach.

## 4.4 Conclusion

47. The analysis of the current issues in the application of Article 33(1)(c) of the CRR, as well as the assessment of the possible alternative approaches highlighted the complexity in measuring the impact of the change in an institution's own credit standing, the fact that research around own credit risk valuation is still evolving, as well as the diversity in institutions' practices with regards to the valuation of own credit risk. Whether the measurement of own credit risk is appropriate, to a large extent, would be determined by the available resources of an institution, its level of sophistication, the particular valuation modelling techniques and assumptions applied as well as the business model and risk management practices of the institution.
48. It should be mentioned that IFRS 13 was not effective until 1 January 2013 and therefore before it came into effect, fewer institutions took own credit risk into account in the fair value measurement of derivatives, and the valuation methods of own credit risk were less developed than the current situation. The prudential treatment of own credit risk should ensure that the capital available to depositors and senior creditors is of high-quality and loss-absorbent, and that it is not increased when an institution's own credit standing deteriorates.
49. Indeed, on a conceptual basis, the current requirement of the CRR, where only the changes in own credit risk of a derivative which are due to changes in the institution's own credit standing are neutralised in own funds, addresses the prudential concerns over the loss-absorbency of these items. This approach could also avoid the possible impact on CET1 of the initial recognition of own credit risk, and possibly will not have an adverse impact on risk management behaviour. However, the previous analysis indicated that the practical application of these requirements in a consistent and sufficiently robust manner could be challenging.
50. The alternative approaches analysed in this advice could address some of the challenges faced when applying the current CRR requirements, but the analysis highlighted that all the alternatives have drawbacks. This is also due to the evolving practices around measuring own credit risk from derivatives and the fact that no consensus has been reached on some related issues (for example, on the close-out valuation or the funding valuation adjustment).
51. The BCBS requires full deduction of own credit risk of derivative liabilities, which ensures a more conservative outcome and it is the simplest approach to implement. In addition, it ensures a level playing field at the international level. However, it could be seen as punitive, and there could be potential for a relatively higher impact on some institutions, such as institutions with lower credit rating. This approach could also be pro-cyclical, due to the fact that when there is a deterioration of the own credit standing of an institution, CET1 will be impacted further.
52. Considering the challenges in applying the current CRR requirements, the limitations in performing a thorough assessment of the alternatives and in the absence of strong evidence to

support the feasibility of any alternative approach, the EBA would consider as appropriate not deviating from the prudential treatment which is currently applied at the international level under Basel III rules (full deduction of own credit risk). The main advantage of this approach is that it is a simple response to an issue which is complex to address. If necessary, the prudential requirements could be revised in the future when there is a consensus on the current issues under debate and when there is further development and experience of the best practices for valuation.

53. Additionally, the CRR requirements could be refined to avoid any unintended divergence and different interpretation in practice, for example, appropriate changes to the wording of Article 33(1)(c) of the CRR, if the objective of the CRR text is to be aligned with Basel III. From the feedback received during the brief outreach, it is also the EBA's understanding that some institutions have applied the CRR in a similar way to the Basel III text (full derecognition), which can be attributed to the lack of clarity in the CRR requirements and their objective, and to be consistent with Basel III requirements.
54. In the meantime, a close monitoring of the institutions' practices for measuring own credit risk, their practices related to the application of the current CRR requirement, as well as of the evolution of the related adjustment within the calculation of CET1 might be appropriate.
55. If an alternative (other than the full deduction) were to be applied, some of the proposed alternatives might be worth exploring further, since they appear to address many of the drawbacks of the other methods and at the same time, they could satisfy the prudential concerns. More specifically, the alternative approaches of using either the close-out values or a representative credit spread for the industry to isolate the impact of the change in own credit standing deserves additional consideration in the future, once these approaches are sufficiently developed. In addition, future development of consensus on whether any funding valuation adjustment should be incorporated in the fair value and how this should be measured, might deserve further consideration.

## Annex

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For ease of reference, the following paragraphs outline the articles of the CRR which are relevant to the scope of this advice, as well as the relevant Basel III rules.

- Article 33(1)(c) of the CRR

‘Institutions shall not include the following items in any element of own funds: (...) (c) fair value gains and losses on derivative liabilities of the institution that result from changes in the own credit standing of the institution’.

- Article 468 of the CRR

‘By way of derogation from Article 33(1)(c), during the period from 1 January 2013 to 31 December 2017, institutions shall not include in their own funds the applicable percentage, as specified in Article 478, of the fair value gains and losses from derivative liabilities arising from changes in the own credit standing of the institution. The percentage applied to fair value losses arising from changes in the own credit standing of the institution shall not exceed the percentage applied to fair value gains arising from changes in the own credit standing of the institution’.

- Article 502 of the CRR

‘By 31 December 2014, the Commission shall review, and report on, the application of Article 33(1)(c) and shall submit that report to the European Parliament and the Council, together with a legislative proposal, if appropriate. With respect to the potential deletion of Article 33(1)(c) and its potential application at the Union level, the review shall in particular ensure that sufficient safeguards are in place to ensure financial stability in all Member States’.

- Basel III rules (paragraph 75)

‘Derecognition in the calculation of Common Equity Tier 1, of all unrealised gains and losses that have resulted from changes in the fair value of liabilities that are due to changes in the bank's own credit risk. In addition, with regard to derivative liabilities, derecognition of all accounting valuation adjustments arising from the bank's own credit risk. The offsetting between valuation adjustments arising from the bank's own credit risk and those arising from its counterparties' credit risk is not allowed.’