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# **CCP Resolution**

Dear Edwin

Thank you for your participation in a conference call with the Industry Clearing Committee ("ICC") Capital and Risk Management working group in March. This letter summarises this working group's views on Central Counterparty ("CCP") resolution.

We appreciate the work undertaken to date on this topic acknowledging the difficulty of achieving optimal CCP resolution settings, the fact that no loss allocation system can avoid allocating potentially significant losses to participants and the genuine importance of this work to the safe implementation of mandatory central clearing for standard Over-the-Counter ("OTC") derivatives.

At the outset, we wish to advise that the ICC Capital and Risk Management working group is the industry forum with which the Committee on Payment and Settlement Systems ("CPSS") and the Technical Committee of the International Organization of Securities Commissions ("IOSCO") (collectively "CPSS-IOSCO") can engage on the cross-industry "big ticket" aspects on this subject. To further our engagement, we would also like to arrange face-to-face meetings with CPSS-IOSCO on CCP resolution and related topics, and would be grateful if you would propose suitable dates.

## **Executive summary**

• The goal of systemic risk reduction and resilience of the financial infrastructure needs to reflect CCP robustness and ensure that the contagion risk due to a suboptimal CCP resolution process – causing additional Clearing Member ("CM") and client defaults – is avoided. This requires a CCP resolution process that contains mutualisation and limited liability for CMs and their clients in respect of their CCP exposures. In cases where a product is cleared on a number of CCPs, but there are only a limited number of CMs (FX non-deliverable forwards are a current example) then there is a real risk that a CM could fail on multiple CCPs simultaneously. It is important to make sure that the burden placed on remaining CMs does not lead to increased systemic risk.

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- The idea that "nobody" takes the final loss once the CCP has exhausted its financial resources is not possible. Therefore, some loss allocation mechanism must exist. We consider it would be desirable for the loss allocation mechanism to be equitable and fair, and fall on the CMs and clients down to the beneficial owner. The rules for the default management process and the use of resources in a CCP default waterfall need to be encoded into a CCP's operating rules. Any particular CCP default management system should satisfy with the specific design criteria advanced in Part 2 of this letter.
- Loss allocation must be used only in cases where the default waterfall including recourse to the CCP's dedicated own resources has been exhausted and the CCP is faced with potential insolvency.
- An important design criterion of a loss allocation system is that it provides participants with a strong incentive to provide hedges to the CCP to enable the CCP to de-risk a defaulter's portfolio. This is achieved with Variation Margin ("VM") haircutting where, in the case of a large CM default, other CMs acting rationally try to flatten their exposure to the CCP, which in turn assists the CCP to rebalance. The precise mechanics of VM haircutting may vary at each CCP. Initial Margin ("IM") haircutting may not offer the same incentive as IM could increase if a participant provides a hedge to the CCP the possibility of such outcomes could harm the default management process. IM haircutting also distorts segregation and "bankruptcy remoteness", which are embedded in many aspects of the new regulatory regimes. Of course these objections can be overcome with revisions to the IM regime, for example IM liabilities incurred during the hedging and auction processes could be excluded from any IM haircutting process to maintain the right incentives. Also, to the extent that haircuts are limited, that portion of the margin could remain non-segregated.

### Introduction

This letter contains three parts. First, we put the topic of CCP resolution into perspective to establish a context for framework design. Please note that our thoughts in this context apply for a potential CCP default due to a CM default. Further discussion is needed to form a view on what should happen if a CCP defaults due to failed investments or fraud in the CCP.

Second, taking the key considerations to their logical conclusion, we advance specific criteria that a good CCP resolution regime should satisfy. We consider it important that any specific CCP resolution settings be reviewed and judged by reference to these criteria. Any particular setting should be should be avoided where it conflicts with the criteria.

Third, in light of the objectives and criteria advanced above, we make some specific proposals for CCP resolution. The proposals accept that far down the default waterfall "good" solutions are no longer available and participants face a choice between undesirable alternatives<sup>1</sup>.

<sup>&</sup>lt;sup>1</sup>In the future some concept "bulk portability" (moving the whole portfolios of clearing members of a defaulted CCP to another, similar as the client portability) maybe a significantly more attractive alternative. As a result, it ought to remain on the agenda.

#### Part I – Key considerations

A cornerstone of global OTC derivate reform efforts is the mandatory clearing of standardised derivatives through CCPs. The aim is to prevent systemic risk to derivative markets as a result of contagion between market participants (as observed during the financial crisis). These efforts can only be considered successful to the extent that the stability of financial markets is actually enhanced, in particular without the introduction of new and unpredictable systemic risks.

