

# Review of Non-Internal Model Approaches for Measuring Counterparty Credit Risk Exposures

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# Part I - Process and Preferences: Capitalization of CCR

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- The capitalization of counterparty credit risk (CCR) issue has to be considered from the following perspectives:
  - The level of sophistication of the bank/CCP, the complexity of its exposures and the susceptibility of such exposure to measurement by risk-sensitive techniques –
    - ❖ i.e. the trade-off between increasing risk-sensitive and complex solutions (which are more difficult to implement and supervise, but more effective) – vs. consistency, transparency, replicability and ease of implementation and supervision;
  - The time frame in which the regulators need to complete their deliverable (i.e. propose a solution, finalize rules and have banks implement those rules) –
    - ❖ e.g. G-20 mandate to complete derivatives reforms by the start of 2013; various national timelines.
- To the extent the capitalization of CCR is inaccurate or overstates capital (e.g. due to a lack of risk sensitivity or a failure to recognize risk mitigation), the wrong incentives are given to banks.
  - Bank strength, economic activity and financial stability can easily be adversely affected.

It is important that this work is fact-based and does not proceed with any preconceptions;

- ❖ e.g., that CCPs are or are not well capitalized and managed
- ❖ e.g., that the Current Exposure Method (CEM) or the Standardized Method (SM) did or did not generate sufficient capital to protect banks during the crisis

# Measurement of Exposure

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- To capitalize CCR, the **measurement of the potential future exposure (PFE)** for derivatives and securities financing transactions (SFTs) requires an evaluation of how the current exposure of such a transaction to the counterparty could change over the life of such a transaction.
  - **Risk-sensitive internal models methods (IMM)** are the most sophisticated and reliable techniques for evaluating PFE – they are customized to circumstances and approved by supervisors.
  - The **less risk-sensitive methods** are CEM and SM – these are more appropriate for banks with smaller, less diversified portfolios.
- **CEM is widely recognized as having material shortcomings** due to risk insensitivity (e.g. failure to recognize diversification and risk mitigants) when it is used by banks.
  - While the benefit of CEM's simplicity for smaller firms cannot be underestimated, its shortcomings become apparent when CEM is used for larger portfolios traded by sophisticated counterparties.
- When **CEM is applied to measure CCP** exposure to its clearing members, its shortcomings are even greater as it does not recognize the benefits of multilateral netting and good CCP risk management practices.

# Industry Preferences for Exposure Measurement

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- The industry's preferred approach would be to conduct an **observation period** for (rather than implementing) any new proposed CCR capital requirements or revised CEM or SM. Reasons why an observation period are required are set forth in Part II of this presentation.
  - This would **provide time to evaluate** the impact of such requirements and allow an opportunity for refinements, or for more appropriate and accurate simple methods of assessing these capital requirements, to be developed.
  - It will also allow an opportunity to assess such capital requirements as the use of CCPs matures.
    - ❖ No one can currently estimate the ultimate impact of the proposed rules.
- In particular, the use of CEM (even with an improved net-to-gross ratio and the other modifications proposed by BCBS) for the **capitalization of default fund exposures to CCPs** should be observed, providing an opportunity to address unique CCP characteristics or develop better (e.g. more IMM-like) methodology
  - e.g., a **consistent and supervisable internal models method for CCPs** that recognizes the differences in their structures and products.
- To maintain a more level playing field between CCP-cleared transactions and bilateral OTC transactions, an observation period for the **Basel III CCR capital increase for OTC derivatives and SFTs** should also enter an observation period in parallel with the bank capital requirements for CCP exposures.
- If an observation period for new bank capital requirements for CCP is not practicable, a **gradual transition** (e.g. over 5 years) to introduce CCP capital requirements should be used to provide time to improve the methodologies and avoid negative consequences of fully implementing sub-optimal methods when the consequences cannot be known in advance.
- Further, the proposed use of **CEM in the US** for determining major swap counterparty exposures should be delayed until CEM can be improved or replaced.

