CCDS unchained?

*In October, **David Rowe** argued that contingent credit default swaps offered only limited potential for active counterparty credit risk management. The convergence of several factors could change that*

A review of how derivatives markets have evolved over the past 25 years yields one important insight. Major developments usually take hold only when two or three enabling developments are in place. These developments usually fall into the areas of financial theory, computing technology, the regulatory/legal environment and the general business environment.

The dramatic growth in derivatives throughout the 1980s was clearly supported by development of the Black-Scholes option pricing formula in 1973. However, the market did not take off until personal computers and spreadsheets became widely available. This allowed practitioners to create appropriate software for pricing calculations without going through the sluggish and bureaucratic process of specification, development, testing and deployment. Nevertheless, without the computational efficiency of the closed-form Black-Scholes formula, early PCs would not have been powerful enough to support daily revaluations of a sizable book.

Finally, the dramatic inflation and interest rate cycle that occurred in the late 1970s and early 1980s created a significant incentive for more active interest rate management on the part of corporate treasurers. This stimulated strong and growing demand for interest rate swaps and options during the 1980s. Ultimately, it was the convergence of these three developments that produced the explosive growth in the volume of interest rate derivatives.

As I have pointed out elsewhere, recognition of pre-settlement credit risk was slow to develop.[1] The initial impetus for dealing with this issue was debate over the treatment of pre-settlement credit exposure in the Basel capital Accord from 1986 to1988. However, concern about counterparty credit exposure has grown in recent years. That is partly due to its growing significance in total credit exposure, but it is also a result of the illiquidity of this exposure given its inherent entanglement with complex underlying derivatives portfolios.

Clearly, regulatory pressure and general credit concerns are creating incentives for an effective means of transferring and hedging counterparty credit exposure. The nascent contingent credit default swap (CCDS) market is an early response to these concerns. Unfortunately, CCDS transactions currently require heavy manual and highly error-prone processing that constitutes a prohibitive constraint on any significant growth in volume. I have been told that a single completed CCDS transaction with a simple underlying notional portfolio can take six to seven hours of an analyst's time to price, book and confirm. No derivative product can achieve significant volume with that kind of costly overhead. Also, regulators were burned two years ago by the significant backlog of confirmations for much simpler standard CDS transactions. They are bound to intervene sooner and more forcefully if the CCDS market begins to grow.

It seems to me that a solution to this problem requires two things:

- a reliable electronic means of exporting and importing a proposed notional portfolio to and from front-office trading systems automatically.
- an effective means of simulating the distribution of potential future counterparty exposure both for initial pricing and for daily mark-to-market calculations.

Financial products mark-up language (FpML) is ideal for addressing the first point and it has been steadily refined over the years. Unfortunately, it has always been viewed as a tool to reduce cost and minimise operational risk. As such, its universal application has never been considered a priority and its implementation has been correspondingly slow.

The second requirement demands sophisticated simulation capabilities not available in front-office systems. Most important is the ability to age transactions forward and analyse them at future dates under hypothetical future market conditions. This capability is available as part of most sophisticated counterparty credit risk measurement and control systems. Also, the emergence of grid computing, which has made parallel processing a mainstream functionality, greatly speeds the performance of such exposure profile calculations.

The appeal of being able to grow a new and lucrative product that meets a recognised market need could easily be the incentive for market makers to deploy FpML as a universal derivative description protocol. It could also stimulate much tighter integration of counterparty exposure simulation logic with front-office pricing systems. In short, we are seeing a convergence of demand for a product to hedge counterparty credit exposure with the necessary enabling technology to support such a product. Whether this convergence ignites another dramatic chapter in the history of the derivatives markets remains to be seen. ■

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[1] *Rowe, D, The Evolution of Counterparty Credit Risk Management, in Modern Risk Management: A History, pp205–222, Risk Books, 2003*