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REDUCING RISKS AND IMPROVING OVERSIGHT IN THE OTC CREDIT DERIVATIVES MARKET

HEARING

BEFORE THE

SUBCOMMITTEE ON
SECURITIES AND INSURANCE AND INVESTMENT

OF THE

COMMITTEE ON
BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

ON

REDUCING RISKS AND IMPROVING OVERSIGHT IN THE OTC CREDIT DERIVATIVES MARKET

WEDNESDAY, JULY 9, 2008

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WEDNESDAY, JULY 9, 2008

U.S. SENATE,
SUBCOMMITTEE ON SECURITIES, INSURANCE, AND INVESTMENT, COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The subcommittee met at 2:02 p.m., in room SD–538, Dirksen Senate Office Building, Senator Jack Reed (Chairman of the Subcommittee) presiding.

OPENING STATEMENT OF CHAIRMAN JACK REED

Chairman REED. I will call the hearing to order. Senator Allard is on his way. We have a vote or a series of votes that is scheduled to begin at approximately 2:15. So I would make my opening statement, and then I will recognize the panel. But when Senator Allard arrives, we will interrupt or conclude that statement and give him the opportunity to make his opening statement. Although we do not have any additional colleagues here yet, I would ask them to defer their opening statements so we can get into the heart of the matter.

Let me welcome the witnesses, the first panel and the second panel. I will introduce them individually in a moment. But let me begin.

Since its inception, the credit derivatives market has grown exponentially—in trading volume, in total value of outstanding contracts, and also in the potential risks that these instruments pose. According to the International Swaps and Derivatives Association, the credit derivatives market has exploded with the total notational value of contracts growing from $919 billion in 2001 to over $62 trillion in 2007. Though some argue that total losses could be less than this, perhaps at around $2 trillion to replace all existing contracts in the event of widespread default, this remains a staggeringly high number.

The tremendous growth in this market occurs in an environment of incidental regulation and an infrastructure that has not kept pace with trading volumes and product complexity. Today's hearing is an opportunity to explore a number of issues, including the risks that these products pose to the financial system and the proposed approaches to reducing such risks through a central clearing entity or an exchange.

Counterparty risk in this market is now a major concern. It played a significant role in problems surrounding Bear Stearns and paved the way for the new "too interconnected to fail" standard. The lack of information and transparency with regard to this market led to inadequate monitoring of risk in credit default swaps. As some have suggested, this issue of counterparty risk has become a ticking time bomb. These products are traded from one counterparty to another to another, making it virtually impossible to know who is holding what and complicating regulators' ability to oversee concentration of risks that buildup in the system.

Infrastructure problems have also long plagued the credit derivatives market. This complex market has not been completely automated to confirm trades and track overall risks. Though the industry has made progress in automating risks, highly structured and customized contracts are still difficult to automate and confirm.

Since 2005, regulators, led by the New York Federal Reserve Bank, have been coordinating efforts with the industry to reduce risk in this market and have been gathering data about the backlogs in confirmations. Though progress has been made, it seems that whenever we have seen increased trading volumes or fear that a major counterparty might go bankrupt, like with Bear Stearns, suddenly all the progress fades away, and we have spikes in the confirmation backlogs and in trade novations, which strains the system and increases risk.

After 3 years of efforts, there has been some progress, but are we becoming too complacent in our efforts to fully address these risks and make the market more efficient and resilient?

Additionally, as the credit derivatives market plays an increased role in setting the course of corporate debt, it becomes critical that these prices reflect the actual risk of default. For example, the interest that some companies pay for their revolving credit is beginning to be based upon price fluctuations in credit derivatives. However, there are no regularly and publicly reported prices for credit derivatives, leaving room for perception and rumor to factor into pricing more than true economic fundamentals.

What information is used to set these prices and should they be made public to avoid manipulation is another serious question. The current proposals to handle these emerging risks center on a proposed clearing entity with the main dealers as members. But who will oversee this entity, and who determines what trades will be cleared through this entity? If we have a clearinghouse that lacks oversight, coupled with inadequate risk management, does that really reduce the risk in the marketplace?

Any new actions in this market must include improved regulatory oversight. Have the regulators considered the importance of price discovery in this market? And whether it can be achieved through the clearing entity or whether it requires an exchange is another important question.

With the recent sobering experience in the subprime mortgage market, we must do more than hope that there isn't another next big problem. Rather than just hoping, this hearing is an attempt to explore these issues and bring them out on the table in an effort to help move the industry and regulators forward in resolving these difficult challenges.

And as I indicated, when Senator Allard arrives, he will be recognized, but let me introduce the witnesses of our first panel and then ask them to make their statements.

Mr. Patrick Parkinson is the Deputy Director, Division of Research and Statistics, Board of Governors of the Federal Reserve System.

Mr. James Overdahl is the Chief Economist and Director, Office of Economic Analysis, United States Securities and Exchange Commission.

And Ms. Kathryn E. Dick is the Deputy Comptroller for Credit and Market Risk, Office of the Comptroller of the Currency.

Your statements will be made part of the record. If you would like to refine them, compress them, that is completely up to you. And as I said, we are going to try to get through as many statements as we can before the vote is called. But first let me recognize Mr. Parkinson.

Could you bring the microphone forward and turn it on?

STATEMENT OF PATRICK M. PARKINSON, DEPUTY DIRECTOR, DIVISION OF RESEARCH AND STATISTICS, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Mr. PARKINSON. Thank you. Chairman Reed, other Members of the Subcommittee, I am pleased to appear today to discuss the over-the-counter derivatives market.

Estimates of the size of the global market for such instruments indicate that it has been growing very rapidly. The very rapid growth of the market reflects their perceived value for managing credit risks. But use of credit derivatives entails risks as well as benefits. Of particular importance is counterparty credit risk.

