

Basel Committee on Banking Supervision

CRE

Calculation of RWA for credit
risk

CRE34

IRB approach: RWA for
purchased receivables

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First version in the format of the consolidated
framework.



BANK FOR INTERNATIONAL SETTLEMENTS

Introduction

34.1 This chapter presents the method of calculating the unexpected loss (UL) capital requirements for purchased receivables. For such assets, there are internal ratings-based (IRB) capital charges for both default risk and dilution risk.

Risk-weighted assets for default risk

34.2 For receivables belonging unambiguously to one asset class, the IRB risk weight for default risk is based on the risk-weight function applicable to that particular exposure type, as long as the bank can meet the qualification standards for this particular risk-weight function. For example, if banks cannot comply with the standards for qualifying revolving retail exposures (defined in [CRE30.24](#)), they should use the risk-weight function for other retail exposures. For hybrid pools containing mixtures of exposure types, if the purchasing bank cannot separate the exposures by type, the risk-weight function producing the highest capital requirements for the exposure types in the receivable pool applies.

34.3 For purchased retail receivables, a bank must meet the risk quantification standards for retail exposures but can utilise external and internal reference data to estimate the probabilities of default (PDs) and losses-given-default (LGDs). The estimates for PD and LGD (or expected loss, EL) must be calculated for the receivables on a stand-alone basis; that is, without regard to any assumption of recourse or guarantees from the seller or other parties.

34.4 For purchased corporate receivables the purchasing bank is expected to apply the existing IRB risk quantification standards for the bottom-up approach. However, for eligible purchased corporate receivables, and subject to supervisory permission, a bank may employ the following top-down procedure for calculating IRB risk weights for default risk:

- (1) The purchasing bank will estimate the pool's one-year EL for default risk, expressed in percentage of the exposure amount (ie the total exposure at default, or EAD, amount to the bank by all obligors in the receivables pool). The estimated EL must be calculated for the receivables on a stand-alone basis; that is, without regard to any assumption of recourse or guarantees from the seller or other parties. The treatment of recourse or guarantees covering default risk (and/or dilution risk) is discussed separately below.

- (2) Given the EL estimate for the pool's default losses, the risk weight for default risk is determined by the risk-weight function for corporate exposures.¹ As described below, the precise calculation of risk weights for default risk depends on the bank's ability to decompose EL into its PD and LGD components in a reliable manner. Banks can utilise external and internal data to estimate PDs and LGDs. However, the advanced approach will not be available for banks that use the foundation approach for corporate exposures.

Footnotes

¹ *The firm-size adjustment for small or medium-sized entities (SMEs), as defined in [CRE31.9](#), will be the weighted average by individual exposure of the pool of purchased corporate receivables. If the bank does not have the information to calculate the average size of the pool, the firm-size adjustment will not apply.*

Foundation IRB treatment

34.5 The risk weight under the foundation IRB treatment is determined as follows:

(1) If the purchasing bank is unable to decompose EL into its PD and LGD components in a reliable manner, the risk weight is determined from the corporate risk-weight function using the following specifications:

(a) If the bank can demonstrate that the exposures are exclusively senior claims to corporate borrowers:

(i) An LGD of 45% can be used.

(ii) PD will be calculated by dividing the EL using this LGD.

(iii) EAD will be calculated as the outstanding amount minus the capital charge for dilution prior to credit risk mitigation (K_{Dilution}).

(iv) EAD for a revolving purchase facility is the sum of the current amount of receivables purchased plus 75% of any undrawn purchase commitments minus K_{Dilution} .

(b) If the bank cannot demonstrate that the exposures are exclusively senior claims to corporate borrowers:

(i) PD is the bank's estimate of EL.

(ii) LGD will be 100%.

(iii) EAD is the amount outstanding minus K_{Dilution} .

(iv) EAD for a revolving purchase facility is the sum of the current amount of receivables purchased plus 75% of any undrawn purchase commitments minus K_{Dilution} .

- (2) If the purchasing bank is able to estimate PD in a reliable manner, the risk weight is determined from the corporate risk-weight functions according to the specifications for LGD, maturity (M) and the treatment of guarantees under the foundation approach as given in [CRE32.5](#) to [CRE32.15](#), [CRE32.18](#), [CRE32.19](#) to [CRE32.24](#) and [CRE32.39](#).

Advanced IRB treatment

- 34.6** Under the advanced IRB approach, if the purchasing bank can estimate either the pool's default-weighted average loss rates given default (as defined in [CRE36.85](#)) or average PD in a reliable manner, the bank may estimate the other parameter based on an estimate of the expected long-run loss rate. The bank may (i) use an appropriate PD estimate to infer the long-run default-weighted average loss rate given default, or (ii) use a long-run default-weighted average loss rate given default to infer the appropriate PD. In either case, it is important to recognise that the LGD used for the IRB capital calculation for purchased receivables cannot be less than the long-run default-weighted average loss rate given default and must be consistent with the concepts defined in [CRE36.85](#). The risk weight for the purchased receivables will be determined using the bank's estimated PD and LGD as inputs to the corporate risk-weight function. Similar to the foundation IRB treatment, EAD will be the amount outstanding minus K_{Dilution} . EAD for a revolving purchase facility will be the sum of the current amount of receivables purchased plus 75% of any undrawn purchase commitments minus K_{Dilution} (thus, banks using the advanced IRB approach will not be permitted to use their internal EAD estimates for undrawn purchase commitments).
- 34.7** For drawn amounts, M will equal the pool's exposure-weighted average effective maturity (as defined in [CRE32.41](#) to [CRE32.49](#)). This same value of M will also be used for undrawn amounts under a committed purchase facility provided the facility contains effective covenants, early amortisation triggers, or other features that protect the purchasing bank against a significant deterioration in the quality of the future receivables it is required to purchase over the facility's term. Absent such effective protections, the M for undrawn amounts will be calculated as the sum of (a) the longest-dated potential receivable under the purchase agreement and (b) the remaining maturity of the purchase facility.

