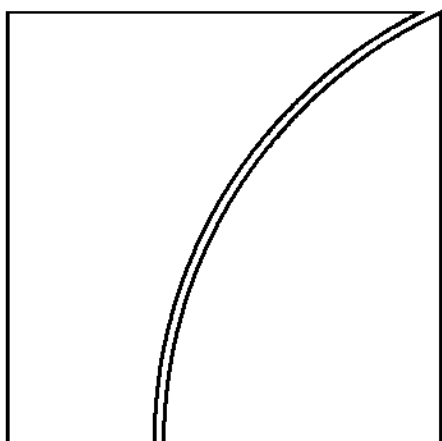# Basel Committee
on Banking Supervision

Basel III counterparty credit risk - Frequently asked questions

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Basel III counterparty credit risk - Frequently asked questions

The Basel Committee on Banking Supervision has received a number of interpretation questions related to the 16 December 2010 publication of the Basel III regulatory frameworks for capital and liquidity and the 13 January 2011 press release on the loss absorbency of capital at the point of non-viability. To help ensure a consistent global implementation of Basel III, the Committee has agreed to periodically review frequently asked questions and publish answers along with any technical elaboration of the rules text and interpretative guidance that may be necessary.

This document sets out the first set of frequently asked questions that relate to the counterparty credit risk sections of the Basel III rules text.[1] The questions and answers are grouped according to the relevant paragraphs of the rules text.

I.   Default counterparty credit risk charge

1.   With respect to identifying eligible hedges to the CVA risk capital charge, the Basel III provisions state that "tranched or nth-to-default CDSs are not eligible CVA hedges" (Basel III document, para 99 - inserting para 103 in Annex 4 of the Basel framework). Can the Basel Committee confirm that this does not refer to tranched CDS referencing a firm's actual counterparty exposures and refers only to tranched index CDS hedges?

Also, can the Committee clarify that Risk Protection Agreements, credit linked notes (CLN), short bond positions as credit valuation adjustment (CVA) hedges, and First Loss on single or baskets of entities can be included as eligible hedges?

All tranched or nth-to-default credit default swaps (CDS) are not eligible. In particular, credit linked notes and first loss are also not eligible. Single name short bond positions may be eligible hedges if the basis risk is captured. When further clarifications are needed, banks should consult with supervisors.

(a)   Effective Expected Positive Exposure (EPE) with stressed parameters

2.   To determine the counterparty credit risk capital charge as defined in the Basel III document, para 99 - inserting para 105 in Annex 4 of the Basel framework, banks must use as the default risk capital charge the greater of the portfolio-level capital charge (excluding the CVA charge as per para 96- 104), based on Effective EPE using current market data, and the portfolio-level capital charge based on Effective EPE using a stress calibration. The stress calibration should be a single consistent stress calibration for the whole portfolio of counterparties. The greater of Effective EPE using current market data and the stress calibration should not be applied on a counterparty by counterparty basis, but on a total portfolio level. We seek clarity on:

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[1]   The Basel III document is available at www.bis.org/publ/bcbs189.pdf.

- **How often is Effective EPE using current market data to be compared with Effective EPE using a stress calibration? and**

- **How this requirement is to be applied to the use test in the context of credit risk management and CVA (eg can a multiplier to the Effective EPE be used between comparisons)?**

The frequency of calculation should be discussed with your national supervisor.

The use test only applies to the Effective EPE calculated using current market data.

3. **The Basel III standards (Basel III document, para 98) introduce amendments to Annex 4, para 61 of the Basel II framework,[2] indicating that when an Effective EPE model is calibrated using historic market data, the bank must employ current market data to compute current exposures and that alternatively, market implied data may be used to estimate parameters of the model.**

   We seek confirmation that banks that use market implied data do not need to employ current market data to compute current exposures for either normal or stressed EPE, but can instead rely respectively on market implied and stressed market implied calibrations.

This will depend on the specifics of the modelling framework, but current exposure should be based on current market valuations. However, in any case, current exposure has to be based on current market data, be they directly observed or implied by other observable prices which also need to be as of the valuation date.