Although the credit derivatives market often is described as unregulated, by its nature it is subject to significant regulatory oversight. All transactions in the market are intermediated by dealers, and all major dealers are commercial or investment banks that are subject to prudential regulation by U.S. or foreign banking regulators or by the SEC. The prudential supervisors devote considerable attention to the dealers' management of the risks associated with activities in the credit derivatives market and other OTC derivatives markets, especially to their management of counterparty risk.

In addition, prudential supervisors, under the leadership of the Federal Reserve Bank of New York, have been working with dealers and other market participants since September 2005 to strengthen arrangements for clearing and settling OTC derivatives transactions. For too many years, post-trade processing of OTC derivatives transactions remained decentralized and paper-based despite enormous growth in transactions volumes. Among other adverse consequences, dealers reported large backlogs of unconfirmed trades. By making greater use of available platforms for electronic confirmation of CDS trades, just a year later, by September 2006, they had reduced confirmations outstanding more than 30 days by 85 percent.

Nonetheless, the financial turmoil during the summer of 2007 convinced prudential supervisors and other policymakers that further improvements in the market infrastructure were needed. In

their reports on the financial market turmoil, both the President's Working Group on Financial Markets and the international Financial Stability Forum asked prudential supervisors to take further actions to strengthen the OTC derivatives market infrastructure.

The New York Fed convened a meeting of supervisors and market participants on June 9th to discuss how to address the PWG and FSF recommendations. They agreed on an agenda for bringing about further improvements in the OTC derivatives market infrastructure. With respect to credit derivatives, this agenda includes developing well-designed central counterparty services to reduce systemic risks. Several plans were already under development to provide CCP services to the credit derivatives market.

A central counterparty has the potential to reduce counterparty risks to OTC derivatives market participants and risks to the financial system by achieving multilateral netting of trades and by imposing more robust risk controls on market participants. However, a CCP concentrates risks and responsibility for risk management in the CCP. Consequently, the effectiveness of a CCP's risk controls and the adequacy of its financial resources are critical. If its controls are weak or it lacks adequate financial resources, introduction of its services to the credit derivatives market could actually increase systemic risk.

A CCP that seeks to offer its services in the United States would need to obtain regulatory approval. The Commodity Futures Modernization Act of 2000 included provisions that permit CCP clearing of OTC derivatives, but at the same time require that a CCP be supervised by an appropriate authority, such as a Federal banking agency, the Commodity Futures Trading Commission, or the SEC.

If a CCP for credit derivatives sought to organize as a bank subject to regulation by the Federal Reserve or if we were consulted by any other regulator of a proposed CCP, we would evaluate the proposal against the Recommendations for Central Counterparties, a set of international standards that were agreed to in November 2004.

An exchange is a mechanism for executing trades that allows multiple parties to accept bids or offers from other participants. Exchange trading requires a significant degree of standardization of contracts. But where exchange trading of OTC credit derivatives is feasible, it can produce several benefits, including intermediation by a well-designed CCP, elimination of confirmation backlogs, increased market liquidity, and increased transparency with respect to bids and offers, and the depth of markets at those bids and offers.

For these reasons, policymakers should encourage greater standardization of contracts, which would facilitate more trading on exchanges. However, they should not lose sight of the fact that one of the main reasons the credit derivatives market and other OTC markets have grown so rapidly is that market participants have seen substantial benefit to customizing contract terms to meet their individual risk management needs.

I will be pleased to answer any questions you may have. Thank you.

Chairman REED. Thank you very much, Mr. Parkinson.

Now I would like to recognize Senator Allard for his opening statement.

STATEMENT OF SENATOR WAYNE ALLARD

Senator ALLARD. Mr. Chairman, thank you very much. Sorry I was late. I was in a very important meeting that I could not get away from, and I appreciate your commitment to starting on time. I had the same commitment. And I think that is the way we need to run our committees. It is all too frequently that we sit around and sit around and wait for somebody to show up for a committee meeting to start.

I would like to thank you, Chairman Reed, for convening this hearing of the Securities Subcommittee to examine the over-the-counter derivatives market. The recent turmoil in the credit markets and the demise of Bear Stearns have caused many to scrutinize the role of credit derivatives and banks' exposure to these potentially risky financial instruments. Even though credit derivatives and the OTC market have existed since the mid-1990s, they are still relatively new and trade on an immature market that lacks substantial infrastructure and transparency compared to other markets.

Since 2005, the Federal Reserve Bank of New York has taken an active role in bringing together market participants and supervisory agents in order to improve the OTC credit derivative clearing and settlement process and to better ensure risk management practices. This proactive approach was the result of a backlog in the confirmation of credit derivatives trades. A backlog totaling over 150,000 unconfirmed trades was the result of relying on an inefficient manual confirmation process that failed to keep up with growing volume and because of the difficulties in confirming information for trades.

Through initiatives and innovation in the marketplace, the number of credit derivatives confirmation outstanding more than 30 days has been reduced by 86 percent. That number will hopefully continue to increase as we go forward.

I am pleased to see market participants and regulators have agreed on an agenda that will continue to foster further improvements in the OTC derivatives market's infrastructure. This agenda will include developing a central counterparty for credit swaps that will have a strong risk management organization that can help reduce systemic risk.

The Clearing Corporation expects to start guaranteeing OTC credit derivatives contracts in the third quarter of 2008, increasing the credit default swaps products covered through 2008–2009. Not only will the introduction of a central counterparty help reduce systemic risk, but it will also help bring more transparency into the market.

While regulators and participants have taken some necessary steps to improve the transparency and infrastructure of the OTC credit derivatives market, further steps are still needed. Just yesterday, at an FDIC conference on mortgage lending, Chairman Bernanke said the infrastructure for managing these derivatives still is not as efficient or reliable as other markets. As was evident

last summer when a surge in credit default swaps, trading volume greatly increased backlogs of unconfirmed trades.

I would like to take this time to welcome our distinguished panelists for joining us today and thank them for their testimony as we continue our look into the credit market.

