

Countdown Derivative

Are Exchange-Traded Futures Poised to

By Fiona Pool and Betsy Mettler

The credit derivatives market is one of today's most important over-the-counter markets. The growth of the market has outperformed all expectations, rising from a notional value of \$5 trillion in 2004 to over \$20 trillion in 2006, according to the British Bankers Association. This phenomenal growth in the size of the market has been matched and to some extent driven by the array of new credit derivative products; index trades, tranching index trades and options on credit default swaps to name just a few. Furthermore, the market is soon to enter the next phase of its evolution, exchange-traded credit derivative futures. On March 27, Eurex is set to launch the world's first exchange-traded credit derivatives contract, a future based on the Itraxx Europe index, the most widely traded index in the over-the-counter market. Depending on market demand and sufficient OTC market maker support, Eurex will also list futures contracts on the Itraxx HiVol and Itraxx Crossover indices, either simultaneously on March 27 or soon after.

This push into exchange-traded credit derivatives is not limited to Europe; the Chicago Mercantile Exchange's proposal to trade futures on single name credit default swaps has recently been approved by the Commodity Futures Trading Commission. An exact launch date has not yet been announced but it is expected to start trading in the first quarter of 2007. The Chicago Board of Trade and the Chicago Board Options Exchange are also planning their own product launches in the near future. Given the spectacular growth in the credit derivatives market, it is unsurprisingly attracting interest from all corners of the financial community.

In the Beginning

In analyzing the potential demand for credit derivative futures, it is important to understand the origins of credit derivatives. In the mid-1990's financial institutions realized that although they had strong relationships with borrowers and had the best access to cash, they were not necessarily efficient holders of credit risk due to their regulatory capital requirements. They needed to separate the credit risk of these loans from the funding risk. If this could be achieved, financial institutions would be able to retain their relationships and continue to provide loans to their clients but not retain all of the

to Credit Futures

Revolutionize the Credit Derivative Market?

credit risk. Effectively they wanted to buy protection from a third party against a borrower default. This initiative took the market by storm and so was born the credit derivatives market. Since these credit default swaps allowed the isolation and transfer of credit risk from one party to another, CDS volumes exploded. Not only were banks able to offset their traditional credit risks, but investors now had access to credit risk that had previously only resided in the bank loan market. This ability to tailor credit exposure to the specific needs of investors, dealers and portfolio managers has been the driving force in the growth in the credit derivatives market.

A natural progression from single name credit default swaps was the development of CDS indices. The launch in 2004 of the iTraxx in Europe and CDX in the United States created a standardized series of indices that revolutionized the credit markets by allowing investors to take macro views on the broader credit market.

Who's Who in Credit Derivatives

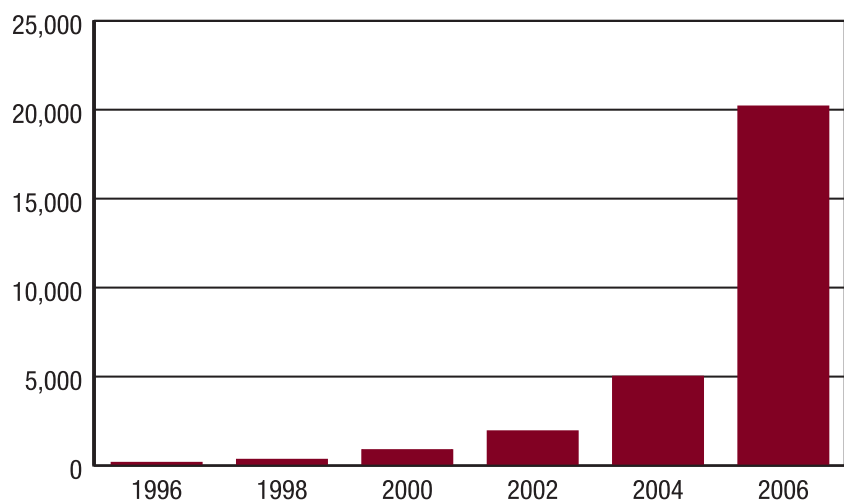
Banks still constitute the largest market participant but there has been a shift in emphasis from the loan portfolio desks to the market-making trading desks, with the traders now representing almost two thirds of

banks' derivative volumes. According to Fitch Ratings, the top ten OTC market makers accounted for 86% of traded volume in 2005. Morgan Stanley, Deutsche Bank, Goldman Sachs, and JPMorgan have consistently been the top four OTC market makers and between them constitute the lion's share of derivative volumes. Although banks remain the largest market participant, their

market share has fallen over the last few years. Hedge funds have continued their drive into the credit derivatives market, expanding their market share of buyers of protection to almost 30% in 2006. But their growth is most exceptional as sellers of protection, unsurprising given the lack of liquidity in the cash markets and the search for investment opportunities.

