

BIPRU 5: Credit risk mitigation

This explanatory note does not form part of BIPRU 5, nor does it constitute individual or general FSA guidance. It is subject to periodic review.

Credit risk mitigation (CRM) – techniques used to reduce the credit risk associated with an exposure or exposures that a firm holds.

Introduction

A firm must calculate its credit risk capital requirement using either the standardised or internal ratings based (IRB) approaches. As a firm may have entered into further agreements to mitigate these risks, applying the CRM framework means it can sometimes lower its Pillar 1 capital requirement on a particular exposure.

We recommend that firms read BIPRU 3 (standardised approach to credit risk) or BIPRU 4 (IRB approach to credit risk) as appropriate before considering the CRM techniques outlined below.

CRM framework

CRM can be achieved through either funded or unfunded protection:

- A firm has funded protection if it can either take rights over assets or reduce its liabilities when the borrower does not pay. An example of funded protection is a bank taking a mortgage over a house.
- A firm has unfunded protection if it has an agreement that another party will step in when the borrower does not pay. Examples of unfunded protection include a guarantee or an insurance policy.

Under both approaches, a firm might reduce its capital requirement by recognising different forms of eligible CRM. The main CRM techniques mentioned in BIPRU are:

- netting;
- collateral;
- guarantees; and
- credit derivatives.

A firm may also benefit from using other techniques that have the same economic effect.

How do the BIPRU rules work?

BIPRU 5 of the FSA Handbook contains the detailed rules and guidance for firms to apply CRM techniques under the standardised approach. Firms on the IRB approaches also need to be aware of some CRM rules in BIPRU 4, mainly BIPRU 4.10.

Principles

Only certain types of CRM are considered strong enough to provide effective protection against credit risk and therefore for use in reducing the Pillar 1 capital requirement. Before any form of CRM can be recognised, there are a number of high-level principles that apply to ensure that the credit protection is adequate.

BIPRU 5.2 sets out the central principles of CRM that apply across all CRM techniques and calculation methods.

Types of CRM

BIPRU arranges the rules according to the type of CRM that a firm has. There are some sections that apply only to different types of funded protection and others that apply only to types of unfunded protection.

Funded protection

The two most important factors for funded CRM are whether:

- a firm can be sure that it will be able to get good value for the assets if needed; and
- the agreement is legally enforceable.

Funded protection – eligibility

To ensure a firm gets good value, the assets must be able to be sold quickly for a good price. So, only certain things can be treated as eligible forms of funded CRM. Cash, gold and bonds are seen as providing good protection, but eligibility will also depend on the calculation method that a firm uses. For example, only bonds with a certain rating can be considered eligible collateral under the financial collateral simple method.

BIPRU 5.6 sets out the eligibility requirements for funded credit protection.

Funded protection – minimum requirements

Even if the CRM is eligible, the firm must meet further operational requirements before the CRM can be used to calculate capital requirements. For example, a firm can only use netting if it has a legal opinion saying that netting will work and its systems will allow it to calculate the net exposure.

BIPRU 5.6 sets out the other minimum requirements for funded credit protection.

Funded protection - calculation of CRM effects

Netting and collateral are the main techniques of funded credit protection.

Sometimes, the exposure calculation of certain instruments will allow netting and collateral to be taken into account. This is seen mainly in derivative and repo-style transactions. Where this is the case, a firm is not able to double-count the effect of the CRM by also using the CRM methods.

BIPRU 13 sets out the exposure calculations for over-the-counter (OTC) derivatives and repo-style transactions. It should be clear whether netting and collateral can be accounted for here.

Netting

For many on-balance sheet transactions, netting allows a firm to treat cash balances held on behalf of a third party as cash collateral.

BIPRU 5.3 sets out the specific treatment of on-balance sheet netting.

Collateral

Collateral can take many different forms, but generally the more liquid the collateral and robust the valuation, the greater the effect on regulatory capital. There are different ways to calculate the effects, depending upon the type of asset taken as collateral.

For financial collateral, there are two main methods.

- The financial collateral ***simple*** method is available only to firms using the standardised approach to credit risk. This method takes the current value of the collateral and, for that amount, simply substitutes the risk weight of the borrower with the risk weight that would apply to the collateral. Any exposure left over attracts the risk weight of the borrower.

For example, a firm that lends £100 to an unrated corporate which posts £50 of AAA rated government bonds as collateral would attract the following risk weights:

£50 would attract a 0% risk weight as this is the risk weight of a direct exposure to the collateral.

The remaining £50 would attract a 100% risk weight as this is the risk weight of the direct exposure to the borrower.

BIPRU 5.4 sets out the financial collateral simple method.

- The financial collateral ***comprehensive*** method is available to firms on either the standardised or the foundation IRB approaches to credit risk. This method applies a volatility adjustment (or ‘haircut’) to the value of the collateral to allow for the fact that the collateral taken may fall in value when it comes to taking control of the collateral and selling it. This adjusted collateral value is then subtracted from the exposure value to create an ‘adjusted exposure value’.

