An effective recovery and resolution regime for CCPs

Additional subjects to be considered

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1. Introduction

Background

This paper sets forth the views of the European Association of CCP Clearing Houses (EACH) on subjects which have been discussed recently within the industry and the regulatory community in the context of Recovery and Resolution of CCPs. This paper should be read in conjunction with the EACH paper '**An effective recovery and resolution regime for CCPs**'[1], issued in December 2014.

The role of CCPs

CCPs are financial market infrastructures that reduce and manage the counterparty risks in financial markets. CCPs operate a matched book and prevent the build-up of a network of exposures between market participants by ensuring that all clearing members meet their financial requirements, have robust risk management procedures in place and ensure they are adequately collateralised to manage current and future exposures between market participants. CCPs place themselves between the buyer and seller of an original trade and aim to ensure that if a counterparty to the trade fails, the other counterparty is protected by a prescribed default management procedure, allowing the market to continue to operate. European regulation requires that a CCP has enough resources to withstand at least the simultaneous default of its two largest clearing members. Furthermore, CCPs perform a risk management function through robust risk management tools, such as multilateral nettings, ex-ante collateralisation of market positions and a pre-agreed set of legal and operational rules in case of counterparty default.

The **CPMI-IOSCO Principles for Financial Market Infrastructures (PFMIs)**[2] set global standards for CCPs. In addition, all CCPs authorised to operate in Europe must comply with stringent requirements set out in the **EMIR regulation**. This regulation sets minimum standards regarding the governance arrangements of CCPs, the way they conduct business, the capital they must hold and their risk management framework.

Recovery and Resolution of CCPs

Recovery must be considered in the context of the **CCP's risk management framework**, as it entails a set of measures undertaken by the CCPs themselves to restore their viability in the event of adverse developments. Resolution requires authorities to have plans to restructure a CCP in order to ensure the continuity of its essential functions and preserve financial stability. It is important to understand that the **circumstances that would lead to recovery and resolution are extremely remote**, far worse than those experienced at the height of the financial crisis in 2008.

[1] http://www.eachccp.eu/SiteAssets/141217%20-%20EACH%20paper%20-%20An%20effective%20Recovery%20and%20Resolution%20Regime%20for%20CCPs%20-%20Dec14.pdf
[2] CPMI IOSCO report (April 2012) https://www.bis.org/cpmi/publ/d101a.pdf

These events **would not have happened in a vacuum**, as CCPs would have executed risk management strategies to minimise the impact of losses arising from the default of one or more members or from events other than a member default.

During the 2008 Financial Crisis, the losses related to the **default of Lehman Brothers** were covered by using part of the first line of defence in the default waterfall of the CCP it was a member of (i.e. Lehman's own contribution in the form of Variation Margin and Initial Margin). The contributions of the CCP and the Non-Defaulting Clearing Members were not exposed to losses and additional lines of defence were not required, demonstrating the conservativeness of (even pre-EMIR) margin requirements.

The sections below discuss the following subjects that have been raised recently within the industry and the regulatory community in the context of Recovery and Resolution of CCPs:

- Total loss-absorbing capacity
- Additional pre-funded funds
- Initial margin haircutting
- Early intervention and triggers
- Resolution authority

2. Total loss-absorbing capacity

Key Messages

- **CCPs already have a total loss-absorbing capacity** in place, tailored to the clearing environment: the default waterfall.
- The total loss-absorbing capacity (TLAC) and minimum requirement for own funds and eligible liabilities (MREL) are **proposals related to the resolution of banks which cannot be 'copy/pasted' to CCPs**.
- **CCPs are not banks**. Applying the banking concepts of TLAC or MREL to CCPs would **change the incentive structure** of the loss allocation arrangements of a CCP.
- CCP capital structures typically **do not include debt**. Obliging CCPs to issue bail-in-able debt is a disruptive idea as it could fundamentally change the positive risk management features which have made CCPs so stable, make the CCP a leveraged institution and increase the cost of clearing.

2.1. CCPs are not banks

CCPs play a very different role from banks. The application of tools in resolution of a bank is therefore inappropriate in resolution of a CCP. The differences between CCPs and banks range from their business objectives, the balance sheet, the way they perform risk management through to their supervisory architecture. Table 1 below summarises the key differences between banks and CCPs.

