A second consultative document on this topic was published in November 2011. http://www.bis.org/publ/bcbs206.htm

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. This consultative paper seeks comments from banks, central counterparties (CCPs) and other stakeholders on the proposed Basel III reforms reflected in the proposed regulatory capital adequacy rules text attached as Annex A of this document. These changes seek to require banks to more appropriately capitalise their exposures to CCPs, including both trade and default fund exposures to CCPs.

2. Generally speaking, the Committee proposes that trade exposures to a qualifying CCP will receive a 2% risk weight. In addition, default fund exposures to a CCP will, in accordance with a risk sensitive waterfall approach (based on a CCP's actual financial resources and hypothetical capital requirements), be capitalised according to a method that consistently and simply estimates risk arising from such default fund.

3. This consultative paper also provides the background for an impact study which will be initiated shortly to measure the impact of the proposed changes on bank capitalisation. The impact study will assist the Committee in finalising the rules for banks' regulatory capital against exposures to CCPs, including a determination of the appropriate calibration of such rules. The Committee requests that banks, CCPs and stakeholders contact national supervisors to participate in the impact study.

II. Background

4. The Basel II Framework allows exposures to CCPs to be nil – and, as such, provides significantly reduced capital charges for banks.[1] The G20 Leaders, at their Pittsburgh summit in September 2009, encouraged the Basel Committee, among others, to create incentives to use CCPs.[2]

5. The Committee has previously identified that the regulatory capital treatment for counterparty credit risk (CCR) was insufficient in a number of areas[3] and that CCPs were not widely used to clear derivatives trades. With respect to CCPs, the Committee has been working to give effect to the G20 Pittsburgh statement concerning the creation of incentives for banks to increase the use of CCPs, while ensuring that the risk arising from banks' exposures to CCPs is adequately capitalised.

6. The Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO) (collectively CPSS-IOSCO) set the standards for the supervision and oversight of financial market

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1 See Annex 4, paragraph 6, of *International Convergence of Capital Measurement and Capital Standards: A Revised Framework - Comprehensive Version*, June 2006 (hereinafter referred to as "Basel II" or the "Basel II Framework"), which is available at www.bis.org/publ/bcbs128.htm.

2 See paragraph 13 of the *Leaders' Statement: The Pittsburgh Summit*, which is available at www.pittsburghsummit.gov/mediacenter/129639.htm.

3 See the Committee's December 2009 consultative document *Strengthening the resilience of the banking sector*, from paragraph 113 (available at www.bis.org/publ/bcbs164.pdf).

infrastructures, including CCPs, and it is currently in the process of reviewing its standards.[4] The Basel Committee is concerned with the capitalisation by banks for their exposures to CCPs and acknowledges that standard setting for CCPs and overseeing CCPs is the responsibility of CPSS-IOSCO and its members.[5] As such, this document and the proposed rules text are limited to matters within the Committee's remit and do not express views on standards applicable to CCPs.

7. As part of the Basel III reforms, the Committee has materially changed the CCR regime.[6] These changes significantly increase the capital charges associated with bank OTC derivatives and SFTs and thereby create important incentives for banks to use CCPs wherever practicable.[7]

III. Proposed reforms

8. The Committee is responsible for establishing prudent minimum capital standards for internationally active banks. While the Basel II Framework could be interpreted as permitting all bank exposures to CCPs be free of counterparty credit risk capital, the Committee is of the view that this would fail to correctly capitalise banks for their CCP exposures. Further, with the important efforts being made to increase the use of CCPs, the Committee recognises that banks, and financial systems, will be increasingly reliant on CCPs. Consequently, it is important that banks maintain sufficient capital for their exposures to CCPs. Finally, the Committee is mindful that regulatory provisions requiring banks to capitalise their exposures to CCPs in a risk-sensitive way inevitably leads to the creation of certain incentives for banks and CCPs to structure their financial resources. For this reason, the Committee wishes to ensure that such incentives are appropriate and do not have unintended consequences.[8]

9. The Committee proposes that the rules text set out in Annex A should, subject to consultation and the completion of calibration following the impact study, be finalised by September 2011, and implemented effective 1 January 2013. These rules will result in a more appropriate capitalisation of banks' exposures to CCPs. In sum, the proposed rules text

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4 See www.iosco.org/news/pdf/IOSCONEWS177.pdf. The Basel Committee intends to review its rules governing the capitalisation of bank exposures to CCPs in light of the CCP standards finalised by CPSS-IOSCO.

