BASEL II IMPLEMENTATION – RETAIL CREDIT RISK MITIGATION

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ABSTRAKT

Hlavním cílem příspěvku je stručné představení základních prvků metodologie zabývající se problematikou definování a nastavení zajištění při úvěrování v oblasti retailového segmentu, které je v rozporu s novými pravidly Basel II. Basel II nabízí pro retailový segment dva možné přístupy: standardizovaný přístup a přístup založený na interním ratingu.

ABSTRACT

The main objective of this paper is to introduce the methodology for the recognition of collateral for retail lending which is Basel II complaint. Basel II for the retail segment offers two possible approaches: the standardized approach and the Internal Ratings-Based (IRB) Approach.

Introduction

Basel II for the retail segment offers two possible approaches[1]: the standardized approach and the Internal Ratings-Based (IRB) Approach. The standardized approach is relatively easy to apply and defines standard risk weights, whereas the IRB approach requires internal estimates of risk components in determining the capital requirement for a given exposure. The risk components include measures of the probability of default (PD), loss given default (LGD) and the exposure at default (EAD) and serve as inputs to the risk weight functions that have been developed for separate asset classes. Case studies show that the IRB approach results in a significantly lower minimum capital amount.

1. Credit Risk Mitigation

Credit Risk Mitigation is "a technique used by a credit institution to reduce the credit risk associated with an exposure or exposures which the credit institution continues to hold"[2]. A collateralized transaction is a transaction where the credit exposure or potential credit exposure of the credit institution to a counterparty is hedged – in whole or in part – by collateral posted by the counterparty or by a third party on behalf of the counterparty. Collateralized credit exposures must have a risk-weighted exposure amount lower than the same credit exposure without credit protection[3].

The aim is to allow for an expanded range of credit protection to be taken into account for the purpose of reducing capital requirements. And where possible to allow for a more sophisticated calculation of the risk reduction achieved.

The rules for determining which forms of credit protection may be recognized, in what circumstances, and to what extent, take into account a number of entitlement,

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[1] EU Directive 2006/48/EC, Annex VIII, Part 1, point 6.
[2] EU Directive 2006/48/EC, Article 4(30).
[3] EU Directive 2006/48/EC, Article 93(2).

liquidity, price availability and stability etc. In relation to unfounded protection such as guarantees and credit derivatives, significant factors include once again issues of certainty and timeliness, along with the creditworthiness and willingness to pay of the protection provider.

The effect of collateral as a risk-mitigant under the IRB Retail approach operates through the LGD risk parameter. This means that under the Advanced IRB Approach (which is applicable for Retail) the risk reducing effect of physical and other collateral will be reflected in our own estimates of Loss Given Default, and needs to be done consistently.

1.1 Central Principle

Credit Risk mitigation may be recognized by supervisors and regulatory capital relief given where reduction in the level of credit risk on the exposure as a result of the credit risk mitigation is sufficiently certain. The minimum conditions for such certainty are set out in this section.

The benefits of such recognition will be limited to that element of the exposure which is deemed, in accordance with the rules for valuation of the exposure and the credit protection set out in the Commission´s directive, to be covered by the credit protection. The capital charge for any uncovered element will be determined on the basis of the credit risk approach being used to calculate the regulatory capital requirements of the lending institution in relation to exposures of the relevant category.

No exposure in respect of which risk mitigation is obtained will receive a higher credit risk capital requirement than an otherwise identical claim in respect of which there is no credit risk mitigation.

1.2 Regulatory Recognition

In order for credit risk mitigation to satisfy the requirement of certainty, the following requirements must be complied with.

1.2.1 Eligibility

In the case of funded[4] credit protection, to be eligible for recognition the assets relied upon by the institution for protection must be sufficiently liquid and their value over time sufficiently stable to provide appropriate certainty as to the (level of) credit protection achieved, having regard to the credit risk approach being used to calculate the regulatory capital requirements and to the degree of capital relief allowed.

In the case of unfounded[5] protection, to be eligible for recognition the party giving the undertaking must be sufficiently creditworthy, to provide appropriate certainty as to the (level of) credit protection achieved (including appropriate certainty in relation to likelihood of payment under the credit protection agreement in the event of default of the counterparty or on the occurrence of other specified credit events), having regard to the credit risk approach being used to calculate the regulatory capital requirements and to the degree of capital relief allowed.

