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## Statement of the Financial Economists Roundtable on Reforming the OTC Derivatives Markets

Financial Economists Roundtable (FER)

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*Statement on*  
**Reforming the OTC Derivatives Markets**

The Financial Economists Roundtable (FER) is a group of senior financial economists, who have made significant contributions to the finance literature and seek to apply their knowledge to current policy debates. The Roundtable focuses on microeconomic issues in investments, corporate finance, and financial institutions and markets, both in the U.S. and internationally. Its major objective is to create a forum for intellectual interaction that promotes in-depth analyses of current policy issues in order to raise the level of public and private policy debate and improve the quality of policy decision.

FER was founded in 1993 and meets annually. Members attending a FER meeting discuss specific policy issues on which statements may be adopted. When a statement is issued, it reflects a consensus among the majority of the attending members and is signed by all members supporting it. The statements are intended to increase the awareness and understanding of public policy makers, the financial economics profession, the communications media, and the general public. FER statements are distributed to relevant policy makers and the media.

The following statement on “Reforming the OTC Derivatives Markets” is the result of a discussion at FER's annual meeting on July 18-20, 2009 at Skamania Lodge in the Columbia River Gorge.

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**Statement of the Financial Economists Roundtable**  
**on**  
**Reforming the OTC Derivatives Markets**

**A. Introduction: Background, motivation, and objectives  
of the Financial Economists Roundtable (FER) report**

The recent financial crisis has focused much attention on our financial institutions and markets, and a major subset of this scrutiny is on the role of derivative securities such as credit-default swaps. These contracts were not the cause of the financial crisis. Rather, many observers trace the crisis to such roots as the housing price bubble, excessive leverage, and the concentration of real estate and other risks within the financial system. Still, as illustrated dramatically during the crisis, derivatives can play a key role in reallocating and transmitting risk, including risk that becomes systemic within the financial system.

One of the main causes of systemic risk is the uncertainty about the financial situation of one's potential trading partners. In periods of market uncertainty, such as at the height of the recent financial market crisis, this uncertainty limited the willingness of financial firms to transact with one another, thereby restricting available liquidity in the marketplace. This restricted liquidity followed from uncertainty about the trading positions of others and to a degree, uncertainty about the pricing of those positions. In addition, the importance of inadequate capital underlying derivatives positions, as illustrated by AIG's handling of its long-term exotic book, has been an important theme to emerge in the aftermath of the crisis.<sup>1</sup>

Even modest uncertainty about the solvency of a particular counterparty can lead financial institutions to cut off trade with one another. Solvency fears led to the demise of Bear Stearns. Uncertainty about the financial viability of counterparties more broadly led to the freezing of the financial system in the aftermath of the collapse of Lehman Brothers and bailout of AIG. The collapse of a significant interconnected individual firm, can stoke the fears of contagion and systemic risk, and set off difficulties for the financial system. In such an environment, bilateral over-the-counter (OTC) contracts face serious risks of inadequate collateral and capitalization. The lack of knowledge of a counterparty's financial situation can lead to fears about its solvency. That outsiders cannot observe the risk management practices

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<sup>1</sup>For example, see Brady Dennis, "Bernanke Blasts AIG for 'Irresponsible Bets' that Led to Bailouts," *Washington Post*, March 4, 2009.

of individual firms causes an intractable problem. The problem will remain intractable to the extent that counterparties cannot pre-commit to their future risk management practices (not for the particular contract, but on an overall basis).

Collateral offers a partial solution to these concerns, but can also contribute to other problems. For example, collateral posted by its customers can lead to unsafe reliance of a derivatives dealer on unsegregated collateral posted to it as a source of financing that could quickly disappear when the dealer becomes weak, as well as a lack of certainty by those posting collateral of their ability to retrieve it quickly if the counterparty were to fail. More broadly, collateral is costly. The world now appreciates in the aftermath of the bailout of AIG that a “AAA” counterparty is not riskless and therefore, certainly needs to post collateral and more generally, that both the riskier and less risky counterparties to a transaction are subject to credit risk and default. Furthermore, even a counterparty who is currently strong needs a viable strategy to be able to post additional liquid assets as its creditworthiness deteriorates as a result of either changes in market conditions or as it leverages its own balance sheet. This discussion emphasizes the considerable systemic risk associated with OTC derivatives in instances when proper collateral is infeasible.

