Central Counterparty Clearing: Preventing the Next AIG

Over the course of the most recent financial crisis, the government, lacking regulatory mechanisms to deal with firms whose failure could cascade throughout the over-the-counter (OTC) derivatives market, was forced to manage the systemic risk posed by large financial institutions on an *ad hoc* and *ex post* basis. Nowhere was this more apparent than with American International Group (AIG). When imprudent trading on the OTC market led to a liquidity crisis that threatened to bankrupt the firm, AIG turned to the government for financial support. The Federal Reserve, and later the United States Treasury, invested $182 billion in AIG over several rounds of bailouts, while other systemically important firms received no funding (Lehman Brothers) and some received no additional support after the first round of bailouts (CIT). These events have demonstrated the need to develop a sound regulatory framework to efficiently manage systemic risk posed by the growing uncleared OTC market.

The heart of the dilemma faced by policy makers in reforming the OTC derivatives market is its size and complexity. In 2008, the notional value of all outstanding OTC financial contracts was in excess of $680 trillion; in contrast, the value of all cleared derivatives traded by private regulated exchanges in 2008 was below $20 trillion in notional value. Given the limitless variation among derivatives (i.e., underlying assets, terms and conditions, etc.) establishing capital requirements and clearing for this market has long been technologically infeasible. Only recently have technology and financial theory reached the point that centralized clearing for both vanilla and complex derivatives is possible.

In our previous work on this topic (Rausser, Balson, and Stevens, 2010), we have shown that systemic default risk is best managed directly through the creation of a central counterparty clearing house (CCP). We have provided a conceptual framework for the market microstructure necessary for a CCP to clear both standardized and complex derivative instruments. Such a CCP would dramatically decrease systemic risk by pricing default risk between the counterparties to an OTC contract and by moderating the financial incentives to accumulate “excessive risk” in OTC markets.

Having demonstrated the theoretical feasibility of comprehensive OTC clearing, we propose an empirical demonstration. Using recently released data on AIG’s derivatives transactions that preceded the crisis, we will provide a detailed study of the effect a CCP would have had on AIG’s derivatives trading. First we will quantify the default risk of each of AIG’s derivatives contracts, using only data available at the origination of the contract. Once we have calculated the default risk of AIG’s portfolio we will determine the price a CCP would have charged AIG to guarantee these contracts. This approach will show how AIG’s risk profile grew over time and how a CCP could have prevented AIG’s failure by increasing clearing fees as the firm’s default risk increased.

Quantifying and pricing the risk of AIG’s derivative contracts is particularly useful because of their complexity. All CCPs that currently offer clearing for derivatives limit their services to a small set of standardized contracts because it is assumed that complex instruments cannot be profitably cleared. Policy makers have accepted this false premise and have proposed inefficient measures to manage the OTC market’s systemic risk, including excessive capital requirements. This research will demonstrate that there are incentives for both the private and public sectors to clear all derivatives contracts, regardless of their complexity, and burdensome legislation is not needed to reduce the systemic risk of the OTC market.