

Whitepaper series “Incentives to Clear” Architecture of Clearing

The whitepaper series

This whitepaper is part of a series of papers developed by ISDA members to complement the work of the FSB Derivatives Assessment Team and their post-implementation evaluation of the effects of the G20 financial regulatory reforms¹.

Summary and Introduction

Global frictionless markets are most efficient in promoting growth in the real economy by providing the ability to borrow, invest and hedge at the fairest possible prices. Any arbitrary and mandated fragmentation of these markets, or indeed of the infrastructure that supports these markets (i.e. Trading Venues, CCPs etc) may lead to consequences such as distortion and inefficiency which, in turn, can burden economies with additional costs.

In this paper, we will look at the role clearing and the architecture of the global clearing market play in supporting frictionless trading. Future regulation of CCPs should account for the dynamics that will allow for the most efficient clearing market for all asset classes worldwide, and regulators should be aware of potential negative consequences of regulation.

ISDA supports competition amongst CCPs and all market landscapes that emerge in a fair and competitive market. Based on experience to date, ISDA believes that the competition among CCPs and potential CCPs has been fierce.

Theoretical Extreme Cases

As a thought experiment (and not a representation of ISDA’s views or recommendations), there are two extreme approaches to organizing clearing. Neither of these scenarios would be desirable for the reasons discussed below (and others).

- 1) There could be a single CCP that clears all products globally. This CCP could benefit from many network effects:
 - Netting benefits could be utilised where there are correlations between products, allowing the most efficient levels of initial margin (“IM”) possible to be achieved.

¹ <http://www.fsb.org/2018/08/fsb-and-standard-setting-bodies-consult-on-effects-of-reforms-on-incentives-to-centrally-clear-over-the-counter-derivatives/>

DISCLAIMER: The purpose of this document is to analyze the potential impact of regulation on incentives and impediments to clearing. The report will consider these topics from an industry-wide perspective, and will not discuss specific firms, positions or plans.

- Cleared portfolios of participants would not be fragmented, allowing maximum multilateral netting. This would not only affect IM (see above), but also capital requirements and Variation Margin (“VM”) payments, reducing liquidity requirements.
- The cost of setting up the risk management framework and other fixed costs of operation could be distributed across many transactions, keeping clearing fees low.
- Participants could connect to only one CCP, increasing efficiency.

Such a CCP could also confront challenges as the sole provider of a service:

- The CCP would have limited external pressure to keep operations efficient and prices low. It is likely that such a CCP could only credibly be run as a public utility, or be heavily regulated.
- Even if the CCP is run as a public utility, without competition from other CCPs there would be limited incentive for the CCP to continue to innovate and deliver the most efficient platform.
- There would be limited incentive for the CCP to go beyond the minimum regulatory requirements, for instance in relation to the size of own funds that the CCP exposes in the default management waterfall (“skin-in-the-game”, or SITG).
- Such a CCP could form the ultimate single point of failure in the market. It would likely too big to be bailed out by its users, increasing the likelihood of public support in a crisis.
- Such a CCP would require close cooperation by global supervisors.

2) Alternatively, the global market could be served by a very large number of CCPs, for instance many CCPs per country, plus CCPs with global reach, or CCPs specialising on certain products. This would result in an inverted image compared to the example above:

- There would be strong competition between the CCPs. The CCPs would not be incentivized to extract an outsized rent from clearing and all CCPs would face pressure to innovate constantly.
- Competition between CCPs would allow market forces to discover the best balance of risk allocation, for instance in terms of the economic commitment in terms of capital a CCP has provided to its clearing business including SITG and recovery tools. For example, in such an environment CCPs could not afford to decline discussions about compensation claims for the use of recovery tools, as is happening in practice today.
- Failure of any one of the CCPs would not, in and of itself, be a systemic event. That said however, it would not be a given that issues in these CCPs are independent given that major firms are likely to be members of most if not all of them. In case of a large market crisis many CCPs might well fail simultaneously.

The fragmentation of clearing between a very large number of CCPs would make clearing very costly, both in terms of margin (fewer netting opportunities when calculating initial margin) and clearing fees, as the fixed cost of implementing an appropriate risk management framework is similar between CCPs, and broadly independent of volumes cleared. As it is unlikely that each of these CCPs serve an identical mix of clearing participants, it is also likely for bases (price differences) between CCPs to emerge. The ability for market participants to divide up large positions across multiple CCPs would lead to concentrations of risk to be masked.

Neither of these extreme scenarios maximizes efficiencies or best serves all market participants.

Current market landscape

The global OTC derivatives clearing market presently sits somewhere between the two extreme positions described above: there is strong competition among CCPs but also significant efficiencies and cost-reductions given the relatively limited number of CCPs in each asset class.