5 The Committee gratefully acknowledges the assistance and cooperation provided by the CPSS-IOSCO Editorial Team to assist the Committee's Risk Management and Modelling Group in better understanding CCPs and how the regulatory capital rules will interact with the CPSS-IOSCO standards.

6 On 16 December 2010 the Committee published its reforms related to counterparty credit risk. See *Basel III: A global regulatory framework for more resilient banks and banking systems* (www.bis.org/publ/bcbs189.htm).

7 It is widely expected that not all OTC derivatives will be suitable for CCPs. Please see the Financial Stability Board report issued on 25 October 2010 for a discussion of the standardisation of derivatives and other matters related to increasing the use of CCPs and giving effect to the G20 Pittsburgh statement concerning CCPs (www.financialstabilityboard.org/publications/r_101025.pdf).

8 The management of incentives for CCPs is a matter within the remit of CPSS-IOSCO and CCP overseers. However, the Basel Committee, through its ongoing dialogue with CPSS-IOSCO, is sensitive to the fact that the creation of incentives for banks may impact CCPs. The Basel Committee is committed to continuing to work with CPSS-IOSCO, for example, by sharing the results of this consultation process and impact study, to ensure that incentives are understood and considered on a system wide basis as the applicable standards are finalised.

on the capitalisation for banks' exposures to CCPs (see Annex A) includes the following requirements:[9]

(a) **Qualifying CCPs [para. 113, 114, 117 and 118]**: Where a CCP is compliant with CPSS-IOSCO standards and is able to assist clearing member banks in properly capitalising for CCP exposures (by either undertaking the calculations and/or making available sufficient information to its clearing members, or others, to enable the completion of capital calculations (see next bullet point (g) on the CCP's hypothetical capital calculation), such CCP is considered to be a "qualifying CCP" [see paragraphs 113 and 118 of the proposed rules text]. Exposures to "qualifying CCPs" should benefit from lower capital charges:

- This is intended to recognise that the supervision and oversight of CCPs and the standards governing CCPs are a matter for CPSS-IOSCO.
- This reflects the Committee's expectation, based on discussions with CPSS-IOSCO, that CCPs compliant with CPSS-IOSCO standards will be able to facilitate the information and calculation requirements in the below-described risk sensitive waterfall approach.

The proposed approaches give rise to some debate in relation to the quantification of risk and implementation. For example, banks are experienced with the current exposure method (CEM) calculation methodology (see discussion below) but may not have the necessary information; CCPs should have the necessary information but may not have the CEM experience and may have confidentiality restrictions preventing them from sharing data with members. ***The Committee invites comments on whether CCPs, CCP overseers, clearing members, transaction repositories or other sources of information and expertise are best equipped to assemble and manage the necessary information and to complete this calculation.*** Further, verification of such calculations will also be essential (eg bank supervisors will need to confirm that banks have correctly calculated their exposures to, and capital requirements in respect of, CCPs). ***As such, the Committee invites comments on how such verification and related quality control can be assured.***

(b) **Non-Qualifying CCPs [para. 119 and 120]**: Exposures to any entity that is not a qualifying CCP should, regardless of whether it has some attributes of a CCP or is for some other purposes considered to be a CCP, be capitalised as is the case with any other bilateral exposure.

- This is intended to ensure that banks are encouraged to deal with CCPs subject to CPSS/IOSCO standards, and supervision and oversight based on them.

(c) **Trade Exposures [para. 114 and 119]**: The low capital charges for exposures to CCPs should be limited to posted collateral, mark-to-market exposures and potential future exposures (ie collectively trade exposures[10]) to qualifying CCPs. Further, rather than a zero capital charge, a small but positive capital charge (ie based on a 2% risk weight) should be associated with such trade exposures.