The Financial Economists Roundtable (FER) appreciates the value of encouraging and allowing the reallocation of risk to lower-cost parties through derivatives contracts. It also recognizes the importance of encouraging the development of new tools and financial innovation. The Roundtable offers a series of recommendations that both reflect these perspectives and attempt to limit the systemic risk that can arise as a byproduct of derivatives trading. Furthermore, implementing these recommendations would enhance the competitiveness and liquidity of the markets, while limiting any adverse consequences to financial innovation. The recommendations address such issues as the role of central clearing and the management of clearinghouses and trading platforms, the nature of margin and capital requirements across trading contexts, the transparency of positions as well as prices, competitiveness in trading, price discovery and restrictions on “speculative” trading, such as naked credit default swaps (CDS), and the role of dealers in the management of clearinghouses and trading platforms.

The recommendations would not have avoided completely a financial crisis whose roots were a housing bubble and poor risk management practices. We have learned from the events of the last few years how fundamental economic principles apply to potential policy reforms, which themselves are the subject of broad interest and current discussion by the Obama Administration, the Congress and industry. These issues were the focus of the Roundtable’s annual meeting last summer (July 18, 2009 to July 20, 2009) in the Columbia River Gorge, Washington.

## **B. Summary of Recommendations**

This report highlights a number of important recommendations related to derivatives trading:

- We recommend incentivizing migration of more derivatives transactions to central-clearing facilities by offering more favorable capital requirements to such transactions.

- Analogously, we recommend improved criteria for the collateralization of positions that do not reflect standardized derivatives.
- We support the use of data repository requirements, including unfettered supervisory access by regulators and sufficient information to understand systemic risk exposures in the financial system.
- We support encouraging post-trade price transparency for all sufficiently standardized OTC products.
- We support additional migration of trading in actively traded products to exchanges.
- While we support regulations against market manipulation, we oppose potential restrictions on speculative trading, including holding “naked” CDS.

## C. Safe and Effective Central Clearing

A central clearing counterparty (CCP) is a financial institution whose primary function is to guarantee the performance of over-the-counter and exchange-traded derivatives contracts among its participants. This function is called “clearing.” If two members of a CCP enter a derivatives trade of a type handled by the CCP, they may submit the trade for clearing. The process converts the original trade into two trades, one in which the CCP acts as the buyer to the original seller, and the other in which the CCP acts as the seller to the original buyer. If either of the original parties to the trade later fails to meet its contractual obligations, the CCP will terminate the derivatives contract with that party, but will continue to perform with the other original party, provided that it is able to do so.

In order to guarantee each cleared trade in this manner, the CCP requires each member to post margin, that is, to provide assets, typically in the form of cash or liquid government securities, as collateral to the CCP against the obligations of that member on each of its trades. In addition, each member must contribute to a pooled guarantee fund. In the event that a member fails and the member’s margin account is not sufficient to cover the cost to the CCP of unwinding the failed member’s derivatives positions, the CCP draws the remainder from its other resources, including the capital of the CCP and the guarantee fund. Suppose that a member fails to perform on a derivatives contract. If the cost to the CCP of unwinding its positions with the member is \$100 million, and if the member had posted \$80 million in margin to the CCP, then the remaining \$20 million would be taken from a fund of liquid assets held by the CCP and from the guarantee fund. The layers of financial resources available to a CCP and the order in which they are drawn vary from one CCP to another.

