

## Thoughts On Credit Default Swap Clearing

Are you ready for some heavy-duty thinking at year's end? Which number will be greater over the course of your lifetime, the number of times you become ill or injured or the number of times you will die? The answer is obvious.

Now, let's extend the question to the legal personage of a corporation. Which number will be greater, the number of times it encounters a difficult period either in its operations or in its securities, the number of times it defaults on its obligations or the number of times it finally departs from the scene? Here the answer is not as clear, but in general corporations, like people, encounter numerous bumps in the road, occasionally miss a payment or two, and while they can enter bankruptcy more than once, they shed this mortal coil just once.

### Insurance And The Grim Reaper

How odd, then, that the dominant trade in corporate bonds has become credit default swaps (CDS), a topic I first discussed here in [April 2005](#) in general and then again shortly thereafter for [economic sectors](#) in general and [basic materials stocks](#) in particular. We can add [sovereign credit risks](#) to the pool now that governments around the world are spending money like there's no tomorrow.

Let's think about CDS in reference to two analogies, living persons and equity markets. Most of us carry a form of medical insurance whose cost is determined more by membership in a random pool of our fellow workers than by our own medical history; in fairness, many individual and self-employed policies are priced off actuarial risk. Many of us also carry life insurance payable to our heirs; we do not as a rule and often by law take out life insurance policies on complete strangers payable to ourselves. The moral hazard of such behavior is rather obvious. Unless there is a pool involved, life insurance rates are determined by actuarial risk, and once set are not raised and lowered as our fortunes change.

The CDS world is quite different. Here each insurance rate, expressed in basis points for \$10 million coverage, has been determined in a highly inefficient and opaque market with no central clearing repository. The bid-ask spreads often were determined by members of a banking consortium such as Markit who had a vested interest in keeping them wide.

The CDS market, like the life insurance market, pays off not on a temporary illness but rather on a binary finality, but unlike readily determinable human mortality, the conditions that determine a credit event can be surprisingly uncertain. A declaration of bankruptcy certainly is sufficient, but what if someone argues that bankruptcy was engineered and therefore unnecessary? The same can apply for other events, such as a missed payment or a material downgrade from a nationally recognized statistical rating agency. Given what we now know about the probity of these raters, do we really want more money changing hands on their musings?

Finally, the traded prices of CDS fluctuate with all manner of events or no events at all, just a change in sentiment from various traders. This would be rather like the price of a life insurance policy rising and falling each time you sneezed or were rumored to be about to sneeze by the insurance policy's beneficiary. This would be intolerable in other insurance markets, yet it has been tolerated to the extent the notional value of CDS outstanding rose to more than \$62 trillion.

### Why Not The Put Option?

Here's another thought-experiment question seldom posed: If rising credit risk pushes the price of a bond lower, why not simply create exchange-traded bond options whose payoff is linked to the bond's price and not to a life-or-death credit default? We have been trading equity options for more than 30 years and equity index options for 25 years with satisfactory results.

The answer, of course, is the individual stocks or indices are liquid and can be combined with the options to create myriad trading strategies. Most corporate bonds are small in size and illiquid. Moreover, the time-to-maturity for a bond changes each and every day, meaning its characteristics change as well. All of this has forced the writers of CDS protection to hedge their risks not with the issuing corporation's bonds but rather with the issuer's stock in what is known as a correlation trade. This opened the door to a rare combination of poor hedging and mischievous market manipulation.

As Janet Tavakoli noted, calculating the probability of default and the recovery rate of a defaulted asset are the keys to CDS pricing. She continued in a November 2005 talk at the University of Chicago, "What people have been

using in the market is asset correlation. That's pretty worthless, because what we really want is default correlation. If we guess probability of default correctly, we don't even need default correlation."

### **Central Clearing**

By last September's Lehman Brothers crisis, it became obvious the rumor-mongering had gotten out of hand. Buyers of CDS protection could force the price up within an opaque market that enabled their positions to remain unknown and force the writers into selling ever-greater quantities of stock at ever-lower prices. As we saw, these very price changes could threaten the survival of financial firms as big as Morgan Stanley or Goldman Sachs when no real danger of default existed.

Lehman's bankruptcy forced the issue in a number of respects. First, there was general confusion within the market as to the notional value of the CDS outstanding and, more important, to the net exposures of various parties involved. As many players in the CDS market, as in all swap markets, had numerous offsetting positions it was assumed the net exposure would be far less than the notional exposure, but the mere fact there was such uncertainty was unsettling.

Second, and in an issue that will be central to all CDS central clearing, the recovery from Lehman assets had to be determined at a later date. After an auction on October 10, 2008, protection sellers had to pay 91.375¢ on the dollar; some had hoped for just 86¢. Auctions of this nature should scare the clearing members of any exchange; when a contract such as wheat or gold is defaulted upon the damages are known very quickly and are finite. Many of Lehman's assets were either illiquid or were of the intellectual property and goodwill genres.

This asset mix is not unusual and should give pause even to those clearing assets in, say, the automobile industry. General Motors' vast empire contains brand values, networks and supply chains of great value to GM but of little value taken separately to another buyer.

Third, the cascade of events after Lehman's bankruptcy highlighted the industry correlation problem. A clearinghouse is used to dealing with isolated defaults by traders, not linked defaults amongst its products. If a crude oil trader fails to deliver, the clearing firm is liable to the clearinghouse and then seeks recovery from the trader. The crude oil contract is unaffected. If, however, a Lehman Brothers goes bankrupt, it is the product that has disappeared and as we discovered, the risk of default by related products is adjudged to be significantly higher. The clearinghouse then has to sort out the liabilities of its clearing members, insurers and others and present them with a best-guess claim for restitution. This is far closer to the reinsurance model in the property & casualty insurance business than it is to the exchange-traded clearinghouse for fungible products model.

An exchange clearing member presented with these uncertainties of damage and linked default chains should demand an appropriately high level of margining in return for assuming the clearing risk. We shall see where these margins are set; too high, and the business will avoid the exchange. Too low, and the clearinghouse's and clearing members' integrity will be threatened.

This danger was noted by some exchange clearing members and suggests a dealer-based clearing model may be preferable.

### **Whither The Market**

A final unknowable risk remains, and that is the future of the CDS market itself. I have stated on more than one occasion that transparent pricing could turn the market into something akin to trading viatical settlements on life insurance. After all, if the market converges on a probability of default and a recovery rate then the wide bid-ask spreads should disappear. Offsetting this, presumably, will be a far greater level of volume as new CDS-related products are developed and new traders enter the market. A symbiosis between the cash and exchange-traded markets can develop to the aggrandizement of both; this has occurred in markets as disparate as natural gas and Eurodollars.

The real benefit, of course, will be transparency of position. The costs of opacity became too visible this past year, especially in September. Central clearing of CDS will lower the cost of information in these markets and enable the creation of new products for assessing bond market risk above and beyond trading the high-impact but low-probability risk of default.