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The Value of Central Counterparty Clearing

Ann Sacra, President and Chief Operating Officer
Nodal Exchange LLC

The Case for Clearing

The financial crisis of 2008 has brought increased attention to the merits of using a clearinghouse as a Central Counterparty (CCP) as a way to reduce systemic risk in financial markets. The Central Counterparty clearinghouse structure withstood an important test during the Lehman failure, and so has become a key component of efforts to reform financial markets. In fact, the leaders of the G20 countries meeting in Pittsburgh in September 2009 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."

However, often lost in the discussion of clearing's systemic benefits are the many other benefits that clearing brings to participants in financial markets. In these uncertain times, cleared transactions bring participants a level of security impossible to replicate in the bilateral markets. In addition, cleared markets give participants greater access to counterparties, which means better pricing opportunities and more flexibility in entering and exiting a trade. Clearing also allows for portfolio netting, which improves capital efficiency. Further benefits can be achieved for energy traders if the clearinghouse utilizes portfolio margining that recognizes the offsets inherent to many energy transactions.

In this article, we will review why the multiple safeguards used in the clearing process reduce counterparty risk and detail why cleared transactions should be used as a key part of any strategy to reduce corporate risk.

What is Clearing?

The cornerstone of clearing is a process called novation, in which the clearinghouse becomes a party to both sides of the transaction (e.g., the Central Counterparty). In doing so, the clearinghouse becomes the buyer to the seller, and the seller to the buyer, effectively shielding the counterparties from each other. In contrast, in a bilateral transaction, the parties to the transaction deal directly with each other and are exposed to future failures to deliver on the contract. With novation, a trade legally becomes one between each party and the Central Counterparty, and thus, each party is only exposed to the Central Counterparty's commitment to deliver on the financial aspects of the trade. It is important to note that clearinghouses do not make markets in securities since the clearinghouse always steps in on both sides of each transaction. It therefore remains market neutral and so is not exposed to changes in the value of the positions its members hold, unless a member defaults, at which point the additional protections outlined below take over.

So why does novation work and how is it that the clearinghouse does not fail the moment one party to a transaction fails to meet their commitment? Clearinghouses put several protections in place to support their ability to keep positions intact even when one participant in the system fails. First, the clearinghouse only deals directly with its own members; when trades are novated, the clearinghouse only faces its own Clearing Members as its counterparties. Clearing Members are carefully vetted by the clearinghouse, are usually required to contribute to the clearinghouse's risk pools, and are often large financial institutions. Given the requirements placed on Clearing Members, many trading participants choose to become a client of a Clearing Member rather than become a member of the Clearinghouse itself. In taking on such clients, a Clearing Member becomes responsible for their clients' credit quality, and assumes responsibility for any client defaults, thereby forming an additional layer of protection in the cleared market.

In addition to taking certain measures to monitor the credit worthiness of its members, the clearinghouse also collects from its Clearing Members both initial and variation margin on positions held. Clearing Members in turn collect this margin from their clients. The initial margin amount is generally calculated to cover the clearinghouse's potential loss on that position in the event of a Clearing Member default. To prevent losses from accumulating over time, positions are also marked to market every day, and variation margin, based on the change in the value of the position, must also be posted. Accounts that have accrued value are awarded a credit, while accounts that have lost value are charged an additional margin amount.

Ann Sacra is the President and COO of Nodal Exchange, a new commodities exchange focusing on locational futures products in the power industry. For more information, contact Ms. Sacra at sacra@nodalexchange.com.

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While initial margin is common to all cleared markets, the way initial margin is calculated is not. Many markets employ the Standard Portfolio Analysis of risk (SPAN) methodology developed by the CME in the late 1980s. SPAN employs various offset factors that attempt to model the actual risk borne by the clearinghouse for offsetting positions. For example, a portfolio that consists of positions that are long power but short natural gas should not be as volatile as a portfolio that simply consists of positions that are long power. Nodal Exchange, a new power exchange, and LCH.Clearnet, the central counterparty that clears trades executed on Nodal Exchange, are employing a Value-at-Risk (VaR) methodology for calculating initial margins. By explicitly calculating the historical correlations for the relevant portfolio, VaR provides a mechanism to distinctly capture the offsets that exist in a diverse portfolio, which the SPAN methodology might otherwise not capture.

