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26 September 2013

By email: [baselcommittee@bis.org](mailto:baselcommittee@bis.org)

Basel Committee on Banking Supervision  
Bank for International Settlements  
Centralbahnplatz 2  
CH-4002 Basel  
Switzerland

Dear Sirs

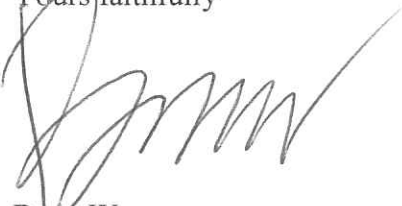
**Consultation on the Capital Treatment of Bank Exposures to Central Counterparties**

We refer to the consultative document on the “Capital Treatment of Bank Exposures to Central Counterparties” published by the Basel Committee on Banking Supervision in June 2013.

On behalf of our members, we write to provide our views on the proposals in the consultative document as set out in the Appendix.

We hope you would find our comments useful. Should you have any questions, please do not hesitate to contact our Assistant Manager, Mr. Timothy Tam, at (852) 2526 6080.

Yours faithfully



Boey Wong  
Secretary

Enc.

cc. Ms. Karen Kemp, Executive Director (Banking Policy), Hong Kong  
Monetary Authority

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**Comments on Consultative Document on the Capital Treatment of Bank Exposures to Central Counterparties**

**Question 1: Which of these two proposed methodological approaches best satisfies the objectives which the capital treatment seeks to achieve and why?**

Two approaches – Ratio and Tranches approaches – were proposed in order to calculate the capital requirements for clearing members' (CMs') prefunded contributions to the Qualifying Central Counterparty's (QCCP's) default fund (DF).

**Ratio Approach:**

$$K_{CM_i} = 8\% \cdot 1250\% \cdot \left[ \left\{ \frac{RLDF}{DF_{CCP} + DF_{CM}^{pref}} \right\} \cdot \left( \frac{DF^{cover*}}{DF^{cover*} + DF_{CCP,junior}} \right) \cdot (DF_i^{pref}) \right]$$

**Tranches Approach:**

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

Where:

$$c_1 = 16\% \cdot \frac{RLDF}{DF^{pref}}$$

$$c_2 = 100\%$$

Both approaches have one common fallacy; in defining the reference level of default fund (RLDF) as the higher of:

- (a) the minimum level of default fund coverage (Cover\*) required under the Committee on Payment and Settlement Systems (CPSS) and the International Organization of Securities Commissions (IOSCO) Principles for Financial Market Infrastructures (PFMIs), or
- (b) the capital deducted from the non-internal model method (NIMM) over the underlying trade exposures of one CCP.

This is not appropriate as Cover\* is a minimum standard for funded contributions which cannot reflect the actual risk. Placing a capital charge on DFs because it might get depleted through losses is like placing a capital charge on capital.

NIMM is a risk measure estimating the probability of loss through the assessment of likelihood of the default risk of the underlying trade exposures from a CCP facing to its CMs. The reference level should make use of risk measure, i.e. NIMM, instead of Cover\* to address the risk sensitivity issue of the interim rules.

Please refer to our answer in Q2 which further indicates that we do not subscribe to the concept of maximum of NIMM and CPSS-IOSCO PFMI capital calculation.

Both proposed approaches include the concept of RLDF for which we have concerns regarding the level of conservatism implied in its calculation. Notwithstanding our concerns around the calibration of the RLDF level, we believe that the Tranches approach provides a better approach to calculate capital related to the DF a Client Member has provided to the CCP. Our analysis has demonstrated that the capital requirement of the Tranches approach is higher when the total capitalisation of the CCP default funds ( $DF^{pref}$ ) are below the theoretical capital required for the CCP operations (RLDF). However, the capital requirement is about the same level for both approaches when the total capitalisation of the CCP ( $DF^{pref}$ ) is higher than the theoretical capital (RLDF) but lower than the capitalisation level provided directly by the CCP. This situation puts the portion of the total prefunded member default fund ( $DF^{pref}_{CM}$ ) between RLDF and the total amount of the CCP's own contribution to prefunded default resources ( $DF_{CCP}$ ) at greater "risk" and both approach reflect that fact adequately. Finally, the capital requirement is substantially lower in the Tranches approach when the CCP has been capitalised by the CCP own funds. When the  $DF_{CCP}$  is higher than the RLDF, the level of capitalisation requirement for the Tranches approach is a fraction of the Ratio approach.

Therefore, the Tranches approach provides a much steeper capital requirement as the overall capitalisation level of the CCP deteriorates which in itself is a good property of this model. It also reflects the fact that when a CCP is well capitalised by itself, the addition of capital by the Client Members is somewhat "superfluous" and therefore should not attract large capital.

