

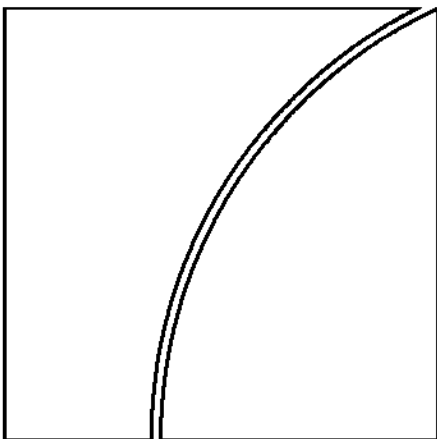
# Basel Committee on Banking Supervision

Consultative Document

## Capitalisation of bank exposures to central counterparties

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# Capitalisation of bank exposures to central counterparties

## I. Executive summary

1. The G20 Leaders, at their Pittsburgh summit in September 2009, agreed to a number of measures to improve the over-the-counter (OTC) derivatives markets, including creating incentives for banks to increase their use of central counterparties (CCPs).<sup>1</sup> The Basel Committee has been working to give effect to the G20 statements, and has developed proposals that require banks to more appropriately capitalise their exposures to OTC derivatives, while creating incentives for banks to increase their use of CCPs. This includes efforts to ensure that banks' exposures to CCPs are adequately capitalised.

2. This is the second consultative paper on the capitalisation of bank exposures to CCPs. This consultative document reflects changes to the proposals that have been made after careful consideration of the responses to the first consultation paper in December 2010 as well as the results of various quantitative impact assessments. The Committee also consulted closely with the Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO), herein collectively referred to as "CPSS-IOSCO". The most significant changes to the proposals are summarised in Section III of this paper. The Committee plans to finalise the rules and to publish the results of its quantitative impact studies around the end of this year.

3. The Committee will continue to rely on the application of the CPSS-IOSCO standards by CCP regulators to determine if exposures to a given CCP are eligible to receive the beneficial capital treatment. The Committee still proposes that trade exposures to a qualifying CCP will receive a 2% risk weight, and that default fund exposures to a CCP will be capitalised in accordance with a risk sensitive approach based on the actual financial resources of each CCP and its hypothetical capital requirements.

4. The Committee will continue to assess the incentives created by the framework for bilateral trading of OTC derivatives versus central clearing.

5. The Committee notes that the capitalisation of bank exposures to CCPs is a new element of the capital framework that it will monitor post implementation. This consultative paper seeks comment on the proposed Basel III capital adequacy rules text attached as Annex A of this document.

## II. Overview: OTC derivatives and the role of CCPs

6. This section provides an overview of the role CCPs can play to reduce systemic risk in OTC derivatives markets. OTC derivatives markets have grown considerably in recent years, with the total notional outstanding amounts equal to around US\$ 500 trillion at the end of 2010. While steps were taken prior to the crisis by both regulators and market participants to strengthen the legal and operational infrastructure for OTC derivatives trading, the crisis exposed fundamental weaknesses. As difficulties in financial markets began to emerge,

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<sup>1</sup> See paragraph 13 of the *Leaders' Statement: The Pittsburgh Summit*, which is available at [http://www.g20.org/Documents/pittsburgh\\_summit\\_leaders\\_statement\\_250909.pdf](http://www.g20.org/Documents/pittsburgh_summit_leaders_statement_250909.pdf).

market participants faced problems unwinding OTC credit default swaps (CDS). Moreover, the common practice of counterparties entering into offsetting contracts, rather than closing them out, exacerbated counterparty risk arising from OTC derivatives exposures and added to the complexity, opacity, and interconnectedness in the financial system. This made it very difficult for market participants, regulators and other relevant authorities to gauge risk exposures and the potential knock-on effects associated with the failure of a major counterparty.

**(a) The risk reducing role of central counterparties**

7. A CCP interposes itself between two clearing members (CMs) to a bilateral transaction. In particular, the two CMs legally assign their trades to the CCP (usually through “novation”), and the CCP becomes the counterparty to each CM, assuming all the contractual rights and responsibilities.

8. CCPs can improve the safety and soundness of OTC derivatives markets through the multilateral netting of exposures, the enforcement of robust risk management standards, including mandatory posting of initial margin, and the mutualisation of losses should a clearing member fail.<sup>2</sup>

9. CCPs provide various safeguards and risk management practices so that the failure of a clearing member will not affect other members. In particular, CCPs mitigate counterparty credit risk because the impact of the failure of a major counterparty is absorbed by the CCP’s default protection schemes. CCPs require initial margin to be held against losses of the defaulting CM. In the case of default, if the defaulting CM’s initial margin and its contribution to the CCP’s default fund are not sufficient to absorb the losses, the CCP default fund, made up of all the CMs’ contributions, is used. This mutualisation of losses together with other backstops that may also be in place substantially reduce the contagion risk to other counterparties.

10. CCPs can also increase market transparency, as they maintain centralised transaction records, including notional amounts and counterparty identities.<sup>3</sup>

**(b) The importance of CCP sound risk management and prudent regulation**

11. Despite the benefits that CCPs can bring to OTC derivatives markets, CCPs can concentrate counterparty and operational risks. If these and other risks to which CCPs are exposed are not well managed, a CCP presents systemic risk that arises from its own potential failure. Hence, it is key that CCPs are subject to best-practice risk management, and sound regulation and oversight to ensure that they indeed reduce risk, both for their participants and for the financial system.

12. Standards for the supervision and oversight of financial market infrastructures, including CCPs, are the responsibility of the CPSS-IOSCO, who are currently in the process of finalising their enhanced standards, to be published in early 2012.<sup>4</sup>

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<sup>2</sup> In order to clear trades and perform multilateral netting, the CCP requires contracts to be standardised.

<sup>3</sup> Mandating exchange trading for all standardised derivatives as outlined in the September 2009 G20 Communiqué has been suggested as a way to improve price transparency and market liquidity.

<sup>4</sup> The CPSS-IOSCO consultative paper, published in March 2011, is available at [www.bis.org/publ/cpss94.pdf](http://www.bis.org/publ/cpss94.pdf).

13. The set of rules proposed in this consultative paper is not intended to express views on standards applicable to CCPs. It focuses only on the capitalisation by banks for their exposures to CCPs, which is the remit of the Basel Committee.<sup>5</sup> To the extent that bank exposures to CCPs are appropriately capitalised, the financial system will be safer.

