



**Financial Services  
Commission**

## **Guidance Note**

Capital Requirements Directive

Financial derivatives, SFTs and long  
settlement transactions

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## 1. Application and Purpose

- 1.1. This Guidance Note applies to all locally incorporated credit institutions and investment firms. Capital Adequacy Directive, comprising Directive 2006/48/EC and Directive 2006/49/EC which have been implemented in Gibraltar via the Banking (Capital Adequacy of Credit Institutions) Regulations, 2007 and Financial Services (Capital Adequacy of Investment Firms) Regulations 2007. The aim of the Guidance Note is to supplement the Regulations in setting the standards for the measurement of financial derivatives, SFTs and long settlement transactions.

### Unusual Transactions

- 1.2. If the calculation of the amount of an exposure or of a combination of exposures under this Guidance Note would materially understate the amount of the counterparty credit risk, the firm must increase the amount of the credit risk capital requirement by an amount sufficient to compensate for that understatement.
- 1.3. If a firm in relation to an exposure covered by this Guidance Note has:
  - 1.3.1. an exposure of a non-standard type; or
  - 1.3.2. an exposure that is part of a non-standard arrangement; or
  - 1.3.3. an exposure that, taken together with other exposures (whether or not they are subject to this Guidance Note), gives rise to a non-standard counterparty credit risk; or
  - 1.3.4. is subject to the requirement set out in paragraph 1.2;it must immediately notify the FSC of that fact, the counterparty involved, the nature of the exposure or arrangement and the treatment of those exposures it has adopted for the purpose of the calculation of the credit risk capital requirement.
- 1.4. A firm must judge the question of what is non-standard for the purposes of paragraph 1.3 by reference to the standards:
  - 1.4.1. prevailing at the time the rule is being applied; and
  - 1.4.2. of firms who generally carry on business which might give rise to exposures covered by this Guidance Note rather than merely by reference to the firm's own business.
- 1.5. The methodologies which have been developed assume instruments with standard characteristics. There are many examples, however, of instruments which, although based on a standard contract, contain structural features which make the requirements, as stated, inappropriate. Examples of such instruments are:
  - 1.5.1. path dependant and other exotic options;
  - 1.5.2. swaps with cash flows subject to a multiplier; and
  - 1.5.3. securities with embedded options.

In such circumstances a firm should consult the FSC.

## 2. Calculation of exposure values for financial derivatives and long settlement transactions: General provisions

### Financial derivative instruments

- 2.1. A firm must determine the exposure value of a financial derivative instrument in accordance with this Guidance Note, with the effects of contracts of novation and other netting agreements taken into account for the purposes of such methods in accordance with this Guidance Note.
- 2.2. Subject to Section 2, a firm must determine the exposure value for financial derivative instruments with the CCR mark to market method, the CCR standardised method or the CCR internal model method.

### Definition of financial derivative instrument

- 2.3. Each of the following is a financial derivative instrument:
  - 2.3.1. an interest-rate contract, being:
    - 2.3.1.1. a single-currency interest rate swap;
    - 2.3.1.2. a basis-swap;
    - 2.3.1.3. a forward rate agreement;
    - 2.3.1.4. an interest-rate future;
    - 2.3.1.5. a purchased interest-rate option;
    - 2.3.1.6. other contracts of similar nature;
  - 2.3.2. a foreign currency contract or contract concerning gold, being:
    - 2.3.2.1. a cross-currency interest-rate swap;
    - 2.3.2.2. a forward foreign currency contract;
    - 2.3.2.3. a currency future;
    - 2.3.2.4. a currency option purchased;
    - 2.3.2.5. other contracts of a similar nature;
    - 2.3.2.6. a contract concerning gold of a nature similar to 2.3.2.1 to 2.3.2.5 and
  - 2.3.3. a contract of a nature similar to those in 2.3.1.1 to 2.3.1.5 and 2.3.2.1 to 2.3.2.4 concerning other reference items or indices, including as a minimum all instruments specified in [points 4 to 7, 9 and 10 in Section C of Annex I of the MiFID] not otherwise included in 2.3.1. or 2.3.2).

### Long settlement transactions

- 2.4. Long settlement transaction means a transaction where a counterparty undertakes to deliver a security, a commodity, or a foreign currency amount against cash, other financial instruments, or commodities, or vice versa, at a settlement or delivery date that is contractually specified as more than the lower of the market standard for this particular transaction and five business days after the date on which the firm enters into the transaction.
- 2.5. A firm must calculate the exposure value of a long settlement transaction in accordance with either:



- 2.5.1. this Guidance Note; or
  - 2.5.2. the master netting agreement internal models approach, if it has obtained FSC consent to apply that approach.
- 2.6. A firm may determine exposures arising from long settlement transactions using any of the CCR mark to market method, the CCR standardised method and the CCR internal model method, regardless of the methods chosen for treating financial derivatives instruments and repurchase transactions, securities or commodities lending or borrowing transactions, and margin lending transactions. In calculating capital requirements for long settlement transactions, a firm that uses the IRB approach may apply the risk weights under the standardised approach on a permanent basis, irrespective of the materiality of such positions.

### General netting

- 2.7. Under the CCR mark to market method, the CCR standardised method and the CCR internal model method, a firm must determine the exposure value for a given counterparty as equal to the sum of the exposure values calculated for each netting set with that counterparty.
- 2.8. A firm may only recognise netting for the purposes of Sections 3, 4 and 5 if the requirements in Section 6 are met.

### Combined use

- 2.9. The combined use of the CCR mark to market method, the CCR standardised method and the CCR internal model method is not permitted. The combined use of the CCR mark to market method and the CCR standardised method is permitted where one of the methods is used for the cases set out in paragraph 4.8 to paragraph 4.9.

### Exposure to a central counterparty

- 2.10. Notwithstanding paragraphs 2.1 and 2.5, a firm may determine the exposure value of a credit risk exposure outstanding with a central counterparty in accordance with paragraph 2.11, provided that the central counterparty's counterparty credit risk exposures with all participants in its arrangements are fully collateralised on a daily basis.
- 2.11. A firm may attribute an exposure value of zero for CCR to derivative contracts and long settlement transactions, where they are outstanding with a central counterparty and have not been rejected by the central counterparty:

### Exceptions

- 2.12. When a firm purchases credit derivative protection against a non-trading book exposure, or against a CCR exposure, it must compute its capital requirement for the hedged asset according to:
  - 2.12.1. Regulations 41 to 43 of the BCACI Regulations 2006;
  - 2.12.2. Guidance Note on the IRB approach;
  - 2.12.3. Schedule 7 of the BCACI Regulations 2006.
- 2.13. In the cases in paragraph 2.12, a firm must set the exposure value for CCR for these credit derivatives to zero.
- 2.14. A firm must set the exposure value for CCR from sold credit default swaps in the non-trading book to zero, where they are treated as credit protection

provided by the firm and subject to a capital requirement for credit risk for the full notional amount.