If a CCP is sufficiently creditworthy, it absorbs the cost of unwinding the positions of failed counterparties. This would mitigate contagion--the propagation of default risk from one member to another. Furthermore, a common presumption that the CCP has effectively guaranteed the majority of derivatives positions held by important financial institutions lowers the potential for investor panic during a financial crisis.<sup>2</sup>

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<sup>2</sup>Of course, because the guarantees can create moral hazard, it is important that collateral requirements be appropriate so that costs are largely internalized. Additionally, given the central role of the CCP, it would seem important to be careful to ensure the adequacy of the collateral that the CCP obtains, to tightly supervise it and even

Beyond simply absorbing the default exposures of its members, a CCP can actually lower average exposures significantly through the effect of “multilateral netting.” To illustrate, suppose Bank A has derivatives positions with Bank B that, before considering clearing or collateral, expose B to the potential loss of \$100 million. Similarly, suppose that Bank B has positions with Bank C that expose C to the potential loss of \$100 million. Finally, suppose that Banks C and A have positions that expose A to the loss of \$100 million if C fails. If all of these positions are cleared at the same CCP, then these current exposures are eliminated.<sup>3</sup> Once cleared, the CCP’s positions with Bank A have a combined value that is the net of the positive and negative values of A’s original positions with C and B respectively. In the above example this net value is zero. Normally, the exposures of each clearing member to a CCP do not net to zero as in this simple illustrative example, but in many practical situations clearing could result in a significant lowering of average counterparty exposures through the cancellation of positive and negative counterparty exposures.

Another benefit of a CCP is the fact that it has limited discretion to “run” on a member whose financial condition is weakened.<sup>4</sup> Provided that a member continues to meet its contractual membership eligibility requirements and to perform on its cleared derivatives positions, the CCP should not have discretion in deciding whether to continue to clear the member’s trades.<sup>5</sup> This contrasts with cases in which the counterparties of uncleared trades contribute to a run on a weakened financial institution by exiting their positions.<sup>6</sup>

The absence of transparency of exposures to other investors (and even to regulators) was important in the financial crisis and led to much of the disruption of trading that was experienced in the marketplace. An additional benefit of a CCP is that it can provide superior transparency to regulators and the public. Each trade, settlement price, and collateral positions of counterparties that would be cleared is recorded in a manner accessible to the regulator of the CCP. Furthermore, the CCP would be in a position to provide public disclosure of the settlement prices, aggregate amount of trades that it has cleared in each type of derivative instrument, and the terms of each trade, such as collateral and marking-to-market requirements. Later, we discuss the extent to which a CCP should publicly disclose trading information.

A CCP is itself a potential source of systemic risk. The CCP must be able to safely unwind the positions of any defaulting members, while continuing to perform on its positions with non-defaulting members.

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potentially to guarantee its solvency. This is a potentially significant downside with the CCP model. Of course, the scope of the CCP’s decisions is more limited than for a traditional financial institution.

<sup>3</sup>The use of the same CCP is a crucial aspect of the example. To the extent that different instruments are cleared through different CCPs (and indeed, for markets operating in different countries it would be more likely to see multiple CCPs) that would weaken the benefit due to multilateral netting. It is even possible that bilateral netting would be more efficient (for example, suppose there are only a small number of major counterparties).

<sup>4</sup>Whether one should view this as a benefit is not unambiguous, as it may lead to a reduction in market discipline. Indeed, within our group there is disagreement about the extent to which a CCP resolves the problem of runs.

<sup>5</sup>As long as sufficient collateral is obtained, this would not appear to impose costs on the CCP.

<sup>6</sup>Some of the source of the run would be if there was uncertainty about whether the claim to collateral was clear or whether there was concern about the sufficiency of collateral.

The CCP must therefore be well-capitalized and have rigorous and high standards for risk management. This begins with eligibility requirements for members, including objective standards for creditworthiness. The CCP must also have high standards for the amount of margin that it collects from its members. The initial amount of margin on a given derivatives position should cover potential costs to the CCP of terminating the position in an extreme but plausible scenario, recognizing that it may take some time for the CCP to unwind the position, and that the market value of the position could change with uncertainty in the interim. The margin held by the CCP is adjusted daily, up or down dollar for dollar with the estimated change in market value of the position. The cumulative amount of these incremental margin adjustments is called the “variation margin.”<sup>7</sup> Margin should be held in liquid forms, such as cash and Treasury bills.