### **III. Summary of the proposed reforms**

#### **(a) Overview of the CCP framework**

14. The section provides a brief non-technical summary of how the CCP framework works, and is provided for background purposes only. The applicable rules text is provided in Annex A.

#### **Scope**

15. This framework will apply to all exposures to CCPs arising as a result of financial derivatives (ie OTC and exchange traded derivatives), repos/reverse repos and securities lending and borrowing transactions.

#### ***Bilateral framework***

16. When entering into bilateral OTC derivative transactions, banks are required to hold capital to protect against the risk that the counterparty defaults and for credit valuation adjustment (CVA) risk. The CVA charge was introduced as part of the Basel III framework.<sup>6</sup>

#### ***The proposed CCP framework***

17. The Committee's proposed framework for capitalising exposures to a CCP relies on the new and more demanding CPSS-IOSCO international Principles for Financial Market Infrastructures (FMIs), including CCPs, which are designed to enhance the robustness of the essential infrastructure supporting global financial markets. Where a CCP complies with these Principles, exposures to such CCPs will receive a preferential treatment as compared to exposures to CCPs that do not comply.<sup>7</sup> In the proposed framework, these CCPs are referred to, respectively, qualifying CCPs (QCCP) and non-qualifying CCPs.

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<sup>5</sup> The Committee notes the assistance and cooperation provided by the CPSS-IOSCO Editorial Team to assist the Committee's Risk Measurement Group (previously known as the Risk Management and Modelling Group) in better understanding CCPs and how the regulatory capital rules will interact with the CPSS-IOSCO standards.

<sup>6</sup> Exposure is measured using one of three methods: the Internal Model Method (IMM); the Standardised Method (SM) or the Current Exposure Method (CEM). The risk weight, which is multiplied by the exposure to derive the capital charge, is that which applies to the counterparty under the Standardised Approach (SA) or Internal Ratings-Based Approach (IRB) for credit risk. Here CVA is the mark-to-market value of CCR, ie the adjustment that quantifies the expected loss to the bank caused by changes in the credit quality of the counterparty. Banks are not required to hold capital for CVA risk for derivatives that are centrally cleared.

<sup>7</sup> It is expected that all large CCPs will be compliant with these new CPSS-IOSCO principles, since the framework provides incentives to CM (through the capital rules) to deal only with these safer and more robust CCPs.

(j). *Capitalisation of a Bank/CM exposures to a QCCP*

18. When a bank acts as a CM of the CCP, it has two types of exposures that require capitalisation: trade related and default fund related.

*Trade related exposures*

19. The trade exposures consist of mark-to-market current exposure and potential future exposure of the OTC derivative or the Securities Financing Transaction (SFT), as well as the collateral posted to the CCP, which includes initial margin and variation margin. To calculate this exposure amount, banks can use the same model that they would use under the bilateral framework (ie Internal Model Method – IMM; Standardised Method – SM; or Current Exposure Method – CEM).

19. The capital charge reflects the risk of default of the QCCP, which is assumed to be very low. As such, this exposure receives a very low risk-weight of 2%.

20. Moreover, if the collateral is posted in a way that is bankruptcy remote from the CCP (ie if the CCP defaults, the CM does not lose the collateral), the risk weight applied to the collateral is 0%.

*Default Fund exposures*

21. Default funds make CCPs safer from a systemic point of view, as they are used to mutualise losses when a CM defaults. In addition, default funds are frequently an important source of collateral that would be used to raise liquidity in the event of a participant default. Although CCPs have different waterfall structures to absorb and mutualise losses, the general order is the following: (1) posted collateral of the defaulted CM; (2) default fund contribution of the defaulted CM; (3) default fund contribution of the CCP; and (4) default fund contributions of non-defaulting CMs.

22. The fact that each CCP can set the level of its financial resources (margin and default funds) calls for a risk-sensitive approach that capitalises the default funds exposure to each CCP according to the risk that the CM is facing.

To calculate the capital requirements for the default fund exposures, there are three steps:

*Step 1 - Calculation of the “hypothetical capital” ( $K_{CCP}$ )*

23. The hypothetical capital ( $K_{CCP}$ ) that a QCCP would have to hold if it had bilateral trades to all its clearing members under the banking framework is calculated. This measure is not meant to quantify the riskiness of a CCP but to set a comparable capital amount which the risk-sensitive capitalisation approach can build on.

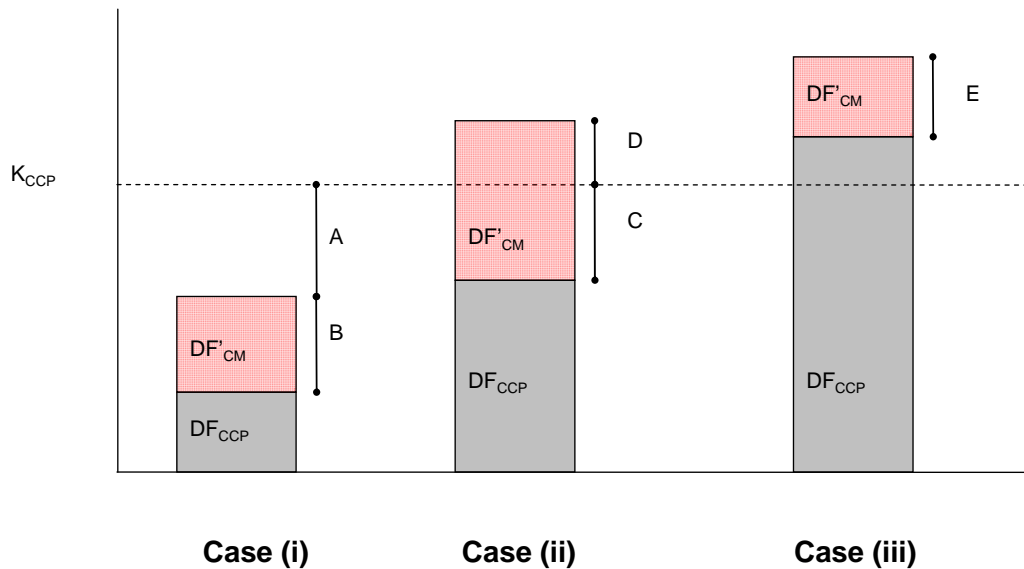
24. The rules require that CCPs use the Current Exposure Method (CEM) to perform this calculation, as this is the only simple approach that will ensure consistent and verifiable implementation. Since this calculation is performed from the QCCP perspective, the collateral posted to the CCP (initial or variation margin) as well as the default fund contribution from each member are treated as risk mitigants which reduce the exposure that the CCP has to each CM.