### 3. CCR mark to market method

#### General

- 3.1. The rules in Section 3 set out the CCR mark to market method.
- 3.2. A firm must obtain the current replacement cost of all contracts with positive values by attaching current market values to contracts (marking to market).
- 3.3. A firm must obtain a figure for potential future credit exposure by multiplying the notional principal amounts or underlying values by the percentages in the table in paragraph 3.5.
- 3.4. Paragraph 3.3 does not apply in the case of single-currency "floating/floating" interest rate swaps.
- 3.5. Table: multiples to be applied to notional principal amounts or underlying values

Residual Maturity	Interest rate contracts	Contracts concerning foreign currency rates and gold	Contracts concerning equities	Contracts concerning precious metals except gold	Contracts concerning commodities other than precious metals
<i>One year or less</i>	0%	1%	6%	7%	10%
<i>Over one year, less than five years</i>	0.5%	5%	8%	7%	12%
<i>Over five years</i>	1.5%	7.5%	10%	8%	15%

- 3.6. A firm must treat a contract which does not fall within one of the five categories indicated in the table in paragraph 3.5 as a contract concerning commodities other than precious metals.
- 3.7. For contracts with multiple exchanges of principal, a firm must multiply the percentages in the table in paragraph 3.5 by the number of remaining payments still to be made according to the contract.
- 3.8. For contracts that are structured to settle outstanding exposure following specified payment dates and where the terms are reset such that the market value of the contract is zero on these specified dates, a firm must treat the residual maturity as equal to the time until the next reset date.
- 3.9. In the case of interest-rate contracts that meet the criteria in paragraph 3.8. and have a remaining maturity of over one year, a firm must apply a percentage no lower than 0.5%.
- 3.10. For the purpose of calculating the potential future exposure in accordance with paragraph 3.3 a firm may apply the percentages in the table in paragraph 3.11 instead of those prescribed in the table in paragraph 3.5, provided that it



makes use of the commodity extended maturity ladder approach for those contracts.

3.11. Table: Alternative multiples to be applied to notional principal amounts or underlying values

<b>Residual maturity</b>	<b>Precious metals (except gold)</b>	<b>Base metals</b>	<b>Agricultural products (softs)</b>	<b>Other, including energy products</b>
<i>One year or less</i>	2%	2.5%	3%	4%
<i>Over one year, less than five years</i>	5%	4%	5%	6%
<i>Over five years</i>	7.5%	8%	9%	10%

3.12. A firm must calculate the exposure value as the sum of:

- 3.12.1. the current replacement cost calculated under paragraph 3.2; and
- 3.12.2. the potential future credit exposure calculated under paragraph 3.3.

3.13. Contracts with a negative replacement cost should still be subject to an add-on if there is a possibility of the replacement costs becoming positive before maturity. Written options should therefore be exempt from add-ons.

### Alternative approach

3.14. A firm must ensure that the notional amount to be taken into account is an appropriate measure for the risk inherent in the contract. Where, for instance, the contract provides for a multiplication of cash flows, a firm must adjust the notional amount in order to take into account the effects of the multiplication on the risk structure of that contract.

### Netting: Contracts for novation

3.15. The single net amounts fixed by contracts for novation, rather than the gross amounts involved, may be weighted. For the purposes of the CCR mark to market method, a firm may obtain:

- 3.15.1. in paragraph 3.2, the current replacement cost; and
- 3.15.2. in paragraph 3.3, the notional principal amounts or underlying values; by taking account of the contract for novation.

### Netting: Other netting agreements

3.16. In application of the CCR mark to market method:

- 3.16.1. in paragraph 3.2 a firm may obtain the current replacement cost for the contracts included in a netting agreement by taking account of the actual hypothetical net replacement cost which results from the agreement; in the case where netting leads to a net obligation for the

firm calculating the net replacement cost, the current replacement cost is calculated as "0";

- 3.16.2. in paragraph 3.3 a firm may reduce the figure for potential future credit exposure for all contracts included in a netting agreement according to the following equation:

$$PCE_{red} = 0.4 * PCE_{gross} + 0.6 * NGR * PCE_{gross},$$

where:

- 3.16.2.1.  $PCE_{red}$  = the reduced figure for potential future credit exposure for all contracts with a given counterparty included in a legally valid bilateral netting agreement;
- 3.16.2.2.  $PCE_{gross}$  = the sum of the figures for potential future credit exposure for all contracts with a given counterparty which are included in a legally valid bilateral netting agreement, and are calculated by multiplying their notional principal amounts by the percentages set out in the table in paragraph 3.5; and
- 3.16.2.3.  $NGR$  = "net-to-gross ratio": the quotient of the net replacement cost for all contracts included in a legally valid bilateral netting agreement with a given counterparty (numerator) and the gross replacement cost for all contracts included in a legally valid bilateral netting agreement with that counterparty (denominator).
- 3.17. For the calculation of the potential future credit exposure, according to the formula in paragraph 3.16, perfectly matching contracts included in the netting agreement may be taken into account as a single contract with a notional principal equivalent to the net receipts.
- 3.18. For the purposes of paragraph 3.17 a perfectly matching contract is a forward foreign currency contract or similar contract in which a notional principal is equivalent to cash flows that fall due on the same value date and fully or partly in the same currency.

## 4. CCR standardised method

### Scope

- 4.1. A firm may use the CCR standardised method only for financial derivative instruments and long settlement transactions.

### Derivation of risk position: payment legs

#### 4.2.

- 4.2.1. When a financial derivative instrument transaction with a linear risk profile stipulates the exchange of a financial instrument for a payment, the payment part is referred to as the payment leg.
- 4.2.2. Transactions that stipulate the exchange of payment against payment consist of two payment legs.
- 4.2.3. The payment legs consist of the contractually agreed gross payments, including the notional amount of the transaction.

- 4.2.4. A firm may disregard the interest rate risk from payment legs with a remaining maturity of less than one year for the purposes of the calculations in Section 4.
- 4.2.5. A firm may treat transactions that consist of two payment legs that are denominated in the same currency, such as interest rate swaps, as a single aggregate transaction. The treatment for payment legs applies to the aggregate transaction.

