Paul Tucker: Clearing houses as system risk managers

Speech given by Mr Paul Tucker, Deputy Governor for Financial Stability at the Bank of England, at the Depository Trust & Clearing Corporation (DTCC)-Centre for the Study of Financial Innovation (CSFI) Post Trade Fellowship Launch, London, 1 June 2011.

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It is a real pleasure to be here this evening. The new "Post-Trade Fellowship" is an excellent idea, and I am delighted Peter Norman is the first incumbent. Like CSFI, Peter has made a very considerable contribution to thinking about the financial system – and no more so than in his latest book, The Risk Controllers. There is hardly a more important topic right now. The community has rediscovered the importance of the financial system's plumbing. Your new Fellowship will help to sustain that interest as the years pass. And that is of special interest to the Bank of England given the government's plan to transfer to us responsibility for supervising critical financial infrastructure – settlement systems and clearing houses.

CCPs and the financial network

Right now, the biggest "plumbing" issues follow from the decision of the G20 that more of the over-the-counter derivatives market should be cleared via central counterparties.

But this is not just about derivatives markets. Compared to their origins in clearing commodity futures and then exchange-traded financial derivatives, CCPs have increasingly been clearing ***cash*** instruments – notably equities and, in recent years, government bond repos. In London, LCH's move to clear repos in Spanish government bonds helped that market stay open during some dark days last year.

Why are CCPs important? There has been a resumption of interest in the network characteristics of the financial system. CCPs simplify the complex web of counterparty exposures through multilateral netting – precisely what the US authorities contemplated trying to achieve ad hoc towards the end of a weekend when Lehman was slipping away. But they do ***more*** than facilitate multilateral netting. They substitute themselves as the counterparty to the trades they clear – hence a ***central*** counterparty.

This makes them unusual financial institutions, because they run a completely matched book, and so ordinarily are not exposed to market risk in their core activity. They ***are*** exposed in a big way to counterparty credit risk. If a counterparty defaults, they have uncovered market risk positions, and need to enter the market to get back to square. Everything important about a CCP concerns how they manage those risks. In essence, having centralised risk upon themselves, they redistribute it to their clearing members. They do that through a waterfall under which, in the event of a counterparty defaulting, the CCP can draw on, first, the margin pledged by the firm, then its contribution to the default fund, then the rest of the default fund etc.

CCPs as risk managers

Given that CCPs centralise and concentrate risk, their job is ***not*** just to deliver ever greater operational and capital efficiency for their clearing members. It is not just about IT. It is about making it less likely that their clearing members will default on their obligations to the clearing house; containing the spillovers from any failure of clearing members; and, above all, ensuring their own financial integrity. They are de facto regulators and supervisors for the markets they clear; and risk managers of their own balance sheet. In protecting themselves, they impose some financial discipline on their clearing members. They do this through financial soundness and operational-capacity requirements for access; initial and variation

margining; and levying contributions to a default fund. And they act as a central market authority for valuing positions and setting minimum margin levels.

To deliver those quasi regulatory and supervisory responsibilities, CCPs need to adopt prudent collateral policies; but also to monitor the robustness of their clearing members and risks from the business that they are bringing to the CCP. Amongst other things, that means collecting and analysing information from clearing members on large positions taken by their customers. I am not convinced that that is sufficiently recognised by clearing houses or by standard setters.

CCPs are, in truth, ***system risk managers***. They absolutely must think of themselves as that, and organise themselves accordingly.

Margining and systemic risk

The margining policy of CCPs matters enormously to the stability of the system.

CCPs should take care to avoid having margining policies that are unnecessarily procyclical – chasing after events and amplifying market moves. At the other end of the spectrum, there is an important question of whether the macroprudential authorities should be able to require changes in initial margin levels in the face of market exuberance. In the UK, there will be a debate about whether the Bank of England's Financial Policy Committee should have that power. The Basel Committee of the Global Financial System has already produced a report on it.[1]

In a different dimension, there is an important question about whether clearing houses should adopt what is called Gross Margining rather than Net Margining. What this means is that a clearing member – ie a dealer – could not net off positions of their various customers and their own house position when the amount of margin they have to hold with the clearing house is determined. That would affect the incentives of clearing members to collect minimum margin amounts from their customers. And, more generally, it would probably reduce the amount of leverage in the system and simplify the chain of credit. In terms of public policy objectives, this is, therefore, about more than investor protection through the segregation of client moneys, and so needs to be debated against the goal of preserving stability without impairing efficiency.

The resolution of CCPs

If CCPs can do a lot of good by simplifying the network of counterparty exposures and imposing standard valuations and margin requirements, conversely it is an understatement that it would be a disaster if a clearing house failed. Commentators have, indeed, been emphasising that CCPs are ***becoming*** systemic. To my own way of thinking, they have already been systemic for the markets they clear for a very long time.