Global Credit Derivatives Market

In \$ billions of notional value

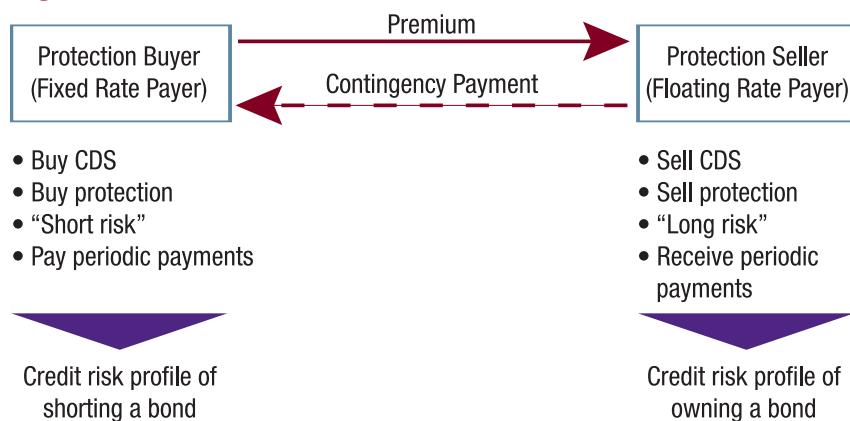


Source: BBA - Credit Derivatives Report 2006

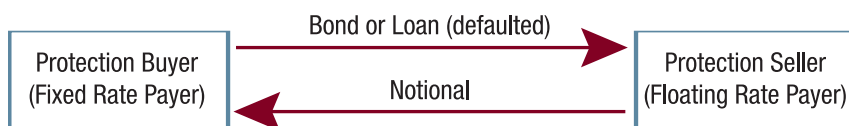
What Is a Credit Default Swap?

A Credit Default Swap is a form of protection against credit risk. It is a bilateral contract whereby the credit risk of a reference entity (the issuer i.e. Ford) is transferred from the protection buyer to the protection seller. The protection buyer pays a fixed premium to the protection seller in return for a contingent payment, which compensates the protection buyer for any loss incurred in case of a Credit Event. The standard corporate credit events are bankruptcy, failure to pay and in some cases, restructuring. If no credit event occurs during the life of the CDS contract, the protection buyer continues to pay the premium until the maturity of the contract and the protection seller does not have to make any payments. If a credit event does occur, standard market contracts physically settle, whereby the protection seller pays the protection buyer the notional value of the contract in return for the defaulted bonds or loan with a face value equal to the notional value of the contract.

Single Name CDS



After a Credit Event



The CDS Buyer delivers a bond or loan issued by the reference entity to the seller. The seller then delivers the notional value of the CDS contract to the buyer.

Source: JPMorgan, B&B Structured Finance

With greater liquidity in credit derivatives, many more asset managers are now using the indices as part of their overall risk management and investment policy strategy. But the primary application of credit derivatives has been and remains for trading and market-making purposes. According to the BBA report, the average traded volume of European indices in 2006 was \$182 billion, up from \$125 billion in 2005. Index trades now account for approx 30% of overall credit derivative transactions and

together with single name credit default swaps they account for over 60% of all credit derivative transactions. Market participants expect this strong trend of growth in indices to continue.

Settlement procedures have also evolved over the last few years; physical settlement remains the principal payout method following a credit event, but its market share, according to the BBA, has dropped from approx 85% in 2004 to around 70% in 2006. Cash settlement has

increased its relevance to approximately 25% of all payouts in the last two years. Interestingly, a fixed payout structure remains the least favored method of settlement as it is difficult for investors to predict recovery rates and hence potentially leaves them exposed to further losses.