### Derivation of risk position: mapping

#### 4.3.

- 4.3.1. Transactions with a linear risk profile with equities (including equity indices), gold, other precious metals or other commodities as the underlying financial instruments must be mapped to a risk position in the respective equity (or equity index) or commodity (including gold and the other precious metals) and as well as to an interest rate risk position for the payment leg.
- 4.3.2. If the payment leg is denominated in a foreign currency, it must be additionally mapped to a risk position in the respective currency.
- 4.3.3. Transactions that have a linear risk profile with a debt instrument as the underlying instrument must be mapped to an interest rate risk position for the debt instrument and a separate interest rate risk position applied to the payment leg.
- 4.3.4. Transactions with a linear risk profile that stipulate the exchange of payment against payment, including foreign exchange forwards, must be mapped to an interest rate risk position for each of the payment legs.
- 4.3.5. If the underlying debt instrument is denominated in a foreign currency, the debt instrument must be mapped to a risk position in the respective currency.
- 4.3.6. If a payment leg is denominated in a foreign currency, the payment leg must again be mapped to a risk position in the respective currency.
- 4.3.7. The exposure value to be assigned to a foreign exchange basis swap transaction is zero.

### Derivation of risk position: calculating the size of the risk position

- 4.4. A firm must calculate the risk position of the transaction or instrument in column 1 in accordance with column 2 of the table in paragraph 4.5.

#### 4.5.

Transaction or instrument	Calculation of size of risk position
Transaction with linear risk profile except for debt instruments.	The effective notional value (market price multiplied by quantity) of the underlying financial instruments (including commodities) converted to the firm's domestic currency.
Debt instruments and payment legs.	The effective notional value of the outstanding gross payments (including the notional amount) converted to the firm's base currency, multiplied by the modified



	duration of the debt instrument, or payment leg, respectively.
Credit default swap	The notional value of the reference debt instrument multiplied by the remaining maturity of the credit default swap.
Subject to paragraphs 4.8 to 4.9, financial derivative instrument with a non-linear risk profile, including options and swaptions except in the case of an underlying debt instrument.	Equal to the delta equivalent effective notional value of the financial instrument that underlies the transactions.
Subject to paragraphs 4.8 to 4.9, financial derivative instrument with a non-linear risk profile, including options and swaptions, of which the underlying is a debt instrument or a payment leg.	Equal to the delta equivalent effective notional value of the financial instrument or payment leg multiplied by the modified duration of the debt instrument, or payment leg, respectively.

### Derivation of risk position: effective notional value

- 4.6. As detailed in the BCACI Regulations, Schedule 3, Part 5, Regulation 11.

### Derivation of risk position: treatment of collateral

- 4.7. For the determination of risk positions, a firm must treat collateral received from a counterparty similar to a claim on the counterparty under a derivative contract (long position) that is due on the day. Collateral posted must be treated similar to an obligation to the counterparty (short position) that is due today.

### Derivation of risk position: non-linear risks

- 4.8. A firm must apply the CCR mark to market method to transactions with a non-linear risk profile or for payment legs and transactions with debt instruments as underlying if:
- 4.8.1. the firm does not have a VaR or other model permission; or
  - 4.8.2. where the firm does have a VaR or other model permission but cannot determine the delta or the modified duration, respectively, with its VaR or other model permission.
- 4.9. A firm must not recognise netting for the purpose of applying the CCR mark to market method to an exposure treated under the above measure: that is, the exposure value must be determined as if there were a netting set that comprises just the individual transaction.

### Hedging sets: assignment

- 4.10. A firm must group the risk positions into hedging sets and, for each hedging set, compute the absolute value amount of the sum of the resulting risk positions in accordance with the BCACI Regulations, Schedule 3, Part 5, Regulation 12.

### Hedging sets: description

- 4.11. For interest rate risk positions from money deposits received from the counterparty as collateral, from payment legs and from underlying debt instruments, a capital charge of 1.60% or less applies. There are six hedging

sets for each currency, set out in the table in paragraph 4.12. Hedging sets are defined by a combination of the criteria “maturity” and “referenced interest rates”.

4.12. Table: Hedging sets

	<b>Non-government referenced interest rates</b>	<b>Non-government referenced interest rates</b>
Maturity	<=1 year	<=1 year
Maturity	>1-<=5 years	>1-<=5 years
Maturity	>5 years	> 5 years

- 4.13. For interest rate risk positions from underlying debt instruments or payment legs, where the interest rate is linked to a reference interest rate that represents a general market interest level, the remaining maturity is the interval up to the next re-adjustment of the interest rate. In all other cases, it is the remaining life of the underlying debt instrument, or in the case of a payment leg the remaining life of the transaction.
- 4.14. There is one hedging set for each issuer of a reference debt instrument that underlies a credit default swap.
- 4.15. Underlying financial instruments other than debt instruments must only be assigned by a firm to the same respective hedging sets if they are identical or similar instruments. In all other cases a firm must assign them to separate hedging sets.
- 4.16. The similarity of instruments is established in accordance with 4.16.1 to 4.16.4.
- 4.16.1. For equities, similar instruments are those of the same issuer. An equity index is treated as a separate issuer.
- 4.16.2. For precious metals, similar instruments are those of the same metal. A precious metal index is treated as a separate precious metal.
- 4.16.3. For electric power, similar instruments are those delivery rights and obligations that refer to the same peak or off-peak load time interval within any 24 hour period.
- 4.16.4. For commodities, similar instruments are those of the same commodity. A commodity index is treated as a separate commodity.

### Hedging sets: collateral

- 4.17. For interest rate risk positions from underlying debt instruments and from money deposits posted with a counterparty as collateral, where the counterparty does not have debt obligations of low specific risk outstanding, a capital charge of more than 1.60% applies, there is one hedging set for each issuer.

- 4.18. When a payment leg emulates such a debt instrument, there is also one hedging set for each issuer of the reference debt instrument.
- 4.19. A firm may assign risk positions that arise from debt instruments of a certain issuer, or from reference debt instruments of the same issuer that are emulated by payment legs, or that underlie a credit default swap, to the same hedging set.
- 4.20. A firm that makes use of collateral to mitigate its CCR must have internal procedures to verify that, prior to recognising the effect of collateral in its calculations, the collateral meets the legal certainty standards set out in Schedule 8 of the BCACI Regulations, where relevant.

### Hedging sets: netting

- 4.21. A firm must have internal procedures to verify that, prior to including a transaction in a hedging set, the transaction is covered by a legally enforceable netting contract that meets the requirements set out in Section 6.

