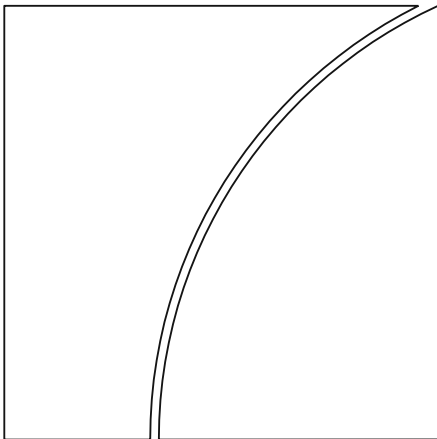


Basel Committee on Banking Supervision

Technical Amendment

Hedging of counterparty credit risk exposures



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Hedging of counterparty credit risk exposures

Introduction

To promote a consistent global implementation of the Basel Framework, the Basel Committee on Banking Supervision¹ regularly monitors and reviews issues that arise from the implementation of its standards. Where necessary, it publishes clarifications and interpretative guidance. In some instances, implementation issues can be clarified in the form of answers to frequently asked questions (FAQs), without any changes to the standard. On other occasions, the issue, though minor in effect, cannot be resolved unambiguously without an amendment to the text of the standard itself. In these cases, the Committee publishes the clarification as a proposed technical amendment (TA). Such amendments will be published for a short consultation period, typically 45 calendar days.

In November 2024, the Committee published for public consultation a proposed TA on hedging counterparty credit risk (CCR).² The TA aims to better align the treatment of guarantees and credit derivatives that provide fixed or capped protection with the treatment of eligible collateral in the CCR framework with respect to the residual risk to the original counterparty.

After considering the feedback from stakeholders on the consultation proposal,³ the Committee has now finalised changes to CRE – Calculation of RWA for credit risk. This document sets out the final revised standard which the Committee has agreed to implement by 1 November 2028. The Committee wishes to thank respondents for their feedback on the consultative document.

Proposed amendments to the TA

Based on the feedback received, the Committee has amended certain aspects of the TA relative to the consultation proposal. These changes include:

- **Scope of application:** the TA is intended to apply to a bank's use of fixed or capped protection through guarantees and credit derivatives to hedge the CCR arising from a derivative exposure. The TA is not intended to apply to securities financing transactions (SFTs) under the internal models method (IMM), or to securitisation exposures which will continue to be subject to the securitisation framework. The text of the TA has been adjusted to better reflect this intended scope of application.
- **Risk sensitivity:** the TA was intended to apply to cases of full fixed or capped protection. However, some jurisdictions have observed cases of capped proportionate protection (ie where a fixed percentage of the exposure or loss is specified in the contract that is protected up to a maximum protection amount). For such cases, the Committee expects that banks would adjust the calculation of exposure at default (EAD) under the TA to appropriately reflect the limitations

¹ The Basel Committee on Banking Supervision is the primary global standard setter for the prudential regulation of banks and provides a forum for cooperation on banking supervisory matters. Its mandate is to strengthen the regulation, supervision and practices of banks worldwide with the purpose of enhancing financial stability.

² See www.bis.org/bcbs/publ/d584.htm.

³ Non-confidential submissions are available at www.bis.org/bcbs/publ/comments/d584/overview.htm.

of proportionate protection. National supervisors may also choose to prescribe a specific treatment for these transactions.

- **Simplification of the calculation:** the final TA removes the proposed “higher of” approach in calculating EAD (ie flooring the unprotected portion to the original EAD net of the maximum contingent claim). Instead, the unprotected portion should be calculated by treating the guarantee or credit derivative as if it were a fixed amount of cash collateral within the netting set.
- **Haircuts:** the final TA clarifies that banks should apply haircuts for currency and maturity mismatches (where these exist) and specifies the level at which these haircuts should be applied.

In addition, the Committee is clarifying the interaction of the TA with other elements of the Basel Framework. More specifically:

- **Credit valuation adjustment (CVA):** the EAD used for CVA risk remains unaffected by the TA. For the purpose of the basic approach (BA-CVA), banks should use the EAD produced by the standardised approach for CCR (SA-CCR) or the IMM without considering the guarantee or derivative hedging the CCR.
- **Pari passu and pro rata loss sharing/tranches:** where a bank obtains fixed or capped credit protection against the CCR of a derivative exposure, it must apply the approach now set out in CRE51.18 to determine the protected and unprotected portions of the full exposure. In these cases, CRE22.80 does not apply, and CRE22.81 does not apply in the case of obtained protection of loss after recovery up to a maximum protection amount.
- **Own loss given default (LGD) estimates:** where a bank has approval to use the advanced internal ratings-based approach (A-IRB) for estimating its own LGDs for both the obligor and the protection provider, and it chooses to make adjustments to its LGD estimates to reflect the protection in accordance with CRE32.27 and CRE32.28, its methodology for producing adjusted LGD estimates for exposures subject to the TA should reflect the considerations set out in CRE51.18.

