A new frontier for clearing

While the credit derivatives market continues to expand, there are still areas for improvement. André Cappon* argues the case for an adequate infrastructure for trading, clearing and settlement in credit derivatives

Credit derivatives have established themselves as a proven type of financial contract and are already playing a significant role in the transfer of credit risk. Their development, which has enormous potential, is held back by the lack of an appropriate clearing and settlement infrastructure. Clearing organisations have a major role to play in the future of this market.

To define, a credit derivative is a bilateral contract for the transfer of credit risk among counterparties. In the most basic instrument, the credit default swap, one counterparty, the "protection buyer", pays a premium to another counterparty, the "protection seller" in exchange for a promise to indemnify the former against an economic loss due to a "credit event" (ie, bankruptcy) occurring to a "reference credit". Credit derivatives are thus economically equivalent to financial guaranties such as credit insurance, but they permit the full unbundling of credit risk, which can now be freely traded.

The credit derivative market has grown by a factor of ten in the last five years, ie, at annual compound rates of over 50%. As of 2002, credit derivatives notional outstanding had reached around $2,000 billion.

However, this market has vast potential for further growth. Relative to their underlying credit market – instruments such as government or corporate bonds and loans – it is estimated that credit derivatives represent no more than approximately 9% of outstanding. Similar ratios for other comparable derivatives markets are much higher: around 20% for equities and nearly 200% for interest rates, fx and commodities.

A major reason why credit derivatives still remain below their natural potential is the lack of an adequate infrastructure for trading, clearing and settlement in these contracts.

The credit derivatives market still is, for the time being, a traditional OTC, thinly traded, illiquid derivatives niche market. As a result, the market has very wide bid-ask spreads, remains vulnerable to speculative manipulation, for example by hedge funds[1]; and is plagued by counterparty credit risk concerns (since a guaranty is only as good as the guarantor).

In the long run, trading will probably become truly liquid through the emergence of exchange traded, clearinghouse-cleared, fully standardised and liquid contracts, as in other derivative markets, for example interest rates and fx. However, the major dealers who currently control the OTC market enjoy very high margins and have little motivation to support such a development, for the time being. Clearing and settlement, however, is a very different matter.

Clearing and settlement organisations – depositories and clearinghouses – could and should play a major role in providing a stronger infrastructure for the existing OTC credit derivatives markets. An interesting analogy can be made with the fx cash and derivative markets, where CLS provides high value settlement services to an OTC market.

Nevertheless, it is useful to review the "value chain" of "after-the-trade" service that clearing organisations can provide and identify how they might do so for the credit derivatives market. In increasing order of sophistication, these include:

- ❑ Trade comparison and registration
- ❑ Collateral management
- ❑ Bilateral netting
- ❑ Multilateral netting/central counterparty.

Trade comparison and registration

Trade comparison and registration or trade matching is the first step of the clearing process.

Following the trade (possibly done verbally on the phone), the two counterparties submit standardised detail information on the trade to a mutually agreed agent, the clearing organisation. The latter compares the details of the trade as reported by both sides and, if they match, records or registers the trade. Otherwise, the trade is rejected and sent back to the reporting firms for reconciliation.

This is a simple but essential service. A neutral, objective party confirms the trade and makes it official, which helps minimise or avoid disputes among traders and back offices.

In addition to reducing back office problems and providing a neutral record, the trade process and registration process can offer a valuable by-product: it can provide, as long as it respects the confidentiality of counterparties and dealers, a unique source of market data, which is otherwise difficult to gather in credit derivatives.

Collateral management

In OTC markets such as credit derivatives, dealers, who typically enjoy strong credit ratings, will, from time to time, demand that lower rated counterparties deposit collateral to guarantee their performance. Collateral arrangements are usually negotiated and administered on an *ad hoc* basis. As a result, there can be significant variability and arbitrariness in terms and in management processes.