### Credit conversion factors: Table

- 4.22. A firm must apply the CCR multipliers for the different hedging set categories according to the Table in paragraph 4.23.
- 4.23.

Hedging set categories	CCR Multiplier (CCRM)
(1) Interest Rates	0.2%
(2) Interest Rates for risk positions from a reference debt instrument that underlies a credit default swap and to which a capital charge of 1.60%, or less.	0.3%
(3) Interest Rates for risk positions from a debt instrument or reference debt instrument to which a capital charge of more than 1.60%.	0.6%
(4) Exchange Rates	2.5%
(5) Electric power	4.0%
(6) Gold	5.0%
(7) Equity	7.0%
(8) Precious Metals (except gold)	8.5%
(9) Other commodities (excluding precious metals and electricity power)	10.0%
(10) Underlying instruments of financial derivative instruments that are not in any of the categories above.	10.0%



- 4.24. A firm must assign underlying instruments of financial derivatives instruments (in line 10 of the Table in paragraph 4.23) to separate individual hedging sets for each category of underlying instrument.

### Exposure value

- 4.25. A firm must calculate the exposure value separately for each netting set and must determine the exposure value net of collateral in accordance with the BCACI Regulations, Schedule 3, Part 5, Regulation 1.
- 4.26. A firm may only recognise collateral for this method if it is collateral that is eligible under regulations 41 to 43 and Schedule 8 of the BCACI Regulations and Schedule 2 of the FSCAIF Regulations Schedule 2.
- 4.27. A worked example showing a US Dollar (USD)-based firm, single counterparty, single netting set, Risk-positions  $R_{Pij}$  by hedging sets  $j$  is shown overleaf.

I	Transaction type			Effective notional	Modified duration	CMV	Interest rate risk hedging sets					FX risk hedging sets		Equity Risk
							USD non-gov M<1	USD non-gov M>1	EUR non-gov M<1	EUR non-gov M>1	JPY non-gov M>1	EUR/USD	JPY/USD	DAX
				\$ million	years	\$ million	effective notional x modified duration	effective notional x modified duration	effective notional x modified duration	effective notional x modified duration	effective notional x modified duration	effective notional (+ = long, - = short)	effective notional (+ = long, - = short)	effective notional (+ = long, - = short)
1	USD	IR swap	Receiver leg	80	-6		640							
1	USD	IR swap	Payer leg	80		-20								
2	USD	IR swap	Receiver leg	300		37.5								
2	USD	IR swap	Payer leg	300	-6		-1800							



3	EUR	FX Swap	Receiver leg	100	15	0				1500		100		
3	USD	FX Swap	Payer leg	100	-0.125		-12.5							
4	EUR	Cross ccy swap	Receiver leg	60	7	1				420		60		
4	JPY	Cross ccy swap	Payer leg	60	-7						-420		-60	
5	DAX	Total return swap in EUR	Receiver leg	150	0.125	4			18.75			150		
5	DAX	Total return swap in EUR	Payer leg	150	Not applicable									-150
Sum of risk positions RPTij by hedging setj							5	-1160	18.75	1920	-420	310	-60	-150



Absolute amount $ \sum \text{RPT}_{ij} $ of risk positions by hedging set $j$	5	1160	18.75	1920	420	310	60	150
Credit conversion factors $\text{CCF}_j$ by hedging set $j$	0.20%	0.20%	0.20%	0.20%	0.20%	2.50%	2.50%	7%
$\text{CCF}_j \times  \sum \text{RPT}_{ij} $ : CCF-weighted absolute amounts of risk positions by hedging set	0.0100	2.3200	0.0375	3.8400	0.8400	7.7500	1.5000	10.5000

Sum of $(\text{CCF}_j \times  \sum \text{RPT}_{ij} )$	26.7975
CMV: sum of current market values $\text{CMV}_i$ of the transactions	1.000
$\text{Max}(\text{CMV}, \text{sum of } (\text{CCF}_j \times  \sum \text{RPT}_{ij} ))$	26.7975
Beta:	1.4000
EAD	37.5165

## 5. CCR internal model method

- 5.1. This paragraph sets out the rules relating to the CCR internal model method.
- 5.2. A firm may only use the CCR internal model method if it has a CCR internal model method permission.
- 5.3. A firm should contact The FSC to obtain further information in regard to applying for a CCR internal model method permission.
- 5.4. A firm's CCR internal model method permission will modify paragraph 5.2 and will require the firm to use only the CCR internal model method, except to the extent that section 5 permits the firm to combine the use of the CCR internal model method with one or more other methods.
- 5.5. A provision of the CCR internal model method, in relation to a firm:
  - 5.5.1. excludes any provision of the CCR internal model method which is not applied to that firm by its CCR internal model method permission;
  - 5.5.2. includes any additional provision contained in the CCR internal model method permission; and
- 5.6. and takes into account any other amendments relating to the CCR internal model method made by the CCR internal model method permission.

### Scope

- 5.7. A firm may determine the exposure value for:
  - 5.7.1. financial derivative instruments;
  - 5.7.2. repurchase transactions;
  - 5.7.3. securities or commodities lending or borrowing transactions;
  - 5.7.4. margin lending transactions; and
  - 5.7.5. long settlement transactionswith the CCR internal model method.
- 5.8. A firm may use the CCR internal model method to calculate the exposure value for:
  - 5.8.1. the transactions in paragraph 5.7.1; or
  - 5.8.2. the transactions in paragraphs 5.7.2, 5.7.3 and 5.7.4; or
  - 5.8.3. the transactions in paragraphs 5.7.1 to 5.7.4.
- 5.9. In each of paragraphs 5.8.1, 5.8.2 and 5.8.3, a firm may include long settlement transactions as well.

### Use of other models

- 5.10. Paragraph 2 of Part 6 of Annex III of the Banking Consolidation Directive provides that a firm using the CCR internal model method may use a type of model other than the type set out in Section 5. If the FSC agrees to this, the details of the model and the necessary calculations will be set out in the CCR internal model method permission, which will modify Section 5 to the extent necessary. The FSC will not expect to agree to such a request unless the firm is able to satisfy the FSC that the method was at least as conservative as the method set out in Section 5 and in particular that, for every counterparty, any method was more conservative than alpha times effective EPE, calculated according to the equation found in BCACI Regulations (Schedule 3, Part 6, Regulations 5-16).