Supervisors and the Committee will continue to monitor banks’ hedging of CCR exposures. If they observe banks restructuring derivative exposures to circumvent the application of the TA, they will reconsider whether a similar treatment should be extended to SFTs and securitisation exposures. Similarly, while the TA does not adjust the treatment for protection providers (which may or may not be banks), supervisors and the Committee will continue to monitor how banks are calculating EAD where they sell credit protection and whether they are providing unlimited protection to avoid the scope of the TA.

The final TA is included in Annex 1. Updated numerical examples illustrating the calculation of EAD are included in Annex 2. The revised text has also been incorporated into the consolidated Basel Framework (CRE – Calculation of RWA for credit risk).

Annex 1: Amendments to the Basel Framework

This Annex sets out the amendments to the Basel Framework. The text in red shows the changes to the current text of the Basel Framework.

CRE22 – Standardised approach: credit risk mitigation

CRE22.79

The general risk-weight treatment for transactions in which eligible credit protection is provided is as follows:

- (1) The protected portion is assigned the risk weight of the protection provider. The unprotected (ie uncovered) portion of the exposure is assigned the risk weight of the underlying counterparty to the exposure without consideration of the credit protection. In the case of fixed or capped credit protection obtained against the counterparty credit risk of a derivative exposure subject to the SA-CCR or IMM, CRE51.18 must be applied to determine the protected and unprotected portions of the full exposure.
- (2) Materiality thresholds on payments below which the protection provider is exempt from payment in the event of loss are equivalent to retained first-loss positions. The portion of the exposure that is below a materiality threshold must be assigned a risk weight of 1250% by the bank purchasing the credit protection.

CRE32 – IRB approach: risk components for each asset class

CRE32.22

Under either approach, CRM in the form of guarantees and credit derivatives must not reflect the effect of double default (see CRE36.102). As such, to the extent that the CRM is recognised by the bank, the adjusted risk weight will not be less than that of a comparable direct exposure to the protection provider. In the case of capped or fixed credit protection obtained against the counterparty credit risk of a derivative exposure subject to the SA-CCR or IMM, CRE51.18 must be applied to determine the protected and unprotected portions of the full exposure. Consistent with the standardised approach, banks may choose not to recognise credit protection if doing so would result in a higher capital requirement.

CRE51 – Counterparty credit risk overview

CRE51.16

As an exception to the requirements of CRE51.4 above, banks are not required to calculate a counterparty credit risk charge for the following types of transactions (ie the exposure amount or EAD for counterparty credit risk for the transaction will be zero):

- (1) Credit derivative protection purchased by the bank against a banking book exposure, or against a counterparty credit risk exposure. ~~In such cases, the bank will determine its capital requirement for the hedged exposure according to the criteria and general rules for the recognition of credit derivatives within the standardised approach or IRB approach to credit risk (ie substitution approach).~~

- (2) Sold credit default swaps in the banking book where they are treated in the framework as a guarantee provided by the bank and subject to a credit risk charge for the full notional amount.

Treatment of guarantees and credit derivative protection

CRE51.17

When banks purchase credit protection against the counterparty credit risk of a derivative exposure, the bank will determine its capital requirement for the hedged exposure according to the criteria and general rules for the recognition of guarantees and credit derivatives within the standardised approach to credit risk (ie the substitution approach) or IRB approach to credit risk. For fixed or capped protection, banks must apply CRE51.18 to determine the protected and unprotected portions of the full exposure.

CRE51.18

When a bank uses a guarantee or credit derivative to hedge the counterparty credit risk of a derivative exposure subject to the SA-CCR (CRE52) or IMM (CRE53), and when the protection amount is either fixed or capped (ie it is not a credit derivative with unlimited protection), the bank is exposed to the risk that the protection amount may not cover the full exposure to the counterparty at the time of default. To address this risk, banks must calculate the protected and unprotected amounts of their counterparty credit risk exposure using the following approach:

- Full EAD is the EAD calculated under the SA-CCR or IMM without taking into account the guarantee or credit derivative.
- The protected portion of the full EAD is equal to the difference between the full EAD and the unprotected portion, where the unprotected portion is determined as the EAD calculated using the SA-CCR or IMM, but treating the guarantee or credit derivative as if it were a fixed amount of cash collateral within the netting set equal to the adjusted protection amount.^[4]

The adjusted protection amount used in SA-CCR or IMM exposure calculations is the fixed notional amount (in the case of fixed protection) or the nominal maximum protection amount (in the case of capped protection) of the guarantee or credit derivative.