The Ratio approach, despite it being simpler, has its major drawback in that CMs' DF contributions are penalized for higher capital charge even though the CCP may have sufficient capital to cover the hypothetical capital level as required under NIMM method.

e.g. RLDF = 100

$DF_{CCP} = 150$

$DF_{CCP, Junior} = 0$

$DF_{CM} = 30$

$DF_i = 10$

*Under Ratio approach*

$$K_{CMi} = 8\% * 1250\% * (100 / (150 + 30)) * 1 * 10$$

$$= 5.56 \quad (\sim RW @ 695\%)$$

*Under Tranche approach, as  $RLDF \leq DF_{CCP}$  (assuming C1 parameter is @ 16%)*

$$K_{CMi} = 10 / 30 * 16\% * 100 / 180$$

$$= 0.03 \quad (\sim RW @ 3.75\%)$$

On Tranches approach, we would clarify whether the  $c_1$  parameter defined in the formula under Tranches approach (paragraph 37 and paragraph 38) should be 1.6%, instead of 16%. Based on the interim rules, such parameter is stated as 1.6%, by treating a financially sound

QCCP as a good credit quality security firm under standardised approach, i.e. risk weighted at 20% (1.6% \* 12.5).

Extracts from interim rules

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

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

Therefore, we favour the Tranches approach as it provides a greater degree of flexibility around the assessment of “Client Members default fund at risk”. However, we stress again the fact that we believe that the RLDF calibration as it stands now is extremely conservative and needs to be relooked at.

**Question 2: What are the pros and cons of using the greater of the minimum Cover\* level required by the CPSS-IOSCO PFMI or the hypothetical level of default resources calculated using NIMM as a model for calculating the relative risk of clearing members contribution to QCCP default funds? Should the Committee consider any adjustments to NIMM to improve its measurement of the derivative exposures in the context of CCPs? Would it be better to use only one of these measures or are there other suitable alternatives?**

We do not support the proposal to use the greater of the minimum Cover\* level required by the CPSS-IOSCO PFMI and the NIMM hypothetical level of default resources. We believe that a single measure of CCP capital requirement should be used, that this measure should be universally accepted and provide no arbitrage opportunities in the market. Based on these principles, we favour the use of the NIMM approach as the single measure of CCP hypothetical capital requirements. However, we are concerned regarding the calibration of the NIMM approach and believe that the current proposal includes a large amount of conservatism in the assessment of CCP hypothetical capital.

NIMM should be adjusted to remove some of the conservative parameterization:

- We do not see the need to apply alpha for NIMM when looking at the exposure (including default fund) to CCP as there is no wrong-way risk or no rollover risk.
- We also do not see the need for the 3/2 scalar to be applied to margin period of risk because default fund exposure (DFE) is EE, not effective EPE. It is not clear to us under which asset class the default fund contributions should be classified and what calibration should be done.

We have identified a number of concerns around the use of the greater of CPSS-IOSCO PFMI and NIMM:

1. The inclusion of CPSS-IOSCO PFMI in the calculation of the RLDF may bring arbitrage opportunities or inconsistent theoretical capital requirements. Whilst the current proposal may appear to be more stringent as it ensures the reference default resources are always set at the higher one of the two elements; it potentially creates an inconsistency problem as PFMI requirements may vary in different jurisdictions for the same CCP. As a result, CMs located in different countries / areas may end up applying different RLDF for their CCP exposure estimation, leading to potential large variations in the regulatory capital requirements modelling and thus introducing unfairness in the business competition.

This can occur either when Cover\* is higher than NIMM in 2 jurisdictions with one jurisdiction having stricter capital rules than the other or when Cover\* in one region / country is higher than RLDF in another. Therefore, the amount of theoretical capital for a given CCP could be different across its Client Members capital requirements.

2. The application of Cover\* does not consider the risk of CMs defaulting as the basis for capital requirements against DF contributions, which makes clearing uneconomical and is obviously in contrast to the G20 objectives.

Interpreting Cover\* as a capital measure, without consideration to the risk of a CM default effectively assigns 1250% risk weight (RW) to the Cover\* measure, implicitly assuming that all CMs of a CCP will default at the same time across multiple CCPs in any given year, which is obviously not the case even in the most stressed historical period, i.e. 2008/2009 financial crisis. Through initial analysis the industry has observed that  $K_{CCP}$  (NIMM) will not exceed Cover\*, which means the resultant capital requirements will be based on a measure of risk that is inconsistent with the risk based capital framework and result in capital charges that make central clearing uneconomical.