## Partial use

- 5.11. For all financial derivative instruments and for long settlement transactions which are outside the scope of a firm's CCR internal model method permission, a firm must use the CCR mark to market method or the CCR standardised method.
- 5.12. Under paragraph 5.11, combined use of the CCR mark to market method and the CCR standardised method is only permissible where one of the methods is used for the cases set out in paragraphs 4.8 to 4.9.
- 5.13. Notwithstanding paragraph 2.9 (Combined use), a firm may choose not to apply the CCR internal model method to exposures that are immaterial in size and risk.
- 5.14. If permitted by its CCR internal model method permission, and subject to its terms, a firm may carry out the implementation of the CCR internal model method sequentially across different transaction types; during this period the firm may use the CCR mark to market method or the CCR standardised method.
- 5.15. After the initial period following the granting of its CCR internal model method permission, as referred to in paragraph 5.14, a firm should extend the use of the CCR internal model method to cover any new business within a product category covered by its CCR internal model method permission. Subject to paragraphs 5.11 to 5.14, the firm should do so within a reasonable period of time. If the firm decides to exclude any business on, for example, the basis of materiality, it should document its reasons clearly.
- 5.16. In principle, the use of different measures of exposure within the CCR internal model method is possible within the same product category, including on a permanent basis. The FSC may allow a firm to use a more conservative measure of exposure that is less risk sensitive (for instance a measure based on conservative haircuts) for certain parts of the business if justified on a cost-benefit basis. However a firm would still need to meet the use test for these more conservative measures and would need to demonstrate that the aggregation of CCR exposures, that come from different approaches and have different degrees of conservatism, makes sense and is used for its CCR management purposes.
- 5.17. The FSC may require a firm to apply a multiplier to the measures of exposures coming out of a less risk-sensitive approach to calculating exposures as referred to in paragraph 5.16 where the FSC considers this to be appropriate due to the complexity of the business or the nature of the risks involved.

## Use of CCR internal model method

- 5.18. Subject to paragraphs 5.11 to 5.17, a firm that has a CCR internal model method permission must not use the CCR mark to market method or the CCR standardised method for transactions within the scope of the firm's CCR internal model method permission.
- 5.19. A firm which wishes to revert to the CCR mark to market method or the CCR standardised method will need to request the FSC to revoke or vary its CCR internal model method permission.
- 5.20. The FSC will not agree to a firm's request to revoke or vary its CCR internal model method permission except for demonstrated good cause.
- 5.21. If a firm ceases to comply with the requirements set out in Section 5, it must either present to the FSC a plan for a timely return to compliance or demonstrate that the effect of non-compliance is immaterial.

- 5.22. If a firm ceases to comply with the requirements set out in Section 5, the FSC may revoke the CCR internal model method permission or take other appropriate supervisory action.

### Exposure value

- 5.23. A firm must measure the exposure value at the level of the netting set.
- 5.24. A firm must calculate the exposure value in accordance with the BCACI Regulations, Schedule 3, Part 6, Regulations 5-16.

### Maturity adjustment

- 5.25. A firm using the IRB approach for risk weighting of exposures, arising from a CCR internal model method, should also apply a different maturity adjustment as set out in the Guidance Note on the IRB approach.

### Margin agreement

- 5.26. If the netting set is subject to a margin agreement, a firm must use one of the following EPE measures:
- 5.26.1. effective EPE without taking into account the margin agreement;
  - 5.26.2. the margin threshold, if positive, under the margin agreement plus an add-on that reflects the potential increase in exposure over the margin period of risk:
    - 5.26.2.1. the add-on is computed as the expected increase in the netting set's exposure beginning from a current exposure of zero over the margin period of risk;
    - 5.26.2.2. a floor of five business days for netting sets consisting only of repo-style transactions subject to daily remargining and daily mark-to-market, and ten business days for all other netting sets is imposed on the margin period of risk used for this purpose.
  - 5.26.3. if the model captures the effects of margining when estimating EE, the model's EE measure may be used directly in the equation in the BCACI Regulations (Schedule 3, Part 6, Regulations 5-16), unless the firm's CCR internal model method permission does not apply this provision or does not permit such use.
- 5.27. Where the effects of margining are captured by the model itself, the FSC does not prescribe any floors for the margin period of risk, but will challenge a firm that looks to use periods shorter than 5 days for repurchase agreements or reverse repurchase agreements or 10 days for financial derivative instruments.

### Operational requirements: General

- 5.28. A firm's EPE model must meet the operational requirements set out in paragraphs 5.29 to 5.76.

### Operational requirements: CCR control

- 5.29. The firm must have a control unit that is responsible for the design and implementation of its CCR management system, including the initial and on-going validation of the model.
- 5.30. This unit must control input data integrity and produce and analyse reports on the output of the firm's risk measurement model, including an evaluation of the relationship between measures of risk exposure, credit and trading limits.

- 5.31. This unit must be:
- 5.31.1. independent from units responsible for originating, renewing or trading exposures and free from undue influence;
  - 5.31.2. it must be adequately staffed; and
  - 5.31.3. it must report directly to the senior management of the firm.
- 5.32. The work of this unit must be closely integrated into the day-to-day credit risk management process of the firm; its output must, accordingly, be an integral part of the process of planning, monitoring and controlling the firm's credit and overall risk profile.
- 5.33. A firm must have CCR management policies, processes and systems that are conceptually sound and implemented with integrity.
- 5.34. A sound CCR management framework must include the identification, measurement, management, approval and internal reporting of CCR.
- 5.35. A firm's risk management policies must take account of market risk, liquidity risk, and legal and operational risk that can be associated with CCR.
- 5.36. The firm must not undertake business with a counterparty without assessing its creditworthiness and must take due account of settlement and pre-settlement credit risk.
- 5.37. These risks must be managed as comprehensively as practicable at the counterparty level (aggregating CCR exposures with other credit exposures) and at firm-wide level.
- 5.38. A firm's governing body and senior management must be actively involved in the CCR control process and must regard this as an essential aspect of the business to which significant resources need to be devoted. Senior management must be aware of the limitations and assumptions of the model used and the impact these can have on the reliability of the output. They must also consider the uncertainties of the market environment and operational issues and be aware of how these are reflected in the model.
- 5.39. A firm must ensure that the daily reports, prepared on its exposures to CCR, are reviewed by a level of management with sufficient seniority and authority to enforce both reductions of positions taken by individual credit managers or traders and reductions in the firm's overall CCR exposure.
- 5.40. A firm's CCR management system must be used in conjunction with internal credit and trading limits.
- 5.41. A firm must ensure that its credit and trading limits are related to its risk measurement model in a manner that is:
- 5.41.1. consistent over time; and
  - 5.41.2. well understood by credit managers, traders and senior management.
- 5.42. A firm's measurement of CCR must include measuring daily and intra-day usage of credit lines.
- 5.43. The firm must measure current exposure gross and net of collateral.
- 5.44. At portfolio and counterparty level, the firm must calculate and monitor peak exposure, or potential future exposure (PFE), at the confidence interval chosen by the firm.
- 5.45. The firm must take account of large or concentrated positions, including by groups of related counterparties, by industry, by market, etc.