If there is a currency mismatch, as defined in CRE22.82, the currency mismatch adjustment of CRE22.82 to CRE22.83 must be applied. If there is a maturity mismatch, as defined in CRE22.10, the maturity mismatch treatment of CRE22.12 to CRE22.14 must be applied. The adjusted protection amount should be treated within SA-CCR or IMM exposure calculations as a fixed amount of cash collateral in the same currency as the currency of the exposure arising from the netting set.

Footnotes

- [4] Banks should adjust the calculation of EAD appropriately for transactions with capped proportionate protection (ie where a fixed percentage of the exposure or loss is specified in the contract that is protected up to the maximum protection amount). National supervisors may prescribe a specific treatment for cases of capped proportionate protection.*

Annex 2: Illustrative numerical examples

To illustrate the effect of the TA, consider the following example for a bank that uses SA-CCR. Under SA-CCR, the EAD for an unmargined netting set is calculated as follows:

$$\begin{aligned} \text{EAD} &= \alpha * (RC + PFE) \\ \alpha &= 1.4 \\ RC &= \max\{V - C; 0\} \\ V &= \text{the value of the derivative transactions in the netting set} \\ C &= \text{haircut value of net collateral held} \\ PFE &= \text{multiplier} * \text{AddOn} \\ \text{multiplier} &= \min \left\{ 1; \text{Floor} + (1 - \text{Floor}) * \exp \left(\frac{V - C}{2 * (1 - \text{Floor}) * \text{AddOn}} \right) \right\} \\ \text{Floor} &= 5\% \end{aligned}$$

AddOn = an amount that represents how much the value of the derivatives in the netting set may change by the time of default, calculated according to a methodology specified in SA-CCR

Case 1: a derivative exposure with no collateral taken and no mitigating CDS

- Assume a bank has a derivative exposure with a current market value of \$0 (ie $V = \$0$). Since no collateral is taken, $C = \$0$ and consequently $RC = V - C = \$0$.
- Assume that when the SA-CCR is applied to the derivative it gives an AddOn of \$10.
- Since $V - C = \$0$, the multiplier has a value of 1.
- The EAD under the SA-CCR is therefore \$14 ($= 1.4 * (\$0 + 1 * \$10)$).
- Finally, $RWA = \$14 * \text{the risk weight of the derivative counterparty}$.

Case 2: same as case 1 except the bank hedges the derivative with a \$14 CDS and applies the substitution approach implied by the existing standard

- Like in case 1, the EAD of the CCR exposure to the derivative counterparty is \$14.
- The EAD of the CCR exposure to the CDS counterparty = \$0 as per CRE51.16 (giving \$0 of RWA), ie an unprotected portion of \$0.
- The RWA for the CCR exposure to the derivative counterparty = \$14 * the risk weight of the CDS counterparty using the protected portion of \$14.

Note that the risk weight of the derivative counterparty in the above final bullet has been substituted with the risk weight of the CDS counterparty, as per the substitution approach.

Case 3: same as case 1 except the bank hedges the derivative by obtaining a CDS with a \$14 notional amount that is treated like \$14 of cash collateral under the TA

- Replacement cost: $RC = \max\{V - C; 0\} = \max\{\$0 - \$14; \$0\} = \$0$.
- The EAD of the CCR exposure to the derivative counterparty:
 $EAD = \alpha * (RC + PFE) = 1.4 * (\$0 + multiplier * \$10)$.
- $multiplier = \min\{1; 5\% + 95\% * \exp[(0-14) / (2 * 95\% * 10)]\} = 50.47\%$.
- Hence, $EAD = 1.4 * (\$0 + 50.47\% * \$10) = \$7.07$.
- $RWA = \$7.07 * \text{the risk weight of the derivative counterparty}$.
- Note that the EAD does not become zero even in the presence of cash collateral equal to the value of the EAD calculated before the recognition of collateral. This is because both the multiplier and the AddOn are greater than zero.
- Consequently, the EAD of \$7.07, after the application of CRM due to a \$14 CDS, corresponds to the unprotected portion.
- The protected portion is then given by $\$14 - \$7.07 = \$6.93$.
- The sum of RWAs is $\$6.93 * \text{the risk weight of the CDS counterparty} + \$7.07 * \text{the risk weight of the derivative counterparty}$.
- For simplicity, it is assumed that neither a currency nor maturity mismatch exist under case 3.