# Time Pressures in the Regulatory Community

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- However, we understand that the regulatory community has to be responsive to the following time pressures:
  - A. A **G-20 commitment** to, by the end of 2012, increase the capital for OTC derivatives/SFTs and encourage the use of CCPs (while bank regulators are charged with ensuring that increased bank exposures to CCPs will be properly capitalized and will not be a source of financial instability).
    - ❖ We understand this is driving the need to finalize rules to capitalize bank exposures to CCPs at the **June Basel meeting** so that they can be implemented by the end of 2012.
      - If this **constraint does not require immediate implementation of rules**, we recommend the observation period mentioned above so current proposals can be monitored and more risk-sensitive and appropriate methods can be developed.
      - If it is a **binding constraint**, our alternative recommendation would be a slow implementation.
  - B. A longer-term **commitment to the industry to improve CEM** when it is used by banks for bilateral OTC derivative/SFT exposures.
    - Currently this time frame is unclear – and we suggest that timelines are required.

# Time Pressures in the Regulatory Community

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- C. A longer-term need to **ensure the capitalization of bank exposures to CCPs is accurate**, so that CCPs will promote financial stability and banks will not be unduly exposed to CCP risk.
- Again, this time frame is unclear - timelines are required.
  - Further, this discussion needs to include **CCPs, banks, BCBS, CPSS and IOSCO** – and potentially end-users of transactions which will ultimately be cleared through CCPs.

While not the subject for today, an improved methodology for **capitalizing Credit Valuation Adjustment (CVA)** as a market risk is required - a timeline and process should be established to achieve that goal.

# Workstream Proposals

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- If our understanding of these constraints is correct (e.g. CEM will be used), we suggest 3 workstreams:
  1. Next Few Weeks: For a specified assessment period, multiple options for determining the appropriate clearing member capitalisation of the risk associated with default fund contributions should be evaluated and considered by the regulatory community. Refer to Part II. Should the RMG decide to go down the CEM route, we suggest the following changes, but warn that such changes improve the overall capital, but do not make CEM a good choice of risk measure.
  2. Next Half Year: Improving CEM and SM for the capitalization of bank exposures arising from bilateral counterparty risks (not CCPs) of bank exposures arising from bilateral counterparty risks (not CCPs)
  3. Next Year: 2 stages to improve the capitalization of bank exposures to CCPs:
    - I. Develop a consistent and risk-sensitive way for CCPs to assess exposures to members; and
    - II. Using such CCP methodology, develop a methodology for banks to capitalize their exposures to CCPs.



# First Workstream – “Next Few Weeks”

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1. In the next few weeks leading to the June BCBS, agree a specified assessment period where multiple options for determining the appropriate clearing member capitalisation of the risk associated with default fund contributions. Refer to Part II.
  - While CEM cannot be made responsive to large portfolios by adjustments, the following discussion proposes **tangible calibration improvements** for CEM that can be implemented over the next few weeks – e.g. change NGR, reduce the default fund risk weight through a correction factor – and add-on weights adapted for clearing.
    - ❖ It also proposes more fundamental changes to CEM for consideration in Workstreams #2 and #3 (based in large part on trading book methodologies which are tested and widely accepted).
  - Develop **gradual, transitional implementation** of Basel III CCR rules and of new capital requirements for bank exposures to CCPs.
  - Following the principle that the **Basel rules are an international minimum**, other tools such as economic capital, Pillar 2 and national discretion can be used to increase capital where the Basel rules are inadequate.
  - Recognizing the need to **encourage the use of CCPs**, the CCP version of CEM needs to be calibrated (e.g. by changing the NGR; reduce default fund risk weight) to a level which will not create a material disincentive to use CCPs.
    - ❖ If this level of capital is on the low side for certain bank exposures to CCPs, in the longer term more risk sensitive solutions can then be developed to get a more appropriate level of bank capital for such exposures to CCPs.
  - **Parallel transitional implementation** of the CCR changes for bilateral derivatives/SFTs and for changes to bank exposure capital for CCPs will ensure less distortion in market choices.

