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INTRODUCTION

Every financial deleveraging is a dream shatterer. The boom that invariably precedes each of these events is both caused by and helps foster a climate of unbridled enthusiasm wherein all dreams can come true. Alas, when that Minsky moment arrives calling forth a debt bust and an implosion of asset prices, the emotional character of the marketplace becomes one dominated by fear and dismay: “How could *this* have happened? Just *who* do we need to punish?” Often, the “who is to blame” question is subordinated to histrionics surrounding the role of some new “toxic” asset class.

For instance, it may be worth recalling that the 1990-91 recession was, ostensibly, “caused” by the proliferation of high yield bonds, an asset class brought into the limelight by Drexel Burnham as an “innovative” mechanism to finance acquisitions and LBOs. Perhaps, mused some, if “junk” bonds were prohibited, the excesses of the 1980s could have been averted and the RTC, that multi-hundred billion dollar bailout fund for the nation’s S&Ls, would have never been necessary. In 1994, the culprit was “mortgage derivatives”, a nebulous term which effectively meant any mortgage security which blew a hole in a bond portfolio. 1998 was the year to vilify the emerging market asset class. This go round, one of the perceived villains in the downturn is the credit derivative.

It is now one very, very long year since the government takeover of Fannie Mae and Freddie Mac, the collapse of Lehman

Brothers and the Fed’s extraordinary \$85 billion emergency rescue package for AIG. While the business practices which “took down” these enterprises were all different, market participants quickly realized that in the matter of AIG at least, credit derivatives played a culpable role. Most particularly, a unit of AIG engaged in an (apparently) out-of-control program of using credit derivatives to enhance the short-term profitability of the company. Of course, every nickel of loss that AIG racked up was a nickel earned by some AIG counterparty. Indeed, what appeared to AIG as an income enhancer was, in many cases, viewed by the AIG counterparty as a form of insurance “premium” paid in pursuit of an objective of risk reduction. Hence, was it the credit derivative per se which brought down the house, or the method by which it was employed?

In some sense, this has always been the central conundrum of all financial innovations: to what extent do they enhance the intermediation and dispersal of risk vs. merely facilitating speculation by allowing some to hide or concentrate risk? Or, is a derivative (like most technologies) morally neutral? Indeed, MetWest generally adheres to the notion that, whether the innovation brings a net benefit to the investor depends upon the context within which the “derivatives” are used, and the form and quality of the management controls employed to oversee their application.

However, before engaging in a discussion of the uses (and abuses) of credit derivatives, it may help to review the question: Exactly what is a credit derivative?

CREDIT DERIVATIVES EXPLAINED

Essentially, all derivatives are securities or contracts which derive their value from some other financial asset. For instance, a futures contract on stocks—or soybeans—derives its value from the market price of the underlying asset: that is, the S&P 500 index or the market price of soybeans. A credit derivative derives its value from a so-called “reference” obligation which is ordinarily some corporate bond. In particular, we’ll focus our discussion on the “credit default swap” or CDS, as these have become the preeminent form of credit derivative.

Conceptually, a credit default swap is simply a bilateral contract between two parties, one party being the broker/dealer and the second being the investor. One of these parties is a *buyer* of bankruptcy protection; the other is a *seller* of bankruptcy protection. Buying protection as we will see, is much like being “short” a corporate debt obligation; selling protection in contrast, is analogous to being “long” a credit obligation. This begs the question: what exactly is being bought and what is