*Step 2 - Calculation of aggregate capital requirements*

25. The aggregate capital requirements (calculated prior to the application of the concentration and granularity adjustment) for all clearing members of a CCP are calculated comparing the abovementioned  $K_{CCP}$  to the CCP’s own loss-bearing capital (from its own

resources) contributed to the default fund ( $DF_{CCP}$ ) and the default fund contributions of the CMs ( $DF_{CM}$ ). Here it is important to bear in mind that, since default fund contributions from CMs are already considered as risk mitigants in the  $K_{CCP}$  calculation, if a CM defaults, its contribution will not be available to mutualise losses. As such, to avoid the double counting of default fund contributions as a risk mitigant and capital, the default fund contributions of the two average-sized CMs that are assumed to default are deducted from total available default funds.<sup>8</sup>  $DF'_{CM}$  denotes the prefunded default fund contributions from the remaining surviving clearing members available to mutualise losses under this assumed scenario.

26. To illustrate, if we take three different CCPs (each represented by a column in the diagram below), the aggregate capital requirements for each will be the following:



$$\text{Case (i)} = 1.2 * (A) + B$$

$$\text{Case (ii)} = C + \max(\alpha ; 0.16\%) * (D)$$

$$\text{Case (iii)} = \max(\alpha ; 0.16\%) * (E)$$

where  $\alpha$  is a decreasing function of the ratio  $(DF_{CCP} + DF'_{CM})/K_{CCP}$ .  $\alpha$  starts off at a value of 1.6% and slowly declines to a floor of 0.16% as the sum of  $DF_{CCP} + DF'_{CM}$  increases relative to  $K_{CCP}$ .

### Step 3 - Allocation of aggregate capital requirements to individual clearing members

27. The aggregate capital requirements calculated in Step 2 need to be allocated to the individual clearing members. This allocation is based on the proportion of each clearing members' default fund contribution to total default funds. The allocation factor also takes into account the granularity and concentration of the CCP. The more granular and the less concentrated is a CCP, the less punitive is the allocation factor.

<sup>8</sup> This is proxied by two times the average default fund contribution.

(ii) *Capitalisation of a CM exposures to a non-QCCP*

28. If a clearing member trades with a non-QCCP, it will have to capitalise the trade-related exposures as in the bilateral framework, and apply the corresponding risk weight under the Standardised Approach for credit risk. As such, the applicable risk weight would be at least 20% (if the CCP is a bank) or 100% (if it is a corporate financial institution according to the definition included in paragraph 272 of the Basel framework, revised by Basel III).

29. In turn, the CM will have to deduct from capital the funded and unfunded, but quantifiable and committed, contributions to the default fund of a non-QCCP.

(iii) *Indirect access – capitalisation of exposures arising from client trades*

30. When a client of a clearing member enters into a trade which is centrally cleared, it will be able to capitalise the exposures arising from such a trade under the proposed framework for CCPs only if certain segregation and continuity requirements are met. Otherwise, the client will capitalise its exposure to the clearing member as a bilateral trade.

**(b) Changes to the December 2010 proposal**

31. Among the comments received by the Committee from banks, CCPs and associations in connection with the first consultation published in December 2010,<sup>9</sup> some were outside the remit of the Basel Committee (eg some dealt with matters covered by CPSS-IOSCO<sup>10</sup>) or would require the Committee to prioritise factors other than its bank capitalisation risk mandate (eg assisting CPSS-IOSCO in performing its duties or improving liquidity in the banking system). Other responses to the consultation requested clarification of the final rules text. Finally, certain comments warranted further analysis in light of the quantitative impact study results, assessing the impact of the changes proposed and the resulting overall calibration.

32. The most important changes to the December 2010 proposal intended to address comments received from CPSS-IOSCO and industry stakeholders are the following:

**Scope**

- If a qualifying CCP (QCCP) loses its status, a grace period of three months will apply before bilateral capitalisation rules apply.

**Capitalisation of trade exposures**

- When capitalising trade exposures, the large netting set rules with respect to an extended margin period of risk will not apply to a bank's trades with a QCCP.

**Capitalisation of default fund exposures**

*Step 1 - Calculation of the "hypothetical capital" ( $K_{CCP}$ )*

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<sup>9</sup> The non-confidential responses to the December 2010 consultative document are available at [www.bis.org/publ/bcbs190/cacomments.htm](http://www.bis.org/publ/bcbs190/cacomments.htm).

<sup>10</sup> For example, whether a CCP is a qualifying CCP is a matter for CPSS-IOSCO and not for bank supervisors. However, a bank supervisor retains the discretion to require its banks to hold higher capital than the Basel minimum requirements (eg if necessary information is not forthcoming).

- To address the concern that the CEM underestimates the multilateral netting benefits arising from a CCP, the factor in the CEM which controls the amount of netting ( $\rho$ ) is increased from 0.6 to 0.7. Analysis of netting benefits for large and roughly balanced portfolios, which should be the case for CCPs, indicates that a  $\rho$  of 0.7 more closely reflects the actual netting benefits.<sup>11</sup>
- Where a CCP cannot calculate the Net-to-Gross Ratio (NGR) used in the CEM due to the need to change its systems and data collection methods, a default NGR value of 30% will be permitted until March 2013. After this transitional period, failure to properly calculate NGR will cause a CCP to be non-qualifying.
- The CEM exposure at default (EAD) for options contracts will be calculated by multiplying the contract notional by its “delta”, to reflect the “moneyness” of the option.

#### *Step 2 - Calculation of aggregate capital requirements*

- The three-tier risk sensitive formula has been adjusted to reflect the fact that  $DF_{CM}$  related to a defaulting clearing member will normally bear losses alongside its initial margin (IM) and thereby reduce the need for loss mutualisation. To avoid double counting of funds available for loss mutualisation, it is necessary to make an assumption about the default scenario. It is assumed that two-average-sized clearing members will default. The  $DF_{CM}$  contributions from such members are subtracted from the available funds to mutualise losses in the three-tier risk-sensitive formula that is used to determine the aggregate capital requirements for default fund exposures.
- Where a substantial excess amount of  $DF_{CM}$  exists over the hypothetical capital requirement, the 1.6% capital requirement is reduced, subject to a floor of 0.16%, on a sliding scale by applying a “decay factor” to reflect the diminishing risk associated with large amounts of  $DF_{CM}$ .