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9 The references in brackets refer to the attached proposed rules text in Annex 1.

10 Collateral and mark-to-market exposures are capitalised based on their "exposure at default" (EAD).

- Trade exposures to qualifying CCPs are subject to very low capital charges, as these exposures benefit from the multilateral netting and loss mutualisation mechanism provided by such CCPs.
- The small but positive capital charge is intended to ensure that banks track and monitor their exposures to CCPs as part of good risk management and to reflect that even trade exposures to compliant CCPs are not risk free.

(d) **Bankruptcy Remote Collateral [para. 115 and 116]**: Notwithstanding the previous subsection, where collateral posted by a bank in connection with trades with a compliant CCP has been segregated and is remote from the bankruptcy of the firm holding the collateral, no counterparty credit risk capital charge is required as a result of the bank posting such collateral.

(e) **Collateral Risk [para. 115 and 116]**: Where a bank posts collateral with a CCP, the bank continues to bear the risk associated with such collateral and must continue to capitalise its exposure to such collateral.

(f) **Equity Investment:**[11] Where a bank has an investment in the capital of a CCP, such capital investment should be treated on an equivalent basis to an equity investment by a bank in a corresponding financial entity.

(g) **Qualifying Default Fund Exposures [para. 117]**: A bank should capitalise its default fund exposure to a qualifying CCP according to a risk-sensitive approach that is based on the calculation of the CCP's "hypothetical capital". It is worth noting that this hypothetical capital is used solely for the purpose of calculating the capital required for a bank's default fund exposures to a CCP.[12] Generally speaking, such hypothetical capital is to be calculated using the CEM, as set forth in paragraphs 91-96 of Annex 4 of the Basel II Framework, and the standard credit risk mitigation techniques, in combination with a 20% risk weight from the standardised approach for credit risk, to estimate the CCP's exposures to its members on a bilateral basis. Such exposure amount is then reduced by the initial margin held by the CCP, using the comprehensive approach with standard supervisory haircuts. ***The Committee specifically invites comments on other practicable, simple and supervisable methods for calculating such exposure or hypothetical capital and on adjustments to CEM that could improve its utility as a proxy for CCP exposures to its members.***

According to the proposed risk-sensitive approach, a bank should capitalise its default fund exposures to a CCP based on its pro rata share of the following capital charges applied to the total member-provided default funds:

(i) To the extent that the CCP's prefunded financial resources[13] exceed the CCP's "hypothetical capital", the member-provided excess prefunded default fund contributions should be capitalised at the low rate of 1.6% (ie based on a 20% risk weight and the assumption of 8% total capital);

[11] Note that this result occurs due to the general Basel II text provisions governing the capitalisation of equity investments in other entities; as such, it is not expressly covered in Annex A.

[12] CCP capital adequacy is determined by a CCP's overseer and the hypothetical capital discussed herein is not intended to be a basis for assessing the adequacy of a CCP's financial resources.

[13] The "CCP's prefunded financial resources" are the aggregate of the prefunded default funds provided by the CCP and by its members which are, according to the CCP's actual loss bearing financial resource hierarchy, exposed to loss.

(ii) To the extent that the CCP's prefunded financial resources equal the CCP's "hypothetical capital", the portion of member-provided prefunded default fund contributions should be capitalised at a 100% rate (ie based on a 1250% risk weight and the assumption of 8% total capital);

(iii) To the extent that the CCP's prefunded financial resources are less than the CCP's "hypothetical capital", where members have an obligation to contribute additional funds to cover the losses of a CCP, they should recognise a higher exposure, based on 120% of the amount expected to be drawn/called from members according to such obligations.[14] Such exposure should also be capitalised at a 100% rate.

