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## **An Overview of Credit Default Swaps**

### **I. Introduction**

The financial community has become intimately familiar with Credit Default Swaps (CDS) since their advent in the 1990's. However, the recent upheaval in credit markets has brought the term "CDS" into the mainstream vernacular. In fact, "CDS" may have taken over "sub-prime" as the most vilified investment vehicle in recent memory. Even primetime television shows such as "60 Minutes" have featured segments on CDS and their role in the financial crisis and the failure of firms such as Lehman Brothers and AIG. While the premise that CDS were a prime cause of the financial crisis may be rather naïve, the size of the market (estimated at \$38 trillion) and the fact that it is largely unregulated make it a prime candidate for criticism. The goal of this paper is to separate fact from fiction and to explain the mechanics of CDS and how they can be used in managing investment portfolios.

### **II. Credit Default Swaps**

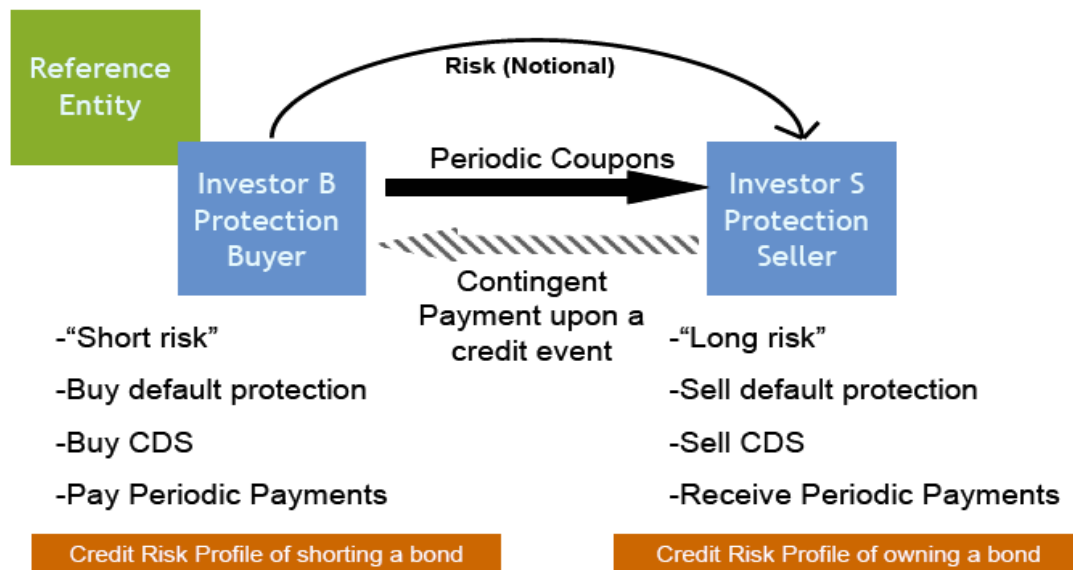
A credit default swap is an agreement between two parties to exchange credit risk on a particular bond issuer (a corporation or sovereign entity) known as the "reference entity." The buyer of CDS is buying protection against a default by the reference entity and pays a fee for that right. The seller of CDS is selling protection against that default and receives the fee. If the reference entity's credit worthiness deteriorates, i.e. its credit spread widens, or the entity defaults, the protection buyer profits. Vice versa, if the credit improves, i.e. the credit spread tightens, the seller profits. In some ways, selling protection provides a similar credit risk position to owning a corporate bond; the seller of CDS is long risk. Correspondingly, the buyer is short risk.

Standard uses of CDS include:

- A. Hedging existing portfolio credit risk, e.g. buying protection on an issuer(s) owned in the investor's portfolio; in this case the investor could be a money manager that is unable to sell a cash bond for accounting reasons or a bank that has significant lending commitments/exposures to a particular client;

- B. Expressing pure credit views independent of existing exposures, e.g. buying or selling protection on a single entity or a portfolio of entities; an investor might want credit exposure to a company like Microsoft that does not have any public bonds outstanding or a non-financial corporation may want to hedge significant exposures to a particular customer or vendor;
- C. Creating basis trades by simultaneously buying a cash bond and CDS of the same entity when the spread on the cash bond yields more than that of buying CDS; a basis trade essentially locks in a spread and creates a risk free asset (basis trades are free of default risk but still carry counterparty risk which is discussed in more detail below)

The mechanics off a standard CDS are shown in the exhibit below:



In general terms, if the reference entity defaults, a credit event is triggered and the seller of protection pays a contingent payment to the protection buyer (Note: Credit events and all other triggers and factors governing the legalities of CDS are defined by the International Swaps & Derivatives Association (ISDA). Investors cannot buy or sell CDS without an executed ISDA agreement with a counterparty such as a bank and/or broker dealer. There is significant momentum in Washington and by some participants

in the investment community to create a central exchange/clearing house similar to that of futures and options).

In general, credit events include a bankruptcy, failure to pay or restructuring. Upon the triggering of a credit event, the buyer of protection has two options in which to settle the CDS contract. If the buyer owns a deliverable obligation of the reference entity, e.g. a senior corporate bond of Lehman Brothers, the bond can be delivered to the CDS seller in return for the full par value, i.e. 100 cents on the dollar. For example, if the buyer had purchased \$5mm notional five-year CDS (five-year maturity is the standard on CDS) on Lehman Brothers, the CDS buyer could deliver a Lehman Brothers bond in return for \$5mm. Alternatively, the buyer of CDS can elect to cash settle the contract in which he would receive 100 cents on the dollar less the recovery value of the issue. The recovery value is determined by ISDA using a Dutch Auction process. In the case of Lehman Brothers, the recovery value was settled for just under 10 cents on the dollar, which would equate to a cash payment just in excess of \$4,500,000 for the buyer of \$5mm Lehman CDS.

Other important CDS considerations include counterparty risk and accounting rules. Regarding counterparty risk, consider the case of Lehman Brothers where investors bought and/or sold (in the hundreds of billions of dollars) protection from Lehman (as market-maker/counterparty) across the spectrum of reference entities in single name, portfolio, and securitized CSO (collateralized synthetic obligations) format. Those investors are now general creditors in the bankruptcy of Lehman Brothers. This has prompted increased pressure to create a central exchange/clearinghouse for the trading of CDS in an effort to remove the systemic risk. Regarding accounting rules, under U.S. and international accounting standards, CDS are considered derivatives and generally require fair value accounting (i.e. mark-to-market). Under certain circumstances, it is possible to designate CDS as hedges and therefore to use standard book accounting.

In summary, while CDS provide a broad set of users (investors, banks, corporations, etc.) the ability to manage credit risk in ways not feasible in the past, there are clear needs for better regulation and transparency. The creation of a central clearinghouse/exchange would remove both the issue of counterparty risk that was present in case of Lehman Brothers and systemic risk in the case of AIG since CDS users would need to post margin against mark-to-market changes. It is likely the large commercial/investment banks would oppose such a clearinghouse since CDS trading is a profitable part of their business.

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