Table 1 - Key differences between a CCP and a bank

Issue	CCPs	Banks
Business objective	Counterparty risk mitigation between trading participants. The vast majority of the capital for this risk mitigation comes from the trading participants themselves.	Various businesses related to risk taking include: fractional reserve banking, investing on own account, investing on the account of its clients, securitisation, provision of loans, maturity transformation.
Credit and market risk coverage	CCPs assume a probability of default of 100% for all of their members. CCPs charge the full market risk they would be exposed to if a member did default. Under EMIR, this market risk is covered by each member's margin to at least 99% or 99.5% confidence level, depending on the product type. Further market risk is covered through the CCP's own	Banks typically consider counterparty credit risk with probabilities of far less than 100%, or only considered as credit or funding value adjustments (XVAs) for derivative positions. Therefore, they expect and predict losses, using a risk vs. reward mentality. The approach of the banks therefore is based on the principle that the higher the risk involved, the more capital banks will need to raise to cover that risk.

	contribution and the default fund mutualised across members.	
Risk management	Conservative risk management, as demonstrated during the recent financial crisis, resulting in no CCP's failure. CCPs mutualise amongst market participants and CCPs do not trade in their own name.	Risk management models were challenged during the recent financial crisis. This introduced significant model risk from banks using standardised models. Banks operate individual risk management of their exposures. Banks actively trade for their clients, as well as in their own name.
Transparent lines of defence	Clear and transparent structure which includes resources from members and also a contribution from the CCP. Default Management • Margins and add-ons (monitored, adjusted and settled on a daily basis) • CCP skin in the game • Mutualised default funds Recovery • Assessments • Loss allocation arrangements (e.g. VMGH) • Service closure (temporary or permanent)	Several measures available while others are still to be implemented (TLAC/MREL; bilateral margin requirements).
Collateral	Under EMIR, CCPs can only take high quality and highly liquid instruments as collateral. CCPs provide capital efficiencies through multilateral netting.	Lower quality collateral with some illiquid instruments. Decentralised nature of counterparty exposures does not provide capital efficiencies.
Process in case of default	CCPs use a default management process (DMP) via the waterfall to ensure clients are ported and gains/losses are paid immediately. CCPs have a structured and transparent DMP.	Process of recovering funds is often lengthy. Depending on counterparty, banks typically deal with a case-by-case application of close out netting and individual trading over time.

2.2. Loss-absorbing capacity

As stated in the previous section, CCPs are very different from banks. During the recent financial crisis there were no failures of CCPs[3], whereas banks required a bail out using taxpayer funds. According to the PFMIs, CCPs collect margins from their members to cover their exposure and, if they are systemically important, maintain financial resources sufficient to cover the default of the two clearing members which would pose the highest credit risk to their clients and the CCP under extreme but plausible market conditions. The total loss-absorbing capacity (TLAC) and minimum requirement for own funds and eligible liabilities (MREL) or any similar concepts are designed to provide banking resolution authorities with funds to stabilise banks during resolution. This approach is not appropriate for CCPs (including those with a banking license), as recognised in a public speech by Benoît Cœuré, Member of the Executive Board of the ECB[4].