- This proposal seeks to provide a consistent, supervisable and implementable risk sensitive waterfall approach, based on CCP specific information, which will thereby result in an appropriate level of capitalisation for a bank clearing member default fund exposure based upon its risk profile.
- The risk borne by a member-provided default fund is low, and the resulting capital charge should be low, if a CCP has adequate initial margining and own financial resources (ie CCP prefunded default funds) to cover losses up to its hypothetical capital requirement.
- Where a CCP does not have adequate initial margining and own financial resources (ie CCP funded default funds) to cover losses up to its hypothetical capital requirement, the risk borne by a member-provided default fund is equivalent to equity risk, and the resulting capital charge should be higher than in the case where a CCP is adequately collateralised/capitalised.
- Where a CCP does not have adequate initial margining, own financial resources and prefunded default funds – but relies on commitments by clearing members to provide additional default funds upon a call – the CCP is reliant on the solvency and liquidity of its members in a stress period to provide additional resources to cover losses up to its hypothetical capital requirement. As it is plausible that some other members will not answer the call, the risk of loss, or exposure of a solvent member bank, is greater.

The proposed risk sensitive approach to capitalising for default fund exposures assumes that a CCP will have sufficient default fund resources to cover losses equal to its hypothetical capital. Where such unfunded (but committed) and prefunded default fund contributions are inadequate, the assumption of low risk trade exposures due to loss mutualisation is called into question. To simplify the calculation when a CCP's prefunded default funds are less than its hypothetical capital, Annex A does not distinguish between the situations where unfunded default fund commitments are or are not adequate to cover the CCP's hypothetical capital. ***Comments are invited with respect to whether an alternative methodology, such as requiring bilateral capital treatment for trade exposures to a CCP where its default funds are less than its hypothetical capital, exists to properly reflect the risk of being a clearing member in such a CCP.***

[14] When calculating the amount assumed to be drawn/called from members, it is assumed that all members will honour their obligations. Such exposure amount is then increased by 20% when determining bank capital for such exposure to reflect the material risk that not all members will honour their obligations and that subsequent calls from the CCP for default funds will then ensue.

(h) **Non-Qualifying Default Fund Exposures [para. 120]**: Where a CCP is not a qualifying CCP, a bank's funded and unfunded, but contractually committed, default fund contributions to such CCP should be capitalised at a 100% rate (ie risk weighted at 1250%).

(i) **Indirect Access [para. 112]**: Where a non-member bank transacts with a clearing member (and the clearing member is in fact acting as a financial intermediary to the CCP by entering into a corresponding trade with the CCP), the non-member bank is only eligible to claim the reduced capital charges associated with a CCP exposure if: (i) any assets of the non-member bank related to such trade are segregated and bankruptcy remote from the clearing member; and (ii) the non-member bank is legally ensured that another CCP member will take over such trade if the original clearing member counterparty cannot perform.

- This clause allows non-member banks to enjoy the capital benefits of indirectly transacting with a CCP where such non-member's assets are not exposed to the insolvency risk of the member/financial intermediary and where the non-member is assured that the trade will survive the insolvency of the member/financial intermediary.
- Where the non-member is exposed to risk due to the insolvency of the member/financial intermediary, the trade is considered a bilateral trade.

(j) **Miscellaneous Exposures**:[15] Where a bank has a non-trade, non-default fund and non-equity exposure to a CCP (eg a bank provides a liquidity facility to a CCP), such exposure is a bilateral non-CCP related exposure and is to be capitalised under the regulatory capital framework in keeping with the capitalisation of any other such exposure.

IV. Process and timelines

10. These proposals related to the capitalisation of bank exposures to CCPs, and in particular, those related to the capitalisation of default fund exposures, were not included in the December 2009 Consultative Package and, as a result, were not quantified in the 2010 quantitative impact study (QIS).

11. As such, the Committee is engaging in this consultation and the related impact study, which will be conducted in coordination with CPSS-IOSCO members, to give affected parties and interested stakeholders an opportunity to raise potential concerns with the proposed rules text, to obtain input on the issues noted herein (and any other issues which may arise in the comments) and to obtain data to assist the Committee in the finalisation and calibration of these proposals. In particular, it will not be possible to assess whether the risk-sensitive capitalisation of default funds exposures has been properly calibrated and results in a sensible amount of capital for banks until the impact of proposed capital framework is tested.