## Second Workstream – “Next Half Year”

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2. Focus in the mid term (over the 4-6 months following the June Basel meeting) on **improving CEM and SM** for bank capitalization of non-CCP CCR exposures:
  - **Schedule meetings** with the industry to develop these alternatives – a partnership approach;
  - **Consultation paper** to be issued following the December BCBS;
  - Solutions to be developed and implemented by the **end of 2013**.

The next presentation proposes changes to CEM for consideration in Workstream #2

## Third Workstream – “Next Year”

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3. Focus during the slightly longer term (e.g. 12-18 months) on developing **common methodologies CCPs can use** to assess their exposures to members – and for member banks to determine their default fund exposures to CCPs.
  - BCBS work on this needs to be done in **full partnership with CPSS-IOSCO**, as well as industry (both banks and CCPs), with each of CPSS-IOSCO and BCBS/RMG taking the lead on the methodology within its area of responsibility.
    - ❖ Ideally, **CCPs and their supervisors** would propose a consistent, reliable, transparent, accurate and supervisable method for calculating CCP exposures to CCP members during the first 6-9 months.
    - ❖ Based on this CCP methodology, **RMG/BCBS and banks** would take the lead, but in consultation with CCPs and CPSS-IOSCO in using CCP/member exposure methodology (developed by CPSS-IOSCO) to develop a more accurate and risk-sensitive method for banks to calculate their exposures to CCPs.
  - This work will be informed by and **benefit from the second workstream** – but will not be constrained by the existing solution set (or by the new CEM/SA which is developed in the 2nd workstream) – rather, it can seek new solutions.
  - The **timeline for implementation** of these new approaches should be:
    - ❖ The **end of 2014** (e.g. consultation paper issued around the end of 2013) for the new CCP/member exposure methodology;
    - ❖ The **end of 2015** (e.g. consultation paper issued by the end of 2014) for the new, more accurate RMG/BCBS methodology for banks to assess their exposures to CCPs.

## Part II “Next Few Weeks” Solutions to CEM for CCP Exposures: What is an Observation and Assessment Period?

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- For a specified period, multiple options for determining the appropriate clearing member capitalisation of the risk associated with default fund contributions should be evaluated and considered by the regulatory community.
- One of these calculation options could be the existing Basel approved frameworks employed by the CMs, to the extent they are subject to such regulation.
- To the extent a hypothetical capital approach is employed and differing levels of sophistication are required in the computation of exposure metrics, these can be calculated by either the CCP for all CMs, or by each CM for their contribution and sent to the CCP to complete the calculation.
- This approach would provide the basis for effective comparison, which if combined with a benchmark portfolio, would provide regulators with the necessary information to validate their longer term solutions.

# Why is an Observation and Assessment Period Necessary?

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- Loan Equivalent Hypothetical Capital Issue: Fundamentally, hypothetical capital approaches based on loan-equivalent measures do not accurately portray CCP dynamics – and are flawed to differing extents depending on the CCP.
- Impact of related regulatory settings: the size of the default fund has been determined in a standardised way (able to withstand largest/two largest clearing member defaults under extreme but plausible market conditions, challenged and approved by regulatory authority).
- Impact on incentives and systemic risk reduction: A non-risk sensitive measure of exposure undermines many aspects of clearing framework (e.g. if you double IM and halve GF but get the same default fund capital requirements for members, something is wrong). CEM with any NGR suffers from this insensitivity.