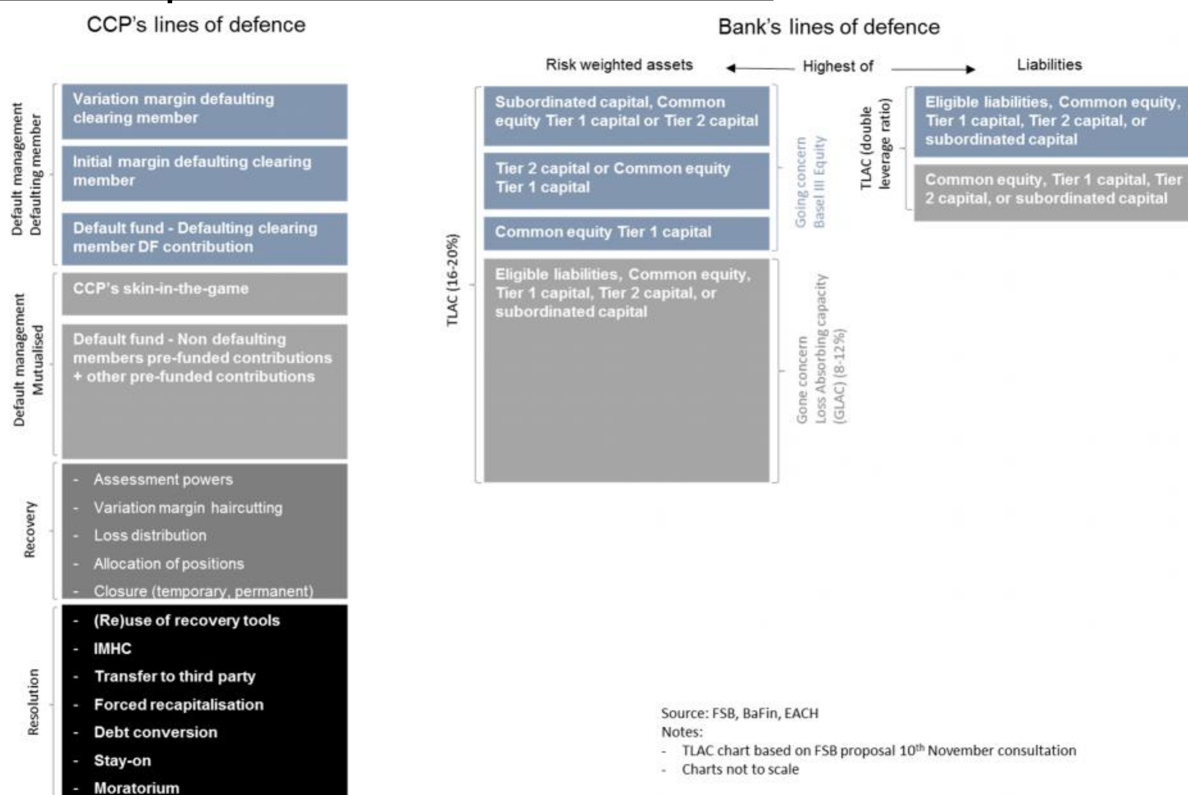
CCPs are risk managers that mutualise risk across their membership and have their own loss absorbing capacity: **the default waterfall**. A CCP's default waterfall comprises a set of pre-funded lines of defence to be used in the event of a member default. As shown in Figure 1 these lines of defence are: resources of the defaulting member (variation margin, initial margin, contribution of the defaulting member to the mutualised default fund), CCP's skin in the game, contribution of non-defaulting members to the mutualised default fund.

The default waterfall not only provides a substantial buffer of collateral to cover counterparty credit risk, but also ensures that the participants in the system have appropriate incentives to support an orderly default management process, as their default fund contribution is at risk.

[3] The last CCP failure in Europe dates back to 1974 and involved the Caisse de Liquidation (Norman, P. 2011).

[4] Federal Reserve Bank of Chicago 2015 Symposium on Central Clearing, Chicago, 10 April 2015 https://www.ecb.europa.eu/press/key/date/2015/html/sp150411.en.html

Figure 1 – Comparison of CCP's and Bank's lines of defence



Note: The Recovery and Resolution tools shown in Figure 1 are taken from the CPMI-IOSCO and FSB reports respectively. However, in practice the recovery tools may vary by CCP depending on the specificities of the products and markets served and the resolution tools may vary by jurisdiction.

The default waterfall structure described above provides CCPs, clearing members, clients and the market as a whole with a transparent, efficient and sound clearing infrastructure.

CCPs should be incentivised to provide prudent risk management to market participants and set the right incentives for clearing members to actively participate in the default management process following a member default. A resolution regime which makes use of a TLAC-style tool does not fit within this framework as it could **undermine the effectiveness of the robust lines of defence and risk mutualisation structure** of the CCP. Furthermore, we believe that regulators should, to the extent possible, promote the continuity of the clearing services by virtue of the CCPs' own contingency measures (recovery plans). In order to ensure an adequate risk management process in case of default of a clearing member, CCPs should be allowed to perform their default management scheme and eventual recovery regime.

2.3. The particular case of bail-in-able debt

EACH believes that requiring CCPs to issue bail-in-able debt would be disruptive as it could fundamentally **change the positive risk management features** which have made CCPs so stable.