[4] EU Directive 2006/48/EC, Article 92(3) and 92(4).
[5] EU Directive 2006/48/EC, Article 92(5).

1.3 Minimum Requirements

1.3.1 Legal Certainty

In accordance with the requirements, the mechanism used to provide the credit protection together with the actions and steps taken and procedures and policies implemented by the lending institutions must be such as to result in credit protection arrangements which are legally robust and effective and enforceable in all relevant jurisdictions.

Without prejudice to the foregoing, in respect of funded protection, the legal mechanism by which protection is given must ensure that the lender has the right to liquidate or retain the assets from which the protection derives in a timely manner in the event of the default, insolvency or bankruptcy (or otherwise defined credit event) of the obligor and where applicable of the custodian holding the collateral.

1.3.2 Maturity Mismatch

A maturity mismatch occurs when the residual maturity of the credit risk mitigation is less than that of the underlying exposure. If there is a maturity mismatch, the credit protection cannot be recognized according to the EU Directive in the following cases:

a) the residual maturity of the credit protection is less than three months;[6]
b) the original maturity is less than one year.[7]

The maturity of both the underlying exposure and the credit protection shall be gauged conservatively.

1.4 Requirements for Retail Exposures Under the Standardised Approach (Simplified CRM Approach)

1.5 General remarks

Banks use a number of techniques to mitigate the credit risks to which they are exposed. Exposure may be collateralized in whole or in part with cash or securities, or a loan exposure may be guaranteed by a third party. No transaction in which CRM techniques are used should receive a higher capital requirement than an otherwise identical transaction where such techniques are not used.

The effects of CRM will not be double counted. Therefore, no additional supervisory recognition of CRM for regulatory capital purposes will be granted on claims for which an issue-specific rating is used that already reflects that CRM. Principal-only ratings will also not be allowed within the framework of CRM. Although banks use CRM techniques to reduce their credit risk, these techniques give rise to risks (residual risks) which may render the overall risk reduction less effective. Where these risks are not adequately controlled, supervisors may impose additional capital charges or take other supervisory actions as detailed in Pillar 2.

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[6] EU Directive 2006/48/EC, Annex VIII, Part 4, point 1.
[7] EU Directive 2006/48/EC, Annex VIII, Part 4, point 2.

While the use of CRM techniques reduces or transfers credit risk, it simultaneously may increase other risks to the bank, such as legal, operational, liquidity and market risks. Therefore, it is imperative that banks employ robust procedures and processes to control these risks, including strategy; consideration of the underlying credit; valuation; policies and procedures; systems; control of roll-off risks; and management of concentration risk arising from the bank's use of CRM techniques and its interaction with the bank's overall credit risk profile.

The Pillar 3 requirements must also be observed for banks to obtain capital relief in respect of any CRM techniques.

1.5.1 Legal certainty

In order for banks to obtain capital relief, all documentation used in collateralized transactions and for documenting guarantees must be binding on all parties and legally well founded in all relevant jurisdictions. Banks must have appropriate legal opinions to verify this, and update them as necessary to ensure continuing enforceability.

1.5.2 Proportional cover

Where the amount collateralized or guaranteed (or against which credit protection is held) is less than the amount of the exposure and the secured and unsecured portions are of equal seniority, i.e. the bank and the guarantor share losses on a pro-rata basis, capital relief will be afforded on a proportional basis, i.e. the protected portion of the exposure will receive the treatment applicable to the collateral or counterparty, with the remainder treated as unsecured.

1.5.3 Collateralised transactions

A collateralized transaction is one in which banks have a credit exposure or potential credit exposure to a counterparty and that credit exposure or potential credit exposure is hedged in whole or in part by collateral posted by the counterparty or by a third party on behalf of the counterparty.8

The Simplified Standardized Approach, substitutes the risk weighting of the collateral for the risk weighting of the counterparty for the collateralized portion of the exposure (generally subject to a 20% floor). Partial collateralization is recognized. Mismatches in the maturity or currency of the underlying exposure and the collateral will not be allowed.