#### *Step 3 - Allocation of aggregate capital requirements to individual clearing members*

- For consistency reasons, the allocation method used to distribute the aggregate capital requirements for default fund exposures to each of the clearing members has been adjusted to reflect the abovementioned assumed default scenario of two average-sized clearing members.
- In addition, a term has been added to account for the granularity and concentration risk of CCPs.
- Finally, where a CCP does not have  $DF_{CM}$  as a basis for allocating  $K_{CM}$  among its members, such allocation can be accomplished using the liability for unfunded  $DF_{CM}$  and, secondly, the initial margin posted.

#### ***Indirect access related issues***

- Revised segregation and continuity requirements are proposed so clients of clearing members can benefit from the CCP framework where it is considered that a client’s trade with a clearing member is effectively a trade with the CCP.

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<sup>11</sup> This change permits greater recognition of netting benefits and reduces bank capital requirements held in respect of clearing member default fund contributions ( $DF_{CM}$ ) by approximately 23%.

- The revised approach introduces an additional risk-weighting category for the case when a client is not protected from loss in the case of joint default of both the clearing member and other clients, but meets all other requirements for segregation and continuity of accounts. A risk weight of 4% is proposed for trade exposures in such cases.

#### **IV. Timeline**

33. The Committee is publishing this proposal for consultation until 25 November 2011 and intends to publish the final rules around the end of this year. These rules should be implemented by January 2013.

#### **V. Comments**

34. The Basel Committee welcomes comments on the proposed rules text and other issues set out in this consultative document. Comments should be submitted by **Friday 25 November 2011** by email to: [baselcommittee@bis.org](mailto:baselcommittee@bis.org). Alternatively, comments may be sent by post to the Secretariat of the Basel Committee on Banking Supervision, Bank for International Settlements, CH-4002 Basel, Switzerland. All comments may be published on the Bank for International Settlements' website unless confidential treatment is specifically requested.

## Annex A

### Regulatory capital rules text on the capitalisation of exposures to central counterparties

- **Annex 4, Section I, A. General Terms**, of *International Convergence of Capital Measurement and Capital Standards: A Revised Framework - Comprehensive Version*, June 2006 (hereinafter referred to as “Basel II”). The following will be **added**:
  - A **central counterparty** (CCP) is a clearing house that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the future performance of open contracts. A CCP becomes counterparty to trades with market participants through novation, an open offer system, or another legally binding arrangement. For the purposes of the capital framework, a CCP is a financial institution.
  - A **qualifying central counterparty** (QCCP) is licensed as a CCP (including a license granted by way of confirming an exemption) and, with respect to products offered, is permitted by the CCP’s supervisor to operate as such, providing the CCP is based and prudentially supervised in a jurisdiction where the supervisor substantially enforces the CPSS-IOSCO Principles for Financial Market Infrastructures on an ongoing basis. If the CCP supervisor does not publicly disclose, or otherwise make available to a bank and its supervisors, details of whether the CCP and its product offerings comply with the relevant requirements, such bank must take reasonable steps (including investigating statements made by a CCP as to its products compliance) to ensure such compliance and shall, upon request, provide the results of its analysis to its supervisor. If the CCP is in a jurisdiction that does not have a CCP supervisor applying such requirements, then the banking supervisor may make the determination of whether a CCP meets this definition.<sup>12</sup>

In addition, for a CCP to be considered as a QCCP, the terms defined in paragraph 116 for the purposes of calculating the capital requirements for default fund exposures must be made available or calculated in accordance with paragraphs 116 and 117.
  - A **clearing member** is a member of, or a direct participant in, a CCP that is entitled to enter into a transaction with the CCP, regardless of whether it enters into trades with a CCP for its own hedging, investment or speculative purposes or whether it also enters into trades as a financial intermediary between the CCP and other market participants.<sup>13</sup>

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<sup>12</sup> If a CCP is in a jurisdiction without a CCP supervisor applying such requirements, it is expected, by definition, to be a non-compliant CCP, as being subject to regular oversight by a prudential supervisor is expected to be one of the CPSS-IOSCO requirements.

<sup>13</sup> For the purposes of this Annex, where a CCP has a link to a second CCP, that second CCP is to be treated as a clearing member of the first CCP. Whether the second CCP’s collateral contribution to the first CCP is treated as initial margin or a default fund contribution will depend upon the legal arrangement between the

- A **client** is a party to a transaction with a CCP through either a clearing member acting as a financial intermediary, or a clearing member guaranteeing the performance of the client to the CCP.
  - **Initial margin** means a clearing member's or client's funded collateral posted to the CCP to mitigate the potential future exposure of the CCP to the clearing member arising from the possible future change in the value of their transactions. For the purposes of this annex, initial margin does not include contributions to a CCP for mutualised loss sharing arrangements (ie in case a CCP uses initial margin to mutualise losses among the clearing members, it will be treated as a default fund exposure).
  - **Variation margin** means a clearing member's or client's funded collateral posted on a daily or intraday basis to a CCP based upon price movements of their transactions.
  - **Trade exposures** (in section IX) include the current and potential future exposure of a clearing member or a client to a CCP arising from OTC derivatives, exchange traded derivatives transactions or SFTs, as well as initial margin and variation margin payable where the position has gained value but the margin has not yet been paid to the clearing member.
  - **Default funds**, also known as clearing deposits or guaranty fund contributions (or any other names), are clearing members' funded or unfunded contributions towards, or underwriting of, a CCP's mutualised loss sharing arrangements. The description given by a CCP to its mutualised loss sharing arrangements is not determinative of its status as a default fund; rather, the substance of such arrangements will govern its status.
  - **Offsetting transaction** means the transaction leg between the clearing member and the CCP when the clearing member acts on behalf of a client (eg when a clearing member clears or novates a client's trade).
- **Annex 4, Section II.** Scope of application. Paragraph 6 will be **replaced** by the following:
    - 6(i) Exposures to central counterparties arising from OTC derivatives, exchange traded derivatives transactions and SFTs will be subject to the counterparty credit risk treatment laid out in paragraphs 106 to 119. Exposures arising from the settlement of cash transactions (equities, fixed income, spot FX and spot commodities) are not subject to this treatment. The settlement of cash transactions remains subject to the treatment described in Annex 3.
    - 6(ii) When the client-to-clearing member leg of an exchange traded derivatives transaction is conducted under a bilateral agreement, both the client and the clearing member are to capitalise that transaction as an OTC derivative.
  - **Annex 4, new section** on central counterparties:
    - IX. Central Counterparties

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CCPs. National supervisors should be consulted to determine the treatment of this initial margin and default fund contributions and such supervisors should consult and communicate with other supervisors via the "frequently asked questions" process to ensure consistency.