CCPs do not typically issue debt, and doing so would make them leveraged institutions. Beyond this, the following issues are identified:

1. **Decrease of incentives for adequate risk management** - It would force the CCP to increase the size of the default waterfall with its own capital. The costs of clearing would therefore increase while the **CCP would underwrite a greater portion of the risk, and substantially reduce any member or participants' incentives** to support the CCP beyond the point when this capital is used. As such, it would make the CCP similar to an insurance company for the part of the tail-risk of its members' portfolios and trades that this capital is guaranteeing. This would create strong pressures for CCPs to have smaller member-backed default funds.

2. **Alteration of loss-bearing** – The issuance of bail-in-able debt by a CCP would be an attempt to obtain a liability reduction at the expense of debt holders. The buyers of the debt would be exposed to the resolution of a CCP. If the buyers of the debt were not members of the CCP, the losses would be transmitted to participants outside the CCP and its participants. This would lead to negative contagion in the sense of not supporting the risk management standards, the default management, and the recovery plan of the CCP. If on the other hand the buyers were the members of the CCP, then this would simply mean an extension of the waterfall, although the CCP would bear the running costs of the debt issuance.

3. **Unlevelled playing field with other jurisdictions** – The issuance of bail-in-able debt by CCPs would create an additional cost that would result in a competitive disadvantage for those CCPs in the jurisdictions where the issuance of bail-in-able debt would be applied. Clearing members might therefore decide to move to CCPs in jurisdictions where such tools are not applied. It is not in the interest of financial stability that market participants move to CCPs where they are less exposed to recovery and resolution costs.

3. Additional pre-funded resources

Key messages

- In line with EMIR, CCPs currently have **sufficient pre-funded resources** to ensure that the participants in the system have incentives and disincentives which support an orderly default management.
- Separate pre-funded resources **could break the incentive structure of CCPs** and **discourage risk management** through CCP clearing. Having separate additional resources, which are provided by the State or giving further benefits (e.g. ownership of the CCP) would be **problematic. This is due to the fact that it does not provide incentives for members to ensure the success of the default management process and the recovery phase, and creates moral hazard which could lead to premature resolution of the CCP.**
- A **single resolution fund at EU level should not be applied to CCPs.** A cross-CCP fund makes it difficult for each CCP to manage their own default management process and recovery regime. **The concept of mutualisation of losses is already central to the risk management framework of CCPs through their default fund.**

Available pre-funded resources at CCPs

CCPs are by design a risk management and mutualisation system. The CCP's waterfall comprises of a set of pre-funded resources designed to provide a substantial buffer of collateral to cover counterparty credit risk as well as to ensure that the participants in the system have incentives to support an orderly default management process.

As stated above, **the prefunded resources of CCPs** include variation margin, initial margin, the contribution of the defaulting member to the mutualised default fund, the CCP's skin in the game and the contribution of non-defaulting members to the mutualised default fund. In line with the EMIR, the latter two should be sufficient to deal with the extreme scenario of a default of the two largest clearing members.

One of the reasons why CCPs have been so stable even during extreme market moves is this incentive/disincentive structure, and **it is critical that the recovery and resolution framework does not diminish but rather increase the market discipline** that central risk management creates.

Having separate resources, which are provided by the State or give further benefits (e.g. ownership of the CCP) would be **problematic because it does not provide incentives for members to ensure the success of the default management process and recovery phase.**

How a Single resolution fund changes the incentive structure of the CCP

A single resolution fund to be shared amongst all CCPs, similar to that developed for some EU banks, is not adequate for CCPs. **The concept of mutualisation of losses embedded in a single resolution fund is already central to the risk management framework of CCPs** through their default fund. The default fund acts as a mechanism for the mutualisation of the losses that arise from the management of a member default.

For CCPs and their resolution authorities to be able to manage the incentives and allocation of losses, having a separate cross-CCP fund creates **confusion, complexity, and higher costs of clearing**. A single resolution fund for CCPs could **decrease the incentives for CCPs to develop and maintain adequate risk management procedures**. A single resolution fund for CCPs could reduce the focus on the default management process, which is at the core of the CCPs' role in the financial system. Creating a single resolution fund across CCPs could potentially increase confusion and dilute such incentives. This is a crucial feature to be considered in the context of resolution funds for CCPs, in addition to the costs for market participants associated with raising such funds.