4. **From the Basel III document, para 99 - introducing para 100 in Annex 4 of the Basel II framework, our understanding is that the periods involved in the calculation of stressed Effective EPE and the CVA charge, according to para 100 (ii), are as follows:**

- **A period of stress to the credit default spreads of a bank's counterparties. The length of this period is not defined (in the revision to paragraph 61 of Annex 4);**

- **A three-year period containing period (1). This three-year period is used for calibration when calculating stressed Effective EPE;**

- **The one-year period of most severe stress to credit spreads within period (2). This one-year period is used when calculating stressed VaR, as described in new paragraph 100 (ii) in Annex 4. In general, period (3) will be different from the one-year period used to calculate stressed VaR, as described in paragraph 718 (Lxxvi) (i) in the Revisions to the Basel II Market Risk Framework. The difference is due to period (3) being a period of stress to credit spreads, whereas the Market Risk one-year period is a period of stress to the bank's portfolio and therefore to all types of market risk factor that affect the portfolio.**

- **Please confirm our understanding of the above.**

Yes, this is correct.

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[2] The Basel II framework is available at www.bis.org/publ/bcbs128.htm.

The one-year period of stress used for the stressed CVA VaR calculation is the most severe year within the three-year period used for the stressed Effective EPE calculation. This one-year period may, and will probably, be different to the one-year period used for market risk calculations.

5.   Our assumption from para 98 of the Basel III document, which revises para 61 of the Basel framework, is that the stressed three year data period will be centred on the credit spread stress point, ie there will be equal history used before and after that point. Where the stress period occurs in the current three year data set, a separate stress data set would only be required once the stress point is more than 18 months in the past, ie before that the stress and current period will be the same.

Please confirm this assumption.

There is no explicit requirement that the three-year data period needs to be centred on the credit spread stress period. The determination and review of the stress period should be discussed with your national supervisor.

(b)   Collateralised counterparties and margin period of risk

6.   Our reading of para 103 of the Basel III document, revising para 41 (i) of the Basel framework, is that the margin period of risk is netting set dependent and not on an aggregated basis across a counterparty. The rationale is that different netting sets may contain very different transactions and impact different markets, so this level of granularity is appropriate.

The margin period of risk (MPOR) applies to a netting set. This extends only to a counterparty if all transactions with this counterparty are in one margined netting set.

7.   Our interpretation of para 103 of the Basel III document, revising para 41 (i) of the Basel framework, is that where there is illiquidity of transactions or collateral, our understanding is that the margin period of risk immediately changes, as opposed to the criteria for number of trades in a netting set or collateral dispute which has a lag effect. Please confirm this is the intention.

That is correct.

8.   Para 103 of the Basel III document revises para 41 (i) of the Basel framework. Where the margin period of risk is increased above the minimum, for instance due to the inclusion of an illiquid trade, when the Expected Exposure is calculated should the margin period of risk be reduced to the minimum for tenors beyond the expected expiry of the event (the expected maturity of the illiquid trade, in this example).

The extension of the margin period of risk (MPOR) is ruled by market liquidity considerations. That means liquidation of respective positions might take more time than the standard MPOR. In very rare cases market liquidity horizons are as long as the maturity of these positions.

9.   The Basel III standards introduce a qualitative requirement indicating that probability of default (PD) estimates for highly leveraged counterparties should reflect the performance of their assets based on a stress period

(Basel III document, para 112, which introduces a new para 415(i) in the Basel framework). We seek clarity on:

- **How highly leveraged counterparties are to be defined (eg will non-financial entities be included in the definition);**

- **How PDs of highly leveraged non-financial counterparties are to be estimated if there are no underlying traded assets or other assets with observable prices.**

(1)   Para 112 is intended for hedge funds or any other equivalently highly leveraged counterparties that are financial entities.

(2)   The new para 415 (i) introduced in the Basel framework is elaborating on the sentence in para 415 that states "…a bank may take into account borrower characteristics that are reflective of the borrower's vulnerability to adverse economic conditions or unexpected events…". This means that in the case of highly leveraged counterparties where there is likely a significant vulnerability to market risk, the bank must assess the potential impact on the counterparty's ability to perform that arises from "periods of stressed volatilities" when assigning a rating and corresponding PD to that counterparty under the IRB framework.

10.   The Basel III standards include an amendment to the Basel II standards that implements the supervisory haircuts for non-cash OTC collateral (Basel III document, para 108).

We seek clarity on how the FX haircut is to be applied for mixed currency exposures.

The FX haircut should be applied to each element of collateral that is provided in a different currency to the exposure.

11.   With regard to para 111 of the Basel III document: Does the prohibition to recognise re-securitisations as financial collateral also apply to repo-style transactions in the trading book? Paragraph 703 of the Basel framework says that: "In the trading book, for repo-style transactions, all instruments, which are included in the trading book, may be used as eligible collateral." This seems to include re-securitisations.

Re-securitisations are not eligible financial collateral for repo-style transactions in the trading book.