For each of the types of derivatives that it clears, a CCP incurs significant setup costs, including those for designing methodologies for estimating market values, for designing procedures for unwinding the positions of failed members, and for determining margin requirements that incorporate the volatility of market values and the time that it may take to unwind a position of a given size. The CCP must have personnel that are expert in each of the types of derivatives that it handles. As a result, there can be relatively high fixed costs for each new type of derivative security that the CCP clears.

For financial institutions that are subject to regulatory minimum capital requirements, we advocate that the collateral required to be set aside for a derivatives position be substantially higher if the position is not cleared. This would encourage the greater use of clearing in order to lower systemic risk, and also provide a larger collateral buffer for the financial institution in light of the fact that the performance risk associated with uncleared derivatives is more difficult for regulators to monitor and control. At the same time, we recognize that the presence of some contracts that are not cleared could be efficient. In the next section, we advocate strict regulatory standards for the collateralization of derivatives that are not cleared.

Whether the largest clearing members of a CCP should be permitted to own or control a CCP is not an easily settled matter. The main advantage of vesting the control and ownership of a CCP with its largest members is that, by virtue of their extensive exposure to the performance of the CCP, they have a strong incentive to see that the CCP does not fail. For example, due to the mutualization of risk, they will apply strict credit-quality requirements for membership, and internalize to some extent the benefits of safer clearing standards. Further, if the clearing members share in clearing profits, their incentives to clear a larger volume of trades are enhanced. One disadvantage, however, of a member-controlled CCP is that the benefit to members of the financial soundness of their CCP may be overwhelmed by the cost to the members of setting correspondingly large margin requirements and guarantee funds or exercising market power. They may not wish to incur the cost of appropriately safe standards. In the event that a CCP is owned or controlled by its largest clearing members, the regulators of the CCP must therefore pay close attention to the safe design and operation of the CCP. Of course, close regulatory supervision of CCPs is

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<sup>7</sup>For example, suppose the initial margin on a derivatives position is \$10 million. After one day, suppose that the market value of the derivatives position has increased by \$3 million in favor of the CCP. The CCP then collects a variation-margin payment of \$3 million from the clearing member. If, on the following day, the market value of the position is reduced by \$2 million, the CCP makes a variation margin payment to the clearing member of \$2 million, leaving a total of \$11 million in margin, representing the initial margin of \$10 million and the remaining variation margin of \$1 million.

advisable in any case! Clearing standards should not be so high so as to allow inappropriate exercise of monopoly power by the clearing members.

## **D. Customization and innovation in the OTC market**

The costs and benefits of customization and innovation in the OTC derivatives market are easier to list than to weigh against one another. New financial products are by their nature thinly traded, and are sometimes complex. Some new or customized derivatives products are likely to first appear in the over-the-counter market, and are unlikely to be cleared, at least until the product achieves a critical level of trading activity. We have already discussed the benefits of clearing, which is mainly counterparty risk mitigation and later will discuss exchange trading, which in some instances can improve market competition. In addition, risk taking through highly customized OTC derivatives products is more difficult for regulators to monitor. Further, customized OTC derivatives provide more scope for the less financially sophisticated customers of dealers to be sold products that are unsuitable for them.

The general economic benefits of the innovation and customization of financial products have often been taken for granted, at least by most economists. The efficient allocation of risk among investors relies in part on vehicles by which the risk can be transferred from one investor to another, at a price that reflects the matching of supply and demand. This is a central tenet of modern economic theory.<sup>8</sup>

Derivatives have been at the forefront of financial innovation. Their economic benefits include flexibility of design and the ability to transfer risks that are not already represented in the marketplace for traded assets. Derivatives also provide “price discovery.” For example, the market pricing of a credit default swap offers a signal of the credit quality of the referenced borrower that is often used for risk management and market valuation. As another example, the pricing of an option often reveals valuable information about the likely future volatility of the returns of the underlying asset (“implied volatility”).