Again, thank you, Chairman Reed, for convening today's important hearing. I look forward to hearing from our witnesses.

Chairman REED. Thank you very much, Senator.

Mr. Overdahl, your statement, please.

STATEMENT OF JAMES A. OVERDAHL, CHIEF ECONOMIST, SECURITIES AND EXCHANGE COMMISSION

Mr. OVERDAHL. Chairman Reed, Ranking Member Allard, I am pleased to have the opportunity to testify today regarding the Securities and Exchange Commission's efforts to encourage enhancements to the operational infrastructure of the over-the-counter credit derivatives market.

The SEC has a strong interest in this topic because of its oversight of the largest internationally active U.S. securities firms through its voluntary consolidated supervised entities, or CSE, program. Each firm in this group—which includes Goldman Sachs, Lehman Brothers, Merrill Lynch, and Morgan Stanley—plays a significant role in the over-the-counter derivatives market. Strengthening the operational efficiency of this market will serve to increase the effectiveness of counterparty credit risk management systems used by these market participants.

In their role as dealers, the CSEs make active markets in credit derivatives and rely on these instruments to hedge their dealing risk and to take proprietary positions. This buying and selling of default protection generates market credit and operational risk for the CSEs. At the same time, this activity generates potential credit risk exposure for the CSEs' trading counterparties. A significant part of the Commission's CSE program is dedicated to monitoring and assessing CSEs' market and credit risk exposures that arise from these trading and dealing activities.

In terms of operational risk, credit derivatives pose challenges for prudential supervisors. One challenge is that the efforts of the CSE firms to reduce market and credit risk exposures can often serve to increase the operational risk borne by these firms. This is because the easiest way to reduce risk often is to enter into new, offsetting trades rather than to unwind ones. This paradox, in part, explains why the Commission is interested in centralized clearing as one means for improving the operational efficiency of credit derivatives trading.

A paramount concern of supervisors and market participants about proposed clearing systems for credit derivatives such as the system recently proposed by The Clearing Corporation will be the ability of a central counterparty, or CCP, to implement sound risk management practices. This is because the CCP concentrates risk. A CCP typically "novates" bilateral contracts so that it assumes any counterparty risks. Novation allows the CCP to enter into separate contractual arrangements with both of the contract's counterparties—becoming buyer to one and seller to the other.

A CCP can serve a valuable function in reducing systemic risk by preventing the failure of a single market participant from having a disproportionate effect on the overall market. A CCP also may facilitate the offset and netting of obligations arising from contracts that are cleared through the system.

While providing a number of potential benefits, a CCP for credit derivatives should not be viewed as a silver bullet for concerns about risk related to these instruments. Even with a CCP, preventing a systemic risk buildup would require that dealers and other market participants manage their remaining bilateral exposures effectively, a process that will require ongoing regulatory oversight.

SEC staff has been addressing the question of whether a CCP must register as a securities clearing agency and the potential availability of exemptive relief. We have also been approached about the possibility of the Commission issuing an exemption for broker-dealer registration for firms that would use the CCP. We are currently considering how best to proceed.

It is not uncommon for derivative contracts that are initially developed in the over-the-counter market to become exchange-traded, as the market for the product matures. Exchange trading of credit derivatives would add both pre-and post-trade transparency to the market and can also reduce liquidity risk by allowing market participants to efficiently initiate and close out positions. In this regard, I note that last year the Commission approved the proposal by the Chicago Board Options Exchange to list and trade two credit default products.

As you can see, developments in the derivatives space pose significant operational and regulatory challenges, which will have to be addressed as this market matures. Again, thank you for this opportunity to discuss these important issues, and I welcome your questions.

Chairman REED. Thank you very much, Mr. Overdahl.

Ms. Dick, please.

STATEMENT OF KATHRYN E. DICK, DEPUTY COMPTROLLER FOR CREDIT AND MARKET RISK, OFFICE OF THE COMPTROLLER OF THE CURRENCY

Ms. DICK. Chairman Reed, Ranking Member Allard, and Members of the Subcommittee, I appreciate this opportunity to discuss how the OCC supervises derivative activities in national banks and to share our views on the risk mitigation efforts underway in the credit derivatives market.

I have spent 24 years at the OCC working as a national bank examiner and have had the opportunity to examine the derivatives and trading activities at many of our largest national banks that function as financial intermediaries in over-the-counter derivative markets. I currently serve as the Deputy Comptroller for Credit and Market Risk supporting OCC senior management and identifying supervisory solutions for financial risk management issues in the national banking system.

For over 20 years, OTC derivatives have been an important component of the risk management products and services that national banks offer to their clients. As noted in our first quarter 2008 de-

rivatives report that is attached to my written statement, the five largest national banks, all supervised by the OCC, account for 97 percent of the total U.S. commercial bank derivative holdings. These same five banks are responsible for nearly all credit derivatives trading among U.S. commercial banks.

We believe that these large national banks with their access to resources for people, technology, and capital to support trading businesses are best equipped to shoulder these risks. This does not mean they will not make mistakes. These are not risk-free businesses. But it does mean they have the wherewithal to devote the necessary talent and resources to establish risk management systems that meet the expectations and standards set by the OCC.

At these large national banks, the OCC has established resident teams of examiners who serve as the foundation of our supervisory program with their continuous, onsite examination of complex areas such as credit derivatives. The dynamic nature of bank trading activities requires the OCC to frequently evaluate our risk management expectations, clearly communicate these expectations to our banks, and continually evaluate their compliance with our standards.

From our perspective, there are two significant risks in the credit derivatives market: the first is counterparty credit risk; the second is operational risk. The OCC and other regulatory agencies are actively working to address these risks in the credit derivatives market. Given the global nature of derivative markets, these risks and the issues they raise cut across legal and national boundaries. As a result, our efforts involve both U.S. and key foreign regulators and are aimed at all of the major global financial market participants, commercial and investment banks.