106. Regardless of the view of a QCCP supervisor, a bank supervisor has the ultimate discretion to determine whether banks subject to its supervision should hold more than the minimum capital requirements arising from dealing with a QCCP.

107. Furthermore, regardless of whether a CCP supervisor or bank supervisor considers that a CCP meets the definition in Annex 4, Section 1, A. General Terms (and specifically, whether the CCP is subject to a supervisor that enforces the CPSS-IOSCO Principles for Financial Market Infrastructures), a bank retains the responsibility to ensure that it maintains adequate capital for exposures to such a CCP. In particular, under Pillar 2 of Basel II, a bank needs to consider whether it should hold capital in excess of the minimum capital requirements if (i) its dealings with a CCP give rise to more risky exposures; or (ii) it is dealing with a CCP where, given the context of that bank's dealings, it is unclear that the CCP meets the definition above mentioned. Where the bank is acting as a clearing member, as part of its sound capital assessment as referred to in paragraph 731 of this Framework, the bank should assess through appropriate scenario analysis and stress testing whether the level of capital held against exposures to a CCP adequately relates to the inherent risks of those transactions. This assessment will include potential future or contingent exposures resulting from future drawings on default fund commitments, and/or from secondary commitments to take over or replace offsetting transactions from clients of another clearing member in case of this clearing member defaulting or becoming insolvent.

108. A bank must monitor and report to senior management and the appropriate committee of the Board on a regular basis all of its exposures to CCPs, including exposures arising from trading through a CCP and exposures arising from CCP membership obligations such as default fund contributions.

109. Where a bank is trading with a Qualifying CCP (QCCP) as defined in Annex 4, Section I, A. General Terms paragraphs 110 to 117 will apply. In the case of non-qualifying CCPs, paragraphs 118 and 119 will apply. Within three months of a central counterparty ceasing to qualify as a QCCP (as defined in Annex 4, Section I, A. General Terms), each bank's trades that were with such a central counterparty must be capitalised using the risk weight of the bilateral current counterparty to the trades. Until that time, unless a bank's national supervisory otherwise requires, the trades with a former QCCP may be capitalised as though they continue to be with a QCCP.

## **Exposures to Qualifying CCPs**

### **A. Trade exposures**

#### **(i) Clearing member exposures to CCPs**

110. Where a bank acts as a clearing member of a CCP, either for its own purposes or as a financial intermediary between a client and a CCP, a risk weight of 2% must be applied to the clearing bank's trade exposure to the CCP in respect of OTC derivatives, exchange traded derivative transactions and SFTs. The 2% risk weight for trade exposures also applies where the clearing member guarantees that

the client will not suffer any loss due to changes in the value of its transactions in the event that the CCP defaults.

The exposure amount for such trade exposure is to be calculated in accordance with Annex 4 using the IMM,<sup>14</sup> CEM or Standardised Method, as consistently applied by such bank to such an exposure in the ordinary course of its business, or Part 2, Section II, D3 together with credit risk mitigation techniques set forth in Basel II for collateralised transactions.<sup>15</sup>

Where the respective exposure methodology allows for it, margining can be taken into account.

In the case of IMM banks, the 20-day floor for the margin period of risk (MPOR) as established in the first bullet point of paragraph 41(i) of Annex 4, included by the Basel III framework, will not apply, provided that the netting set does not contain illiquid collateral or exotic trades and provided there are no disputed trades. This refers to exposure calculations under IMM, or the IMM short cut method of paragraph 41 in Annex 4 and for the holding periods entering the exposure calculation of repo-style transactions in paragraphs 147 and 181.

Where settlement is legally enforceable on a net basis in an event of default and regardless of whether the counterparty is insolvent or bankrupt, the total replacement cost of all contracts relevant to the trade exposure determination can be calculated as a net replacement cost if the applicable close-out netting sets meet the requirements set out in:

- Paragraphs 173 and, where applicable, also 174 of the main text in the case of repo-style transactions,
- Annex 4 paragraphs 96(i) to 96(iii) in the case of derivative transactions,
- Annex 4 paragraphs 10 to 19 in the case of cross-product netting.

To the extent that the rules referenced above include the term “master netting agreement”, this term should be read as including any “netting agreement” that provides legally enforceable rights of set-off.<sup>16</sup> If the bank cannot demonstrate that netting agreements meet these rules, each single transaction will be regarded as a netting set of its own for the calculation of trade exposure.

## **(ii) Clearing member exposures to clients**

111. The clearing member will always capitalise its exposure (including potential CVA risk exposure) to clients as bilateral trades, irrespective of whether the clearing member guarantees the trade or acts as an intermediary between the client and the CCP.

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<sup>14</sup> Changes to IMM introduced in Basel III also apply for these purposes.

<sup>15</sup> In particular, see paragraph 151 or 154 for OTC derivatives and standard supervisory haircuts or own estimates for haircuts, respectively; and for SFTs, see paragraph 178 for simple VaR model.

<sup>16</sup> This is to take account of the fact that for netting agreements employed by CCPs, no standardisation has currently emerged that would be comparable to the level of standardisation with respect to OTC netting agreements for bilateral trading.

**(iii) Client exposures**

112. Where a bank is a client of a clearing member, and enters into a transaction with the clearing member acting as a financial intermediary (ie the clearing member completes an offsetting transaction with a CCP), the client's exposures to the clearing member may receive the treatment in paragraph 110 above if the following two conditions are met:

(a) The offsetting transactions are identified by the CCP as client transactions and collateral to support them is held by the CCP and/or the clearing member, as applicable, under arrangements that prevent any losses to the client due to: (i) the default or insolvency of the clearing member, (ii) the default or insolvency of the clearing member's other clients, and (iii) the joint default or insolvency of the clearing member and any of its other clients.<sup>17</sup>

The client must be in a position to provide to the national supervisor, if requested, an independent, written and reasoned legal opinion that concludes that, in the event of legal challenge, the relevant courts and administrative authorities would find that the client would bear no losses on account of the insolvency of an intermediary clearing member or of any other clients of such intermediary under relevant law:

- the law of the jurisdiction(s) of the client, clearing member and CCP;
  - if the foreign branch of the client, clearing member or CCP are involved, then also under the law of the jurisdiction(s) in which the branch are located;
  - the law that governs the individual transactions and collateral; and
  - the law that governs any contract or agreement necessary to meet this condition (a).
- (b) Relevant laws, regulation, rules, contractual, or administrative arrangements provide that the offsetting transactions with the defaulted or insolvent clearing member are highly likely to continue to be indirectly transacted through the CCP, or by the CCP, should the clearing member default or become insolvent. In such circumstances, the client positions and collateral with the CCP will be transferred at market value unless the client requests to close out the position at market value.