Product / Asset Class	CCPs
IRS	SwapClear, CME, Eurex, regional CCPs
CDS	ICE (US and EU), CDSClear (LCH SA)
FX	ForexClear, CME, Eurex, HKEx

Correlation and netting opportunities between asset classes are a second order consideration compared to those within an asset class. The current global clearing landscape allows crystallising a significant majority of theoretical netting opportunities. There is competition among each asset class. The large clearing members have memberships to many CCPs and will clear where it is most efficient for them. An example of competition allowing for expansion is LCH SA's growing business in CDS clearing. For smaller clearing members, it is more efficient for them to belong to a single CCP, but it is feasible to switch between CCPs.

Overall, the current landscape allows for economies of scale and network effects, but also appears to minimize the downside risks of a single CCP through vibrant competition among CCPs that drives innovation in risk management and efficiency.

Regulation and Supervisory Cooperation

This report focuses on market landscape, and does not cover in depth topics such as supervision of CCPs. ISDA generally supports CCP supervisory cooperation².

Despite strong competition, it is important to have a strict regulatory framework that also manages the conflict of interest between participants, and between participants and the CCP, for instance when setting the size of SITG or implementing recovery tools.

We would like to address some key issues in detail below.

CCP crisis and tail risk

Well-known globally active CCPs warehouse a large part of the risk in an asset class on their books. They also have a large global membership, providing sizeable default resources. The network effects that enables efficient netting between transactions gives the CCP ability to design a very conservative risk management framework.

The failure of such a CCP would be a catastrophe and the CCPs are therefore systemically important. Both the clearing participants, especially clearing members and supervisors, will closely monitor the resiliency of the CCP and make sure a robust risk management framework and an effective default

² For more details please see the whitepaper "The Case for CCP Supervisory Cooperation" at <https://www.isda.org/2018/04/18/the-case-for-ccp-supervisory-cooperation/>

management process are in place, including recovery and resolution plans to deal with unforeseen events.

Other than efficiencies that can compensate for increased cost for resiliency, for instance by very conservatively sized initial margin and default funds, such a CCP has the ability to observe a significant portion of the global market in their asset class. This enables the CCP to identify concentrations that might be missed if these concentrated portfolios were distributed across several CCPs. With this knowledge, the CCP can act accordingly, for instance by margin add-ons and Default Management Process (“DMP”) auction design.

Diversification

An advantage of many competing CCPs would be better diversification: not all of these CCPs would fail at the same time, and the cost of each failure would be smaller.

This assumption however ignores that many smaller CCPs will share many of the same clearing members: the global firms that aim to provide their clients with access to all relevant market infrastructure globally. Those are also the clearing members whose failure would be most difficult to manage for a CCP, especially if this CCP is competing for hedges and auction bids with other CCPs that had to invoke their default management plan at the same time.

CCPs are therefore very likely to be tightly correlated with each other, meaning that the benefits of diversification might be less relevant in a situation of market stress and defaults of large clearing members.

Each CCP and its supervisor would be less able to identify and measure concentration that could be introduced by clearing participants, and would not be able to as effectively size a margin add-on to mitigate this risk.

The more CCPs that clear a product in a market, the less netting opportunities and the sum of the margin across these CCPs would be higher than in the case of fewer CCPs. More margin being collected could partially compensate for the issue that concentration could be missed if the portfolios are split between several CCPs.

Furthermore, in a business-as-usual context, differences in trade prices between CCPs (“Price Basis”) emerge which can have unpredictable consequences on market activity.

Also, for some operational risks (i.e. cyber attacks, IT issues, and others) there could be diversification effects if clearing was spread across more CCPs.

Role of regional and local CCPs

As stated above, numerous CCPs are important to maintain competition that serves all market participants. Smaller CCPs play a role servicing smaller participants that are not comfortable with accessing foreign CCPs, or are too small to become members in a large, global CCP. Regional CCPs might also be able to clear regional products, or utilise regional infrastructure that enables it to clear products other CCPs would not be able to, for example HKEx’s clearing of cross-currency swap by utilising HKMA’s PvP infrastructure. Being located in the same time zone as their customers can also be an advantage of such a regional CCP.

Exchange traded derivatives CCPs

The main CCPs clearing exchange traded derivatives are often more locally focussed. This can be because those CCPs clear mostly regional products. However, exchange traded derivatives CCPs could utilise economies of scale, so that CCPs converge towards the CCP market landscape of OTC derivatives CCPs.

Conclusion

Splitting large CCPs into a number of smaller, more localised CCPs is not without risk. A global market supported by a number of smaller CCPs has challenges of its own, not least that the major global dealers are likely to be members of most if not all of these CCPs giving rise, in turn, to a highly correlated default environment. Running multiple parallel Default Management Processes across many CCPs presents considerable difficulties and there is a risk that hidden concentrations of exposures suddenly become apparent for the first time in the midst of such a process.

A solution has naturally evolved that balances the efficiencies of a single CCP model with the benefits provided by competition, providing benefits to market participants. Regulators should consider how changes could unintentionally impact this balance.