Investors rely heavily on the benefits of many financial products, such as options and interest-rate swaps that are no longer viewed as “innovations.” Of course, every financial product was once an innovation, and it is difficult to know when to draw the line and say, “This is enough.” The trading of common equity shares goes back to Roman times.<sup>9</sup> Forward contracts for rice and other commodities date to the Renaissance.<sup>10</sup> These and most other common and useful financial products began in over-the-counter markets.

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<sup>8</sup>Of course there are exceptions to all theories, and these benefits have recently been called into serious question. For example, former Fed chairman Paul Volcker, a widely respected voice, has recently questioned the economic benefits of financial innovation over the past quarter century, given the experience of the recent financial crisis.

<sup>9</sup>Ulrike Malmendier, W. Goetzmann and G. Rouwenhorst (eds.), “The Origins of Value: The Financial Innovations that Created Modern Capital Markets.” Oxford University Press, August 2005, pp. 31-42, 361-365. [http://www.econ.berkeley.edu/~ulrike/Papers/Roman\\_Shares\\_published\\_090605.pdf](http://www.econ.berkeley.edu/~ulrike/Papers/Roman_Shares_published_090605.pdf).

<sup>10</sup>Schaede, Ulrike (1989). "Forwards and Futures in Tokugawa-period Japan: A New Perspective on the Dojima Rice Market." *Journal of Banking and Finance*, 13, 487-513 and Ali, Paul, “Review of 'Building the Global Market: A 4000 Year History of Derivatives'” by E. J. Swan (2000), University of Queensland working paper, October 2001.



Not all over-the-counter derivatives are designed with the hope that they will eventually become widely traded. Many non-financial corporations, for example, request positions in derivatives that are customized to treat specific risk-management problems that other market participants are unlikely to face. Dealers may provide these customized solutions with one-time product designs, laying off their own risk as counterparty to their customers by hedging with more standardized derivatives. In some cases, a corporation would be unable to achieve favorable accounting treatment if it were to hedge with widely-traded derivatives, because of a lack of sufficient correlation between the particular business risk they face and the returns of widely-traded financial products. Without a customized derivatives hedge, the corporation might avoid hedging, and could thereby incur potential distress costs, or could alternatively forgo some projects that add value, but which are too risky when not hedged.

We recommend tolerance for customization and innovation in the over-the-counter derivatives markets. At the same time we advocate strong regulatory incentives, including differential collateral requirements, for derivatives to be cleared and to be exchange traded. In order for it to be profitable for dealers to provide new over-the-counter derivatives products that are unsuitable for clearing or exchange trading, the marginal benefit of the new product would therefore need to be higher under our proposed regulatory incentives than it has been in the past. Thus, some marginal innovation and customization would stop. Regulatory incentives will influence the decisions of market participants of which derivatives to clear and which to trade on exchanges, by forcing market participants to internalize some of the associated social costs.

On an overall net basis we also advocate improved collateralization and transparency for over-the-counter derivatives, especially derivatives that would not be subject to clearing, so as to mitigate some of the costs associated with these derivatives. These are the subjects of the next two sections.

## **E. Collateralization standards for uncleared positions**

The performance of a party on a derivatives position that is not cleared is often backed by collateral. This is analogous to the margin provided to central clearing counterparties. In its latest survey, the International Swaps and Derivatives Association (ISDA) estimates that roughly 60% of positions are collateralized, mainly with cash. However, separate work in a joint study of the European Central Bank and the Banque de France finds that the frequency of collateralization is only 44%. Dealers frequently avoid collecting collateral from other dealers, from many sovereigns (such as Greece), and from non-financial corporate end-users. Dealers rarely provide collateral to their customers.<sup>11</sup> ISDA estimates that roughly 80% of the collateral provided is in cash.