Where a client enters into a transaction with the CCP, with a clearing member guaranteeing its performance, the client's exposures to the CCP may receive the treatment in paragraph 110 if the above conditions are met.

113. Where a client is not protected from losses in the case that the clearing member and another client of the clearing member jointly default or become jointly insolvent, but all other conditions in paragraph 112 are met, a risk weight of 4% will apply to the client's exposure to the clearing member.

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<sup>17</sup> That is, upon the insolvency of the clearing member, there is no legal impediment (other than the need to obtain a court order to which the client is entitled) to the transfer of the collateral belonging to clients of a defaulting clearing member to the CCP, to one or more other surviving clearing members or to the client or the client's nominee. National supervisors should be consulted to determine whether this is achieved based on particular facts and such supervisors should consult and communicate with other supervisors via the "frequently asked questions" process to ensure consistency.

114. Where the bank is a client of the clearing member and the requirements in paragraphs 112 or 113 are not met, the bank will capitalise its exposure (including potential CVA risk exposure) to the clearing member as a bilateral trade.

**(iv) Treatment of posted collateral**

115. In all cases, any assets posted or collateral must, from the perspective of the bank posting such collateral, receive the risk weights that otherwise applies to such assets or collateral under the capital adequacy framework, regardless of the fact that such assets have been posted as collateral. Where assets or collateral of a clearing member or client are posted with a CCP or a clearing member and are not held in a bankruptcy remote manner, the bank posting such assets or collateral must also recognise counterparty credit risk based upon the assets or collateral being exposed to risk of loss based on the creditworthiness of the entity holding such assets or collateral.

Collateral posted by the clearing member (including cash, securities, other pledged assets, and excess margin, also called overcollateralisation), that is held by a custodian,<sup>18</sup> and is bankruptcy remote from the CCP, is not subject to a capital requirement for counterparty credit risk exposure to such bankruptcy remote custodian.

Collateral posted by a client, that is held by a custodian, and is bankruptcy remote from the CCP, the clearing member and other clients, is not subject to a capital requirement for counterparty credit risk. If the collateral is held at the CCP on a client's behalf and is not held on a bankruptcy remote basis, a 2% risk-weight must be applied to the collateral if the conditions established in paragraph 112 are met; or 4% if the conditions in paragraph 113 are met.

**B. Default fund exposures**

116. Whenever a bank is required to capitalise for exposures arising from default fund contributions to a qualifying CCP, clearing member banks will apply a percentage to their default fund contributions. Such percentage will be determined according to a risk sensitive formula that considers (i) the size and quality of a qualifying CCP's financial resources, (ii) the CCR exposures of such CCP, and (iii) the application of such financial resources via the CCP's loss bearing waterfall, in the case of one or more clearing member defaults. The clearing member bank's risk sensitive capital requirement for its default fund contribution ( $K_{CMI}$ ) must be calculated using the formulae and methodology set forth below. This calculation may be performed by a CCP, bank, supervisor or other body with access to the required data, as long as the conditions in paragraph 117 are met.

Where a default fund is shared between products or types of business with settlement risk only (eg equities and bonds) and products or types of business which are OTC derivatives, exchange traded derivatives or SFTs giving rise to CCR, all of the default fund contributions will receive the risk weight determined according to the

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<sup>18</sup> In this paragraph, the word "custodian" may include a trustee, agent, pledgee, secured creditor or any other person that holds property in a way that does not give such person a beneficial interest in such property and will not result in such property being subject to legally-enforceable claims by such persons creditors, or to a court-ordered stay of the return of such property, should such person become insolvent or bankrupt.

formulae and methodology set forth below, without apportioning to different classes or types of business or products.

- (i) First, calculate the CCP's hypothetical capital requirement due to its CCR exposures to all of its clearing members.<sup>19</sup> This is calculated using the formula for  $K_{CCP}$ :

$$K_{CCP} = \sum_{\substack{\text{clearing} \\ \text{members } i}} \max(EBRM_i - VM_i - IM_i - DF_i; 0) \cdot RW \cdot \text{Capital ratio}$$

Where

RW is a risk weight of 20%.<sup>20</sup>

Capital ratio means 8%.

$\max(EBRM_i - VM_i - IM_i - DF_i; 0)$  is the exposure amount of the CCP to CM 'i', with:

- $EBRM_i$  denoting the exposure value to clearing member 'i' before risk mitigation under CEM for derivatives or under the comprehensive approach of paragraphs 130 to 153 and paragraphs 166 to 169, and for SFTs under paragraphs 173 to 177;
- $VM_i$  denoting the variation margin that the clearing member is entitled to receive (but has not yet received) from the CCP ( $VM_i > 0$ ), or variation margin that the CCP is entitled to receive (but has not yet received) from the clearing member ( $VM_i < 0$ );
- $IM_i$  being the initial margin collateral posted by the clearing member with the CCP.
- $DF_i$  being the prefunded default fund contribution by the clearing member that will be applied upon such clearing member's default, either along with or immediately following such member's initial margin, to reduce the CCP loss.

For clarity, each exposure amount is the CCR exposure amount a CCP has to a clearing member, calculated as a bilateral trade exposure for OTC derivatives and exchange traded derivatives either under paragraphs 186 and 187 using Annex 4, Section VII Current Exposure Method (CEM), or under paragraph 176 and paragraph 151 standard supervisory haircuts for SFTs. The holding periods for SFT calculations in paragraph 167 remain even if more than 5000 trades are within one netting set, ie the first bullet point of paragraph 41(i) of Annex 4, included by the Basel III framework, will not apply in this context.

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<sup>19</sup>  $K_{CCP}$  is a hypothetical capital requirement for a CCP, calculated on a consistent basis for the sole purpose of determining the capitalisation of clearing member default fund contributions; it does not represent the actual capital requirements for a CCP which may be determined by a CCP and its supervisor.

<sup>20</sup> The 20% risk weight is a minimum requirement. As with other parts of the capital adequacy framework, the national supervisor of a bank may increase the risk weight. An increase in such risk weight would be appropriate if, for example, the clearing members in a CCP are not highly rated. Any such increase in risk weight is to be communicated by the affected banks to the person completing this calculation.