Through collaborative work, we have been successful in focusing industry attention on significantly reducing aged outstanding confirmations in the credit derivatives market, while increasing automation to ensure a stronger financial market going forward. We have also been successful in developing a set of risk metrics that improves transparency among firms and supervisors. And we have developed a useful forum for identifying and responding to emergent issues in a timely manner. But our work is not done.

At our June 9th meeting between supervisors and the industry participants, agreement was reached on an expanded set of future goals. The industry is developing a new commitment letter that will address, among other things, new trade-processing goals, a proposed central counterparty clearinghouse, incorporating an auction-based settlement mechanism into standard derivatives documentation, and extending these infrastructure improvements to over-the-counter equity, interest rate, foreign exchange, and commodity derivatives.

The clearinghouse proposal, which would create a central counterparty for the clearing of credit derivatives should reduce counterparty risk and operational risk by providing a mechanism for multilateral netting among major market participants. A related issue is the question of whether an exchange should be created for credit derivatives. From our perspective, the evaluation of potentially competing alternatives is appropriately being conducted by industry participants who will need to use these mechanisms if

risk mitigation objectives are to be achieved. Our role will be to ensure that large national banks who intend to participate in one or more of these alternatives meet our risk management standards and expectations.

While the proposed clearinghouse or exchange-based solutions will certainly contribute to our objective of reducing counterparty credit and operational risks in the credit derivatives market, we must not lose sight of the fact that the dynamic nature of this market will require ongoing consideration of other initiatives that may also facilitate risk reduction.

I appreciate the Subcommittee's interest in the OCC's supervisory work with respect to credit derivatives, and I look forward to answering any additional questions or comments you may have.

Chairman REED. Well, thank you all very much for your excellent testimony.

We are in the midst of two votes, so I would propose to recess briefly, and Senator Allard and I will go vote and return and engage in a round of questioning. Thank you all very much.

We stand in recess.

[Recess.]

Chairman REED. Thank you for your patience in allowing us to go over and vote, and I will begin with a 7-minute round of questioning and then turn it over to Senator Allard.

A question for all the panelists. Some major investors have claimed, as I indicated in my opening statement, that this is a major ticking time bomb, that this poses a potentially system risk to the market system, and I wonder if you could, starting with Mr. Parkinson, just comment upon that. How serious is this potential? And, obviously, what are the steps that you think should be taken to preclude the risk?

Mr. PARKINSON. I think it is a significant risk. We have been devoting significant resources to trying to strengthen the system. I think in terms of a day-to-day basis the primary reason we are worried about the infrastructure and the backlogs is the potential for them to magnify market and counterparty credit risk by permitting errors in trading records to go undetected. The really good thing about fully confirming your trades with a counterparty is that then you have a good understanding of what the terms are and, therefore, you have good records of those trades.

In terms of systemic risk, I think the major concern is that it might complicate the resolution of a default by a major market participant if one were to occur. I think, for example, we would be concerned that derivatives counterparties might have difficulty promptly determining what their credit exposures are to a counterparty if they have not confirmed all their trades with that counterparty. And I think if a major counterparty were to default, that would be a real challenge to its counterparties and a challenge to the system.

Chairman REED. Mr. Overdahl.

Mr. OVERDAHL. I would agree with that and just add that I think the confirms issue can pose risk in a few different ways. It can undermine the risk management capability, the effectiveness of the risk management—counterparty credit risk management of the major players. It can make that management less effective. It can

also pose credit risk issues in terms of just knowing who your exposure is and monitoring that counterparty credit risk, and also market risk if there is a trade that is not agreed to and has to be replaced, that that can pose significant market risk.

So, you know, there is certainly potential here for a lot of risk, and I think efforts to strengthen that system can only pay off in more effective risk management by the firms.

Chairman REED. Ms. Dick, please.

Ms. DICK. I would maybe supplement the comments of my colleagues with a couple of observations from what we have seen in the national banking system. Again, credit derivatives are probably about a fifth or 20 percent of the volume of transactions, so from a volume standpoint, and even, quite frankly, a counterparty credit risk standpoint, they are somewhere around 20, 25 percent of total exposure. I think some of the systemic issues arise because it is a young market. You do not have standardization of documents. You have perhaps participants in that market that are less well understood and recognized in the market. So there is variabilities that we see in other markets. At the same time, in the national banking system, we have got large over-the-counter markets and interest rates and foreign exchange that, again, started under similar circumstances, and 20 years later are, in fact, very sound, robust markets.

So as both Jim and Pat mentioned, I think one of the keys here is looking for all alternatives to improve infrastructure and the credit risk that is associated with these contracts so we can diminish any unwarranted exposure.

Chairman REED. Ms. Dick, let me follow up with a slightly different question. We have just come through a very tumultuous episode with mortgage-backed securities, and there were credit default swaps written on these products. To what extent do these credit default swaps exacerbate the underlying problem? And were banking regulators—and I will turn to Mr. Overdahl also—aware early on that this was a potential problem with the credit default swaps?

Ms. DICK. Well, again, we were aware that credit default swaps were used as part of the structured products. I will say the losses we have seen in the national banking system are largely associated with cash underlying securities. So, in fact, it really is not, again, from a product standpoint, a derivative.

Now, again, a benefit is that they do allow for hedging of some exposures as well, so there is a plus, I guess, to the credit derivative product in some of the structured product markets.

Chairman REED. Mr. Overdahl, you can respond to that question with regard to securities but also with respect to Bear Stearns. There was an issue there with credit default swaps, and there were some commentators that suggested that that was one of the principal reasons that there had to be regulatory action, just uncertainty about how that would all fall out. I think it tracks Mr. Parkinson's response about if a major institution fails, no one quite knows where the ball will stop rolling. Could you comment?

Mr. OVERDAHL. Let me take the first question first. The role of the SEC in its consolidated supervised entities program is looking at the risk controls, the risk structure, the risk management of the entire structure, and so to that certainly there is awareness of the

exposures without necessarily second-guessing the risk appetite for any particular firm, but making sure—or asking the questions, making sure that those risks are well understood and well controlled.

