

On September 16, 2008, the Federal Reserve Bank of New York, part of the U.S. central bank, made an extraordinary \$85 billion loan to American International Group (AIG). AIG, the largest insurance company in the world, was on the verge of collapse because it had sold roughly \$500 billion worth of *credit default swaps* (CDS).

What is a CDS? What functions does it serve? How has the market for CDS evolved? How did it influence the 2007-09 financial crisis and the policy response?

What is a CDS? A CDS is a form of insurance. It is a *credit derivative* that allows lenders to insure themselves against changes in borrowers' credit ratings. In the case of a CDS, the purchaser makes payments – like insurance premiums – while the seller agrees to pay the buyer *if* an underlying loan or security defaults. The CDS buyer pays a fee to transfer the risk of default – the credit risk – to the CDS seller. A CDS agreement often lasts several years and requires that the seller of the insurance provide collateral to ensure that the buyer will be paid in the event of default. The collateral for a CDS typically varies with the credit rating of the swap counterparties. The purpose of the collateral is to limit counterparty risk over the life of the swap (see the Chapter 5 module: Systemic Risk).

Using CDS. The use of CDS allows a lender to make a loan without facing the possibility of default. By combining a loan with a CDS to insure against default, a lender who is good at identifying attractive loan opportunities and collecting the loan payments is able to focus on the part of the business where he or she has expertise, letting someone else worry about the default risk. The idea is that this division of labor can make resource allocation more efficient (core principle 4).

Market for CDS. The market for CDS expanded astronomically in the years before the financial crisis of 2007-09, but then shrank rapidly. The volume of CDS (based on the initial value of the underlying assets) was about \$6 trillion at the end of 2004 and soared to \$58 trillion at the end of 2007, before falling back to \$42 trillion a year later (see Figure 1).

The meteoric rise and fall of the CDS market indicates that many buyers used CDS not to insure the risks of assets that they held, but to place bets on the probability that a borrower will default. An investor may purchase CDS to benefit from a rise of default risk even if they do not own the underlying asset. Investors who believe that default risks for a security are higher than market prices imply can buy a CDS to profit if their view proves correct. The unusually narrow credit spreads that prevailed in many markets prior to the financial crisis probably encouraged this use of CDS.

Role in the Financial Crisis. CDS affected the financial crisis and the policy response in three important ways:

- 1) by creating uncertainty about who ultimately bears credit risk;
- 2) by making the leading CDS sellers mutually vulnerable in a way that fostered systemic risk (see the Chapter 5 module: Systemic Risk);
- 3) by making it easier for sellers of insurance to assume risk.

First, the ability to transfer credit risks through CDS makes it difficult to evaluate the riskiness of specific intermediaries. The problem is that the amount of CDS a bank buys and sells is not reported on their balance sheet. This lack of disclosure makes it much more difficult for a bank's counterparties (its depositors or the investors who purchase the bank's bonds or commercial paper) to tell how risky it is. Put another way, CDS can make the true riskiness of a financial institution invisible.

This loss of transparency made the financial system as a whole more vulnerable to a shock that threatens trust in counterparties. For example, when subprime mortgage defaults soared in 2008, uncertainty about the soundness of many intermediaries rose because no one knew who would face the losses. Was it the holders of the (subprime) mortgage-backed securities (MBS) or someone else who had written CDS to insure the MBS? The result was a decline in counterparty trust that contributed to the collapse in key markets (such as interbank lending).

Second, CDS dealers – the intermediaries that sold the insurance – became collectively vulnerable to a failure by any one dealer, much like a convoy of train cars that can be derailed by the weakest car. How did these institutions – a small group of the world's largest financial intermediaries – become sufficiently interconnected to create such systemic risk?

The answer is that most CDS contracts were traded over the counter (OTC), rather than on an exchange (see Chapter 3 and the Chapter 9 module: Centralized Counterparties and Systemic Risk). In an OTC market, it is impossible for a dealer to know what any customer is doing with others. The problem is like that of someone wishing to avoid a contagious disease. The only way to know how safe it is to come into contact with someone is to know about the health of all the people that that person has previously contacted. In the context of CDS, knowing the riskiness of dealing with any particular customer (a counterparty) requires knowing what contracts they already have with others. When those other contracts are unseen, intermediaries are unable to seek adequate compensation for risk, in contrast with core principle 2.