The collateral held by dealers is typically not segregated, and is therefore available to the dealer as important sources of financing. This lack of segregation is a key source of concern. As most OTC derivatives are not subject to an automatic stay in the event of a dealer bankruptcy, this would normally

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<sup>11</sup>This ties to an important risk management failure during the crisis—derivatives positions by those not posting sufficient collateral facilitated the creation of synthetic leverage and excessive risk-taking.

allow a failed dealer's counterparties to obtain their collateral at the termination of their positions. However, the lack of segregation of the collateral could delay the return of the collateral, and leave its return at some degree of risk. Further, if a dealer's financial condition is weakened, a run by its OTC derivatives counterparties can accelerate the loss of the dealer's liquidity as counterparties exit their derivatives positions with the dealer and request the return of collateral that the dealer had been using to finance its operations.

We advocate regulations establishing safe minimum standards or additional incentives for the collateralization of uncleared OTC derivatives positions. As with our proposal to apply higher regulatory capital requirements for uncleared derivatives, stronger collateralization standards would reduce the systemic risk associated with uncleared derivatives positions. Further, because providing collateral is costly, increasing the collateral required on uncleared derivatives would also provide an incentive to reduce the fraction of derivatives positions that are not cleared. Likewise, we advocate that the collateral held by dealers on their OTC derivatives positions be segregated in a manner consistent with the preservation of customer and counterparty collateral in the event of failure of a dealer.

## **F. Data Repositories**

Data repositories for over-the-counter derivatives would provide regulators with detailed supervisory trading information. Whether or not a trade is cleared, its counterparties, execution time, and terms, including arrangements for posting collateral and other relevant information for monitoring credit exposures, should be recorded in a data warehouse to which regulators have full access. If properly designed and executed, repositories allow regulators to detect excessive risk concentrations, for example dangerous risk levels by a given entity, or excessive credit exposures to a particular counterparty. Data repositories could also be useful when monitoring for market manipulation or insider trading.

“Connecting the dots” from trade repository data to perform these supervisory regulatory functions, may require collating and analyzing data from many different trades on different types of derivatives, likely spanning various different data repositories. The ability of a regulator to use data repositories effectively therefore depends on relatively standardized data structures.<sup>12</sup>

Much of the information to be held in data repositories should not necessarily be made public, at least in real time. For example, publishing the positions held by each individual investor would make it difficult for investors to create or liquidate large positions at relatively competitive terms. This would inhibit investment by speculators in fundamental information and reduce the incentives of investors to absorb large positions when other investors wish to exit their positions. As a result, market liquidity would decline in a harmful way.

Data repositories can, however, offer useful public disclosure of aggregate market-wide position data, just as is currently done by the Trade Information Warehouse of the DTCC, which regularly disseminates the

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<sup>12</sup>XBRL could provide one such model.

aggregate notional amounts of credit default swaps referencing each widely followed borrower. By virtue of the public disclosure of aggregate position amounts and data on concentration of positions, market participants would be better informed about the general allocation of risk in the market.<sup>13</sup>

## **G. Price Transparency**

The difficulty with which investors shopping for a position in a financial instrument can determine the “going price” and find a suitable counterparty are often a concern in over-the-counter markets. The broker-dealers who serve as middlemen earn accounting profits from being, or finding, the suitable counterparty. Without a central marketplace and the automatic trade reporting that accompanies it, search costs can inhibit efficient risk transfer.<sup>14</sup> In 2002, regulators of the over-the-counter market for U.S. corporate and municipal bonds mandated a post-trade price transparency system, known as TRACE, which provides the price and time of trade of almost every individual transaction, after a brief delay, such as 15 minutes. TRACE also provides some information on the size of each trade. TRACE resulted in a substantial reduction in trading costs (such as bid-ask spreads) in the relevant markets.