12.   With respect to firms that use both IMM and CEM approaches in capitalising counterparty credit risk, can the BCBS provide clarity on how collateral posted by a counterparty should be allocated across IMM and CEM netting sets belonging to that counterparty?

Firstly, by applying two different methods, the original netting set is split into two new netting sets. In the standardised approach, collateral enters into the CEM, whereas in IRB it enters into the LGD calculation. Assuming that the IMM is calculated by using the Shortcut Method of Basel III, collateral also enters directly at exposure level (for both, held and posted). The bank needs to split the available collateral into two separate parts, one dedicated to IMM and the other dedicated to CEM. No double-counting is allowed. Currently, there is no rule on how to split the collateral.

II.   Credit Valuation Adjustment (CVA) risk capital charge

13.   Can the BCBS clarify whether the 1.06 scaling factor applied to risk weighted assets for credit risk (paragraph 14 of the Introduction of Basel II Comprehensive Version – June 2006) will apply to the new CVA RWA category? Our expectation is that the calculation of CVA RWA is a market risk calculation and the 1.06 scaling factor should not be applied.

The 1.06 scaling factor does not apply.

The CVA volatility formula multiplied with the factor 3 (under the quantitative standards described in paragraph 718(Lxxvi)) produces a capital number directly, rather than an RWA. Multiplying the CVA volatility charge by 12.5 to get an RWA equivalent would then not involve the 1.06 scalar.

14.   The revised CCR rules in the Basel III document include a number of areas that have not previously received regulatory scrutiny. Does the Basel Committee consider that supervisory approvals will be required for Basel III, specifically in the areas of:

- **Proxy models in respect of CDS spread used where no direct CDS available;**

- **Applicability of index hedges to obtain the base 50% offset of the new CVA charge;**

- **If the basis risk requirement for index hedges is sufficient to satisfy the supervisor, will this automatically enable a 100% offset or is it intended to be a sliding scale between 50% and 100%;**

- **Overall system and process infrastructure to deliver the Basel III changes, even if covered by existing approved models and processes;**

- **Choice of stress periods to ensure industry consistency. In this regard, for VaR calculation purposes how should the one year period within the three year stress period be identified;**

- **The fundamental review of the Trading Book will include further analysis of the new CVA volatility charge. Is there any indication as to implementation date and, in the meantime, should CVA market risk sensitivities be included in the firm's VAR calculation.**

The use of an advanced or standardised CVA risk capital charge method depends on whether banks have existing regulatory approvals for both IMM and specific risk VaR model. Supervisors will review each element of banks' CVA risk capital charge framework based on each national supervisor's normal supervisory review process.

(a)   Standardised CVA capital charge

15.   Para 99 of the Basel III document, inserting para 104 in Annex 4 of the Basel framework, states that in the case of index CDSs, the following restrictions apply: 'Mi is the effective maturity of the transactions with counterparty 'i'. For IMM-banks, Mi is to be calculated as per Annex 4, para 38 of the Basel Accord. For non-IMM banks, Mi is the notional weighted average maturity as referred to in the third bullet point of para 320'. The introduction to para 320 of the Basel II document includes in it a cap which means that M will not be greater than 5 years.

> **Can the BCBS provide clarity on whether this cap still applies for the purpose of calculating Mi above?**

For CVA purposes, the 5-year cap of the effective maturity will not be applied. This applies to all transactions with the counterparty, not only to index CDSs.

Maturity will be capped at the longest contractual remaining maturity in the netting set.

16. **Para 104 inserted in Annex 4 of the Basel framework (para 99 of the Basel III document) talks about effective maturity (bullet 7) at a counterparty level. In rolling up EM from netting sets to counterparty, do we apply the 1 year floor first and then do a weighted average by notional, or do we calculate the weighted average by notional at counterparty level and then apply the floor?**

The 1-year floor applies at a netting set level.

If there is more than one netting set to the same counterparty, an effective maturity (M) should be determined separately for each netting set, the EAD of each netting set should be discounted according to its individual maturity and the quantities M x EAD should be summed.

17. **Question on new para 104 inserted in Annex 4 of the Basel framework (para 99 of the Basel III document): If a bank has more than one CDS contract on the same counterparty, the instructions for the standardised CVA charge demand a different discounting than in the case of several index-CDS. For single-name CDS, each contract gets discounted using its individual maturity and the quantities M x B are to be summed. In contrast, for index-CDS, the full notional (summed over all index contracts) must be discounted using the average maturity. Is there a reason for this difference in the treatment of single-name vs index hedges?**

For index-CDS, the same treatment should be applied as described for single-name CDS. That is, each index contract gets discounted using its individual maturity and the quantities M x B are to be added.