Risk-weighted assets for dilution risk

34.8 Dilution refers to the possibility that the receivable amount is reduced through cash or non-cash credits to the receivable's obligor.² For both corporate and retail receivables, unless the bank can demonstrate to its supervisor that the dilution risk for the purchasing bank is immaterial, the treatment of dilution risk must be the following:

- (1) At the level of either the pool as a whole (top-down approach) or the individual receivables making up the pool (bottom-up approach), the purchasing bank will estimate the one-year EL for dilution risk, also expressed in percentage of the receivables amount. Banks can utilise external and internal data to estimate EL. As with the treatments of default risk, this estimate must be computed on a stand-alone basis; that is, under the assumption of no recourse or other support from the seller or third-party guarantors.
- (2) For the purpose of calculating risk weights for dilution risk, the corporate risk-weight function must be used with the following settings:
 - (a) The PD must be set equal to the estimated EL.
 - (b) The LGD must be set at 100%.
 - (c) An appropriate maturity treatment applies when determining the capital requirement for dilution risk. If a bank can demonstrate that the dilution risk is appropriately monitored and managed to be resolved within one year, the supervisor may allow the bank to apply a one-year maturity.

Footnotes

² *Examples include offsets or allowances arising from returns of goods sold, disputes regarding product quality, possible debts of the borrower to a receivables obligor, and any payment or promotional discounts offered by the borrower (eg a credit for cash payments within 30 days).*

34.9 This treatment will be applied regardless of whether the underlying receivables are corporate or retail exposures, and regardless of whether the risk weights for default risk are computed using the standard IRB treatments or, for corporate receivables, the top-down treatment described above.

Treatment of purchase price discounts for receivables

- 34.10** In many cases, the purchase price of receivables will reflect a discount (not to be confused with the discount concept defined in [CRE32.29](#) and [CRE32.55](#)) that provides first loss protection for default losses, dilution losses or both. To the extent that a portion of such a purchase price discount may be refunded to the seller based on the performance of the receivables, the purchaser may recognise this refundable amount as first loss protection and hence treat this exposure under the securitisation chapters of credit risk standard ([CRE40](#) to [CRE44](#)), while the seller providing such a refundable purchase price discount must treat the refundable amount as a first-loss position under the securitisation framework. Non-refundable purchase price discounts for receivables do not affect either the EL-provision calculation in [CRE35](#) or the calculation of risk-weighted assets.
- 34.11** When collateral or partial guarantees obtained on receivables provide first loss protection (collectively referred to as mitigants in this paragraph), and these mitigants cover default losses, dilution losses, or both, they may also be treated as first loss protection under the securitisation framework ([CRE44.11](#)). When the same mitigant covers both default and dilution risk, banks using the Securitisation Internal Ratings-Based Approach (SEC-IRBA) that are able to calculate an exposure-weighted LGD must do so as defined in [CRE44.22](#).

Recognition of credit risk mitigants

- 34.12** Credit risk mitigants will be recognised generally using the same type of framework as set forth in [CRE32.19](#) to [CRE32.26](#).³ In particular, a guarantee provided by the seller or a third party will be treated using the existing IRB rules for guarantees, regardless of whether the guarantee covers default risk, dilution risk, or both.
- (1) If the guarantee covers both the pool's default risk and dilution risk, the bank will substitute the risk weight for an exposure to the guarantor in place of the pool's total risk weight for default and dilution risk.
 - (2) If the guarantee covers only default risk or dilution risk, but not both, the bank will substitute the risk weight for an exposure to the guarantor in place of the pool's risk weight for the corresponding risk component (default or dilution). The capital requirement for the other component will then be added.

- (3) If a guarantee covers only a portion of the default and/or dilution risk, the uncovered portion of the default and/or dilution risk will be treated as per

the existing credit risk mitigation rules for proportional or tranching coverage (ie the risk weights of the uncovered risk components will be added to the risk weights of the covered risk components).

Footnotes

³ *At national supervisory discretion, banks may recognise guarantors that are internally rated and associated with a PD equivalent to less than A- under the foundation IRB approach for purposes of determining capital requirements for dilution risk.*

34.13 If protection against dilution risk has been purchased, and the conditions of [CRE32.27](#) and [CRE32.28](#) are met, the double default framework may be used for the calculation of the risk-weighted asset amount for dilution risk. In this case, [CRE31.14](#) to [CRE31.17](#) apply with PD_o being equal to the estimated EL, LGD_g being equal to 100 percent, and effective maturity being set according to [CRE34.8](#).