For the purposes of calculating  $K_{CCP}$  via CEM the formula in Annex 4, Section VII, 96(iv) will be replaced by  $A_{Net} = 0.3 \cdot A_{Gross} + 0.7 \cdot NGR \cdot A_{Gross}$ . Further, if NGR cannot be calculated according to Annex 4, paragraph 96(iv), a transitional default value NGR value of 0.30 shall be applied for this calculation, until 31 March 2013. After this transitional period, the fallback approach established in paragraph 119 will apply.

When calculating such an exposure amount, the initial margin collateral posted by each clearing member with the CCP, and the variation margin the clearing member is entitled to receive (but has not yet received) from the CCP, are considered to be collateral which reduces the CCP's current exposure to such a clearing member under Basel II's standard credit risk mitigation provisions. In contrast, variation margin that the CCP is entitled to receive but has not yet received will increase the exposure that the CCP has to the clearing member.

The PFE calculation under the CEM for options and swaptions that are transacted through a CCP is adjusted by multiplying the notional amount of the contract by the absolute value of the option's delta, which is calculated according to Annex 4 paragraph 77 and 78.

The netting sets that are applicable to regulated clearing members are the same as those referred to in paragraph 110. For all other clearing members, they need to follow the netting rules as laid out by the CCP based upon notification of each of its clearing members. The national supervisor can demand more granular netting sets than laid out by the CCP.

- (ii) Second, calculate the aggregate capital requirement for all clearing members (prior to the concentration and granularity adjustment), assuming a scenario where two average clearing members default and, therefore, their default fund contributions are not available to mutualise losses. This scenario is incorporated in the following risk-sensitive formula:

$$K_{CM}^* = \begin{cases} c_2 \cdot \mu \cdot (K_{CCP} - DF') + c_2 \cdot DF_{CM}' & \text{if } DF' < K_{CCP} \quad (i) \\ c_2 \cdot (K_{CCP} - DF_{CCP}) + c_1 \cdot (DF' - K_{CCP}) & \text{if } DF_{CCP} < K_{CCP} \leq DF' \quad (ii) \\ c_1 \cdot DF_{CM}' & \text{if } K_{CCP} \leq DF_{CCP} \quad (iii) \end{cases}$$

Where

$K_{CM}^*$  = Aggregate capital requirement on default fund contributions from all clearing members prior to the application of the granularity and concentration adjustment.

$DF_{CCP}$  = **CCP's prefunded own funds** and other financial resources (eg contributed capital, retained earnings, etc), which are required to be used by CCP to cover its losses before clearing members' default fund contributions are used to cover losses

$DF_{CM}'$  = **Prefunded default fund contributions from surviving clearing members** available to mutualise losses under the assumed scenario. Specifically:

$$DF'_{CM} = DF_{CM} - 2 \cdot \overline{DF}_i,$$

where  $\overline{DF}_i$  is the average default fund contribution.

$DF'$  = **Total prefunded default fund contributions** available to mutualise losses under the assumed scenario. Specifically:

$$DF' = DF_{CCP} + DF'_{CM}$$

$c_1$  = A decreasing capital factor, between 0.16% and 1.6%, applied to the excess prefunded default funds provided by clearing members ( $DF_{CM}$ ):

$$c_1 = \text{Max} \left\{ \frac{1.6\%}{(DF'/K_{CCP})^{0.3}}; 0.16\% \right\}$$

$c_2$  = 100%; a capital factor applied when a CCP's own resources ( $DF_{CCP}$ ) are less than such CCP's hypothetical capital requirements ( $K_{CCP}$ ), and, as a result, the clearing member default funds are expected to assist in the coverage of the CCP's hypothetical capital requirements ( $K_{CCP}$ ).

$\mu$  = 1.2; an exposure scalar of 1.2 is applied in respect of the unfunded part of a CCP's hypothetical capital requirements ( $K_{CCP}$ ).

**Equation (i)** applies when a CCP's total prefunded default fund contributions ( $DF$ ) are less than the CCP's hypothetical capital requirements ( $K_{CCP}$ ). In such case, the clearing members unfunded default fund commitments are expected to bear such loss and the exposure for a clearing member bank is, due to the potential failure of other members to make additional default fund contributions when called, expected to be greater than the exposure if all default funds had been prefunded.<sup>21</sup> Therefore, an exposure scalar ( $\mu$ ) of 1.2 is applied in respect of the unfunded part of  $K_{CCP}$ , to reflect the bank's greater exposure arising from reliance on unfunded default fund contributions. If a part of the CCP's own financial resources available to cover losses is used after all clearing members' default fund contributions ( $DF_{CM}$ ) are used to cover losses, then this part of the CCP's contribution to losses should be included as part of the total default fund ( $DF$ ).

<sup>21</sup> Where a CCP's total prefunded default fund contributions ( $DF$ ) are not sufficient to cover the CCP's hypothetical capital requirements ( $K_{CCP}$ ), and clearing members do not have an obligation to contribute more default funds to offset a shortfall in CCP loss-absorbing resources, such clearing members are still subject to an additional capital charge. The reason is that their trade exposures to such CCP are, in fact, riskier than would be the case if the CCP had access to adequate resources to cover its hypothetical capital requirements. This reflects the underlying assumption that CCPs, through own resources and member default funds, are expected to have adequate loss-bearing, mutualised, financial resources to make defaults on trade exposures highly unlikely. If such loss-bearing resources are inadequate, the members' exposures are bearing additional risk and require additional capital.

**Equation (ii)** applies when a CCP's own resource contributions to losses ( $DF_{CCP}$ ) and the clearing members' default contributions ( $DF_{CM}$ ), are both required to cover the CCP's hypothetical capital ( $K_{CCP}$ ), but are, in the aggregate, greater than the CCP's hypothetical capital requirements  $K_{CCP}$ . As noted in the above definition, for  $DF_{CCP}$  to be included in the total default fund available to mutualise losses ( $DF'$ ), the CCP's own resources must be used before  $DF_{CM}$ . If that is not the case and a part of CCP's own financial resources is used in combination, on a pro rata or formulaic basis, with the clearing members' default fund contributions ( $DF_{CM}$ ) to cover CCP losses, then this equation needs to be adapted, in consultation with national supervisors, such that this part of CCP contribution is treated just like a clearing member's default fund contribution.