A third layer of protection that the clearinghouse offers is its tiered risk pools, which can provide funding in the event that both a Clearing Member fails and the initial margin held by the clearinghouse does not prove sufficient to handle the default. While the structure and size of the risk pools differ from clearinghouse to clearinghouse, the basic concept is the same across clearinghouses. In the event of a member default, the initial margin of the defaulting member, along with any excess collateral, is first used to cover the default. If this is not sufficient, then additional capital pools can be called on to cover the defaulting positions. As noted above, frequently Clearing Members contribute to an additional pool, specified as a Default Fund, as a condition of joining the clearinghouse. Often the last risk pool to be accessed consists of a clearinghouse's own capital and reserves. It should be noted that large clearinghouses rarely, if ever, have needed to access these additional risk pools when handling defaults; LCH.Clearnet, for example, which commenced operations in 1888, has never had a loss or charge to a survivor based on a member default.

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Why Clear?

The combination of safeguards and firewalls outlined above means that participants in cleared markets can largely set aside worries about counterparty risk. Indeed, the Lehman default showed how resilient the cleared market structure is, as multiple clearinghouses were able to meet all their commitments, without accessing their risk pools, despite the default of a very large clearing member. However, mitigating counterparty risk, while a key reason to participate in cleared markets, is only one of many reasons to use clearing.

Clearing allows trade participants a flexibility that is not possible with bilateral transactions. Once a bilateral transaction is completed, the only way to exit the transaction is to come to a new agreement on price with that particular counterparty, or enter into an offsetting transaction with a different counterparty. Entering into an offsetting transaction with a different counterparty can be expensive, as now collateral must be managed with two separate entities. However, cleared transactions make use of standardized contracts, and all market members can transact on these contracts. Thus, should a party desire to exit a transaction, they have multiple parties with whom they can seek to do the deal. Having multiple parties with whom to do business leads to more competition, and hence likely better pricing for the deal than can be achieved when dealing with one counterparty alone.

The above example hints at another key advantage of clearing: the ability to net positions. By using standardized contracts that are all kept in one portfolio, the cleared market structure allows for easy netting of positions. Not only is record keeping simplified, but also 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 can also open up 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 lines. Instead, they are free to trade with all other parties who are members of the market. The markets run by the Independent Systems Operators (ISOs) for Financial Transactions Rights (FTR) in electric power illustrate how limiting restrictions on investment grade ratings can be. In FTR auctions held from December 2008 to September 2009, approximately 40% of the awarded MWh were to participants with no credit rating, and another 15% of the total awarded MWh were to participants with ratings below investment grade. Only 40% of the total MWh awarded in these auctions were to investment-grade rated entities. Thus, if an organization is limiting itself to bilateral deals with investment-grade partners, it could be missing a substantial part of the market, and hence, substantial opportunities to obtain a better price.

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 both 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) 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, which was more than their total estimated cost of clearing. Just as insurance may appear to be expensive when it is not needed, clearing may appear to be expensive for transactions where the counterparty does not default. However, the cost of one counterparty default must be spread across all transactions with non-defaulting counterparties. Many bilateral agreements have ratings triggers to try to mitigate the monetary loss if a counterparty's credit quality deteriorates, but the history of credit downgrades is rife with examples of institutions that went from investment grade ratings to default too quickly for their counterparties to react. The degree of protection gained from measures based on ratings triggers, therefore, must also be discounted. When the total costs of one defaulting counterparty are compared to the costs of clearing a portfolio, clearing no longer looks as costly.

In summary, while much of the public conversation on clearing has justifiably centered on clearing's value to society in reducing systemic risk, cleared markets also offer participants great value by eliminating many of the costs of managing counterparty risk. Using cleared contracts where possible will provide trading organizations with more trading options, improving pricing, while significantly reducing counterparty risk. When the true cost of default and the liquidity advantages of clearing are fully factored into trade cost analysis, clearing emerges as the most cost competitive solution as well. Thus, both market participants and the greater society benefit from a move to clear more transactions.

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