We advocate a TRACE-like post-trade price transparency system for any class of over-the-counter derivatives that is actively traded. For a trade in any type of derivative instrument that is eligible for clearing, the public should have access to data on the basic terms of the trade, the precise time of the trade, and the quantity of the trade within given ranges, should be made available to the public in some type of prompt disclosure system. This disclosure should be provided whether or not the trade is actually cleared, so as to mitigate the potential for avoidance of disclosure through a failure to clear. Customization of derivatives in order to avoid disclosure should also be prohibited. (The incentive for spurious customization is already dampened if our recommendation of higher capital requirements for uncleared trades is adopted.<sup>15</sup>)

There is currently an insufficient degree of price transparency in some standard OTC derivatives markets despite the use of such mechanisms to provide transparency as “dealer runs,” electronic trading platforms, and end-of-day price reporting by central clearing counterparties. A dealer run is a collection of indicative bids and offers provided by dealers, and disseminated by email or on the screens of financial news services. The prices disseminated in dealer runs are not executable; they are simply indications of willingness to trade. Further, dealer runs are not available to the general investing public. Likewise, electronic trading platforms provide indicative bids and offers, but only to a narrow set of investors such as dealers, and most often not in executable form. These alternatives, dealer runs and electronic trading platforms, do not rise to the level of price transparency of an exchange, or even of a post-trade price

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<sup>13</sup>This is analogous to the longstanding required periodic disclosure of total short interest exposure to stocks.

<sup>14</sup>Central trading isn’t strictly necessary for transparency. Indeed, in recent years the United States equity markets have become much less centralized (as reflected in market share data), but closely integrated due to electronic linkages. In fact, the equity markets have strong ex-post transparency, as reflected by public reporting of trades, and even considerable ex-ante transparency in many trading platforms.

<sup>15</sup>If dealers tailor contracts to meet accounting-based correlation needs of customers, then dealers would need to recognize the resulting basis risk in their own capital requirements.

reporting system such as TRACE, which gives a time stamped execution price and some accompanying quantity information. Even the publication of end-of-day prices established by CCPs, would provide insufficient information from which to judge intra-day executable prices, so we also advocate post-trade price reporting. The main purpose of end-of-day price reporting is to establish marking to market prices for the purpose of collateralization of positions at the CCP.

## **H. Migration of Trading to Exchanges**

For actively traded types of derivatives, exchanges provide levels of price transparency and competition exceeding those of the over-the-counter market. Furthermore, exchange-traded derivatives positions are inherently cleared. We recommend the migration of trading from the OTC market to exchange markets for any type of derivatives instrument for which trading activity is above some specified minimum. Some derivatives products or products customized to specific risk-management needs may continue to exist in the over-the-counter market, unless and until they reach a level of trading activity required for efficient exchange trading.

However, once a high level of trading activity is established in an OTC derivatives product, there is an unfortunate impediment to its voluntary migration to exchange trading. Customers for these products have an incentive to trade in that market providing the greatest current level of liquidity. That is, once the liquidity of a market is established, dislodging trading from that market to a superior market structure will be difficult unless required by higher level authority. Dealers derive substantial profits from the intermediation of actively-traded OTC derivatives. They do not have an incentive to foster the migration of derivatives trading to exchange markets, where bid-ask spreads may be narrower and where ultimate buyers and sellers can trade directly with each other, rather than through a dealer. The potential ability of ultimate buyers and sellers to trade directly with one another (e.g., being able to access direct limit orders) would be important for ensuring relatively greater competition and tighter spreads and even more efficient pricing, as illustrated in the equity context by the NASDAQ order-handling rules in the 1990s. Thus, such migration should be encouraged.

The financial market crisis emphasizes the central importance of high quality valuation of derivatives for collateral adjustments, capital requirements and the market valuation of financial institutions. For example, a recent media report highlighted a significant dispute about pricing mortgage derivatives between AIG and Goldman Sachs in January 2008,<sup>16</sup> which reportedly led to collateral demands that were not consistent with third-party valuations.