The Cover\* method combined with a 1250% RW implies that DF contributions are likely to be lost in their entirety on a regular basis. This has not been the case historically; moreover, industry risk management practices have advanced both naturally and through regulatory initiative. We believe that the application of a 1250% RW lacks prudent consideration to these advancements and is further misaligned to activities of similar risk profile within the risk-based capital framework.

In addition, the use of Cover\* measure prescribes a 1250% risk-weight to be applied to CCP default fund contributions with no differentiation between the risk-weight applied to QCCPs and non-QCCPs. This lack of distinction will induce clearing members not to assess the credit quality of a CCP when they apply for membership and in turn the CCP will have less incentive to adhere to the CPSS-IOSCO global standards.

3. Incompatible basis of reconciliation of capital requirements between both the Cover\* and NIMM approach. We note that Cover\* is a funded tail loss estimate, conditioned on the default of 1 or 2 CMs with the largest impact, whereas hypothetical capital is a risk weighted expected exposure measure. The two methods are different measures of risk, intended for different purposes. Hence, we doubt whether they could be compared directly for the purpose of computing capital requirements against DFEs.

In view of above arguments, we support  $RLDF = K_{CCP}$  (NIMM) as the more appropriate approach to compute the hypothetical capital of CCP's default resource. NIMM will

correctly consider and scale with a future-state clearing environment, notably client clearing, and create a level of capital that encourage FIs to act as clearing members and thereby serve the G20 purposes.

**Question 3: What risk weights / capital charges would best achieve, or appropriately balance, the objectives set out in Section II.C? In particular, how would possibly lower values ensure that clearing members are capable of absorbing losses in times of stress without the drawing down of the default funds threatening the viability of the non-defaulting members who have contributed to them? How would the proposed 1250% risk weight affect incentives to use central counterparty clearing?**

We believe that the hypothetical theoretical capital should be calculated based on NIMM. We further believe that NIMM should be less conservative than what is currently proposed in BCBS 254. In the situation where Cover\* has to be used, we believe that the RW applied should be in line with the probability of 1 or multiple members defaulting.

The 1250% RW on DF contributions is intended to reduce pro-cyclicality risk, in that the RW of DF contributions will not impact banks' capital ratios during a crisis and therefore CCP DF will not be negatively impacted accordingly. This is an arbitrary "nice to have" and there is no argument that it would make the financial system safer. The 1250% RW is only appropriate if RLDF represents a risk-weighted hypothetical capital amount. This is the case if the cover funds measure is appropriately risk weighted, i.e.  $RLDF = \max\{(RW \times Cover^*), K_{CCP}(NIMM)\}$ , where RW is an appropriate risk weight; or alternatively, if  $RLDF = K_{CCP}(NIMM)$ . For any other condition, the application of 1250% RW (specifically to the Cover\* measure) without consideration of the risk of CMs defaulting could render central clearing uneconomical. The simple example below can demonstrate the proposed treatment will make central clearing non-economical.

Assume

- Funding cost of 1%
- Return on capital of 5%
- Cover\* DF to initial margin (IM) ratio of 8%
- Clear IM requirement to be 5 days = M
- Non-cleared IM requirement to be 10 days =  $\sqrt{10/5} * M = 1.4 M$
- No other clearing costs

Then

Cost of uncleared = 1% of 1.4 M = 1.4% of M

Cost of cleared = 1% of M + (1% + 5%) \* (8% of M) = 1.48% of M

The Hong Kong banking industry does have difficulties to conduct a full assessment on the reasonableness of the capital charge due to the lack of market presence and little data gathered



from the CCPs. However, by making reference to an industry analysis conducted by ISDA in March 2013 (“Risk Sensitive Capital Treatment for Clearing Member Exposure to Central Counterparty Default Funds”), in adopting the Incremental Default Risk charge (IDRC) model to cover 8 CCPs - the finding is that the probability of a default causing losses to non-defaulting CMs is no more than 30% and the expected loss would be less than 20% of a funded DF contribution. This is a good indication that 1250% capital charge on DF is excessive to a bank in response to the likelihood of the default from the CMs of QCCPs.

**Question 4: The Committee invites comments on this potential risk sensitive approach to capitalizing trade exposures to CCPs.**

2% is too high given a QCCP is considered safe with increased oversight and heightened risk management practices. The risk comes through the potential cost of supporting the CCP and this is reflected in the DF risk; but this is not a function of the size of the funded default as a secure risk mitigant. We are also of concern that in many cases the leverage ratio framework recently proposed will end up with a floor on capital considerably above the risk sensitive approach. Thus, we would urge the BCBS to exempt any client clearing trade and margin exposures to CCPs from leverage ratio calculation or allow collateral netting on CCP exposures.