Arguably, CCPs will become the most systemically relevant participants in global OTC derivative markets as a result of the reforms which have already been decided. We therefore acknowledge the necessity to ensure that CCPs are prevented from experiencing a disorderly default. This should be considered already when deciding what products will be mandated to be centrally cleared, so that CCPs are not forced to clear products that are difficult to risk manage and to auction off in case of a CM's default.

However, the aim of preventing market disrupting events does not imply the need to shield CCPs from insolvency risk altogether. Neither would it be desirable from the standpoint of society: one of the major lessons of the financial crisis has been the widespread acceptance of conflicts associated with the notion of "moral hazard", caused by private sector institutions deemed too big to fail.

To the extent that policy-makers accept the "too-big-to-fail" notion in the context of CCPs and as long as the regulatory intention is to run CCPs as private sector institutions, which we believe they should - it is critical to consider moral hazard on the part of the owners of CCPs and their agents when making policy choices.

The only way to successfully prevent moral hazard by CCP operators is to ensure that they suffer the consequences of their actions. Given the need to prevent market disruption that can be expected to occur in the run-up to a disorderly CCP insolvency, the usual bankruptcy proceedings must be substituted by a regime which results in an economic outcome no less fair than that of a CCP insolvency.

We disagree that the continuity of service of a CCP must be ensured under all circumstances as part of an orderly CCP resolution regime. Unless Governments are willing to step in with taxpayer money, decisions regarding re-capitalising a CCP after the successful conclusion of a resolution event must be left to the private stakeholders who have an interest in the CCP's continuation. In cases where no alternative CCP is available, even accepting that the affected products are cleared bilaterally for a period until another CCP can be established could reduce systemic risk, as opposed to continuing a CCP that might have demonstrated risk management shortcomings.

There is no reason to believe that financial stability can only be preserved if every CCP that is in operation is never allowed to exit the market. The requirement is, rather, that it must be ensured that all market participants can clear their derivatives portfolios independent of the existence of any particular CCP. In summary, it is the existence of a CCP to which market participants could turn in order to clear their portfolios, which is the prerequisite of a good resolution regime. It is not the existence of any particular CCP which is required. On the contrary, for the reasons explained above, we consider resolution regimes that prescribe the continued existence of any particular CCP to be economically flawed. We recognise the policy dilemma that is created through the difficulty in balancing different goals of various stakeholders in the effort to create a "safe" regime for OTC derivatives markets. These goals can be expressed in terms of three, namely: (1) CMs' liability towards CCPs must be limited, (2) Clearing customers must be protected from the default risk of their CM, (3) No more taxpayer bail-outs for Systemically Important Financial Institutions.

Further, the effort to create a "safe" regime is made more difficult by the inescapable fact that unless all economic risks to a financial market are known and quantifiable - any finite liability of CMs may be exceeded by some extreme event under unpredictable circumstances. For example, one can envisage a circumstance where a CM fails on several CCPs simultaneously. This will result in liabilities for remaining CMs that operate on the same several CCPs perhaps several times the liability to any individual CCP. Because of this fundamental fact, one or several of the above principles must be watered down<sup>2</sup>.

We consider that the principle of limited liability for CMs - at least for those that are privately owned - must be maintained because systemic stability cannot be guaranteed by private sector institutions. The theoretical arguments for this are the same as those that can explain why (credible) insurance against nuclear catastrophes and wars does not exist. Another reason for maintaining the limited liability principle for CMs is that we consider the alternative - which implies an arbitrary forced allocation of losses by the public sector onto private companies - a violation of fundamental property rights.

Allowing the second principle to fail - under extreme and exceptional circumstances – warrants closer inspection. We can hardly imagine a more stabilising regime for financial markets as one that aims to distribute losses amongst the highest possible number of stakeholders - because each individual stakeholder could reasonably expect to lose only a small fraction of his assets in a final loss allocation that rebalances the CCP. In our view, an equitable and limited loss allocation as part of the terms and conditions for participating in a CCP service does not violate property rights.

The G20's mandating of clearing via CCPs to achieve the well known and recognised public policy goals of reducing systemic risk (e.g. through multilateral netting and increasing transparency) will concentrate transactions in clearing houses. In the event of a threat to the stability of a CCP, we believe it follows that it will be less costly and more effective for sovereigns/central banks to intervene at a CCP level than at the participant level. We fully understand the current desire to avoid public support for an enterprise that privatises profits, but submit that this does not apply in this situation where usage is mandated by public authorities. We also recognise that it may be appropriate for the sovereign to engage with the CCP bilaterally to consider whether it should bear a cost for such support where it is a commercial enterprise.

### Part II - Criteria for a CCP resolution

Taking these considerations to their logical conclusion we believe that a good CCP resolution regime should satisfy the following criteria:

 $<sup>^{2}</sup>$  We exclude a fourth possibility from our considerations, which is to allow CCPs to raise margin levels by unlimited amounts, for the obvious reason that this would increase systemic instability. We are, however, concerned that this risk may not have been adequately addressed in the policy debate so far.