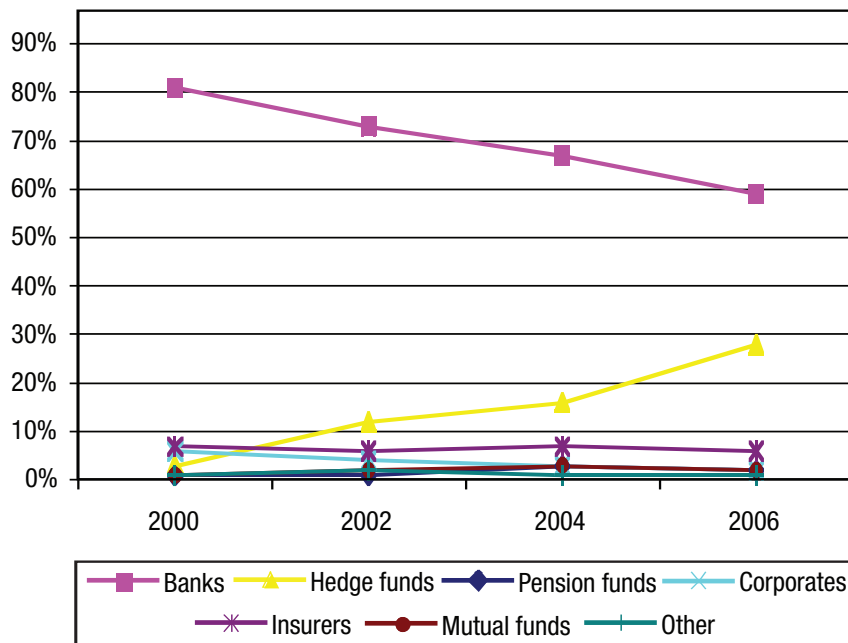
The trading of CDS in the inter-dealer market has been facilitated with the development of electronic trading platforms. Creditex was one of the first to successfully launch an electronic platform for the iTraxx index in Europe several years ago and is now widely used in the OTC dealer community. Straight-through processing will allow the entire trade process to be executed electronically. It is still in early developmental stages but when fully implemented, it will streamline the confirmation and assignment process, which is currently manual.

Trouble in Paradise?

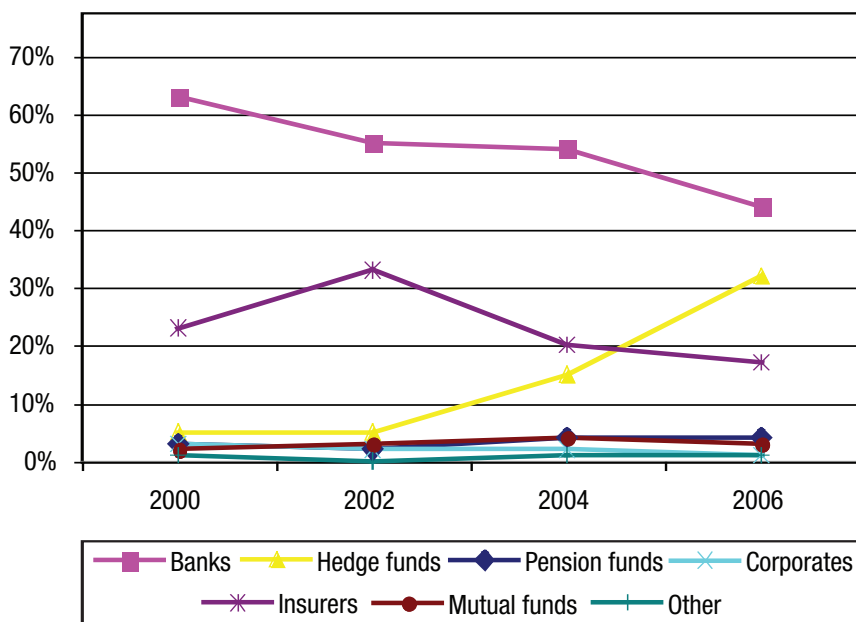
The development of this market has not been without problems, mostly stemming from its own product complexity. Firstly, there have been legal issues surrounding CDS documentation such as what actually constitutes a credit event as well as which reference entity's bonds or loans are deliverable in a credit event. Other issues surrounding documentation and settlement are also not insignificant: counterparty risk, ISDA agreements, collateral posting, administration and operational costs, as well as pricing and the difficulty of obtaining a daily mark-to-market on OTC contracts. But the biggest dilemma for this market has ironically stemmed from its own success. As the market took off, the sheer mass of trades being executed created a huge backlog of unconfirmed trades, a problem that the regulators saw as a major risk in destabilizing the effectiveness of this market. According to the BBA 2006 report, almost 10% of trades were more than two months late in being confirmed.