Case 4: proportionate protection

- An example formula to account for the limitations of cases of capped proportionate protection could be:

$$EAD_{unprotected} = (1 - F) \cdot EAD_{full} + F \cdot EAD\left(\frac{N}{F}\right),$$

where

N is the adjusted protection amount;

F is the fixed percentage of the exposure or loss specified in the contract that is protected up to the maximum protection amount, with $F < 1$ in the case of capped proportionate protection and $F = 1$ in the case of fixed amount protection or full protection up to the maximum protection amount;⁴ and

$EAD(N/F)$ is the EAD calculated using the SA-CCR or IMM, but treating the guarantee or credit derivative as if it were a fixed amount of cash collateral within the netting set equal to N/F .

- Take a replacement cost of \$0 and an add-on of \$10 as in cases 1–3.
- The fixed proportion of protection is eg 50%, ie $F = 0.5$, capped in this example at an adjusted protection amount of \$14, ie $N/F = \$28$.
- The unprotected EAD is given by $(1 - F) \cdot EAD_{full} + F \cdot EAD(N/F)$.

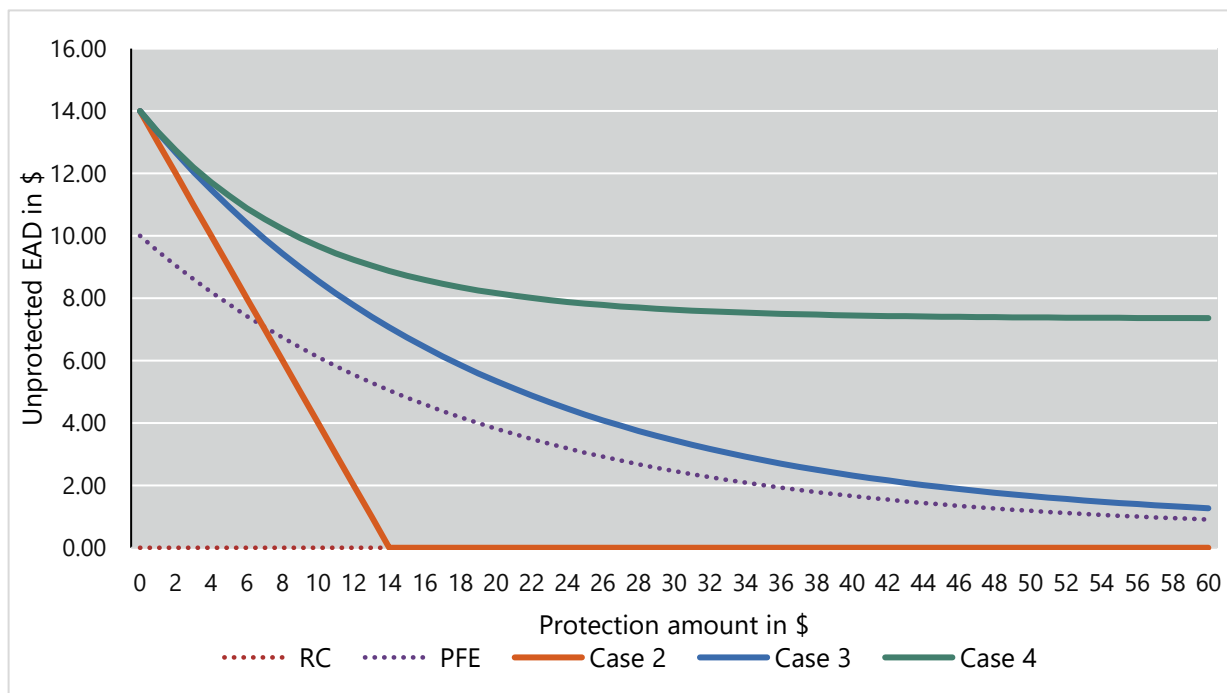
⁴ For $F = 1$, case 4 would lead to the same result as case 3.