How a Recapitalisation fund changes the incentive structure of the CCP

The idea of an **additional recapitalisation fund** for CCPs has also been put forward by certain parts of the industry.

This proposal simply consists of **a new default fund that comes with a change of control of the CCP**. This would **radically change the members' incentives**, since they can "buy" the CCP if the original default fund is exhausted. It does not provide the right incentives to ensure a successful recovery process, and creates moral hazard which could lead to premature resolution of the CCP. This is contrary to the general financial stability considerations. Such incentive could lead to a less well-functioning default management process which could lead to increased financial instability during a period of high market stress.

A recapitalisation fund would result in increased opportunity costs as it would require substantial additional resources to be prefunded, for an event that is extremely remote. We believe it is more valuable for funds to reside within, rather than outside of, the default waterfall.

4. Initial margin haircutting

Key messages

- **Initial margins of non-defaulting members are protected under EMIR and should not be used either in the course of a default management process or during recovery.** Initial Margin haircutting would undermine the concept of 'bankruptcy remoteness' which clearing members rely on, thereby acting as a disincentive to central clearing.
- **Resolution authorities may reserve the right to apply Initial margin haircutting** during resolution under strict conditions and taking into account the impact on the continuity of the CCP, in line with the proposals of the Financial Stability Board (FSB).

What is initial margin?

Initial margin represents the first line of defence in the CCP's default waterfall. Each member of the CCP posts initial margin in the form of securities or cash collateral in order to cover its individual potential future losses on open positions. Such collateral is calculated to a confidence level that is sufficient to limit the risk that each member may bring into the CCP.

Initial margins of non-defaulting members are **protected under EMIR** in case a member defaults and should not be used either in the course of a default management process or during recovery.

EACH believes that **EMIR adequately sets the minimum standards for calculating initial margin**. Notwithstanding this, the mutualisation in the default fund creates market discipline for non-defaulting members as they are incentivised to support the CCP in its efforts to re-establish a matched book following the default of a member and ensure robust risk management practices.

What are the consequences of applying initial margin haircutting?

The purpose of initial margin is to cover the potential future exposure of a clearing member in relation to its own portfolio. Initial Margin haircutting would therefore undermine the concept of 'bankruptcy remoteness' which clearing members rely on, thereby acting as a disincentive to central clearing.

It could create an incentive for members to promote (e.g. via the CCP's risk committee) lower initial margin requirements in order to cap their exposure towards the CCP in the event IM haircutting is applied. Also, the possibility of initial margin haircutting incentivises members to reduce their positions at a CCP.

The Financial Stability Board (FSB) proposes strict conditions for the use of initial margin haircutting as a resolution tool, and generally restricts its use to situations where the initial margin is not remote from the insolvency of the CCP (i.e. when it is posted in the form of cash)

and where consistent with the legal framework and the rules of the CCP. It should be noted that in traditional insolvency, cash collateral forms part of the estate of insolvency.

Initial margin haircutting leaves the positions of the affected non-defaulting clearing members uncovered. Thus, **initial margin haircutting would have to be applied with a requirement to reduce the open positions of surviving clearing members**, where possible (i.e. partial/full tear up of contracts); otherwise, these **clearing members would be required to top up the margin requirements,** which may be challenging at a time of high market stress. Importantly, given this tool would be applied to the cash portion of the margin, which is not bankruptcy remote, clearing members would highly likely stop posting cash and have all or most of their initial margin as non-cash collateral. This would have consequences for the CCP's liquidity management, and potentially make clearing more expensive. Furthermore initial margin that is not bankruptcy remote may attract a capital charge under prevailing capital rules.

However we appreciate that, as recognised in the FSB Key Attributes, a resolution authority can reserve the right to haircut initial margin when a CCP is in resolution, as it serves as a substantial resource to cover losses.

Finally, we recommend that **any approach to initial margin haircutting, as other tools and rules on CCP recovery and resolution, must be agreed internationally**. Any difference at national level, for instance in the degree to which initial margin may be protected in a resolution situation, may result in a competitive disadvantage for some jurisdictions versus others. Effectively, clearing members may choose to switch their clearing activities to CCPs in jurisdictions which offer more protection of margins.