12. To ensure that ongoing observation of bank exposures and market behaviours are observed, the Committee intends, in addition to the impact study to be completed based on 31 December 2010 data, to monitor how the proposed framework will affect bank capital

[15] Note that this result occurs due to the general Basel II text provisions governing the capitalisation of exposures; as such, it is not expressly covered in Annex A.

levels by completing observations at 30 June 2011, 31 December 2011 and 30 June 2012. Please contact your supervisor if you are a bank or a CCP that would like to participate in the impact study and subsequent observations.

13. Finally, the CPSS-IOSCO revised CCP standards are expected to be finalised during 2011 (after a public consultation starting in spring 2011). To ensure coordination, the Committee currently intends to wait until such CCP standards are substantially finalised before finalising the regulatory capital rules text.

14. The Committee recognises that these are complex topics and that concerted effort will be required to complete the consultation, impact study and finalisation of rules text to facilitate a January 2013 implementation. It is, however, important to work towards implementing all CCR reforms, including the CCP-related ones, by January 2013. To implement the CCR reforms but not the CCP-related ones would create a risk to banks and financial systems. This risk arises as the increase in the capital requirements for bilateral trades would put in place the incentives to encourage the use of CCPs, but the adequate capitalisation of bank exposures arising from the increased use of CCPs would not be enacted.

15. The Committee intends that the proposed rules text annexed hereto will be further refined in March-June 2011 after the completion of consultation, and finalised once the final CPSS-IOSCO standards are published during 2011. As such, national implementation by January 2013 should be possible.

16. To summarise, the Committee proposes the following timeline:

	Capitalisation of exposures to CCPs
December 2010 – February 2011	BCBS issues this Consultation Paper in December 2010, followed shortly thereafter by an impact study template. National supervisors arrange for participants in impact study. Comments on Consultative paper received by **4 February 2011**. Impact study: CCPs data as of 31 December 2010, to be submitted to CCPs' overseers by **24 January 2011** (who in turn will submit the data to the Basel Committee's Secretariat by **31 January 2011**).[16]
March 2011	Preliminary report to BCBS. CPSS – IOSCO issues revised CCP standards for consultation
July 2011 BCBS	Final report to BCBS on the consultation and impact study.
Sept 2011 BCBS	Finalisation of the CCP-related rules provisions.

[16] K_{CCP} and K_{CM} will be available to CCPs by **14 February**. Bank clearing members will then need to request this information from the CCPs to calculate their own capital requirement and send it to their national supervisors by **18 February,** so that such information can be shared, subject to maintaining confidentiality, with the BCBS and its working groups. Further details on procedures and detailed instructions will be shared in due course with banks and CCPs participating in the impact study.

V. Comments

17. 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, 4 February 2011** by email to: 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's website unless a commenter specifically requests confidential treatment.

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:

  (a) 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, and

  (b) 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 and its products compliance) to ensure such compliance and shall, upon request, provide the results of its analysis to its supervisor.[17] 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.[18]

  – Clearing member: 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).

  – Client: a party to a transaction that is not a member of a CCP and transacts with a clearing member that is acting as a financial intermediary to a CCP.

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[17] [Note: this provision may be updated to reflect the new CPSS/IOSCO principles once finalised.]

[18] 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. [This will be reviewed when the CPSS-IOSCO revised requirements are available.]

– Default funds, also known as clearing deposits or guaranty fund contributions, are clearing members' funded or unfunded contributions towards, or underwriting of, a CCP's mutualised loss sharing arrangements.

- Annex 4, Section II. Scope of application. Paragraph will be modified as follows:

6. Exposures to central counterparties arising from OTC derivatives, exchange traded derivatives and SFTs transactions will be subject to the counterparty credit risk treatment laid out in paragraphs 106 to 120.

- Annex 4, a new section on central counterparties will be added:

IX. Central Counterparties

106. Transactions by a bank with a CCP are subject to the treatment set forth in paragraphs 109 to 120 of this Annex if the following conditions are met:

(a) The CCP CCR exposures with all its clearing members in its transactions must be fully collateralised on a daily basis; and

(b) The trade must not have been rejected by the CCP.