In 2005 both the Federal Reserve Bank of New York and the Financial Services Authority took the unprecedented step of contacting senior bankers and urging them to take action to reduce this backlog. Two years on, much has been done to alleviate the pressure of unconfirmed trades but problems remain. According to a recent Fitch Ratings report, settlement following a default and trade confirmation remain the biggest challenges facing the credit derivatives market. With the launch of

Buyers of Credit Protection



Sellers of Credit Protection



Source: BBA – Credit Derivatives Report 2006

exchange-traded credit derivatives, the exchanges aim to provide a cleaner, more efficient way of trading credit risk. In essence, they hope to alleviate many of the problems facing the OTC market and ensure full transparency of the product and pricing mechanisms.

Eurex's Coup

Eurex jumped ahead of the other exchanges in 2005 when it secured the rights to license the iTraxx indices. Eurex subsequently sought advice and input from the OTC dealer community when designing the futures contract. As a result, the

iTraxx credit futures will closely mimic the risk structure of CDS traded in the OTC market. The contract will be based on the 5-year series with a fixed coupon and semi-annual maturity dates, March and September. Contract size is €100,000 and the tick size is set at 0.005%, which equals €5 per tick. The future will be cash settled, with the settlement price reflecting the iTraxx index value determined by the International Index Company, the index provider. In the case of a credit event, the existing credit futures contract will continue to trade, but Eurex will list a separate futures contract based on the new version of the underlying index with the affected entity removed. Settlement of the defaulted single name CDS will be made with reference to the ISDA CDS protocol with the timing of its settlement dependent on when a recovery rate is set.

A major hurdle for Eurex will be gaining the support of the OTC dealer community. When talks were first initiated with the IIC and the OTC dealer community several years ago, the iTraxx was in its infancy and it was not obvious just how huge this product would become. So the dealers were keen to discuss any potential avenue to expand their market and ultimately their revenues. Since then, the indices have been embraced by fixed income dealers, investment banks, large hedge funds and many regional banks in order to speculate on the credit market and hedge their portfolios. Liquidity runs deep with single trades sometimes running into the billions. Competition for investor business among the OTC market makers is intense and tight bid-offer spreads have reduced dealers' profit margins considerably. As a result, this part of the market is considered a fairly "plain vanilla" product, and one can see why Eurex would see the market as ripe for the introduction of an exchange-traded derivative on the index. But with daily trading volumes in the iTraxx reaching €25-30 billion, Eurex has its work cut out for it in matching the liquidity of the underlying.

Many of the top OTC dealers are skeptical of the need for credit derivative futures. It is possible that the OTC dealers with a smaller foothold in index trading will be the first to embrace the iTraxx future in order to increase their trading volumes. Most futures desks are supportive of the product, but it will be the OTC index traders who will trade the future and provide liquidity. Without the support of the top OTC dealers, credit deriv-

ative futures are unlikely to give the OTC contract a run for its money, at least in the short term.

An Untested Market

Many market players are concerned with the timing of the launch, given the relative immaturity of the underlying market. There have been many changes and improvements in CDS contracts over the last 10 years, and it is likely we have not seen the last of any structural changes in the OTC contract.

One major concern is the fact that the ISDA settlement protocol has never been tested in Europe. The European credit market has been buoyant for the last few years, and it is not clear what would happen in the face of a major default. It is expected that the market would replicate the same ISDA protocol as used in the U.S. but since this has not been tested yet, some are cautious.