(b)   Advanced CVA capital charge

18. **Para 99 of the Basel III document, introducing para 98 in Annex 4 of the Basel framework, permits the use of proxy CDS spreads. As the majority of banks have portfolios that extend well beyond the scope of bond issuers, proxying a CDS spread will be the norm rather than the exception. We consider this approach to be acceptable given an appropriate model. Is this correct?**

Yes, that is correct. To the extent that single name CDS spread data is not available, banks should use a proxy spread, the methodology for determining the proxy being part of the approved Internal Model for specific interest rate risk.

19. **For banks using the short cut method for collateralised OTC derivatives, under the advanced CVA risk capital charge the Effective EPE is set to a maturity equal to the maximum of (i) half of the longest maturity occurring in the netting set and (ii) the notional weighted average maturity of all transactions inside the netting set. We assume that this maturity is applied only to the CVA risk capital calculation and not to the calculation of Effective EPE itself under the short cut method.**

(a) **Please confirm whether this is the case (in reference to para 99 of the Basel III document, introducing the new para 99 in Annex 4 of the Basel framework).**

(b) **Please also confirm if an acceptable alternative to this approach is to use the Standardised CVA charge for CEM exposures, even for IMM banks using the Advanced Method for EPE exposures.**

(a)   Correct. The new para 99 in Annex 4 refers to a maturity that is only applied to the CVA risk capital calculation. It has nothing to do with the Effective EPE calculation for the short cut method.

(b)   This is not an acceptable alternative. Firms should use the EAD produced for the purposes of default risk capital.

For clarity, para 99 stipulates that banks using the short cut method for collateralised OTC derivatives must compute the CVA risk capital charge based on the advanced CVA risk capital charge. Further, banks with IMM approval for the majority of their businesses, but which use CEM (Current Exposure Method) or SM (Standardised Method) for certain smaller portfolios, and which have approval to use the market risk internal models approach for the specific interest rate risk of bonds, will include these non-IMM netting sets into the CVA risk capital charge, according to the advanced CVA method, unless the national supervisor decides that paragraph 104 in Annex 4 (for standardised CVA risk capital charge) should apply for these portfolios.

20. **The Basel standards, for the purpose of capitalising the risk of CVA charges (para 99 of the Basel III document), introduces a new section VII to Annex 4 of the Basel II framework (paras 97 to 105 under Annex 4). The new paragraph 100 in Annex 4 requires a period of stress for credit spread parameters to be used in determining future counterparty EE profiles under the stressed VaR capital component of the advanced CVA risk capital charge.**

We seek confirmation that the credit spread of the counterparty input into the CVA and regulatory CS01 formulae (ie 's_i') is not impacted by this. That is, the s_i inputs remain the same for both the VaR and stressed VaR capital calculations of the CVA risk capital charge.

It depends on the specific risk VaR model. If the VaR model uses a sensitivity (or Greek) based approach, the credit spread values in the 1st and 2nd-order sensitivities (as in para 99) are the current levels ("as of valuation date") for both unstressed VaR and stressed VaR. In contrast, if the VaR model uses a full-revaluation approach using the CVA formula as in para 98, the credit spread inputs should be based on the relevant stress scenarios.

21. **A strict interpretation of the Advanced CVA standards (new para 102 in Annex 4 introduced by para 99 of the Basel III document) suggests that market LGDs (based on bond recovery rates) should be used instead of LGDs that reflect internal experience, potential security packages or other credit enhancement that could be available in the CSA or the trade confirmation.**

Is this strict interpretation intended by the Committee?

Yes, market LGDs (LGDmkt) based on market recovery rates are used as inputs into the CVA risk capital charge calculation.

LGDmkt is a market assessment of LGD that is used for pricing the CVA, which might be different from the LGD that is internally determined for the IRB and CCR default risk charge.

In other words, LGDmkt needs to be consistent with the derivation of the hazard rates – and therefore must reflect market expectations of recovery rather than mitigants or experience specific to the firm.

22.   We seek clarification of the calculation of LGD for the purposes of the new para 98 in Annex 4 of the Basel framework, introduced by para 99 of the Basel III document, where market instruments or proxy market information is not available). For example, for Sovereign entities the identification of a market spread or a proxy spread is often not possible other than in distressed scenarios.

Also, we seek clarity on how to take into account potential security packages or other credit enhancement provisions that could be available in the CSA or the trade confirmation.