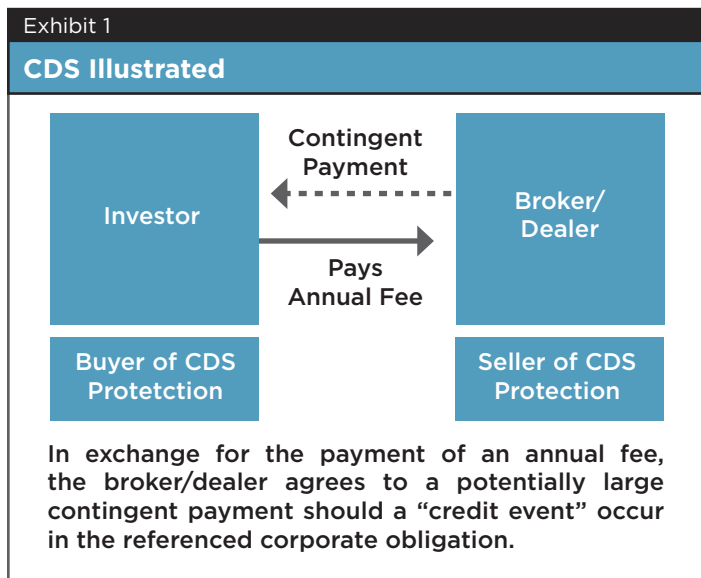
being sold? The answer relates to the reference obligation of the contract.

The CDS can perhaps be best explained using a hypothetical example:

Suppose an investor has a negative view towards the credit of a homebuilding company, ticker BLD. He approaches a broker/dealer and expresses his interest in buying protection on BLD. The broker tells him that the broker is willing to sell protection to the investor at the rate of 100 basis points per year. The investor agrees to the rate and asks for the CDS contract to be established in the notional amount of \$5 million for a period of 5 years. The transaction is consummated with the following result:

1. The investor (protection buyer) agrees to pay the broker/dealer a “premium” of 100 basis points per year (1% per year) on the \$5 million notional value. Hence, the investor is contractually committed to pay the broker/dealer an annual fee equal to 1% of \$5 million (i.e. \$50,000 per year) for the next 5 years.
2. Conversely, the broker/dealer, as the protection seller, receives a fee of \$50,000 per year for the next 5 years.

And, what exactly does the investor get in exchange for his annual \$50,000 fee? Simply this: should BLD experience a “credit event”¹ at any point in the next 5 years, the investor receives a windfall payment dependent upon how severely the price of BLD’s bonds have fallen in response to the event. For instance, if the “event” is the bankruptcy of BLD and, it turns out, that BLD bonds are virtually worthless in the bankruptcy, then the investor receives a payment of approximately \$5 million. But, perhaps BLD experiences an elevated level of stress and elects to play “hardball” with the bondholders by, for instance, failing to make a coupon payment thereby initiating a 30 day “cure” period. While bankruptcy is not yet certain, investors rightly discount BLD’s negative prospects. BLD bonds fall to 50 cents on the dollar. In that event, the CDS would pay the investor an amount roughly equal to \$2.5 million.



Essentially, the buyer of the CDS is expressing the view (or establishing a hedge) that the bonds of a particular company might experience a contractually defined credit event. Indeed the investor is often described as “buying insurance”: he pays an annual premium. If “nothing” happens to the credit, no additional monies change hands. If, however, a “credit event” occurs, the “insurance” policy pays the investor a “claim.” The CDS buyer has a limited obligation: in this example, the CDS buyer can, over the life of the contract, “lose” no more than the \$50,000 annual fee for the 5 years of the contract. Hence, the maximum downside for the investor is \$250,000. In this sense, buying protection in the CDS market is analogous to buying a put on the underlying corporate bond (reference obligation), with the put premium being \$50,000 per year.

The protection seller, i.e. the broker/dealer has limited upside: he can earn no more than \$250,000 for writing the protection, assuming the contract is taken out for the full 5 years. Conversely, the broker/dealer can lose as much as \$5 million on the CDS. In this respect, the protection seller is expressing a view analogous to writing (shorting) a put on the underlying corporate bond. Alternatively, the broker can be thought of as “underwriting” an insurance contract.

The reader will also note that the broker/dealer’s gain/loss scenarios are very similar to the economics of being “long” a corporate bond. Thus, selling CDS protection is very much like buying a corporate bond; buying CDS is much like being short a corporate debt obligation.

Well, if CDS is just another way to go long or short the corporate debt market, why bother with CDS? Why not just use the cash markets to go long or short?