107. Regardless of the view of a CCP 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 CCP.

108. 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 the bank 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.

109. A bank must monitor and report all of its exposures to CCPs, including exposures arising from trade related EAD and CCP membership obligations such as default fund contributions.

110. Paragraphs 111 and 112 apply in the situation when a clearing member is acting as a financial intermediary between a CCP and clients in respect of OTC derivatives, exchange traded derivatives and SFTs transactions.

111. 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, such bank's transactions with a CCP receives the treatment in paragraphs 113 to 120 of this Annex.

112. The risk weights and capital charges for a bank's transactions, where the bank is a client of the clearing member, are to be calculated under Annex 4 and risk weighted according to the category of counterparty such clearing member represents and otherwise in line with Part 2 section II or III. However, where the clearing member does in fact enter into a transaction with such client 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 paragraphs 113 to 120 of this Annex under the following conditions:

(a) the CCP and/or the clearing member, as applicable (ie depending on who has control of the assets and collateral posted by the client) identifies and segregates the positions and assets belonging to the client from those of the CCP and the clearing member, and such segregation results in bankruptcy remoteness should the clearing member become insolvent; and

(b) relevant laws, regulation, rules and contractual arrangements ensure that the client's contracts with the defaulted or insolvent clearing member will be taken over by another clearing member, and thereby continue to be indirectly transacted through the CCP, should the clearing member default or become insolvent.

113. For the purposes of calculating capital requirements for a clearing member bank's exposures to a CCP, a CCP (as defined in this Annex 4, Section 1, A. General Terms) is considered to be a "qualifying CCP" if DF_{CCP}, DF_{CM} and K_{CCP} (as such terms are defined in paragraph 117) are calculated in accordance with paragraphs 117 and 118.

114. A risk weight of 2% must be applied to a bank's trade-related exposure to the EAD with a qualifying CCP, including any posted collateral that is held by a CCP in a manner that does not comply with the first sentence of paragraph 115, even when the clearing member is in a net receivable position with the CCP. The EAD will also include the variation margin in the case it is not returned to clearing members whose positions have gained value. The EAD is to be calculated under Annex 4. Where settlement is legally enforceable on a net basis as specified in paragraph 96(i) to 96(iii), the total replacement cost of all contracts can be calculated as a net replacement cost. Where the respective exposure methodology allows for it, margining can be taken into account.

115. Assets or collateral held by a CCP as a bankruptcy remote custodian[19] on the clearing member's or client's behalf, and assets or collateral held by a clearing member as a bankruptcy remote custodian on a client's behalf, are not subject to a capital requirement for counterparty credit risk exposure to such bankruptcy remote custodian. 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.

116. Collateral includes cash, securities, other pledged assets, including excess margin (also called overcollateralisation).

[19] 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 claims by such persons creditors, or to a stay of the return of such property, should such person become insolvent or bankrupt.

117. To capitalise for exposures arising from default fund contributions to a qualifying CCP (as defined in paragraph 113), 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, trade repository, bank, supervisor or other body with access to the required data, as long as the conditions in paragraph 118 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 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.[20] This is calculated using the formula for K_{CCP}:

$$K_{CCP} = \sum_{Clearing\_members} \text{(Exposure Amounts)} * RW * \text{capital ratio}$$

Where

– Each exposure amount is the CCR exposure amount a qualifying CCP has to a clearing member, calculated under the Annex 4, Section VII Current Exposure Method as a bilateral trade. When calculating such 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 received) from the CCP, is considered to be collateral which reduces the CCP's exposure to such 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 increases the exposure amount.

– RW is a risk weight of 20%.[21]

– Capital ratio means 8%.

(ii) Second, the capital requirement for each clearing member is then calculated using the formulae:

[20] 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.

