

## Counterparty credit risk in Basel III – Executive Summary

Weaknesses in risk management practices associated with derivatives were revealed by the Great Financial Crisis. This led the Basel Committee on Banking Supervision (BCBS) to include a significant strengthening of its framework for counterparty credit risk (CCR) for securities financing transactions (SFTs) and both over-the-counter (OTC) and centrally cleared derivatives in its Basel III response to the crisis.

CCR is a complex risk to assess. It is a hybrid between credit and market risk and depends on both changes in the creditworthiness of the counterparty and movements in underlying market risk factors. This Executive Summary provides an overview of the treatment of CCR in the Basel III framework.

### Risk coverage

The risk-based capital charges for CCR in Basel III cover two important characteristics of CCR: the risk of counterparty default and a credit valuation adjustment (CVA). The risk of counterparty default was already covered in Basel I and Basel II. The Basel III reforms introduced a new capital charge for the risk of loss due to the deterioration in the creditworthiness of the counterparty to a derivatives transaction or an SFT. This potential mark-to-market loss is known as CVA risk. It captures changes in counterparty credit spreads and other market risk factors. CVA risk was a major source of unexpected losses for banks during the Great Financial Crisis.

Material to the calculation of capital charges for default risk and CVA risk is the measurement of the exposure of the underlying transactions in a portfolio, where the concept of a netting set plays an important role. A netting set, for the estimation of the exposure amount, is a group of transactions with a single counterparty that are subject to a legally enforceable bilateral netting arrangement.

SFTs only apply for CVA risk if the transactions are fair valued for accounting purposes. The capital calculation for CVA risk also exempts direct transactions with a qualified central counterparty.

### Capital charges for CVA risk

The CVA risk capital requirement is calculated for a bank's total CVA portfolio on a standalone basis. This calculation takes into account risk-reducing effects, such as netting, collateral arrangements and certain offsetting hedges. The BCBS incentivises active risk management as hedging by recognising external and bank internal hedges. There are three approaches available for calculating CVA risk: (1) the standardised approach (SA-CVA), which is an adaptation of the SA for market risk and requires supervisory approval; (2) the simpler basic approach (BA-CVA); and (3) an approach for banks with less engagement in derivatives activities in which they can choose to use their CCR capital requirements as a proxy for their CVA charge. Any bank below a materiality threshold of EUR 100 billion for the aggregate notional amount of non-centrally cleared derivatives may choose to set its CVA capital equal to 100% of the bank's capital requirement for CCR.

#### The basic approach (BA-CVA)

BA-CVA calculation comes in two variants: a reduced version for banks that do not actively hedge CVA risk; and a full version which is intended for banks that actively hedge CVA risk. Banks are free to choose their approach, though all banks must calculate the capital requirement under the reduced version of the BA-CVA. This is based on the individual CVA capital requirements computed for each counterparty and a supervisory correlation parameter for credit spreads of any two counterparties. Banks applying the full version have a capital charge that is a function of the capital charge for the reduced version and hedging via the formula:

$$\text{Capital full version} = 0.25 \times \text{capital reduced version} + 0.75 \times \text{capital hedges}$$

## The standardised approach (SA-CVA)

Banks eligible to use the more complex SA-CVA calculation must comply with important minimum criteria. First, they must be able to model the exposure, especially credit spreads of less liquid counterparties, and calculate the key risk measure – risk sensitivities of the underlying market risk factors. Second, banks must have a dedicated CVA desk for their hedging activities. The SA-CVA follows closely the SA for market risk. Risk sensitivities are the input for the capital calculation and must be computed in accordance with the validation standards of the revised market risk standard. The capital requirement for the entire CVA portfolio, including all eligible hedges, is calculated as the sum of the capital requirements for individual risks, ie delta and vega risk, increased by a minimum supervisory multiplier of 1.25 to compensate for a higher level of model risk compared with the market risk standard.

## Capital charges for default risk

Estimating the exposure amount is critical for calculating the capital requirements for CCR. The exposure amount for a particular netting set multiplied by the risk weight, using either the SA or the internal ratings-based (IRB) approach for credit risk, is the risk-weighted asset in the CCR default risk calculation. There are two non-modelled approaches and a modelled approach, the Internal Modelling Method (IMM), available for calculating the CCR exposure amount. The non-modelled approaches are the credit risk mitigation approach in Basel II (CRM) and the newly developed SA for CCR (SA-CCR), which is replacing two current non-internal models approaches, the Current Exposure Method (CEM) and the Standardised Method (SM). The SA-CCR and the IMM are available for OTC derivatives. However, only the IMM and the CRM can be applied to SFTs.

## Measuring the exposure for derivatives: SA-CCR

The development of the SA-CCR has brought a significant change in methodology that helped the BCBS to achieve various objectives, including its application and different treatment of margined and unmargined trades. The SA-CCR further incentivises banks to make greater use of margining. It also addresses known deficiencies of the current standardised approaches and reduces national discretion while improving the risk sensitivity of the capital framework without creating undue complexity. The introduction of the SA-CCR affects other Basel-related standards which rely on its exposure calculation, such as the leverage ratio, the large exposures standard, capital requirements for central counterparties and investments in equity funds.

The CCR exposure under the SA-CCR is the sum of the replacement cost of a position and its potential future exposure (PFE), multiplied by a regulatory multiplication factor (currently set at 1.4).

Importantly, the calculation of the PFE has become much more risk-sensitive, allowing partial recognition of excess collateral for each of the five different asset classes (interest rate, foreign exchange, credit, equity and commodity), as well as taking into account important differences in basis risk and correlations.

## Measuring the exposure for derivatives: IMM

A qualifying internal model for measuring counterparty credit exposure must estimate the potential future distribution for changes in the market value of all transactions in a netting set. The treatment of collateral is an important element of this calculation and can be different for banks using different approaches. These expected exposures are the basis for modelling the CCR exposure under the IMM. Being an internal model approach, the IMM needs prior supervisory approval.

This Executive Summary and related tutorials are also available in [FSI Connect](#), the online learning tool of the Bank for International Settlements.