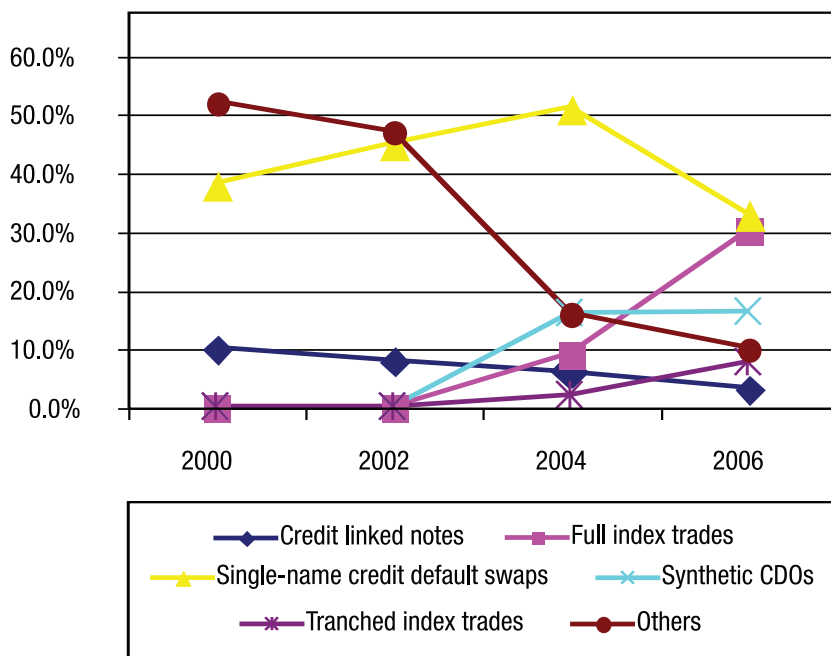
Potential OTC settlement issues following a credit event were highlighted in the U.S. with the bankruptcy of Delphi in 2005. Given the demand from protection buyers looking to source bonds and speculators anticipating a short squeeze, the price of Delphi bonds rose considerably immediately after bankruptcy. This radically distorted the financial payout of the original derivatives trade and caused disorder in the cash market.

The Delphi situation was intensified by the very large notional exposure in the form of single-name CDS, index trades and synthetic collateralized debt obligations relative to the notional amount of deliverable bonds outstanding. If protection buyers could not source enough bonds to deliver to protection sellers, they ran the risk of not receiving their contingent payment.

Since the growth in the credit derivative market is effectively unlimited due to the synthetic nature of many credit derivative structures, these settlement issues needed to be addressed. Now that the option of a cash settlement procedure has been incorporated into the ISDA protocol, such derivative trades should perform as expected.

There is also concern that the ISDA protocol does not address the settlement issues that surround a restructuring credit event, one of the standard credit events in the underlying iTraxx index. All are issues that lead one to question whether the broader investor base will want to see a more stable OTC contract before taking risk exposure via the Eurex future.

Product Type Breakdown



Source: BBA – Credit Derivatives Report 2006

On the flip side, the benefits of a standardized exchange-traded contract are evident: no counterparty risk, no ISDA agreements, no novation issues, efficient trading and execution, a totally transparent pricing mechanism, a daily mark to market, not to mention the freeing up of valuable credit lines.

Several factors will determine how quickly current iTraxx users switch to trading the future. Liquidity will be the primary factor but there are also the issues of existing positions, having to re-hedge one's entire portfolio every six months as the future expires plus the comfort of sticking to what one knows works. Eurex' success hinges on tapping into a new set of participants, in particular asset managers and investors facing hurdles to trade the OTC contract. Barriers to entry in terms of the amount of infrastructure that is required have meant many managers are simply not using the OTC instruments. Perhaps the credit futures price transparency and ease of trading may be the catalyst many investors have been looking for. But how deep does such demand run? Although the credit derivatives market has seen phenomenal growth over the last five years, their use is concentrated amongst the most sophisticated of investors. How educated is the

broader investor community within the credit derivatives space and how comfortable will they be in taking credit exposure in such a way? These questions highlight and articulate what is seen as a major constraint for the future growth of the global credit derivatives market, namely education of the investor space.

Deeper Waters in the U.S.

This issue is even more prominent when considering the U.S. market. Although the credit derivatives market was initially developed in the U.S., innovation in CDS over the last five years has been driven by Europe. Perhaps given the size of the U.S. credit market, dealers and investors alike have not felt the need to embrace new products in the same way as their European counterparts have. With the U.S. being a very dealer driven market, the U.S. exchanges may find it even harder therefore to penetrate the market in the early stages.

Despite plans to merge, the CME and CBOT are still operating as separate entities and have chosen to pursue separate strategies. The CME will list a credit derivative future on single name CDS, referencing just three entities at launch: Jones Apparel, Tribune and Centex. The CBOT favors the index route, but has not disclosed any details

of its plans yet. The CBOE also intends to launch credit default options on up to 10 single names, and is seeking regulatory approval from the Securities and Exchange Commission.