THE USE (AND ABUSE) OF CREDIT DERIVATIVES

The question as to why a CDS market exists in the first place, and what benefits it provides are important ones in understanding this market. First, CDS trading became a gigantic growth industry for its Wall Street sponsors. Ironically, one of the causative factors in the growth of CDS trading related to the regulatory enforcement of increased pricing transparency in the “cash” corporate bond market (e.g. via FINRA’s implementation of the TRACE system). More pricing transparency in the corporate bond market reduced the profitability of corporate bond trading, causing a shift in focus and resource on Wall Street away from corporate bond trading, and towards CDS trading (until the recent implementation of the “Big Bang” protocol, CDS contracts were customized facilitating wider bids/offers and higher trading profits vs. more “commodified” corporate bonds).

¹ In April, 2009 the International Swaps and Derivatives Association (ISDA) updated the protocol governing CDS (“Big Bang” protocol). “Big Bang” both specified terms for “standard” CDS contracts and limited “credit events” to (1) bankruptcy and (2) failure to pay.

Second, while the CDS market has its flaws, the credit default swap has certain unique features which can make it a useful instrument for expressing economically long and short views on particular corporate issuers.

Significantly, there is the matter of cost: the CDS market allows the investor to express a negative view on a credit more readily and at lower cost than would be the case if he chose instead to just short a corporate bond. The buyer of protection pays a fee on a notional balance; in contrast, an investor who would rather short the associated corporate bond needs to first locate someone from whom he can borrow the bond he wishes to short and then needs to pay the full coupon rate to the short counterparty. Crucially, the CDS market also protects the “short” against the risk that the investor runs when he outright shorts a corporate bond: to wit, if the bond the investor has shorted is “recalled”, the short must find another bond to borrow or else he will be “bought out” of his short at pretty much any price the dealer states. Since CDS contracts are for the term of the contract, the risk of being prematurely bought out does not exist in the CDS market.

For the protection seller, the CDS market affords the investor the ability to go long a corporate name, even when no cash bonds are available for purchase. We at MetWest, for example, were able to write protection (go long) on Berkshire Hathaway bonds in February of this year even when the lean inventories of the dealer community made purchasing Warren Buffett’s bonds a near impossibility.

CDS IN FIXED INCOME PORTFOLIOS

Since CDS protection buying programs are the economic equivalent of “shorting” a corporate bond, such strategies ordinarily have limited downside. Thus, the general impact of such a program on a fixed income portfolio is to: (1) slightly reduce portfolio yield, and (2) provide for the potential of price appreciation in the event that the market price of the referenced corporate bond goes down in value. (Technically, while the CDS contract only pays should a “credit event” occur, the market value of the CDS fluctuates in-line with shifting perceptions surrounding the future likelihood of a company’s bankruptcy risk.) Measured protection buying programs tend to have limited downside. (The “worst case” outcome for shorting a corporate bond is that you pay the counterparty his coupon and then are forced to pay him back at par.)

In contrast, protection selling programs expand the exposure of the portfolio to movements in the corporate bond market as protection selling is the analogue of going “long” a corporate bond. A program of protection selling will simultaneously: (1) increase overall portfolio yield in exchange for (2) underwriting the risk that the underlying corporate obligations fall in value. Thus, a program of protection selling – such as the one used by AIG – can effectively “lever” the portfolio to price volatility in the corporate space.

To better illustrate these contrasting portfolio strategies, consider the impact of a protection buying vs. protection selling program on a hypothetical, well-diversified \$100 million fixed income portfolio yielding 5%. Furthermore, suppose this \$100 million portfolio comprises 100 positions in corporate debt securities, with each position being \$1 million in size. Left to its own devices, this portfolio will generate \$5 million per year in annual income, and fluctuate in market value more or less in-line with the overall corporate debt market.

Suppose the investor wishes to mitigate the volatility (hedge) of the corporate exposure in this portfolio. In that event, the investor buys protection on a portfolio of names in the notional amount of, say, \$10 million at a rate of 100 basis points. What has happened? The portfolio must now pay 1% x \$10 million, i.e. \$100,000 per year in “insurance” premiums. In exchange, a portfolio which had \$100 million in exposure to the corporate bond market now effectively has \$90 million in exposure. Ten million of exposure has been “hedged away” for a very modest fee of \$100,000 per year.

