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Dodd-Frank and the Move to Clearing

Paul Cusenza, Chief Executive Officer, Nodal Exchange, and Randi Abernethy, Senior Manager, Group Corporate Strategy, LCH.Clearnet

After the financial crisis of 2008, the leaders of the G20 countries met in Pittsburgh in September, 2009 and stated: "All standardized OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by end-2012 at the latest." On July 21, 2010, President Obama signed and enacted the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank), which brings comprehensive reform to the regulation of over-the-counter (OTC) derivatives. Dodd-Frank will require standardized derivative transactions to be moved into central clearing houses to lower risk in the financial system, while providing exemptions for those end users who are hedging. By requiring clearing for many OTC transactions, Dodd-Frank extends the benefits of counterparty risk reduction that clearing houses have been providing to futures marketplaces since the 1890s. Notably, in the recent financial crisis, while the US federal government had to intervene to avoid catastrophic systemic failure from a default chain reaction in bilateral dealings, centrally cleared futures markets functioned with no loss to counterparties.

What is Clearing?

The cornerstone of clearing is a process called novation, in which the clearing house becomes a party to both sides of the transaction—the central counterparty. In doing so, the clearing house becomes the buyer to the seller, and the seller to the buyer, effectively shielding the counterparties from each other while remaining market neutral as the central counterparty. In contrast, in a bilateral transaction, the parties to the transaction deal directly with each other and are exposed to any failure to deliver on the contract.

It should be noted that the central counterparty typically only deals with its own clearing members, rather than directly with trading participants. These clearing members are generally banks and they in turn have a clearing relationship with the trading participants. This structure provides an additional layer of protection as the clearing member must manage a participant's default and make good on any of the defaulting participant's obligations; only if the clearing member itself defaults does the central counterparty (e.g., LCH.Clearnet) become involved in the default process.

Margining

Margining, both initial and variation, is used to manage risk in a cleared environment. Initial margin provides the clearing house funds to cover likely price movement during the liquidation process in the event of a default, while the variation margin is collected daily to ensure that losses do not accumulate in the account. An exchange, such as Nodal Exchange, which provides a

trading platform for power futures, provides daily price marks that are used by the clearing house to determine variation margin. Each day the clearing house collects variation margin from the clearing members that have had prices move against them and credits the same amounts to the clearing members on the equal and opposite positions. Initial margin is held through settlement in order to ensure that the clearing house or clearing member has funds to cover a defaulting portfolio's price changes while the liquidation process is occurring.

It should be noted that not all initial margin calculations are the same. For example, Nodal Exchange and LCH.Clearnet use Value-at-Risk (VaR) margining for the power market they serve because of the greater effectiveness and capital efficiency of being able to account for many correlated positions (Nodal Exchange offers over 1,800 locations and over 50,000 different expiries).

What Happens in a Default?

One of the most significant benefits of the clearing model resides in the safety and protection afforded to all of the clearing house's members when one of those members goes into default and can no longer meet its obligations. When such an event occurs, the clearing house acts so that the defaulter pays, not the survivors. The implication of this perspective is that all the non-defaulting members of a clearing house should be protected and insulated from the systemic risk that would otherwise result from a default. This difference between cleared and non-cleared markets was made obvious when summing the losses following the Lehman Brothers default. While the other clearing members of the clearing house came out of the Lehman default with no loss directly from the cleared markets, the same cannot be said for Lehman's trading partners in the non-cleared markets.

The Lehman Brothers Story

On Monday September 15, 2008, Lehman Brothers International Europe and Lehman Brothers Special Financing Inc failed to make their margin calls to LCH.Clearnet Ltd. LCH.Clearnet declared these two Lehman entities in default. By making this declaration, LCH.Clearnet assumed those entities' positions, which summed to a multi-trillion dollar notional amount across several asset classes, including OTC interest rate swaps, repos, exchange traded commodities, equities and financial derivatives. By taking on all of these positions, LCH.Clearnet had taken on the risk inherent in these positions, which it now needed to manage.