5. Early intervention

Key messages

- **Regulators already have comprehensive supervisory powers over CCPs, therefore we do not see the rationale for 'early intervention measures'.**
- We believe **CCPs should be allowed to execute fully their default management** process and/or the recovery plan set out in their rules before 'intervention' takes place.

EACH believes that authorities already have the power to intervene at any point. However, **CCPs should be allowed to perform their default management process and exhaust their recovery tools** to the extent possible before the authorities intervene. CCPs would keep authorities informed throughout this process.

In particular, it is crucial **to understand that early intervention can be disadvantageous to the authorities. It should be a primary objective of the legislation to maximise the likelihood that a private sector recovery arrangement is found**. An early intervention by a resolution authority is very likely to shift responsibility to the public sector going against the G20 mandate. 'Early intervention' could be disruptive to financial stability. It does not introduce the right incentives to ensure a successful recovery of the CCP, creates moral hazard which could lead to premature resolution of the CCP and greatly weakens its ability to conduct orderly loss allocation tool in full.

6. Resolution authority

Key messages

- Resolution should be **led by the resolution authority of the jurisdiction in which the competent authority of the CCP is established**. Other authorities that have a legitimate interest in the resolution of a CCP may be consulted.
- EACH supports the establishment of **Crisis Management Groups** for cross-border CCPs. The ultimate decision making should however reside with the resolution authority of the jurisdiction in which the CCP is established.
- The resolution authority should have a **knowledge of the day-to-day operations of a CCP**. Without this expertise there could be an increase in contagion and market instability.
- EACH believes that a **CCP should only be put in resolution once the CCP's recovery process is exhausted or it is clear that it will be insufficient** to restore the CCP's viability.

Resolution authority and crisis management groups

We strongly believe that the resolution of a CCP is most likely to be effective if it is being led by the resolution authority of the jurisdiction in which the competent authority of the CCP is established. EACH believes that the closer the resolution authority is to the CCP, the better they will understand its business and the relevant recovery and resolution tools. If the resolution authority is not the supervising authority, they must work closely together to manage any unintended consequences to financial stability.

We also believe that the efficient resolution of a cross-border CCP will be facilitated if the relevant jurisdictions have taken a consistent approach to CCPs' recovery and resolution regimes. In addition, the lead resolution authority should cooperate closely with the resolution authorities of the other jurisdictions that have a legitimate interest in the resolution of the CCP. Such cooperation will allow the relevant authorities to consider the impact of resolution, including early intervention, on the participants of the CCPs. We therefore support the establishment of Crisis Management Groups, described in the FSB report, as they will facilitate dialogue and discussion between the relevant supervisors, resolution authorities, central banks and other public authorities. We would however highlight that the ultimate decision making should reside with the resolution authority of the jurisdiction in which the CCP is established.

Resolution triggers

EACH believes that a **CCP should only be put in resolution once the CCP's recovery process is exhausted or it is clear that it will be insufficient** to restore the CCP's viability. This is reflected in the FSB's guidelines on resolution which prescribe that resolution is triggered when 'the recovery tools failed to return the FMI to viability, have not been implemented in a timely

manner, or relevant authorities determine that recovery measures are not likely to return the FMI to viability'[5]

Defining triggers for regulatory authorities to intervene is challenging given the above concerns about 'early intervention'. EACH however believes that the two indicators that are likely to suggest the need for regulatory intervention are:

1. The CCP itself contacting the authorities; and
2. The exhaustion of the financial resources available for default management and recovery.

As mentioned above however, regulators already have comprehensive supervisory powers over CCPs, and we therefore do not see the rationale for 'early intervention measures'.

[5] http://www.financialstabilityboard.org/wp-content/uploads/r_141015.pdf

7. Closing remark

EACH hopes that the paper will be considered by regulators and policy makers as a constructive contribution to the ongoing debate on Recovery and Resolution of CCPs and stands ready to discuss it in further detail, to help inform any upcoming EU legislative proposals.

This paper should be read in conjunction with the EACH paper '**An effective recovery and resolution regime for CCPs**'[6], issued in December 2014.

[6] http://www.eachccp.eu/SiteAssets/141217%20-%20EACH%20paper%20-%20An%20effective%20Recovery%20and%20Resolution%20Regime%20for%20CCPs%20-%20Dec14.pdf