**Equation (iii)** applies when a qualifying CCP's own financial resource contribution to loss ( $DF_{CCP}$ ) is used first in the waterfall, and is greater than the CCP's hypothetical capital ( $K_{CCP}$ ), so that the CCP's own financial resources are expected to bear all of the CCP's losses before the clearing members' default fund contributions ( $DF_{CM}$ ) are called upon to bear losses.

- (iii) Finally, calculate the capital requirement for an individual clearing member 'i' ( $K_{CM_i}$ ) by distributing  $K_{CM}^*$  to individual clearing members in proportion to the individual clearing member's share of the total prefunded default fund contributions,<sup>22</sup> and taking into account the CCP granularity (through the factor that accounts for the number of members 'N') and the CCP concentration (through the factor 'β').

$$K_{CM_i} = \left(1 + \beta \cdot \frac{N}{N-2}\right) \cdot \frac{DF_i}{DF_{CM}} \cdot K_{CM}^*$$

Where

$\beta$	=	$\frac{A_{Net,1} + A_{Net,2}}{\sum_i A_{Net,i}}$ , where subscripts 1 and 2 denote the clearing members with the two largest $A_{Net}$ values. For OTC derivatives $A_{Net}$ is defined in Annex IV paragraph 96(iv); and for SFTs, $A_{Net}$ will be replaced by $E^*H_e + C^*(H_c + H_{fx})$ , as defined in paragraphs 147 to 153.
$N$	=	Number of clearing members
$DF_i$	=	Prefunded default fund contribution from an individual clearing member 'i'
$DF_{CM}$	=	Prefunded default fund contributions from all clearing members (or any other member contributed financial resources that are available to bear mutualised CCP losses).

<sup>22</sup> Such allocation method is based on the assumption that losses would be allocated proportionate to prefunded DF contributions of CMs. If the CCP practice differs, the allocation method should be adjusted in consultation with national supervisors.

Alternatively, where the above allocation method fails because of the fact that the CCP does not have prefunded default fund contributions, the following hierarchy of conservative allocation method applies:

1. Allocate  $K_{CM}^*$  based upon each CM's proportionate liability for default fund calls (ie unfunded DF commitment);
2. In the unlikely case such an allocation is not determinable; allocate  $K_{CM}^*$  based upon the size of each CM's posted IM.

These allocation approaches would replace  $(DF_i / DF_{CM})$  in the calculation of  $K_{CMi}$ .

117. The CCP, bank, supervisor or other body with access to the required data, must make a calculation of  $K_{CCP}$ ,  $DF_{CM}$ , and  $DF_{CCP}$  in such a way to permit the supervisor of the CCP to oversee those calculations, and it must share sufficient information of the calculation results to permit each clearing member to calculate their capital requirement for the default fund and for the bank supervisor of such clearing member to review and confirm such calculations.  $K_{CCP}$  should be calculated on a quarterly basis at a minimum; although national supervisors may require more frequent calculations in case of material changes (such as the CCP clearing a new product). The CCP, bank, supervisor or other body that did the calculations should make available to the home supervisor of any bank clearing member sufficient aggregate information about the composition of the CCP's exposures to clearing members and information provided to the clearing member for the purposes of the calculation of  $K_{CCP}$ ,  $DF_{CM}$ , and  $DF_{CCP}$ . Such information should be provided no less frequently than the home bank supervisor would require for monitoring the risk of the clearing member that it supervises.  $K_{CCP}$  and  $K_{CMi}$  must be recalculated at least quarterly, and should also be recalculated when there are material changes to the number or exposure of cleared transactions or material changes to the financial resources of the CCP.

## Exposures to Non-qualifying CCPs

118. Banks must apply the Standardised Approach for credit risk in the main framework, according to the category of the counterparty, to their trade exposure to a non-qualifying CCP.

119. Banks must apply a risk weight of 1250% to their default fund contributions to a non-qualifying CCP. For the purposes of this paragraph, the default fund contributions of such banks will include both the funded and the unfunded contributions which are liable to be paid should the CCP so require. Where there is a liability for unfunded contributions (ie unlimited binding commitments) the national supervisor should determine in its Pillar 2 assessments the amount of unfunded commitments to which a 1250% risk weight should apply to in the absence of an ability to calculate  $K_{CCP}$ .

- Proposed **amendments** (bold and underlined) with regard to IRB partial use of trade exposures to QCCPs, in **para. 256** and a **new paragraph after para. 262** of the Basel II rules text:

### **3. Adoption of the IRB approach across asset classes**

256. Once a bank adopts an IRB approach for part of its holdings, it is expected to extend it across the entire banking group, **with the exception of the banking**

**group's exposures to CCPs treated under Annex 4, Section IX.** The Committee recognises however, that, for many banks, it may not be practicable for various reasons to implement the IRB approach across all material asset classes and business units at the same time. Furthermore, once on IRB, data limitations may mean that banks can meet the standards for the use of own estimates of LGD and EAD for some but not all of their asset classes/business units at the same time.

**262(i). Irrespective of the materiality, exposures to CCPs arising from OTC derivatives, exchange traded derivatives transactions and SFTs must be treated according to the dedicated treatment laid down in Annex 4, Section IX. When assessing the materiality for the purposes of paragraph 259, the IRB coverage measure used must not be affected by the bank's amount of exposures to CCPs treated under Annex 4, Section IX - ie such exposures must be excluded from both the numerator and the denominator of the IRB coverage ratio used.**

- Proposed **amendments** (bold and underlined) to Annex 3, part 1, paragraph 4
- 4. In cases of a system wide failure of a settlement, ~~or~~ clearing system **or central counterparty**, a national supervisor may use its discretion to waive capital charges until the situation is rectified.
- Finally, a technical change or clarification: The current treatment of settlement risk in Annex 3 of Basel II, already applying to clearing houses, applies also to exposures to CCPs.
- 3. The following capital treatment is applicable to all transactions on securities, foreign exchange instruments, and commodities that give rise to a risk of delayed settlement or delivery. This includes transactions through recognised clearing houses **and central counterparties** that are subject to daily mark-to-market and payment of daily variation margins and that involve a mismatched trade.<sup>23</sup> Repurchase and reverse-repurchase agreements as well as securities lending and borrowing that have failed to settle are excluded from this capital treatment.

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<sup>23</sup> An exposure value of zero for counterparty credit risk can be attributed to payment transactions (eg funds transfer transactions) and other spot transactions that are outstanding with a central counterparty (eg a clearing house), when the central counterparty CCR exposures with all participants in its arrangements are fully collateralised on a daily basis.