Exhibit 2

CDS In A Fixed Income Portfolio

Portfolio 1: Pre Hedge	Portfolio 2: Post Hedge
<ul style="list-style-type: none"> • \$100 million in market value • 100 corporate bond positions • Market value tracks overall corporate asset classes 	<ul style="list-style-type: none"> • \$100 million in market value • 100 corporate bond positions • \$10 million in notional purchased CDS • Portfolio volatility 10% lower than over corporate market • Yield of portfolio slightly reduced

Conversely, suppose the investor wishes to have more exposure to the corporate bond market than is already implied by the \$100 million “long” position in corporates. In that event, he might sell (write) protection on an additional \$10 million notional in corporate bonds. The portfolio picks up an extra \$100,000 per year in yield but will now rise/fall in value in proportion to a portfolio that is economically long \$110 million in corporate bonds. In a sense, the original \$100 million portfolio is now “levered” to corporates by an additional 10%. One can easily imagine the risks imposed had the investor written not \$10 million in protection but perhaps \$100 million in protection! In the latter case, a 10% price decline in the corporate market (such as was experienced in the 30 days following the Lehman bankruptcy) would wipe out \$20 million!

THE CDS MARKET TODAY

The credit default swap was reportedly invented in 1997 though, as a practical matter, trading in CDS was quite limited until the early “oughts” (i.e. 00’s). However, by the middle years of this decade, under the laissez-faire Greenspan Fed and the relaxed regulatory environment of the capital markets, the notional dollar value of CDS outstanding had grown to the tens of trillions, a multiple of the size of U.S. GDP. Somewhat shockingly, this growth occurred entirely within the context of an over-the-counter market: no clearinghouse or exchange existed, hence transparency as to how large a given counterparty’s exposure was to another was quite limited; nor was there any centralized mechanism to ensure performance of the CDS obligations of a financially strapped counterparty.

In the wake of the Lehman bankruptcy and near collapse of AIG, the regulatory oversight of CDS began to tighten. The first change involved the late 2008 announcement that DTCC would release information surrounding all CDS trades settled through its systems. Earlier this year, a central clearinghouse for CDS trades was established. Hence, going forward, the risk of non-performance by a counterparty to a CDS trade has been mitigated. Additionally, as alluded to earlier, CDS contracts have now been substantially standardized, allowing for eased fungibility, monitoring, and enhanced pricing transparency.

Collectively, these actions have represented something of a sea change for the CDS market. And, while it may be premature to judge what the longer term impacts on the CDS market will be, we would suggest that these regulatory initiatives will assist in the maturation of this market and bring it fully into the “mainstream.” Likely as not, disputes as to whether a “credit event” has actually occurred will be minimized. The ability to find ready market prices for the better standardized CDS will be enhanced. And, the need to both carefully limit exposure to

weaker broker/dealer counterparties and to carefully manage the posting of margin will be reduced with the advent of the centralized CDS exchange.

Collectively, these changes should improve both the liquidity and the transparency of the CDS marketplace while reducing counterparty risk. And, while the profitability of individual CDS trades to a given Wall Street firm will be reduced, the additional stability these changes should provide the market should allow for the continued participation of the market makers in CDS.

CONCLUSIONS

As is the case with any financial instrument, a credit default swap brings with it certain capabilities as well as certain risks. Some programs involving the selling of credit protection have evidently been improperly controlled and monitored, while the sheer size of the CDS market (the notional value of CDS contracts is in the tens of trillions of dollars) does suggest that for the vast majority of participants, the risks associated with their CDS strategies were appropriately controlled.

MetWest believes that CDS can play a constructive role in a fixed income portfolio provided that the CDS strategies are integrated and governed. Hence, capabilities need to be in place to fully understand the legal documents which govern CDS, e.g. the ISDAs and associated credit annexes. A well established middle-office infrastructure is also necessary to ensure that a process of collateral posting to/from the CDS counterparties is managed in a timely fashion. One of the primary benefits of the CDS market is the ability to purchase protection so as to help insulate a bond portfolio during periods of credit deterioration; additionally, we see the occasional use of protection selling as being useful when the establishment of long positions can be effectuated when cash bonds are not available, or available at higher implied prices.

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