- 5.46. A firm must have a routine and rigorous program of stress testing in place as a supplement to the CCR analysis based on the day-to-day output of the firm's risk measurement model.
- 5.47. The results of this stress testing must be reviewed periodically by senior management and must be reflected in the CCR policies and limits set by management and the governing body.
- 5.48. Where stress tests reveal particular vulnerability to a given set of circumstances, prompt steps must be taken to manage those risks appropriately.
- 5.49. A firm must have a routine in place for ensuring compliance with a documented set of internal policies, controls and procedures concerning the operation of the CCR management system.
- 5.50. The firm's CCR management system must be well documented and must provide an explanation of the empirical techniques used to measure CCR.
- 5.51. A firm must conduct an independent review of the CCR management system regularly through its own internal auditing process. This review must include both the activities of the business units referred to in paragraph 5.29 and of the independent CCR control unit. A review of the overall CCR management process must take place at regular intervals and must specifically address, at a minimum:
- 5.51.1. the adequacy of the documentation of the CCR management system and process;
  - 5.51.2. the organisation of the CCR control unit;
  - 5.51.3. the integration of CCR measures into daily risk management;
  - 5.51.4. the approval process for risk pricing models and valuation systems used by front and back-office personnel;
  - 5.51.5. the validation of any significant change in the CCR measurement process;
  - 5.51.6. the scope of CCR captured by the risk measurement model;
  - 5.51.7. the integrity of the management information system;
  - 5.51.8. the accuracy and completeness of CCR data;
  - 5.51.9. the verification of the consistency, timeliness and reliability of data sources used to run models, including the independence of such data sources;
  - 5.51.10. the accuracy and appropriateness of volatility and correlation assumptions;
  - 5.51.11. the accuracy of valuation and risk transformation calculations; and
  - 5.51.12. the verification of the model's accuracy through frequent back-testing.

#### Operational requirements: Use test

- 5.52. The distribution of exposures generated by the model used to calculate effective EPE must be closely integrated into the day-to-day CCR management process of the firm. The model's output must accordingly play an essential role in the credit approval, CCR management, internal capital allocation, and corporate governance of the firm.
- 5.53. A firm must have a track record in the use of models that generate a distribution of exposures to CCR. Thus, the firm must be able to demonstrate

that it has been using a model to calculate the distributions of exposures upon which the EPE calculation is based that meets, broadly, the minimum requirements set out in Paragraph 5, for at least one year before applying for a CCR internal model method permission.

- 5.54. A firm must ensure that the model used to generate a distribution of exposures to CCR is part of a CCR management framework that includes the identification, measurement, management, approval and internal reporting of CCR. This framework must include the measurement of usage of credit lines (aggregating CCR exposures with other credit exposures) and internal capital allocation.
- 5.55. In addition to EPE, a firm must measure and manage current exposures.
- 5.56. Where appropriate, the firm must measure current exposure gross and net of collateral.
- 5.57. The use test is satisfied if a firm uses other CCR measures, such as peak exposure or based on the distribution of exposures generated by the same model to compute EPE.
- 5.58. A firm must have the systems capability to estimate EE daily if necessary, unless it is able to demonstrate to the FSC that its exposures to CCR warrant less frequent calculation. The firm must compute EE along a time profile of forecasting horizons that adequately reflects the time structure of future cash flows and maturity of the contracts, and in a manner that is consistent with the materiality and composition of the exposures.
- 5.59. Exposure must be measured, monitored and controlled over the life of all contracts in the netting set not just to the one year horizon.
- 5.60. A firm must have procedures in place to identify and control the risks for counterparties where the exposure rises beyond the one-year horizon.
- 5.61. A firm must input the forecast increase in exposure into the firm's internal capital model.

### Operational requirements: Stress testing

- 5.62. A firm must have in place sound stress testing processes for use in the assessment of capital adequacy for CCR.
- 5.63. These stress measures must be compared with the measure of EPE and considered by the firm.
- 5.64. Stress testing must also involve identifying possible events or future changes in economic conditions, that could have unfavourable effects on a firm's credit exposures, and an assessment of the firm's ability to withstand such changes.
- 5.65. A firm must stress test its CCR exposures, including jointly stressing market risk and credit risk factors.
- 5.66. In its stress tests of CCR, a firm must consider concentration risk to a single counterparty or groups of counterparties, correlation risk across market risk and credit risk, and the risk that liquidating the counterparty's positions could move the market.
- 5.67. In its stress tests a firm must also consider the impact on its own positions of such market moves and integrate that impact in its assessment of CCR.

## Operational requirements: Wrong-way risk

- 5.68. A firm must give due consideration to exposures that give rise to a significant degree of general wrong-way risk.
  
- 5.69. A firm must have procedures in place to identify, monitor and control cases of specific wrong way risk, from the inception of a transaction and continuing through the life of the transaction.

## Operational requirements: Integrity of modelling process

- 5.70. A firm must ensure that:
  - 5.70.1. the model reflects transaction terms and specifications in a timely, complete, and conservative fashion;
  - 5.70.2. such terms include at least:
    - 5.70.2.1. contract notional amounts
    - 5.70.2.2. maturity
    - 5.70.2.3. reference assets
    - 5.70.2.4. margining arrangements, and
    - 5.70.2.5. netting arrangements;
  - 5.70.3. the terms and specifications are maintained in a database that is subject to formal and periodic audit;
  - 5.70.4. the process for recognising netting arrangements requires:
    - 5.70.4.1. signoff by legal staff to verify the legal enforceability of netting and
    - 5.70.4.2. input into the database by an independent unit;
  - 5.70.5. the transmission of transaction terms and specifications data to the model is also subject to internal audit; and
  - 5.70.6. formal reconciliation processes are in place between the model and source data systems to verify on an ongoing basis that transaction terms and specifications are being reflected in EPE correctly, or at least conservatively.
  