Comparing with the previously fixed 2% RW for trade exposures to CCPs, the new proposal now only takes 2% as floor and the actual RW is determined by the size of total prefunded DFs (contributed by both the CCP and the members) relative to the RLDF of the QCCP, as shown below.

$$RW_{TE} = \min \left[ \max \left\{ 5\% \cdot \frac{RLDF}{DF_{CCP} + DF_{CM}^{pref}}, 2\% \right\}, 20\% \right]$$

We welcome the risk adjusted capital requirement for trade exposure as better capitalized CCP are less likely to require additional funds to compensate for losses on trade exposure due to a CM default. Although the approach has some merits, the 2% calibration was already too high and therefore the proposal to adjust the capital requirement for trade exposures starting at 5% seems to be overly conservative. We would like to propose to amend the calculation of  $RW_{TE}$  = min (2% \* RLDF/(DF<sub>CCP</sub>+ DF<sub>CM</sub><sup>pref</sup>); 20%).

**Question 5: Do you consider it appropriate to treat initial margin, where a QCCP has legally enforceable rules that make initial margin a senior claim to variation margin in the event of losses in excess of default resources, differently from other trade exposures by retaining a fixed 2% risk weight on initial margin posted in a non-insolvency remote manner?**

We think it is fair to consider IM as a senior claim to variation margin in the event of losses exceeding the DF resources when one or multiple CMs default and the QCCP has legally enforceable rules on IMs. However, we believe this to be an even stronger argument to our points under Q4 where we present our case that the RW for trade exposures should be less than 2% in cases where the CCP is well capitalized.

**Question 6: Do the proposed approaches to capture commitments to top up default funds in the capital treatment of exposures to QCCPs satisfy the objectives which the capital treatment seeks to achieve? Are there ways in which the proposed capital treatment of commitments could be improved? Is the proposed  $\alpha$  value of 0.5 appropriate?**

We noticed that calculation for capital requirements on committed contribution exposures (CCEs) was removed in the latest CRR regulation. As CCE represents a part of the contingent exposure that arises only after the DF depletes, it might be appropriate to be incorporated into the DFE formula. In this aspect, the two proposed modified models seem to be intuitive. Nevertheless, since  $DF_i^{comm*}$  and  $DF_{CM}^{comm*}$  refer to committed contributions in contingent cases where replenishment for DF is required in future, the way to incorporate  $DF_i^{comm*}$  and  $DF_{CM}^{comm*}$  into the DFE  $K_{CMi}$  formula should be slightly different from that how  $DF_{CCP}$  or  $DF_{CM}^{pref}$  is incorporated – perhaps by attaching some probability scalars to these 2 parameters in order to reflect the contingency of the future replenishment for DF.

**Modified DFE capital requirement:**

$$K_{CMi} = 8\% \cdot \boxed{RW} \cdot RLDF \cdot \left[ \left( \frac{DF_i^{pref} + \boxed{DF_i^{comm*}}}{DF_{CCP} + DF_{CM}^{pref} + \boxed{DF_{CM}^{comm*}}} \right) \left( \frac{DF^{cont*}}{DF^{cont*} + DF_{CCP, junior}} \right) \right]$$

**Modified TE RW:**

$$RW_{TE} = \min \left[ \max \left\{ \boxed{RW} \cdot \frac{RLDF}{DF_{CCP} + DF_{CM}^{prefunded} + \boxed{\alpha \cdot DF_{CM}^{comm}}} \cdot 2\%, 20\% \right\} \right]$$

We also agree to incorporate this contingent future commitment in the denominator of the Modified TE RW formula since such commitment should make the CCP DF more robust and hence reducing the institutions'  $RW_{TE}$  (risk weight on trade exposures).

In addition to the above points, we have the following comments about the above modified formula:

1. We suggest RLDF be replaced by  $K_{CCP}(NIMM)$  – reasons as given in the response to Q2;
2. The rationale for “ $\alpha = 0.5$ ” in the modified TE RW formula remains unclear to us though it appears to be reasonable, as at this stage in the waterfall some large clearing members may have defaulted therefore certain top up DFs will no longer be available. Note that our interpretation of this formula, applied to risk-weight of trade exposures is to reflect increased risk of applying haircuts to variation margin, or positions being closed due to a CCP default. This risk should not, however, be confused with the more remote probability of any committed funds being withheld.



3. Proper values for RW in above two formulas are yet to be defined. For modified  $RW_{TE}$ , as proposed in our response to Q4, we believe the RW should be set at 2% and the floor 2% should be removed; on the other hand, for modified DFE  $K_{CMi}$ , as pointed out in our response to Q3, the RW value should be  $< 1250\%$  due to the CPSS-IOSCO PFMI approach.