Clearing organisations can offer a useful service by standardising collateral management for credit derivatives. Several levels of standardisation can be envisaged: definition of assets acceptable as collateral, designation of depositories where these assets may be held, methods for determining required collateral as a function of market volatility (ie, credit conditions, overall and regarding specific names) and counterparty credit quality.

Bilateral netting

In dealer-driven markets such as credit derivatives, most of the volume results from inter-dealer or professional trading activity. At any time, any two given dealers may have entered into many buy and sell transactions with each other, covering the same names or different names and for the same or different tenors. As a result, each of the dealers' counterparty exposure to the other can increase, up to the point where their mutual counterparty credit lines are exhausted. At that point, they would have to stop trading. This is clearly not efficient for the market, since liquidity dries up.

Bilateral netting, however, can offer relief. The two dealers may examine their positions and exposures with each other and decide that there are offsets that can be made to reduce counterparty credit exposure to a net value, hence the term netting. Clearly, many details must be negotiated and resolved: which instruments, which rating classes, which names and/or tenors can be netted against each other and on what terms.

Clearing organisations could offer the credit derivatives market a valuable service as neutral, trusted intermediaries in the bilateral netting process. They can standardise key aspects of the process, such as credit derivative pricing methodologies, to make bilateral netting easier, more efficient and more secure for the market.

Multilateral netting/central counterparty

Multilateral netting through a central counterparty is the net plus ultra, the highest level of clearing service that could be offered to an OTC market.

In multilateral netting, after trades have been successfully compared and registered, the initial bilateral contract among two dealers, A and B, is cancelled and replaced by two contracts between the dealers and the central counterparty, typically clearinghouse. In other words: initially A sold protection to B. With a central counterparty clearinghouse in place, A sold protection to the clearinghouse and B bought protection from the clearinghouse. The clearinghouse itself must have the highest possible credit rating, AAA/Aaa, undoubted capital strength and management processes that ensure it is insulated from market risk.

Central counterparty clearinghouses practically eliminate counterparty credit risk.

They reduce counterparty credit exposures in the market. In a market with N players, there can be N(N-1) bilateral relationships but only 2N transactions with the central counterparty. They become the hub of the market and, as such, can enforce discipline and standardise trading practices. They also provide market security through the system of margin deposits and daily mark to market.

Well-managed clearinghouses have almost never failed in practice.

A central counterparty clearinghouse for credit derivatives would be the ideal infrastructure to support the growth of the market. It does, however, reduce the competitive advantage of highly rated dealers, since it allows all of its clearing members equal access. For this reason, OTC clearinghouses initially meet with some dealer resistance, which will diminish as the dealer community begins to appreciate the benefits of market growth and the ability to lay risk off into the listed market.

To summarise, the credit derivatives market would clearly benefit from an appropriate suite of clearing and settlement services. Clearing and settlement organisations worldwide are beginning to examine the opportunities of serving such a dynamic OTC market.

In the US, organisations such as Depository Trust & Clearing Corporation, which is working with the largest credit derivatives dealers, has already agreed on the concept and design of electronic trade confirmation and comparison for credit derivatives. This service will be available in the near future. Several enhancements are anticipated subsequently.

In Europe, several institutions are actively considering offering a suite of clearing services to support the credit derivatives market.

Meanwhile, in other countries, regulators demand that capital markets and derivatives transactions be made official, in order to avoid disputes and facilitate the regulatory process. In Brazil, for instance, the Central Bank has introduced official registration for OTC derivatives transactions, such as interest rate swaps, by an acceptable central agent such as the country's Central Securities Depository, or the derivatives exchange, BM&F. Effective in 2002, the Central Bank of Brazil has mandated the registration of OTC credit derivatives.

These pioneers are on the right track. Credit derivatives markets are definitely the new frontier for clearing and settlement.

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[i] See Wall Street Journal, *December 5, 2002, "A Market Backfires and Investors Pay: Though Greenspan Praised Idea, Credit-Derivative Trading Mutates; Instead of Stability-Instability", by Henny Sender*