Typically, the next steps in managing such a default would entail analyzing the defaulter's portfolio of positions to determine: 1) which were client positions that could be transferred to another clearing member and 2) which were house positions that need to be hedged and then liquidated. Unfortunately, in the Lehman case this exercise was made more difficult because Lehman had co-mingled client positions with house positions.

With the markets swinging wildly in September, 2008, LCH.Clearnet worked feverishly to ascertain as much information about the Lehman accounts as possible and after about 36 hours began transferring client positions to other clearing members.

With the transfer process underway, LCH.Clearnet was also ascertaining the optimum way to manage the Lehman house positions. There are a few options available, all with the same end goal—disposal of the positions. LCH.Clearnet's disposal options included going to the market directly to liquidate the portfolio, having a dealer unwind the book on an agency basis for the clearing house, or auctioning off the positions as a package. For the Lehman default, LCH.Clearnet chose the auction process as being the most effective.

For the auctions, LCH.Clearnet packaged the house positions into portfolios of each asset class, which were then bid on by other clearing members of LCH.Clearnet. Once the auction of each portfolio was complete, the winner of the portfolio would assume the portfolio with immediate ef-

fect. One by one each of the portfolios were auctioned off, and within 5 days, LCH.Clearnet's risk had fallen by 90%. The OTC interest rate swap portfolio, which had stood at $9 trillion in notional value, was then auctioned off through an established process with swap traders, and took a further 14 days to liquidate. By October 3 the entire Lehman portfolio that LCH.Clearnet had assumed had been successfully managed.

In this case, about 35% of Lehman's initial margin was required to hedge the risk, manage and auction the total house portfolio. LCH.Clearnet was then able to return a significant amount (65% of the initial margin) to the Lehman administrators. More importantly, however, LCH.Clearnet had succeeded in its objective of protecting all other market participants from the systemic counterparty risk which otherwise would have materialized, and forcing the defaulter, rather than the survivors, to pay for the deault.

In contrast, after Lehman's default the surviving participants in the PJM Interconnection Financial Transmission Rights (FTR) markets, which were not cleared, had to share the impact of an $18 million loss.

Why Clear?

Mitigating counterparty risk, while a key reason to participate in cleared markets, is only one of many reasons to use clearing. Netting of positions, an expanded universe of possible trading parties and lower transaction costs provide additional incentives to clear.

By using standardized contracts that are all kept in one portfolio, the cleared market structure allows for easy netting of positions. Participants in cleared markets only need to hold collateral on their true exposure. In bilateral transactions, while the risk of the exposure can be offset with additional transactions, all the resulting positions must still be tracked, and varying collateral requirements between the bilateral transactions can potentially mean inefficient capital usage.

Clearing also provides new trading partner possibilities, as participants in cleared markets no longer need to worry about the credit quality of their counterparty, nor do they need to limit themselves to parties with whom they have established bilateral credit thresholds. In the FTR power markets more than half of the awards in the past year were to entities that were not rated investment-grade (≅44% not rated and ≅7% rated below investment-grade); many institutions would deem these entities not creditworthy and not be able to trade with them directly. By having more possible counterparties in a cleared environment and not needing to worry about their credit risk, both better pricing and greater liquidity are achieved.

There has been a lot of recent discussion around the cost of clearing. While it is true that the benefits of clearing come with the obligations to post initial and variation margin, the cost of clearing needs to be measured against the costs, both implicit and explicit, of bilateral transactions. In a bilateral transaction, the trader is directly exposed to the counterparty's risk of default, and this risk must be factored in as a cost of transacting bilaterally. A report authored by the Committee of Chief Risk Officers (CCRO)[1] prior to the recent financial crisis estimated this default cost of trading bilaterally to be 84 basis points (0.84%) of the total transaction value for each transaction, which was more than their total estimated cost of clearing. Defaults happen irregularly whereas margining is daily, but in the long run clearing is actually less expensive than having to incur defaults.

Summary

Clearing provides many benefits by reducing systemic risk, increasing transparency, enhancing market liquidity and fair pricing and reducing the true cost of transactions when defaults are properly accounted for through time. The new Dodd-Frank requires that the market evolve to clearing. This should benefit both trading participants and society in general. ■

[1]"Market Clearing in the Energy Industry," Committee of Chief Risk Officers, February 2006