- 5.71. A firm must ensure that:
  - 5.71.1. the model employs current market data to compute current exposures;
  - 5.71.2. when using historical data to estimate volatility and correlations, at least three years of historical data is used and updated quarterly or more frequently if market conditions warrant;
  - 5.71.3. the data covers a full range of economic conditions, such as a full business cycle;
  - 5.71.4. a unit independent from the business unit validates the price supplied by the business unit;
  - 5.71.5. the data is acquired independently of the lines of business, fed into the model in a timely and complete fashion, and maintained in a database subject to formal and periodic audit;

- 5.71.6. it has a well-developed data integrity process to clean the data of erroneous and/or anomalous observations; and
- 5.71.7. to the extent that the model relies on proxy market data, including for new products where three years of historical data may not be available, internal policies identify suitable proxies and the firm demonstrates empirically that the proxy provides a conservative representation of the underlying risk under adverse market conditions.
- 5.72. If the model includes the effect of collateral on changes in the market value of the netting set, a firm must have adequate historical data to model the volatility of the collateral.
- 5.73. A firm must ensure that the model is subject to a validation process which:
  - 5.73.1. is clearly articulated in the firm's policies and procedures;
  - 5.73.2. specifies the kind of testing needed to ensure model integrity;
  - 5.73.3. identifies conditions under which assumptions are violated and may result in an understatement of EPE; and
  - 5.73.4. includes a review of the comprehensiveness of the model.
- 5.74. A firm must monitor the appropriate risks and have processes in place to adjust its estimation of EPE when those risks become significant. This includes the following:
  - 5.74.1. the firm must identify and manage its exposures to specific wrong-way risk;
  - 5.74.2. for exposures with a rising risk profile after one year, the firm must compare on a regular basis the estimate of EPE over one year with EPE over the life of the exposure; and
  - 5.74.3. for exposures with a residual maturity below one year, the firm must compare on a regular basis the replacement cost (current exposure) and the realised exposure profile, and/or store data that would allow such a comparison.
- 5.75. A firm must have internal procedures to verify that, prior to including a transaction in a netting set, the transaction is covered by a legally enforceable netting contract that meets the requirements set out in Section 6.
- 5.76. A firm that makes use of collateral to mitigate its CCR must have internal procedures to verify that, prior to recognising the effect of collateral in its calculations, the collateral meets the legal certainty standards set out in Schedule 8 of the BCACI Regulations, where relevant, by the Guidance Note on the IRB Approach.

### Validation requirements

- 5.77. A firm's CCR internal model method approach must meet the validation requirements in paragraphs 5.78 to 5.85.
- 5.78. The qualitative validation requirements set out in the Guidance Note on Market Risk must be met.
- 5.79. Interest rates, foreign currency rates, equity prices, commodities, and other market risk factors must be forecast over long time horizons for measuring CCR exposure. The performance of the forecasting model for market risk factors must be validated over a long time horizon.

- 5.80. The pricing models used to calculate CCR exposure, for a given scenario of future shocks to market risk factors must be tested as part of the CCR internal model method model validation process. Pricing models for options must account for the non-linearity of option value with respect to market risk factors.
- 5.81. The CCR internal model method approach must capture transaction-specific information in order to aggregate exposures at the level of the netting set. A firm must verify that transactions are assigned to the appropriate netting set within the model.
- 5.82. The CCR internal model method approach must also include transaction-specific information to capture the effects of margining. It must take into account both the current amount of margin and margin that would be passed between counterparties in the future. Such a model must account for: the nature of margin agreements (unilateral or bilateral); the frequency of margin calls; the margin period of risk; the minimum threshold of unmarginated exposure the firm is willing to accept; and the minimum transfer amount. Such an approach must either model the mark-to-market change in the value of collateral posted or apply the rules set out in Schedule 8 of the BCACI Regulations as modified, where relevant, by section 10 of the Guidance Note on IRB approach.
- 5.83. Static, historical backtesting on representative counterparty portfolios must be part of the CCR internal model method approach validation process. At regular intervals, a firm must conduct such backtesting on a number of representative counterparty portfolios (actual or hypothetical). These representative portfolios must be chosen based on their sensitivity to the material risk factors and correlations to which the firm is exposed.
- 5.84. If backtesting indicates that the CCR internal model method approach is not sufficiently accurate, a firm must increase the credit risk capital component. Where this Guidance Note is applied for the purposes of Schedule 2 of the FSCAIF Regulations, the counterparty risk capital component by an amount which is conservatively estimated to compensate for the inaccuracy of the model.
- 5.85. If backtesting indicates that the CCR internal model method approach is not sufficiently accurate, the FSC may revoke a firm's CCR internal model method permission or take appropriate measures to ensure that the approach is improved promptly. Measures taken by the FSC may include the use of its power to require the firm to hold more capital resources.

## 6. Contractual netting

### Scope

- 6.1. Section 6 applies for the purpose of:
- 6.1.1. the CCR mark to market method;
  - 6.1.2. the CCR standardised method;
  - 6.1.3. if the firm has a CCR internal model method permission to that model.

### Types of netting recognised

- 6.2. For the purpose of Section 6:
- 6.2.1. "counterparty" means any entity (including natural persons) that has the power to conclude a contractual netting agreement; and

- 6.2.2. “contractual cross product netting agreement” means a written bilateral agreement between a firm and a counterparty which creates a single legal obligation covering all included bilateral master agreements and transactions belonging to different product categories.
- 6.3. Contractual cross product netting agreements do not cover netting other than on a bilateral basis.
- 6.4. For the purposes of cross product netting, the following are considered different product categories:
  - 6.4.1. repurchase transactions, reverse repurchase transactions, securities or commodities lending or borrowing transactions;
  - 6.4.2. margin lending transactions; and
  - 6.4.3. financial derivative instruments.
- 6.5. A firm may recognise as risk-reducing the following types of contractual netting:
  - 6.5.1. bilateral contracts for novation, between a firm and its counterparty, under which mutual claims and obligations are automatically amalgamated in such a way that this novation fixes one single net amount each time novation applies. Thus creates a legally binding, single new contract extinguishing former contracts;
  - 6.5.2. other bilateral agreements between a firm and its counterparty;
  - 6.5.3. a firm that has a CCR internal model method permission may recognise contractual cross product netting agreements for transactions falling within the scope of its CCR internal model method permission; netting across transactions entered by members of a group is not recognised for the purposes of calculating capital requirements.