Three clearing houses have failed in recent decades. In 1974, the Caisse de Liquidation failed in Paris, due to default on margin calls when sugar-futures prices fell sharply. In 1983, it was the turn of the Kuala Lumpur Commodities Clearing House, when half a dozen large brokers defaulted following a crash in palm-oil futures. And, most dramatically, the Hong Kong Futures Exchange clearing house failed in the wake of the global stock market crash in 1987. The effects were devastating. The Futures Exchange had to close. Traders had hedged margin-financed cash equity positions in the futures market. They faced margin calls on their cash positions but, with the futures market closed and the clearing house bust, they

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[1] "The role of margin requirements and haircuts in procyclicality", Committee on the Global Financial System, March 2010.

could not get margin moneys returned on their profitable futures positions. For that and other reasons, the stock market closed too. The upshot was that Hong Kong's main capital market shut down. Reopening the market was no small feat. World markets had fallen further in the meantime, so there was a risk that a modestly "recapitalised" Clearing House would go broke again if positions had to be marked down immediately. In the event, the Hong Kong Government and the clearing banks underpinned the Clearing House.

This episode warrants more study than it has received. Had it been London, Chicago or New York, it would have entered the folklore of policy memory.

As with banks, public policy has to have two components. First, minimum standards to ensure that CCPs do not fail. IOSCO/CPSS are currently consulting on updated standards. (My earlier remarks go to that.) But second, a clear ex ante framework is needed for limiting disorder if, nevertheless, a CCP does in fact fail.

I shall therefore close with a few preliminary thoughts on frameworks for handling the failure of a CCP. As with any business activity, if an institution is insolvent or otherwise cannot pay its debts, it has to stop trading, close and go into liquidation. That can be a disastrous course for a major financial institution at the very heart of important capital markets. Policy in this general area revolves around building regimes that avoid taxpayer solvency support but are less disruptive than orthodox corporate liquidation. In the banking sphere, where a great deal of work is underway internationally, this is known as "resolution".

In the case of a distressed CCP, it is most likely that it would have been brought down by the failure of a very large clearing member and so would have unmatched positions as well as continuing matched positions. For the surviving clearing members, ***they*** would suddenly find themselves having unmatched positions, with continuing obligations to clients but a non-performing CCP on the other side. Two strategies come to mind, which I am airing for debate. The first would be "recapitalising" the CCP so that it can carry on. The second would be to aim to bring off a more or less smooth unwinding of the CCP's book of transactions.

On the former route, in the banking sphere the basic strategy is to develop regimes for bondholders to share in the losses after the equity is wiped out; a distressed bank gets "recapitalised" in some way through a reconstruction of its liabilities. But CCPs do not issue debt, so there is not obviously an economic equivalent of recapitalisation by way of haircutting the debt claims of bondholders. Recapitalisation would seem to entail an injection of new outside capital. That should not come from the public sector. So the only options are the surviving clearing members themselves or a new "owner". On the face of it, the clearing members would have to be involved, as surely the stricken CCP's default fund would also need replenishing in order for it to continue.

If the default fund were to be replenished by its surviving clearing members, that could in principle be sorted out at the time or it could be pre programmed. In practice, making it up at the time must be dangerous. A pre-programmed allocation of losses would be akin to the old "Down To The Last Drop" rule that used to be employed by a Chicago clearing house, under which surviving clearing members ultimately had collectively to absorb all losses: mutualisation. (It was dropped because, as banks became futures-exchange clearing members, bank supervisors didn't like the unlimited exposure of CMs who were banks. An example of unjoined-up thinking.)

That's the option around propping up the clearing house to keep it going.

The other option is some kind of wind down of the Clearing House's book. That involves a combination of closing out part of the book in the market, and doing something with any residue that can't be dealt in the market. One obvious thing to do with the residue is to put it back, pro rata, to the surviving (and fit) clearing members. But that is also a variant of the DTTLD rule, but "in kind" rather than cash.

Maybe I've got this wrong but, in summary, it seems to me that questions about orderly resolution of a failed CCP have to involve clarity around the extent to which surviving clearing members pick up the pieces.

Summary

The design, management and oversight of CCPs is something that we are going to come back to again and again in the years ahead.

I want, therefore, to conclude, if I may, with a quote from the post-'87 crash Report of the Hong Kong Securities Review Committee, published in the summer of 1988, nearly a quarter of a century ago:

> "When everything else is stripped away, the most pressing issue is the management of risk. The focus of this is ......increasingly, the central clearing houses – indeed [their] prudent operation is perhaps the single most important objective for the market authorities and regulators."[2]

It is time to catch up with that insight. Your new Post-Trade Fellowship will surely help us to do so.

[2] Paragraph 3.21, Report of the Hong Kong Securities Review Committee, 1988. I should disclose that I was an Advisor to the SRC.