With respect to Bear Stearns and the role of credit default swaps, I am not sure that in terms of confirmations that there was really an issue there. In terms of the CSEs, they exceeded industry standards in terms of their confirmation processing. They were also among the CSEs the smallest with respect to their over-the-counter positions outstanding, although still being a CSE that is fairly substantial. I think the big risk—one risk that we have become very aware of was just the scale of novations that occurred as counterparties substituted away the Bear Stearns name, and I will turn it over to Pat.

Chairman REED. Let me—and I will, Mr. Parkinson. But a follow-on question is that under the general concepts of an exchange or a clearing mechanism, these novations would be better managed. Is that fair? Or is that one of the objectives of such a system?

Mr. OVERDAHL. I think it can be better managed. It can certainly be better managed that way. Also, I think another significant thing is just the rumors that can start as a result of the novation process and that is something that could be eliminated, largely. You cannot eliminate rumors, but you can eliminate that source of them using a central counterparty or an exchange.

Chairman REED. Mr. Parkinson, your comment, and then I will turn to Senator Allard, and then we will do a second 7-minute round.

Mr. PARKINSON. Just on the Bear Stearns situation, I think there has been some confusion about this. I think the primary cause of Bear's demise was a loss of confidence in its ability to meet its obligations, which triggered a classic run on the bank. And, in particular, investors who provided Bear with large amounts of secured overnight financing, primarily through repo agreements, refused to roll over that financing and demanded repayment of a substantial amount of money.

Where derivatives may have played a role in that is that attempts by counterparties to novate trades with Bear to other dealers in some instances were refused, and that seems to have contributed to the initial loss of confidence.

With respect to what we were worried about in the case of Bear, I think the concerns about the potential impact of Bear's bankruptcy on its derivatives counterparties were not the primary factor in the decision by the Federal Reserve and other policymakers to facilitate its acquisition by JPMorgan. The primary fear was that its bankruptcy would spark a run on the other dealers who are equally reliant on the same kind of secured financing that Bear was. But we were also concerned that counterparties would have serious difficulty promptly determining their vulnerability to losses on derivatives from Bear's default and that their efforts to replace the hedges with Bear would have placed additional pressures on markets that already were quite stressed. So the derivatives concerns were a factor but not the predominant factor in both its troubles and in our response to those troubles.

Chairman REED. Thank you very much.

Senator Allard.

Senator ALLARD. Thank you, Mr. Chairman.

It has been about a year now when we saw a large spike in the credit default swaps, and I think there were attempts to try in the past to reverse some of these backlogs that occur. And my question—I have kind of a two-fold question. What progress have market participants made to improve the infrastructure in processing so it operates more efficiently when we go through these sustained periods of high-volume and high market volatility periods? And what has the President's Working Group—with their recommendations that came out in March, what do you see the results of that n the financial market development concerning credit derivatives? And I address that question to you, Mr. Parkinson.

Mr. PARKINSON. OK. Well, I think they are sort of one and the same because we had this existing initiative led by the New York Fed involving all the supervisors at this table and many others to improve the infrastructure. I think significant progress had been made between the fall of 2005 and the summer of 2007.

That said, as you noted, in the summer of 2007 there was a five-fold increase in the backlogs. I think if they had not made the improvements they had made over the previous year and a half, it could have been far worse and, indeed, might have impaired the liquidity of those markets at a critical time. But we recognize that further improvements are necessary. Both the President's Working Group on Financial Markets and the FSF have asked that group of supervisors under the New York Fed's leadership to ensure that specific improvements in the infrastructure are made. And at the June 9th meeting, agreement was reached on a set of goals for improving the infrastructure. Market participants and regulators agreed that participants should write a letter to the regulators by the end of July setting out the specific steps they are going to take. So I think at that time we will be able to be much more specific on exactly what is being done to address this continuing concern.

Senator ALLARD. Now, there has been some resistance, I understand, to the use of electronic trading platforms. How do you think the use of electronic platforms—why do you think it remains so limited? And why is there some resistance to using that when we have so much technological innovation being used at other exchanges?

Mr. PARKINSON. Well, I think part of it is simply inertia. They have been using over-the-counter markets, they have been using voice brokers for many, many years, and it is hard to wean them from that. I think also the use of the electronic trading platforms does require some further standardization of the contracts. But that said, I think a fair amount of what is being traded is amenable to processing on electronic platforms, so I think that some people do not see that in their economic self-interest to make use of that technology.

But, in any event, as you indicate, the take-up has been pretty slow. I think actually it has been a little bit better in the credit derivatives markets than some of the other derivatives markets, and for reasons that are not completely transparent to me, more successful, more widely used in Europe than the United States.

Senator ALLARD. Yes, I have noticed. I think we made a trip to some of the exchanges in Europe, and they seemed to be much more willing over there to accept electronic platform than over here.

This question I want to address to all three of you on the panel, and that is, do you believe that as regulators you have the tools and the access to information that you need to oversee the OTC credit derivatives market? And if not, what do you need?

Ms. DICK. I will begin that answer.

Senator ALLARD. I think that is fair.

Ms. DICK. Very good. I believe at the OCC we do feel that we have the tools and information needed to oversee the over-the-counter derivative activities in the national banking system. I had mentioned, I think, in my oral statement that we have got over-the-counter derivative markets, the largest there, which is interest rate contracts and foreign exchange, that have been in existence now for 20 years. We have learned over a period of time the type of information we need with respect to risk management.

I will say via participation in this effort that has been initiated in 2005 on the credit derivatives market in particular, as well as some of the work that has been done on an interagency basis between regulators, both domestically and internationally, since the credit market turmoil began last summer, that we actually find ourselves sharing information on emerging issues in some of these over-the-counter markets earlier with colleagues and other agencies than before for instance, if we are seeing trends in the national banking system, we can share that information with our counterparts who might be seeing participants in another part of the market and looking for any systemic issues and identifying them earlier than perhaps we might have in the past where we have tended to do our work more in isolation.