- Calculation of $EAD(N/F)$ uses $multiplier = \min\{1; 5\% + 95\% * \exp[(0-28) / (2 * 95\% * 10)]\} = 26.76\%$, resulting in:
 $EAD(N/F) = 1.4(\$0 + 26.76\% * \$10) = \$3.75$
This leads to an unprotected EAD of $EAD_{unprotected} = 0.5 * \$14 + 0.5 * \$3.74 = \8.87 and a protected EAD of \$5.13.
- The sum of RWAs is \$5.13 * the risk weight of *CDS counterparty* + \$8.87 * the risk weight of the *derivative counterparty*.
- For simplicity, it is assumed that neither a currency nor a maturity mismatch exists under case 4.
- The reduction of the protected portion compared with case 3 is due to the proportionate protection being lower than 100%.

Graphical representation of cases

A graphical representation of these cases with a fixed add-on of \$10, fixed netting set value of \$0, alpha = 1.4 and a fixed proportionate protection of 50%, but increasing protection amount from \$0 to \$60, is included in Graph 1.

Graph 1: Graphical representation of the numerical examples varying the protection amount (netting set value of \$0)

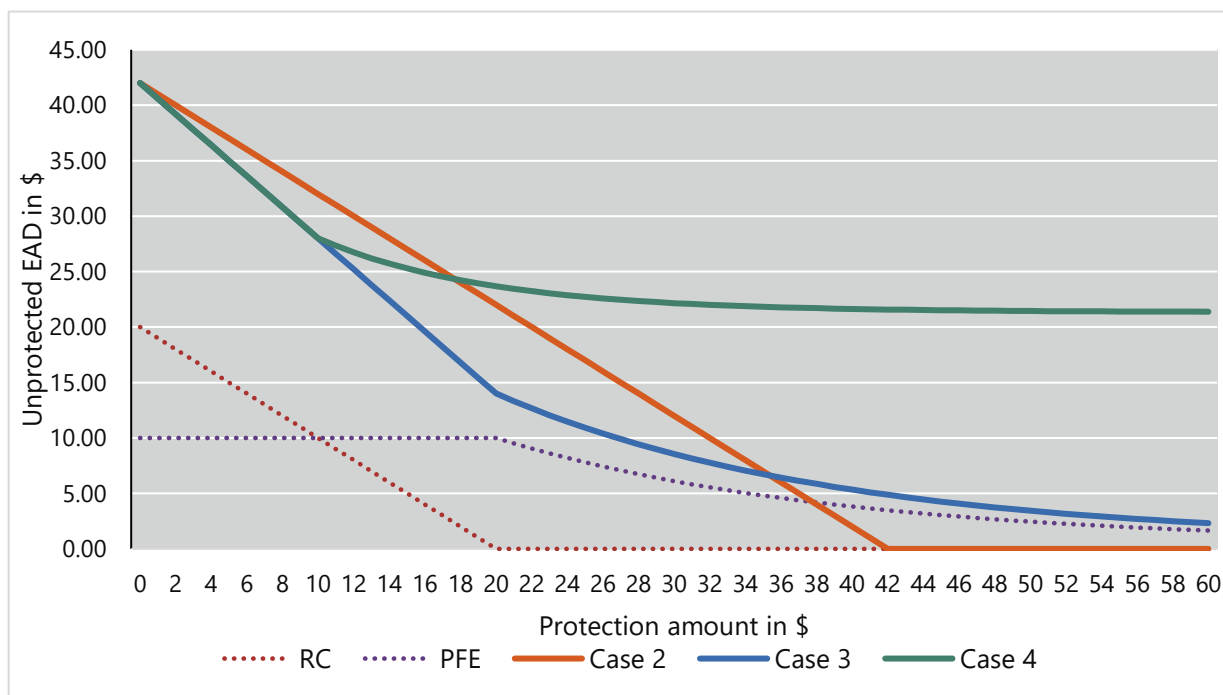


Parameters: $V = 0$; add-on = 10; alpha = 1.4; [$F = 1$ (case 3 under option with equation),] $F = 0.5$ in case 4.⁵

⁵ In case 4, the unprotected EAD converges to \$7.35 with increasing protection amounts.

The effect of an increased replacement cost can be seen using a netting set value of eg \$20, keeping all other parameters as above.

Graph 2: Graphical representation of the numerical examples varying the protection amount (netting set value of \$20)



Parameters: $V = 20$; add-on = 10; $\alpha = 1.4$; [$F = 1$ (case 3 under option with equation),] $F = 0.5$ in case 4.⁶

Here we have a linearly decreasing unprotected EAD for all cases in regimes of lower protection amounts.

⁶ In case 4, the unprotected EAD converges to \$21.35 with increasing protection amounts.