Firms on the standardised approach will then apply the risk weight of the borrower to the adjusted exposure, while firms using foundation IRB make a formulaic adjustment to the loss given default (LGD) number which has a similar effect.

To calculate these ‘haircuts’, the firm can use either a table of supervisory numbers or its own numbers if it meets certain requirements.

BIPRU 5.4 sets out the general approach to the financial collateral comprehensive method, the calculation of haircuts and the final calculation under the standardised approach. This is

modified by BIPRU 4.10 for the foundation IRB approach, which also sets out the final calculation under the foundation IRB approach.

Residential mortgages are another type of collateral (residential real estate collateral). This is the only non-financial collateral that is recognised under the standardised approach and it is treated in a very specific way. The explanatory note on the standardised approach to credit risk gives more information on this.

BIPRU 3.4 sets out the treatment of real estate collateral under the standardised approach.

The foundation IRB approach treats residential mortgages in the same way as other physical collateral. For this type of collateral, the LGD of an exposure will be adjusted depending on certain factors, including the value and type of the asset taken as collateral.

BIPRU 4.10 sets out the treatment of physical collateral under the foundation IRB approach.

A firm using either advanced or retail IRB will usually take account of any collateral in the LGD estimate.

Unfunded protection

Unfunded CRM relies on the ability of the party providing the protection to step in when the original borrower is unable to pay. So, the main factors are whether:

- the firm providing protection is reliable; and
- the contractual arrangement provides adequate protection.

Unfunded protection – eligibility

Under the standardised and foundation IRB approaches, only certain types of company can generally provide this sort of protection.

BIPRU 5.7 sets out the range of eligible unfunded protection providers under the standardised approach. This is modified by BIPRU 4.10 for the foundation IRB approach.

Unfunded protection – minimum requirements

There is no set format a protection agreement must take. For example, a parental guarantee or a third-party insurance contract could both be used to reduce capital requirements in the same way. However, the protection agreement must be written in a way that gives certainty to the level of protection that is provided. And there are further specific requirements that must be met before a particular protection agreement can be recognised in the capital calculation.

BIPRU 5.7 sets out the main minimum requirements for unfunded protection agreements under the standardised and foundation IRB approaches.

Unfunded protection – calculation of CRM

The normal approach for unfunded protection is known as the ‘substitution method’. A firm relying on unfunded protection should take the exposure to the borrower and ‘substitute’ it with a similar exposure to the protection provider. This is because the firm is now relying on the protection provider for payment.

Under the standardised approach there is a simple risk weight substitution, while under foundation IRB the substitution is of the probability of default (PD). Under advanced IRB, the recognition is more complicated and may involve a PD or LGD adjustment or both.

BIPRU 5.7 sets out the substitution treatment for unfunded protection. This is modified by BIPRU 4.10 for the foundation IRB approach.

A firm using advanced or retail IRB is able to take account of unfunded protection in either the PD estimate or the LGD estimate, or a combination of both.

BIPRU 4.10 sets out the rules on unfunded protection for firms applying the advanced or retail IRB approaches.

Under the IRB approach some exposures are subject to the ‘double default’ treatment. This mainly covers exposures in the ‘corporate’ class that have unfunded protection provided by a financial company. This treatment recognises that for a firm to suffer a loss, both the borrower and the protection provider must default at the same time. There is a special formula that a firm must use to calculate this effect, and it may give a lower capital requirement than using the substitution approach. If not, then the substitution approach is still available.

BIPRU 4.4 sets out the double default treatment.

What if the protection only partially covers the exposure?

BIPRU allows the recognition of partial protection. The exposure is split into a ‘protected portion’ and an ‘unprotected portion’. Generally the protected portion is treated under one of the methods above, while the unprotected portion is just treated as an exposure to the original borrower.

A good instance of partial protection is the financial collateral simple method example above.

In some cases partial protection is ‘tranching’ so that only certain types of losses are covered. This is more common on portfolios of exposures. This type of protection is treated as a ‘synthetic securitisation’ and BIPRU 9 will apply.

What if a firm has more than one type of protection?

The recognition of ‘multiple CRM’, where a firm has more than one type of CRM, can be tricky. In many cases it will depend on the specific nature of the agreements. The rules allow firms to recognise this type of protection, but if it becomes difficult it may be necessary to ask for individual guidance.

What if the protection expires before the exposure?

When the protection expires the firm will still have an exposure to the original borrower and this is called a 'maturity mismatch'. Where such a 'mismatch' exists, it can greatly reduce the recognition of any agreement in the capital calculation. If the original maturity of the exposure is less than one year – and there is a 'maturity mismatch' – there is no recognition of the protection at all.

BIPRU 5.8 outlines the rules on 'maturity mismatch'.

Other parts of the BIPRU text to consider

Other parts of the Handbook text relevant to firms applying CRM techniques:

- BIPRU 3 sets out the standardised approach to credit risk.
- BIPRU 4 sets out the IRB approaches to credit risk.
- BIPRU 9 sets out the rules for calculating capital requirements for securitisation positions. If a firm has protection that is 'tranching', then this section will apply.
- BIPRU 13 sets out the exposure calculations for OTC derivatives and repo-style transactions.