The lack of transparency in the OTC market helped AIG take the risks that were highlighted at the start of this module. The collateral that AIG's counterparties required was low in good times because of the firm's high credit rating and because no trading partner could see the risks that AIG had assumed in its trades with other parties. When default risks rose during the crisis, AIG faced a vicious cycle of

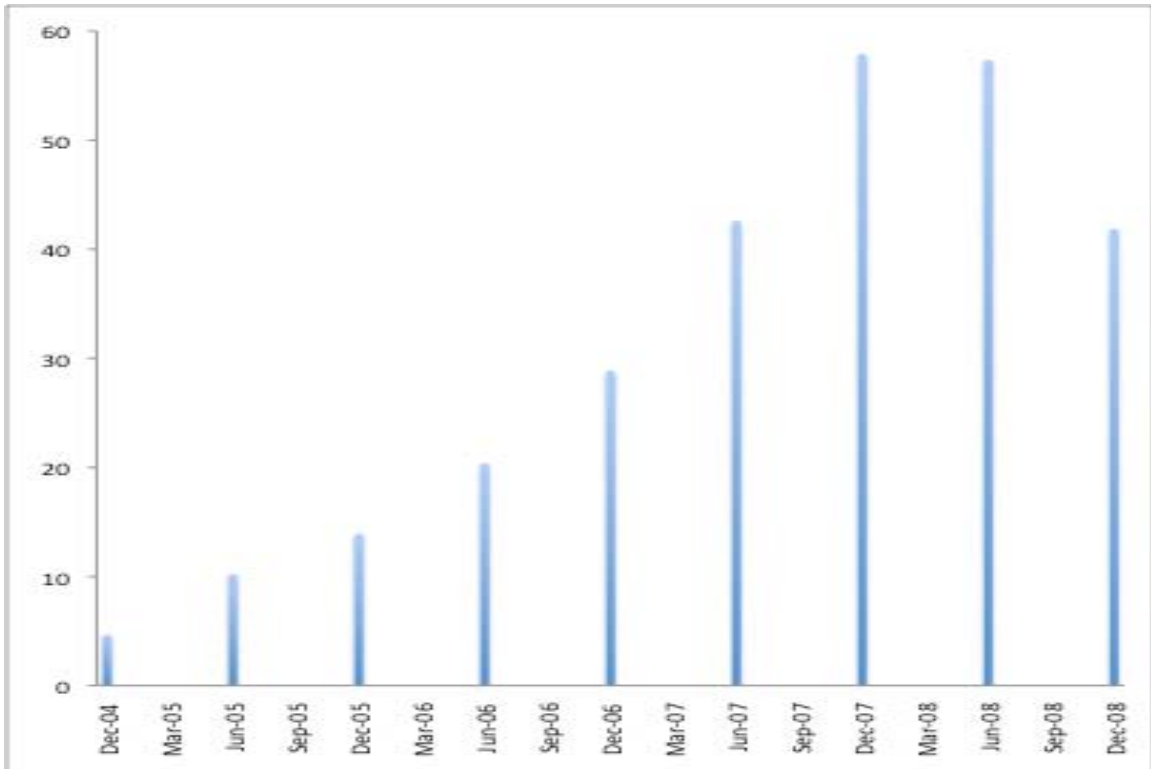
massive losses, potential downgrades of its own credit rating and higher collateral requirements.

Policy actions in the financial crisis of 2007-09 partly reflected the mutual vulnerability of CDS dealers. U.S. officials protected the creditors of Bear Stearns (March 2008) and AIG (October 2008) – both major CDS dealers – in order to prevent a cascade of failures by the world’s largest intermediaries. When officials chose not to protect Lehman’s creditors (October 2008), the resulting collapse of financial markets and liquidity highlighted systemic risks, although not specifically from CDS.

Policymakers have begun to address the systemic vulnerabilities associated with the CDS market, but the process is still at an early stage. In the United States, for example, the Treasury has proposed rules that would shift trading of *standardized* credit derivatives to exchanges, and away from the OTC market. An exchange has both the ability and the incentive to monitor and impose margin requirements on the risk-taking of its dealer members. However, the largest volume of derivative trading occurs in London, and it remains to be seen whether international cooperation will be sufficient to reduce CDS-related systemic risks. Moreover, Treasury’s proposed rules do not affect OTC activity in *customized* derivatives that cannot be readily traded on an exchange.

Policymakers also are assessing other questions posed by critics of CDS. Imagine, for example, that an investor can weaken a firm by purchasing that firm’s CDS. A CDS protects the buyer against default risk. But what if the buyer purchases a CDS without owning the underlying default risk (a so-called *open purchase*)? Increased demand for a firm’s CDS can make the firm *seem* riskier and raise its cost of borrowing. In the extreme, the firm may fail if it becomes unable to borrow. If a firm’s true condition does not warrant such financing stress, open purchases of CDS may be a source of instability that officials wish to limit (core principle 5).

Figure 1. Collateralized Default Swaps Outstanding (Trillions of US Dollars)



Source: Bank for International Settlements.