1.6 Minimum conditions

In addition to the general requirements for legal certainty, the following operational requirements must be met.

The collateral must be pledged for at least the life of the exposure and it must be marked to market and revalued with a minimum frequency of six months. In order for collateral to provide protection, the credit quality of the counterparty and the value

[8] EU Directive 2006/48/EC, Annex VI, Part 4, point 1.

of the collateral must not have a material positive correlation. For example, securities issued by the counterparty - or by any related group entity - would provide little protection and so would be ineligible.

The bank must have clear and robust procedures for the timely liquidation of collateral. Where the collateral is held by a custodian, banks must take reasonable steps to ensure that the custodian segregates the collateral from its own assets.

1.6.1 Eligible collateral

The following collateral instruments are eligible for recognition:

- Cash on deposit with the bank which is incurring the counterparty exposure including certificates of deposit or comparable instruments issued by the lending bank;
- Gold and
- Debt securities rated issued by sovereigns rated category or above or issued by PSE that are treated as sovereigns by the national supervisor.

1.6.2 Risk weights

Those portions of claims collateralized by the market value of recognized collateral receive the risk weight applicable to the collateral instrument. The risk weight on the collateralized portion will be subject to a floor of 20%. The remainder of the claim should be assigned to the risk weight appropriate to the counterparty. A capital requirement will be applied to banks on either side of the collateralized transaction: for example, both repos and reverse repos will be subject to capital requirements.

The 20% floor for the risk weight on a collateralized transaction will not be applied and a 0% risk weight can be provided where the exposure and the collateral are denominated in the same currency, and either the collateral is cash on deposit or the collateral is in the form of sovereign/PSE securities eligible for a 0% risk weight, and its market value has been discounted by 20%.

1.6.3 Guaranteed transactions

Where guarantees meet and supervisors are satisfied that banks fulfill the minimum operational conditions set out below, they may allow banks to take account of such credit protection in calculating capital requirements.

1.6.4 Minimum conditions

A guarantee must represent a direct claim on the protection provider and must be explicitly referenced to specific exposures, so that the extent of the cover is clearly defined and incontrovertible. Other than non-payment by a protection purchaser of money due in respect of the credit protection contract it must be irrevocable; there must be no clause in the contract that would increase the effective cost of cover as a result of deteriorating credit quality in the hedged exposure. It must also be unconditional; there should be no clause in the protection contract outside the control of the bank that could prevent the protection provider from being obliged to pay out in a timely manner in the event that the original counterparty fails to make the payment(s) due.

In addition to the legal certainty requirements, the following conditions must be satisfied:

(a) On the qualifying default/non-payment of the counterparty, the bank may in a timely manner pursue the guarantor for monies outstanding under the documentation governing the transaction, rather than having to continue to pursue the counterparty. By making a payment under the guarantee the guarantor must acquire the right to pursue the obligor for monies outstanding under the documentation governing the transaction.

(b) The guarantee is an explicitly documented obligation assumed by the guarantor.

(c) The guarantor covers all types of payments the underlying obligor is expected to make under the documentation governing the transaction, for example notional amount, margin payments, etc.

1.6.5 Risk weights

The protected portion is assigned the risk weight of the protection provider. The uncovered portion of the exposure is assigned the risk weight of the underlying counterparty.

A lower risk weight may be applied at national discretion to a bank's exposure to the sovereign (or central bank) where the bank is incorporated and where the exposure is denominated in domestic currency and funded in that currency. National authorities may extend this treatment to portions of claims guaranteed by the sovereign (or central bank), where the guarantee is denominated in the domestic currency and the exposure is funded in that currency.

Materiality thresholds on payments below which no payment will be made in the event of loss are equivalent to retained first loss positions and must be deducted in full from the capital of the bank purchasing the credit protection.

1.6.6 Treatment of pools of CRM techniques

In the case where a bank has multiple CRM covering a single exposure (e.g. a bank has both collateral and guarantee partially covering an exposure), the bank will be required to subdivide the exposure into portions covered by each type of CRM tool (e.g. portion covered by collateral, portion covered by guarantee) and the risk weighted assets of each portion must be calculated separately. When credit protection provided by a single protection provider has differing maturities, they must be subdivided into separate protection as well.