Senator ALLARD. Yes, and your comment sort of spurred another question. We have different accounting standards in the United States as well as internationally. Theirs is more conceptual. Ours is more detailed and more specific, regulatory. Does that make a difference for you to bring accountability into the system when you are dealing with international trades?

Ms. DICK. I do not believe from a risk management standpoint that affects the information that we are looking at in our firms. But I know when we look at, for instance, information that is disclosed by these firms, we have our call reports in the U.S. for the commercial banks, which has a fair amount of information on over-the-counter derivatives, and then clearly in published financial statements there is more information about some of the risk aspects.

It is very different when you start to look at foreign firms to try and gauge what that risk exposure is because the disclosures are different and, again, the accounting standards are different.

Senator ALLARD. Mr. Overdahl, maybe you would like to comment on those two questions.

Mr. OVERDAHL. Sure. In terms of the oversight of the market, our window into the market is through our authority with respect to the CSEs, and with respect to that authority, I think we have the tools we need to do the job that we do with the CSEs in the

oversight of risk management controls that they have, which would include the credit default swaps market, but it is only their piece, their management of the counterparty credit risk, the pricing issues, these type of things that directly affect those that are within our jurisdiction.

In terms of the accounting, I cannot really see that as an issue. The risk numbers that we see are not really subject to that type of differences in accounting treatment.

Senator ALLARD. Next.

Mr. PARKINSON. I agree we have all the authority that we need. I think in particular one thing to be realized about the existing oversight regime, which is this cooperative effort by the prudential supervisors and all the major dealers, is that because it is a global market, that kind of cooperation is essential to accomplish anything. And if one contemplated a new regime or a different regime, you would have to figure out how to replicate that degree of international cooperation, which would be difficult. On accounting, I do not really have anything to add to that.

Senator ALLARD. Thank you. I see my time has expired, Mr. Chairman.

Chairman REED. I have a few more questions, and I will take them, and then I will turn to Senator Allard.

One of the aspects of the credit derivatives issue has been the fact that some institutions are finding themselves on both sides of a transaction, in some respects, a bank loaning to a company, and then sells credit protection to that company, and it gets complicated. I wonder if you might respond to this, Ms. Dick, about this whole notion of the concentration of risk and the ability to understand the risk, your viewpoint, and if you gentlemen would like to add anything else, that is fine.

Ms. DICK. Very good. With respect to credit derivatives, as you mentioned, they can be used as a tool both to assume credit risk as well as shedding credit risk, which is what our large national banks do. Most of the activity they report in their call reports of activity that they are involved in is actually financial intermediation activity, where they are taking requests from clients that want to either assume or shed credit risk, designing a credit derivative transaction, and then managing that risk internally.

Clearly, as you mentioned, there is the potential for either concentrations of risk or parties finding themselves—and I think frequently it is actually not the regulated institutions, but perhaps some of the unregulated that are in a position where they might have lending exposures as well as large credit derivative exposures.

We do require, again, you know, robust risk management systems in our firms. One of the things that they will look at when they look at credit exposure as one of these large banks is both cash exposure in the form of either securities owned or loans, as well as any derivative exposure. And, again, one benefit of the derivative product is the fact that it allows you to alter your credit risk profile. So if as a bank you are very concentrated in an industry and your lending portfolio, you can actually diversify that by assuming some credit risk in another industry. It is a risk that certainly has to be managed, but I see risk management tools in the system that I think are very capable of doing that.

Chairman REED. So these tools in the system in a very simplified way, if the lines are all crossed, loans, credit defaults, co-ops, other instruments at one institution, that sets a red light off, I guess, or some sort of warning that you have to look closely?

Ms. DICK. Again, firms will have internal capacity for how much risk they are willing to take to any given name.

Now, I would not want to leave you with the impression that people are pushing magic buttons and can gather all this information. As a supervisor, we wish, of course, that were the case. But because the business is concentrated primarily, in the national banking system in five large institutions, we have the ability to go in and where we see deficiencies in that aggregation capability, work with bank management to get those deficiencies resolved.

Chairman REED. Now, your perspective, Mr. Overdahl, from SEC.

Mr. OVERDAHL. I think that our perspective is very much similar to the banking supervisors in that we are looking at the risk management capabilities of these firms, and to the extent that these type of concentration issues exist, we are looking at the systems to make sure that they can identify and pick up that type of risk, and looking at how they manage that counterparty credit risk but more looking at the process, making sure that the process is in place that these risks are identified and understood. So it is very similar.

Chairman REED. Mr. Parkinson, your comments.

Mr. PARKINSON. Just that I think both at the level of the banks and the level of the regulators, we need to be looking at aggregate exposures to a particular corporate obligor and aggregating those across the cash holdings of the instrument and any derivative holdings they have, and not looking at the cost of derivative in isolation or failing to aggregate them.

That can sometimes be a challenge to do. I do not know that it has been in the case of CDS, but I know in the case of subprime exposures, our banks did not always distinguish themselves in managing their exposures on an aggregate firm-wide basis. But that said, certainly that is the goal, that is the expectation.

Chairman REED. Let me begin with Mr. Parkinson and ask another question. It seems to me there are two general institutional responses to this issue of CDS. One is an exchange approach, and the other is a clearing approach, a clearing entity. The advantages of one versus the other and is there any sort of institutional or regulatory preference or bias?

Mr. PARKINSON. An exchange would employ a central counterparty, so the question really is what further benefits and what further disadvantages exchange trading per se would have over a CCP for the OTC markets.