- CCPs are prevented from experiencing a disorderly default.
- As common and convergent an approach as possible is taken between CCPs on a global basis. The more that a consistent approach is adopted across CCPs and across jurisdictions, the better for all concerned and for financial stability. Accordingly, we welcome CPSS-IOSCO's work in this area and look forward to the forthcoming consultation paper on this subject.
- CCP insolvency and the associated market disruption and destruction of value that would be involved is avoided and the resolution regime places non-defaulting CMs and end-users in a better position, and, at a minimum, not an economically worse position, than they would have been had the CCP become insolvent.
- CCPs are allowed to fail and their owners and operators suffer the consequences of their actions.
- There should be enough time for a service evaluation phase when a CCP reaches a situation where its financial resources (CCP capital plus default waterfall) are insufficient to re-balance the CCP, during which either an orderly wind-down or a recapitalisation by a new group of owners can be organised.
- During the service evaluation phase, the CCP is able to perform its services as normal so that market participants can continue to manage the risk of their portfolio with the CCP.
- Re-capitalisation cannot occur before the CCP has been rebalanced.
- Re-capitalisation cannot be forced onto the private sector.

A loss allocation system:

- Provides participants with the most incentives to provide hedges to the CCP.
- Is clearly understood to be used only in cases where the default waterfall including recourse to the CCP dedicated capital has been exhausted and the CCP is faced with potential insolvency.
- Has a separate default waterfall for each product so that if the waterfall ceases then clearing other products can continue (this requires a CCP to have operating capital outside of each product waterfall to ensure the CCP does not become insolvent if one cleared product market dies).
- Is predictable and clear as to the conditions under which it would be triggered and how it would operate, including as to the nature of potential liabilities and in doing so, it does not increase systemic risk.

- Contains moral hazard mitigation against the CCP under-protecting cleared positions with either insufficient margins or waterfall protections because of the knowledge that it will be protected from insolvency.
- If a private sector solution is desired to rebalance the CCP, gives all stakeholders that bear losses from the rebalancing through loss allocation the opportunity to purchase new shares in order to re-capitalise the CCP.

## **Part III – Specific Proposals**

### Limited liability

To achieve limited liability it is necessary for CMs to have a fixed upper bound on the collateral that may be used to pay for the rebalancing of the CCP following one or more CM defaults. Note that this notion of limited liability is not the same as a general liability in that there are other losses that may be sustained by the surviving CMs as a consequence of the default. The distinguishing factor is that for general liabilities CMs should be able to manage the risk by making appropriate choices, such as decreasing positions, switching trades to another CCP or voluntary re-collateralisation of the CCP following exhaustion of the waterfall, whereas the guarantee fund is committed to the CCP and is at risk unless a CM withdraws.

#### Transparency and enforceability of the default management process

In order to ensure transparency the rules for the default management process and the utilisation of the waterfall needs to be very well specified and encoded into the rules of the CCP. The segregation or at least separation of the waterfall is also needed to ensure that there is clarity around the waterfall structure for each co-margined product so that the default management process can complete unhindered by the process for other products.

As noted above, the loss allocation falls on the CMs and clients down to the beneficial owner. A complication for the enforceability of this is that the CCP's primary legal relationship is with its members. Given this the CCP must ensure that the loss allocation is enforceable on its terms, it must ensure it can rely on a suitable legal mechanism. For example, a CCP could force the CMs to ensure it has the legal and operational capacity to impose it on all of their clients by making this a condition of being a CM.

### Waterfall segregation by product post defaulting CM's resources used-up

As above, we strongly support an orderly resolution but not at the expense of increasing the risk of contagion and proliferation of defaults. One means to effect this balance is to ensure that there is a well defined process for the dissolution of clearing a product on a given CCP. This can be effected by the use of contract tear up at the end of the waterfall. However, this must be done at a product level and not across all products on a given CCP because the reality of a large CCP having its contracts torn up is likely to cause an unnecessarily large market disruption and destruction of value. In this way, viz. by creating co-margined product segments that can be resolved individually we can ensure that the CCP continues to function and minimise systemic impact.

Although for economic reasons it makes sense to have a single CCP clearing a particular product, the counterbalance to this is the need to manage the risk against such a CCP

meaning that it is necessary to spread a particular product across CCPs.. There is also a trade-off to be made with the efforts of CCPs to offer cross-margining between different asset classes.