Each of the U.S. exchanges' proposals deviates significantly from the standard OTC contract. The CME initially included all six events under ISDA 2003 documentation (failure to pay, restructuring, bankruptcy, obligation default, obligation acceleration or debt payment moratorium) but in January it revised the proposed contract design to cover just one type of credit event. The CBOE outlines failure to pay as well as other credit events it may choose to include. Aside from credit events themselves, the proposed payouts as a result of a credit event differ too. The CBOE elects a 100% payout while the CME has chosen a set 50% recovery rate.

Is the key to success to replicate the underlying OTC contract, as Eurex has done? Or is it to develop a whole new product based loosely on the underlying OTC market but with separate, distinct terms and conditions, as the U.S. exchanges are hoping? Two fairly different strategies but which will investors embrace? Only time will tell.

Aside from specific product issues, it is also worth considering differences between the U.S. and European markets. As we touched on earlier, the U.S. is a more dealer-driven market. Without the support of the OTC dealer community in providing consistent, tight markets, success will be harder to achieve. In addition, if the competition among the U.S. exchanges divides liquidity, it may hamper the success of the contracts. In contrast, Eurex is currently the only European exchange with a credit derivative future ready for launch. Euronext.liffe has plans to create a contract based on CDS but has not yet submitted a specific proposal.

Many of the same benefits mentioned for the index futures product apply to the single name credit futures, namely reduction of counterparty risk, settlement ease, streamlined documentation and a transparent market place. Additional hurdles however, may make it more difficult to achieve success in the single name space. There are hundreds of reference entities to choose from and determining which of these will

most whet investor appetite will be challenging. The CME chose its three specific credits based on industry sector, the level of activity in the five year CDS market and credit ratings on the assumption that the less creditworthy the name the higher the need for protection. All very logical but a riskier strategy perhaps than futures on an index with greater standardization and a more established user base. As investors continue to chase yield however, the high yield and emerging market sectors have become ever more attractive compared to the tight spread levels seen in investment grade credits. Perhaps the CME's approach will indeed yield greater success? On this note, several European market participants canvassed for this article have considered the launch of a future on the Itraxx Crossover Index a more shrewd bet than the

trade for fear of losing margins, clients or trading volumes. However, over time, these interest rate swap futures grew in acceptance. Volumes took off in July 2006 when Goldman Sachs and Citigroup committed to become active futures market makers. In the first three months post their inclusion, average daily volume jumped 4.5 times and open interest over two times. What this highlights is that without the support of the main dealers, liquidity and trading volumes will be compromised but that a futures contract can indeed exist alongside the original underlying product.

Looking Ahead

The introduction of credit derivative futures is a crucial part of the credit derivatives market's development. They will provide more liquidity in the market and give more investors access to credit and the opportunity to hedge. In fact, the futures contract should ultimately help cultivate the OTC credit derivatives market and bring a larger number of participants into

the underlying market. No doubt issues will arise but the markets will deal with them and evolve in the way they always have done. Success in terms of volumes may not be immediate, but that does not mean credit derivative futures will fail. There is no doubt that the credit derivative market presents a major opportunity, but the exchanges have to do more than just hope they get it right, not only by providing relevant products at launch and educating their client base but by being able to weather setbacks and adapt to market needs on an ongoing basis. Only then will they fully capitalize on the phenomenal growth of credit derivatives. ■

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Several market participants consider the launch of a future on the iTraxx Crossover Index a more shrewd bet than the investment grade index future given the investors' search for yield.

investment grade index future given this search for yield. While the U.S. exchanges have approached the CDX consortium of dealers to attain the right to list index futures, they have not yet been successful. Given this, the U.S. exchanges have chosen to create single name products in order not to miss out on the growth opportunities in the credit derivative market.

A Framework for Comparison

An interesting comparison can be made between credit derivative futures and interest rate futures. Those in the credit derivatives market often look to the interest rate derivative markets to see what the future may hold for credit. Interest rate derivative markets started at least 10 years prior to credit default swaps and have grown exponentially with an estimated \$200 trillion outstanding notional in contracts. There have been many product developments along the way from the simple interest rate swaps to the more exotic options on derivatives, constant maturity swaps, locks, caps, floors and inflation swaps. This market while huge has become more commoditized. As experienced with the launch of interest rate swap futures in 2001, the lack of early success is not necessarily an indicator of total failure. OTC dealers were hesitant to