[21] 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.

$$K_{CM_i} = \frac{DF_{CM_i}}{\sum DF_{CM}} \cdot \sum K_{CM} \, ,$$

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

Where

$\sum K_{CM}$ = Capital requirement on default fund contributions from all clearing members

In order to calculate the capital requirement for an individual clearing member 'i' (K_{CM_i}), $\sum K_{CM}$ will be distributed to individual clearing members in proportion to the individual clearing member's share of the total prefunded default fund contributions.

DF_{CCP} = CCP's prefunded own funds and financial resources (eg contributed capital, retained earnings, etc.), which are required to be used by CCP to cover its losses either before clearing members' default fund contributions are used to cover losses or in combination with clearing member default fund contributions

$\sum DF_{CM}$ = Prefunded default fund contributions from all clearing members (or any other member contributed financial resources that are available to bear mutualised CCP losses), DF_{CM_i} being the prefunded default fund contribution from an individual clearing member 'i'

DF = DF_{CCP} + $\sum DF_{CM}$ = Total prefunded default fund contributions

c_1 = 1.6%; a capital factor applied to the excess prefunded default funds provided by clearing members (ΣDF_{CM}). Such excess prefunded default funds are calculated by subtracting (a) the part of the total prefunded default funds provided by clearing members (ΣDF_{CM}) which would be (in accordance with a CCP's actual resource allocation waterfall) added to a CCP's own financial resources (DF_{CCP}) to offset losses equal to the CCP's hypothetical capital requirements (K_{CCP}) from (b) the total prefunded default funds (ΣDF_{CM}) provided by clearing members to such CCP.

c_2 = 100%; a capital factor applied when a qualifying 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}).

μ = 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}), to reflect the bank's greater exposure arising from reliance on unfunded default fund contributions.

– Equation (i) is used when a qualifying 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.[22] Therefore, an exposure scalar (μ) 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.

– Equation (ii) is used when a qualifying CCP's own resource contributions to losses (DF_{CCP}) and the clearing members' default contributions (ΣDF_{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}. For Equation (ii):

1. If a CCP's own financial resources available to cover losses (DF_{CCP}) are used only after all clearing members' default fund contributions (ΣDF_{CM}) are used to cover losses, then the CCP's contribution to losses (DF_{CCP}) should be disregarded once the total prefunded default contributions from all sources (DF) is greater than the CCP's hypothetical capital requirements (K_{CCP}).

2. If a CCP's own financial resources (DF_{CCP}) are used in combination with the clearing members' default fund contributions (ΣDF_{CM}) to cover CCP losses, on a pro rata or formulaic basis, then this equation needs to be adapted (in a manner acceptable to a bank's supervisor) to reflect the CCP's loss waterfall rules such that the CCP's contribution to loss (DF_{CCP}) is the amount of the CCP's hypothetical capital (K_{CCP}) that is provided by the CCP's own financial resources.

– Equation (iii) is used 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 (ΣDF_{CM}) are called upon to bear losses.

118. The CCP, trade repository, bank, supervisor or other body with access to the required data, must make a calculation of $K_{CCP,}$ DF_{CMi}, and DF_{CCP} in such a way

[22] 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.

to permit the supervisor of the CCP to oversee those calculations, and it must share sufficient information of the calculation results to permit clearing members to calculate their capital requirement for the default fund and for the bank supervisor of such clearing member to review and confirm such calculations. In particular, the CCP, trade repository, bank, supervisor or other body that did the calculations must 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_{CMi}, 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.

119. Banks must apply the Standardised Approach for credit risk in the main framework, according to the category of the counterparty (determined without reference to status as a CCP), to their CCR EAD to a non-qualifying CCP or to those transactions to a qualifying CCP that do not meet the requirements in paragraph 106 of this Annex.

120. Banks must apply a risk weight of 1250% to its default fund contributions to a non-qualifying CCP or to those transactions to a qualifying CCP that do not meet the requirements in paragraphs 106 of this Annex. For the purposes of this paragraph, the default fund contributions of such a bank will include both the funded, and the unfunded contributions which are liable to be paid should the CCP so require.

- 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.[23] Repurchase and reverse-repurchase agreements as well as securities lending and borrowing that have failed to settle are excluded from this capital treatment.

[23] 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.