Cleared Product A	Cleared Product B
↓	•
CCP's 'First Loss' pool	CCP's 'First Loss' pool
•	•
Non- defaulting CMs' contributions to Default Fund and pre-defined assessments	Non- defaulting CMs' contributions to Default Fund and pre-defined assessments
↓	•
CCP's 'Second Loss' pool	CCP's 'Second Loss' pool
	↓
VM haircutting to pre-defined CM and client CCP	VM haircutting to pre-defined CM and client CCP
exposure cap	exposure cap
•	•
Tear-up contracts	Tear- up contracts
CCP Operational Capital	

Diagram 1: Structure of default waterfall resources post defaulting CM's resources used-up

It should be recognised that a CCP could raise another financing layer with convertible bonds, which would be converted if the CCP share capital is run down below some threshold. However, the issue still remains, when that is exhausted what is to happen. The main benefit is that further losses do not fall on CMs alone.

## Role of loss allocation in default waterfall

VM haircutting should take place from when the default waterfall has been exhausted until a competitive auction is completed for the defaulting participant(s)' portfolio. Those CMs not participating in the auction should be fined as "juniorising" their default fund contributions will have been not penal if we reach resolution stage. The CCP should always hit the best bid in an auction. Following the auction, residual losses can be covered afterwards by VM haircutting up to the pre-defined CM and client CCP exposure cap.

As a related aside, we do not consider Non-Competitive Allocation ("NCA") as an appropriate mechanism for rebalancing a CCP. This is because:

- NCA is not appropriate for OTC derivatives because there is no known market clearing price, in contrast to exchange-traded futures. Thus contracts are transferred at a value that does not reflect the hedging costs.
- NCA breaks the waterfall structure meaning that the incentives for the CCP to protect its own capital are greatly reduced.
- NCA increases systemic risk by increasing the likelihood of further CM defaults by passing an unquantifiable risk position to the CM. Note that a firms risk typically does not scale linearly which means that the increase in risk caused by NCA can be very significant.
- The effects of NCA being unquantifiable mean that firms cannot effectively plan their liquidity reserves.

### Variation margin haircutting

Variation margin haircutting is primarily designed to ensure that the CCP is less likely to become insolvent prior to reaching a critical part of the default management process, viz. the auction. Therefore variation margin provides the collateral necessary to maintain the payments out of the CCP until such time as the default management process can conclude and therefore the best chance afforded for an orderly solution. However, because VM haircutting is not a risk that can be managed by CMs or clients VM haircuts much be capped for each participant by an absolute amount to maintain limited liability. VM haircutting is only an extra last gasp of breath for the CCP.

The precise mechanics of VM haircutting may vary at each CCP. For example, one VM haircutting model might allocate losses in proportion to participants' in-the-money positions at the time of the relevant CM default while another model might allocate losses in proportion to participants' IM. Under the latter model, the loss is allocated in proportion to the risk a participant brings at a particular time, rather than by how much a participants positions are in the money at a particular time. The latter model has the advantage that loss-sharing arrangements are proportionate to the exposures brought to the CCP, which is consistent with CPSS-IOSCO Principles for Financial Market Infrastructure paragraph 3.3.6.

The key advantage of VM haircutting is that it provides participants with an incentive to provide hedges to the CCP. This is because in the case of a large CM default, other CMs acting rationally will try to flatten their exposure to the CCP, which in turn will assist the CCP to rebalance.

Another important advantage of VM haircutting is that it does not offend the segregation or bankruptcy remoteness concepts, which are embedded in many aspects of the new regulatory regimes. We do not support the use of collateral which is not within the waterfall structure. That is only the GF and perhaps capped variation margin haircuts of the non-defaulting CMs

should be used for risk mutualisation. In particular, the IM should be segregated and not available to CCP resources other than the IM of the defaulted CM.

Other advantages of VM haircutting are:

- This approach mirrors most closely the economic situation in CCP insolvency and is therefore the only alternative that satisfies that criterion noted above.
- VM payments are more manageable than IM and default fund contributions and provides an efficient mechanism of hedge provision to the CCP.
- This approach has been formally proposed by LCH.Clearnet S.A. for their contingency planning and adopted by the Tokyo Stock Exchange /Japan Securities Clearing Corporation for CDS clearing in Japan.

#### Moral hazard mitigation

Since the CCP avoids insolvency through the loss allocation a potential moral hazard arises in which the CCP under protects the cleared positions with either insufficient margins or default funds or other waterfall protections. This may arise particularly in the context of competition between CCPs to attract clients' business. To mitigate this troubling incentive, we propose that the CCP put significant portions of its capital at risk, both after the use of participant margin and before CM default funds, and after CM default funds, before loss allocation. This is set out in diagram 1 above. This capital at risk provides participants with further assurance of the sufficiency of both margin and waterfall protections.

Please contact the undersigned should you require further information.

Yours sincerely,

Em. Bly

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