I think exchange trading does require a significant degree of standardization of contracts, although many of these contracts already are standardized to an important degree. But where it is feasible, it can provide additional benefits, possibly including elimination of the confirmation backlogs. I think as Jim said in his testimony, in active markets trades are basically locked in at execution, and the whole confirmation process is obviated. They also can increase market liquidity and they can increase transparency with respect to bids and offers and market depth. The major disadvan-

tage of exchange trading would be, again, the need to standardize the contracts, and that would be a concern where customization allows the OTC contracts to meet the individual risk management needs of counterparties that could not be met by the standardized contracts. But I think standardized contracts trading on an exchange and the more customized contracts trading in the over-the-counter markets might give us the best of both worlds.

Chairman REED. Mr. Overdahl, any comments? And then Ms. Dick.

Mr. OVERDAHL. I agree with Pat's comments, and I would just note that there are other markets outside of the financial world where we have seen over-the-counter clearing, and perhaps in the energy area is the best example where you had a very successful product developed for clearing at the energy exchanges. And it is interesting. When there were credit disruptions in that market, where people were concerned about credit risk, some of the same type of things you are seeing today in financial markets, the people voted with their feet, and they moved to those systems because they could see the benefits of the central counterparty, and they could also see the benefits of the transparency that an exchange offered.

Now, how that is going to play out is really ultimately the choice of markets participants of just how they value those features of these competing marketplaces.

Chairman REED. Ms. Dick.

Ms. DICK. I would echo the comments of my colleagues, and highlight that in looking at the proposed clearinghouse arrangement that is being discussed by the industry right now, we see clear benefits with respect to, again, the two risks we think are most important—the counterparty credit and the operational. If you have a central counterparty, as was mentioned by one of my colleagues, many of these trades that are now being layered one on top of another to actually manage your market or credit risk would no longer be necessary. That also reduces volume of trades, which, again, would address some of the operational issues.

A drawback, however, and one we just need to recognize, is that it would concentrate risk in the clearinghouse, so it has got to be structured properly. We need to make sure there is the right capital support behind that clearing arrangement so that if there is a problem with one of the large participants, that, again, that does not actually exacerbate the credit issue.

Near as I can tell with respect to the exchanges, Mr. Parkinson mentioned probably the biggest benefit, which I think also can be a drawback, is the standardization of contract terms. I think what we see right now is that with respect to index and some other transactions, they are actually quite standardized. But many of the credit derivative transaction that we see in the national banking system are still standard, single-name transactions that are done to assist some client in managing their own credit risk profile. It may be difficult to standardize those contracts in a form that would be necessary for an exchange, and in that regard, if that is the case, the client is looking for customized trades. If the trades do not occur on the exchange, you are not going to get the benefits, again, of the operational and credit counterparty reduction.

Chairman REED. Let me follow up with Mr. Parkinson and Mr. Overdahl. As I understand, the proposed clearing arrangement would take the form of a state bank, which would be supervised at the Federal level by the Federal Reserve. But it is the SEC that to date has had much more extensive experience in clearing operations. Can you comment on that, Mr. Overdahl?

Mr. OVERDAHL. Well, certainly the SEC has had experience over many years in central clearing in the securities markets, and it is interesting that many of the operational difficulties that we are talking about here today were evident in the securities market at one time, and there was a great effort, part of the national market system in the mid-1970s, that addressed many of those issues at that time.

In terms of this particular proposal, I am not sure that there is really much—in terms of the structure, there is much more I can add about—I mean, certainly we see the benefits, potential benefits of centralized clearing and, again, as Kathy said, it really depends on the financial safeguards that are in place and the quality of the guarantees that they can—the credibility of those guarantees in order for it to be a successful venture.

Chairman REED. I just want to ensure that I understand. The proposed arrangement now of the major institutions that are setting up the clearing house would require Federal Reserve supervision. Is that correct, Mr. Parkinson? Would you be the primary supervisor, or the SEC? Let me clarify that.

Mr. PARKINSON. I think that is their choice. Under existing law, which is the Commodity Futures Modernization Act of 2000, a CCP for OTC derivatives needs to be regulated. But they have their choice of regulators. It can either be one of the banking agencies; it can be the CFTC or it can be the SEC. I think you are referring to The Clearing Corporation, which has made a decision to organize as a bank chartered by the State of New York and a member of the Federal Reserve System, which would bring them under our supervision. And in addition, as Mr. Overdahl mentioned in his testimony, if CDS are considered securities, which they might be, then securities have to be cleared through an SEC-registered clearing agency unless the SEC grants an exemption that would allow it to be cleared by an entity that is not an SEC-registered clearing agency. So I infer from that that The Clearing Corporation would need an exemption from the SEC from their clearing agency requirements to proceed with their plan to organize as a member bank regulated by the Fed.

Chairman REED. And if all of those exemptions are granted, it would be regulated by the Federal Reserve in its capacity as the clearing agent. Is that correct?

Mr. PARKINSON. Yes, it would be regulated both by the New York State Banking Department as the chartering authority and by the Federal Reserve, by virtue of its choosing to be a member of the Federal Reserve System.

Chairman REED. But it would just seem to me the expertise, the operational expertise is more in the realm of the SEC than the Federal Reserve. There would be no sort of institutional cost for you to chin up the regulation?

Mr. PARKINSON. We do not currently regulate any central counterparties. We do have a role in regulating securities settlement systems in the case of the Depository Trust Company, which is organized as a State-chartered member bank, much in the way that The Clearing Corporation is planning. We also regulate the CLS Bank which settles foreign exchange transactions, which is organized as an Edge Corporation.

I might also mention—I think the SEC mentioned in their testimony, as we did, the CPSS IOSCO standards. We played a leading role in developing those standards for CCPS. So we do not have the specific experience that the SEC does, but we have a lot of other relevant experience.

Chairman REED. Very good. Thank you.

We have been joined by Senator Schumer. Do you have additional questions?

Senator ALLARD. I do, if I might just briefly, and then——

Chairman REED. Since he has not had an opportunity——

Senator ALLARD. Go ahead.

Chairman REED. OK.