While the Committee recognises that there is often limited market information of LGDmkt (or equivalently the market implied recovery rate), the use of LGDmkt for CVA purposes is deemed most appropriate given the market convention of CVA. As it is also the market convention to use a fixed recovery rate for CDS pricing purposes, firms may use that information for purposes of the CVA risk capital charge in the absence of other information.

In cases where a netting set of derivatives has a different seniority than those derivative instruments that trade in the market from which LGDmkt is inferred, a bank may adjust LGDmkt to reflect this difference in seniority.

Note that firm specific risk mitigants are not used for this calculation.

(c)   Eligible hedges

23.   We seek clarity on the treatment of internal trades and CVA VaR. There is a concern that if a CVA desk buys protection from another desk (within the firm) which faces 'the street' it would not get CVA credit although the CVA VAR would be flat (para 102 in Annex 4 of the Basel II framework, introduced by para 99 of the Basel III document).

Only hedges that are with external counterparties are eligible to reduce CVA. A hedge that is only with an internal desk cannot be used to reduce CVA.

24.   From para 99 of the Basel III document, introducing the new para 103 in Annex 4 of the Basel framework, we would like clarification in terms of eligibility of hedges: (i) Is a CDS indirectly referencing a counterparty (eg a related entity) an eligible hedge?; (ii) can you confirm inclusion of sovereigns in the CVA charge and ability to use sovereign CDS as hedges?

Any instrument of which the associated payment depends on cross default (such as a related entity hedged with a reference entity CDS and CDS triggers) is not considered as an eligible hedge.

When restructuring is not included as a credit event in the CDS contract, for the purposes of calculating the Advanced CVA charge, the CDS will be recognised as in the market risk framework for VaR. For the purposes of the Standardised CVA charge, the recognition of the CDS hedge will be done according to the Standard Measurement Method (SMM) in the market risk framework.

The Committee confirms that sovereigns are included in the CVA charge, and sovereign CDS is recognised as an eligible hedge.

25. **With regard to para 99 of the Basel III document, introducing para 98 in Annex 4 of the Basel framework: we seek confirmation as to whether the risk mitigation available for Expected Exposure profiles remains unchanged. Specifically, please confirm our understanding that the post risk mitigated exposure values are used in the CVA charge, whilst the additional mitigation is also allowed for the CVA charge itself, via eligible CVA hedges, which is undertaken post any Expected Exposure mitigation available.**

The expected exposures (EEs) or the exposures at default (EADs) used as inputs in the advanced and standardised CVA risk capital charge must not have been subject to any adjustments arising from credit protection that a firm intends to include as an eligible hedge in the CVA risk capital charge (see Basel III document, Annex 4, para 102 and 103). However, the use of other types of credit risk mitigation (eg collateral and/or netting) reducing the EE or the EAD amounts in the CCR framework can be maintained when these EE or EAD feed the CVA risk capital charge.

(d) **Treatment of incurred CVA**

26. **Whilst acknowledging that there may be changes to the capital treatment of incurred CVA, we seek clarification of whether the reduction in EAD by incurred CVA extends to the calculation of expected loss amounts for firms applying IRB risk weights. We would expect the reduction in EAD to be extended to expect loss but this would necessitate amendments to other paragraphs of the Basel II document (eg para 375) which do not appear to have been amended under changes already identified in the Basel III document (para 99) introducing a new paragraph after para 9 in Annex 4.**

Could the Committee confirm that amendments to the calculation of CVA risk and default risk capital will be clarified to refer to expected loss capital deduction as well as RWAs?

The Committee confirms that, after the quantitative impact study undertaken after the release of the Basel III Accord, incurred CVA will be recognised as a reduction in EAD when calculating the default risk capital.

Incurred CVA is not permitted to be counted as eligible provisions under para 43 of the Basel framework, ie banks that are currently recognising CVA as general provisions to offset expected loss in the IRB framework should no longer count CVAs as provisions.

Nevertheless, expected losses (EL) can be calculated based on the reduced "outstanding EAD" which reflects incurred CVA (see Basel III document, new paragraph inserted after paragraph 9 in Annex 4). That is, for derivatives, the EL is calculated as PD*LGD*(outstanding EAD).

III.   Asset value correlations

27. **Can the BCBS clarify the definition of unregulated financial institutions (para 102 of the Basel III document)? Does this could include "real" money funds such as mutual and pension funds which are, in some cases, regulated but**

not "supervised by a regulator that imposes prudential requirements consistent with international norms"?

For the sole purpose of applying the IRB approach in para 272 of the Basel framework (para 102 in the Basel III document), "unregulated financial institution" can include a financial institution or leveraged fund that is not subject to prudential solvency regulation.