# More Reasons for an Observation and Assessment Period

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## Outstanding Implementation Issues:

- In addition to the need to observe/transition/calibrate the framework for capitalizing exposures to CCPs, serious implementation issues need to be addressed by BCBS or by national supervisors – e.g.:
- Clarifying the designation and cessation process for “Qualifying CCP” status in terms of CPSS-IOSCO Principles for Financial Market Infrastructures
- Clarifying the language used around “highly likely portability”, (particularly when client, CM and CCP are in three jurisdictions), and the requirement for a “first, perfected security interest” in client money held at exchanges.
- Futures docs create a second lien in client money held at exchanges. The capital costs from not being able to offset the IM against the client exposure is very high – and there isn’t time to renegotiate documentation.

## Increased Shadow Banking:

- There is increasing evidence that the volume of bilateral OTC derivatives between clients is increasing as a result of the cost of clearing/Basel III costs/funding costs for IM.
- Lack of standardised documentation in the clearing space, lack of clarity on pricing all contribute...

# Solutions ranked by objective\*

## How well does each solution meet the target?

		Risk Sensitive	Simple	Comparable	Timeline	Basel Accords Consistency	Overall
Banks Calculate	Bank IMM	1=	2	4	2	1=	1
	Fixed RW	4=	1	1	1	1=	2
CCPs Calculate	CCP IMM	1=	5	2	4=	4=	3
	SM	3	3=	3	4=	1=	4
	Adjusted CEM via changes to netting cap and changes to the add-on weights	4=	3=	4=	3	4=	5

\* 1 (best fit) to 5 (worst fit)

# Summary and interim solutions

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- Interim solution needs to be a compromise
- As proposed, CEM does not reliably measure risk in large portfolios; the cost to the industry of clearing IRS could be a capital increase of \$19bn, making it cheaper to settle bilaterally (where possible), or clear through a non-qualifying CCP, despite clearing being intended to reduce systemic risk.
- An approach whereby banks use their own internal model best meets the original intention of the Basel Accords; however, BCBS is seeking a non-model based approach for the longer term.



# Summary and interim solutions

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- Given these constraints, implementing a short term interim solution for 2013 and 2014 would enable regulators to consult on the best approach for the longer term. Interim solutions during the observation and assessment period could include:
  - a fixed Risk Weight to Default Fund contributions: say 20%, similar to interbank exposures
    - ❖ Simple and consistent but not risk sensitive
  - the SM, as documented in the Basel Accords using effective notionals.
    - ❖ Relies on existing Basel Accord Methodology (so can be implemented and supervised) and is more risk sensitive
  - Adjust CEM via, for example, increasing netting cap, adjust add-on weights – for example
    - ❖ The netting cap (NGP) can be changed to 5%
    - ❖ Add-on weights should be adapted for centrally cleared transactions to shorter close-out periods - we can convene a industry/Basel sub-committee to assist RMG in working on this over the next few days.
  - Limit the maximum amount of capital that a bank would be required to hold in respect of any default fund to its maximum legal obligation (e.g. amounts funded and which it has committed to fund to a CCP's Default Fund).
- And...for the longer term...

# Longer term non-model considerations

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- A fundamental look is justified
- Consider whether it is more appropriate for banks or CCPs to calculate capital on exposures
- Ensure measure of exposure at default reflects actual risk
  - For products where the notional is not settled, the use of effective notional would be more risk sensitive and represent a better approximation of capital required
  - For products where the notional is settled, the amount of netting allowed needs to reflect the multilateral arrangements in place in a CCP
  - Clear internationally recognised designation process for Qualifying CCP under CPSS/IOSCO principles
  - Lower risk weight accorded to QCCPs, compared with non qualifying CCPs
  - Appropriate treatment of client trades to avoid double counting of required capital
  - Quantitative study into the Default Funds of large Qualifying CCPs to assess whether they are sufficiently risk sensitive for a fixed risk weight to be appropriate
  - Link with Trade Exposures capital charge to ensure relative amounts of capital are correctly calibrated.
  - Extended observation period to assess impact of capital charges following products being mandated