## Conditions for recognition

- 6.6. A firm may treat contractual netting as risk-reducing only under the following conditions:
  - 6.6.1. the firm must have a contractual netting agreement with its counterparty which creates a single legal obligation so that the firm would have a claim to receive or an obligation to pay only the net sum of the positive and negative mark-to-market values of included individual transactions. This would cover all included transactions in the event of: a counterparty's failure to perform owing to default; bankruptcy; liquidation; or any other similar circumstance,
  - 6.6.2. the firm must be in a position to provide to the FSC, if requested, written and reasoned legal opinions. This would be to the effect that in the event of a legal challenge, the relevant courts and administrative authorities would, in the cases described under paragraph 6.6.1, find that the firm's claims and obligations would be limited to the net sum, as described in paragraph 6.6.1, under:
    - 6.6.2.1. the law of the jurisdiction in which the counterparty is incorporated and, if a foreign branch of an undertaking is involved, also under the law of the jurisdiction in which the branch is located; or
    - 6.6.2.2. the law that governs the individual transactions included; or

- 6.6.2.3. the law that governs any contract or agreement necessary to effect the contractual netting;
  - 6.6.3. the firm must have procedures in place to ensure that the legal validity of its contractual netting is kept under review in the light of possible changes in the relevant laws;
  - 6.6.4. the firm must maintain all required documentation in its files;
  - 6.6.5. the effects of netting must be factored into the firm's measurement of each counterparty's aggregate credit risk exposure and the firm must manage its CCR on such a basis; and
  - 6.6.6. the firm must aggregate credit risk to each counterparty to arrive at a single legal exposure across transactions; this aggregation must be factored into credit limit purposes and internal capital purposes.
- 6.7. The contractual netting must be legally valid under the law of each of the relevant jurisdictions. If the competent authority or third country competent authority for the banking sector or the investment services sector in any of the relevant jurisdictions does not recognise the validity of netting in its jurisdiction, then the firm must not treat the contractual netting as risk-reducing for either of the parties.
  - 6.8. A legal opinion required under Section 6 may be in the form of a reasoned legal opinion drawn up by type of contractual netting.
  - 6.9. A firm must not recognise as risk-reducing any contract containing a provision which permits a non-defaulting counterparty to make limited payments only, or no payments at all, to the estate of the defaulter, even if the defaulter is a net creditor (a "walkaway" clause).
  - 6.10. In addition to the requirements in paragraphs 6.2 to 6.9, for contractual cross-product netting agreements the following criteria must be met:
    - 6.10.1. the net sum referred to in paragraph 6.6.1 must be the net sum of: the positive and negative close out values of any included individual bilateral master agreement and; of the positive and negative mark-to-market value of the individual transactions (the 'Cross-Product Net Amount');
    - 6.10.2. the written and reasoned legal opinion referred to in paragraph 6.6.2 must address the validity and enforceability of the entire contractual cross-product netting agreement under its terms and the impact of the netting arrangement on the material provisions of any included bilateral master agreement.
    - 6.10.3. the firm must have procedures in place under paragraph 6.6 to verify that any transaction, which is to be included in a netting set, is covered by a legal opinion;
    - 6.10.4. taking into account the contractual cross product netting agreement, the firm must continue to comply with the requirements for the recognition of bilateral netting and the requirements of Section 4 of The IRB Approach Guidance Note and Schedule 8 of the BCACI Regulations for the recognition of credit risk mitigation, as applicable, with respect to each included individual bilateral master agreement and transaction.

## Effects of recognition

- 6.11. For the purposes of the CCR mark to market method, the CCR standardised method and the CCR internal model method a firm must recognise netting as set out in Sections 2 and 5.

## 7. Securities financing transactions

7.1. This paragraph summarises the treatment for securities financing transactions.

### Calculation of exposure value for SFTs

7.2. Subject to paragraph 7.3, if a firm has:

7.2.1. a CCR internal model method permission which covers a securities financing transaction; or

7.2.2. a master netting agreement internal models approach permission which covers that transaction;

then it must use the CCR internal model method approach or the master netting agreement internal models approach, as applicable, to calculate the exposure value for that transaction unless an exception in this Guidance Note or Schedule 8 of the BCACI Regulations allows the firm to use another method.

7.3. If a firm has a CCR internal model method permission and a master netting agreement internal models approach permission which both cover a securities financing transaction, then the firm may choose which of the approach it wishes to use to calculate the exposure value for that transaction.

7.4. A firm including a firm that is using the advanced IRB approach that:

7.4.1. has a securities financing transaction that is covered by a master netting agreement which satisfies the requirements for recognition set out in Schedule 8 of the BCACI Regulations;

7.4.2. does not have either a CCR internal model method permission or a master netting agreement internal models approach permission; and

7.4.3. has an IRB permission that covers the securities financing transaction;

should use the master netting agreement method set out in Schedule 8 of the BCACI Regulations (other than the master netting agreement internal models approach) to calculate the exposure value for that transaction.

7.5. A firm that uses the master netting agreement methods set out in Schedule 8 of the BCACI Regulations in accordance with paragraph 7.4 should increase the exposure value by a volatility adjustment. A firm should calculate that volatility adjustment using either the supervisory volatility adjustments approach or the own estimates of volatility adjustments approach.

7.6. If a firm does not have an IRB permission, but falls into paragraph 7.4, it may only calculate the exposure value for that securities financing transaction using the approach in paragraphs 7.4 and 7.5 if it uses the financial collateral comprehensive method.

7.7. If a firm does not use the CCR internal model method approach, the master netting agreement internal models approach or the master netting agreement approach set out in Schedule 8 of the BCACI Regulations, the value of a securities financing transaction is calculated as its on-balance sheet value. If the firm wishes to recognise the effects of financial collateral it may do so in the same way as for its other exposures, for example by using either the financial collateral simple method or the financial collateral comprehensive method. However the financial collateral simple method should not be used:

7.7.1. by a firm using the IRB approach; or

7.7.2. for securities financing transaction in the trading book.



- 7.8. In the case of a firm using the financial collateral comprehensive method, the exposure value must be increased by the volatility adjustment appropriate to such securities or commodities as prescribed in Schedule 8 of the BCACI Regulations, where an exposure takes the form of: securities; commodities sold, posted or lent under a repurchase transaction or under a securities or commodities lending; or borrowing transaction; and margin lending transactions.

### Exposure to a central counterparty

- 7.9. Notwithstanding paragraph 7.2, a firm must determine the exposure value of a credit risk exposure outstanding with a central counterparty in accordance with paragraph 7.10, provided that the central counterparty's counterparty credit risk exposures with all participants in its arrangements are fully collateralised on a daily basis.
- 7.10. A firm may attribute an exposure value of zero for CCR to a securities financing transaction which is outstanding with a central counterparty and has not been rejected by the central counterparty.