2. Requirements for Retail Exposures under the IRB Approach

2.1 Principles

Institutions shall estimate PDs from long-run averages of one year default rates for exposures by a pool, long run averages for LGDs for each facility, and internal credit conversion factors (CCF) across different product types. The estimates shall meet the criteria laid down in the following sections. The risk parameters shall be estimated for each pool of retail exposures separately.[9]

2.2 Overall requirements for estimation

Internal estimates of the risk parameters, PD, LGD, EAD and EL shall incorporate the relevant and available data, information and methods. Internal estimates shall be derived using both historical experience and empirical evidence, and not based purely judgmental considerations. Internal estimates must be plausible and intuitive and shall be based on the material drivers of the respective parameters. The less data an institution has, the more conservative it shall be in its estimation. The institution shall be able to provide a breakdown of its loss experience in terms of default frequency, LGD, EAD, or loss where EL estimates are used, by the factors it sees as the drivers of the respective risk parameters. The institution shall demonstrate that its estimates are representative of long run experience. Any changes in lending practice or the process for pursuing recoveries over the observation period shall be taken into account. An institution's estimate shall reflect the implications of technical advances and new data and other information, as it becomes available. Institutions shall review their estimates when new information comes to light but at least on an annual basis.

The population of exposures represented in the data used for estimation, the lending standards used when the data was generated and other relevant characteristics shall be comparable with those of the institution's exposures and standards. The institution shall also demonstrate that the economic or market conditions that underlie the data is relevant to current and foreseeable conditions. The number of exposures in the sample and the data period used for quantification shall be sufficient to provide the institution with confidence in the accuracy and robustness of its estimates.

An institution shall add to its estimates a margin of conservatism that is related to the expected range of estimation errors. Where methods and data are less satisfactory and the expected range of errors is larger, the margin of conservatism shall be larger.

2.3 Requirements specific to LGD estimations

The LGD estimates shall be based on the average economic loss of all observed defaults within the data sources (default weighted average) and shall not be the average of average annual loss rates. If LGDs by facility grade are expected to fluctuate over the economic cycle, the institution shall use LGD estimates that are appropriate for an economic downturn if those are more conservative than the long run average. Estimates of LGD shall have a margin of conservatism appropriate to the likely range of errors in the estimate. For Retail exposures LGD estimates may be derived from realized losses and appropriate estimates of PDs.

An institution needs to consider the extent of any dependence between the risks of the borrower with that of the collateral provider. Cases where there is a significant degree of dependence shall be addressed in a conservative manner.

[9] EU Directive 2006/48/EC, Annex VI, Part 4, point 73.

Currency mismatches between the underlying obligation and the collateral shall be treated conservatively in the institution's assessment of LGD.

To the extent, which LGD takes into account the existence of collateral; LGD estimates shall not solely be based on the collateral's estimated market value. LGD estimates shall take into account the effect of potential inability of institutions to expeditiously gain control of their collateral and liquidate it. If an institution does not meet the minimum requirements for collateral, any amount recovered from such collateral may not be taken into account in its LGD estimates.

For the specific case of facilities already in default, the institution shall use its best estimate of expected loss for each facility given current economic circumstances and facility status. To the extent that unpaid late fees have been capitalized in the institution's income statement, they shall be added to the measure of exposure and loss.

Estimates of LGD shall be based on data over a minimum of five years, subject to the transition arrangements. An institution need not give equal importance to historic data if it can demonstrate to its supervisor that more recent data is a better predictor of loss rate.

Conclusion

In June 2004, the Basel Committee on Banking Supervision issued a revised framework on International Convergence of Capital Measurement and Capital Standards ("Basel II"). When following the IRB approach to Basel II, banking institutions will be allowed to use their own internal measures for key drivers of credit risk as primary inputs to their minimum regulatory capital calculation, subject to meeting certain conditions and to explicit supervisory approval.

In light of the need under Basel II for banks and their supervisors to assess the soundness and appropriateness of internal credit risk measurement and management systems, the development of methodologies for validating external and internal rating systems is clearly an important issue. More specifically, there is a need to develop means for validating the systems used to generate the parameters (such as PD, LGD, EAD and the underlying risk ratings) that serve as inputs to the IRB approach to credit risk.

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