## **I. Speculative Position Limits can be Harmful**

Speculation and hedging are important activities that should not be limited, except to control systemic risk and market manipulation. When an investor seeks a risk reduction with a derivatives position, there is

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<sup>16</sup>“Quiet Conflict with Goldman Helped Push AIG to Edge,” Gretchen Morgenson and Louise Story, *New York Times*, February 6, 2010. <http://www.nytimes.com/2010/02/07/business/07goldman.html?pagewanted=1>

only a small probability that another investor seeking risk reduction with an equal-and-opposite derivatives position will arrive in the market at the same time. More likely, an investor will purchase a hedge from a speculator, who is willing to take on risk in order to earn an expected profit.<sup>17</sup> Likewise, when an investor who has an established derivatives position must quickly liquidate that position, the most likely natural counterparty is a speculator.

In addition to risk bearing and liquidity provision, speculators have the profit incentive to gather fundamental information, which is then impounded into market prices in a manner that is often socially beneficial. For example, the pricing of credit default swaps (CDS) is a measure of borrower creditworthiness. Yet some policymakers have suggested that “naked” CDS positions are not appropriate. The imposition of speculative position limits could dampen the incentive of speculators to gather fundamental information, and thereby reduce the quality of price discovery provided by derivatives markets. Limits on speculative position sizes that are designed purely to reduce speculation are likely to reduce market efficiency. We recommend against position limits that are designed to achieve this objective. We reaffirm the importance of speculative trading to our capital markets.

Position limits that constrain an individual entity (or coordinated group of entities) from holding a large fraction of the aggregate market-wide gross notional amount of derivatives on a given underlying asset class may nevertheless be appropriate in order to reduce the potential for market manipulation or to reduce the likelihood of severe market disruptions that could occur when holders must quickly unwind large positions. The imposition of carefully constructed capital requirements and collateral standards can be effective, possibly in combination with position size limits, when the objective is to lower the risk that a holder of a large fraction of the entire related market must unwind on an emergency basis.

## **J. Conclusions**

In this report, the FER offers perspectives on the role of derivatives trading in the financial market crisis and highlights a number of ways in which the regulatory framework can be improved to enhance economic welfare. For example, we would use differential capital charges to provide further impetus to the migration of derivatives transactions into clearing houses and exchange-based trading as well as providing improved collateral standards. Using a clearinghouse system could limit the systemic risk experienced due to the failure of individual derivatives counterparties and also ensure that rigorous and uniformly set collateral is obtained ex ante on contracts through the clearinghouse. It is equally important to have rigorous and uniform minimum collateral standards on contracts that are not cleared. We also would encourage exchange trading of derivatives as well as fuller public disclosure of transactions prices in the over-the-counter market in order to improve the quality of market pricing and the efficiency of risk allocation. The use of a clearinghouse and exchange-based trading are complementary notions, though focusing upon different facets of the trading process.

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<sup>17</sup>Additionally, it can be difficult to distinguish between a speculator and hedger and easy to misclassify a hedger as a speculator.

As we conclude, we highlight a few salient observations. While the Roundtable believes that transparency of pricing and exposures helps the market, both in promoting competition and increasing the quality of market valuations, the term “transparency” has a range of meanings. In particular, consistent with its usage by financial economists, we have in mind transparency to the investing public—which means public disclosure of transaction prices. Regulators, however, often focus upon a narrower view—transparency to government officials. We encourage greater transparency of pricing—greater public revelation of transactions prices. While we agree with encouraging migration of positions to clearinghouses, we also would like to encourage further migration of over-the-counter trading to exchanges in order to increase the competitiveness of these markets and the efficiency of their pricing. One disturbing aspect of some statements of policymakers concerning derivatives trading is their failure to appreciate the value to the marketplace of speculative trading, including naked credit-default swap positions. Beyond that we fear regulator support for position limits (and even outright bans) to an extent not justified by economic principles or by empirical data.<sup>18</sup> Hedging and speculation are crucial activities in our financial system.

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<sup>18</sup>A somewhat related example in the legislative arena is the Senate proposal to ban major Wall Street institutions (with discount window access or FDIC guarantees) from trading in derivatives. We anticipate that this would reduce liquidity in the markets, widening spreads and increase funding costs to end-users.

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