Senator SCHUMER. Thank you. I thank both of my colleagues and only apologize for coming in and leaving, but they are debating the Medicare bill on the floor, and I am very much involved in that. So I apologize to both my colleagues.

First, to Mr. Parkinson, do you believe that the effort underway by various swap dealers to create a clearinghouse and central counterparty will be able to significantly reduce the risks posed by OTC derivative markets?

Mr. PARKINSON. I think that a CCP has the potential to reduce systemic risks and risks to the counterparty participants. But that will be the case only if it robustly manages the risks that are concentrated in the CCP by virtue of its activities. In terms of making judgments as to whether a particular proposal for a CCP reduces systemic risk, we would apply these international standards, the so-called CPSS IOSCO standards, and we would apply those to any plan for providing CCP services to those markets. But we believe that if they do meet those standards—and that would be challenging given some of the unique features of OTC derivatives—then that would be reducing systemic risk.

Senator SCHUMER. OK. Thank you.

And now to all the witnesses, the question is: Will the consolidation of information about the markets and the clearinghouse offer you and other regulators a better view of the safety and soundness and systemic risks posed by these markets? And I also want to address the debate over encouraging credit default swaps and other derivatives to become exchange traded. While I recognize the value that exchange trading can offer in terms of price discovery and settlements, I am also concerned that forcing immature products onto an exchange will reduce innovation and competitiveness. This is the age-old push and pull of regulation.

So, Mr. Parkinson, aren't the OTC derivatives markets where the parties are free to negotiate and customize their contracts some of the most innovative and fastest-growing financial markets? If that is the case, while it may make sense to encourage some of the most mature contracts to an exchange, we should be careful to preserve

our financial markets' ability to innovate and continue to compete. Isn't that correct? And since these markets are so international, what steps are the Fed, SEC, and OCC taking to coordinate their oversight of the OCC derivative markets with international regulators? Are there any indications at the moment that some international markets may fail to implement regulations that are similar to the U.S.' potentially putting us at a comparative disadvantage?

It is a series of related questions. First, Mr. Parkinson, then Mr. Overdahl and Ms. Dick.

Mr. PARKINSON. All right. I do not think we should force things onto exchanges, but if market participants choose to move activities to exchanges, we should not stand in the way. I think it will never be the case that all the products that are traded today in the OTC markets will be traded on exchanges. That would require more standardization in some cases than market participants would find in their interest.

With respect to the question you raised about international coordination, I think there is where we have this existing initiative under the leadership of the Federal Reserve Bank of New York where they have the prudential supervisors of all the global derivatives dealers and the market participants coming together and working together to improve and strengthen the markets so there is a substantial degree of regulatory coordination internationally. When it comes to the specific issue of central counterparties, you have international standards for central counterparties, the CPSS IOSCO standards. Again, that provides a substantial degree of comfort that there will be a level playing field in that area as well.

Senator SCHUMER. Mr. Overdahl.

Mr. OVERDAHL. I agree with those comments in terms of the ability of market participants to choose the best venue for where they would trade. One thing the SEC has spent quite a bit of time thinking about over the last few years is the best way to streamline the process that products can brought to market. So when an exchange identifies an opportunity, that can be done in a quick way in which the risks that have been identified, the product can be there to help manage them. And also, with the international standards, again, the SEC has participated in many of the same forums that Pat just mentioned, with the CPSS IOSCO. The SEC was involved in that standard setting. So we have been involved internationally. We have been involved in discussing these issues with our counterparts overseas.

Senator SCHUMER. Ms. Dick.

Ms. DICK. I would just maybe step back to the first question you asked, which I think was about information we might receive as supervisors. In the effort we have had underway right now that Mr. Parkinson mentioned, led by the New York Fed, I will say we have achieved a great deal of information from the industry both about the firms we individually supervise but also their competitors, which has been extremely helpful. So we have information about how long it takes for a trade to be confirmed, the volume of transactions our firms are involved in, the ability to electronically process those trades. And because the global nature of the business is such that there are only 15 to 20 large global firms involved, it

is very useful as a primary supervisor to be able to go to one of your institutions and identify when they are an outlier in that population and push stronger and harder and really more effectively for some kind of change if there are risk management issues.

So I think based on what we know about a clearinghouse, there is a strong probability we could get additional information that would be useful, and I think the structure, at least as we understand it, that is being discussed right now would also assist in reducing counterparty credit risk and operational risk.

From the OCC's perspective, I do not think we see strong compelling reasons for an exchange, but we would not be opposed to that either. The risks we are worried about are really addressed with the clearinghouse.

Senator SCHUMER. Thank you, Mr. Chairman. Thank you, Ranking Member Allard.

Chairman REED. Thank you very much.

Senator Allard.

Senator ALLARD. Thank you, Mr. Chairman.

You know, my understanding of derivatives is that they have to have some flexibility to meet the various situations that come up, and we have Ph.D.s that work on derivatives who in many cases probably know more than a regulator.

Would you talk a little bit about how far we could standardize derivatives through rules and regulations, or how far your clearinghouse can go on something like this?

Mr. PARKINSON. I do not think that we should be standardizing derivatives through rules and regulations, and I do not think a clearinghouse can standardize. It offers its services for a range of contracts. The range of contracts will not be unlimited, so it will require a certain amount of standardization of contracts for those to be eligible for clearing. But market participants are not compelled to participate in these arrangements, so the fact that the clearinghouse only clears a limited range of contracts does not stop them from trading contracts that do not fit the clearinghouse's parameters. Indeed, in that regard, we have had a CCP for interest rate swaps in London operating since 1999 that is used by all the big dealers. It only clears so-called plain vanilla interest rate swaps. That has not stopped the dealers from customizing interest rate swaps where they see their customers having an interest in their doing that. It is just that those do not get cleared through the clearinghouse. So I do not really think mandating the terms of derivatives transactions is on the table.

Senator ALLARD. Mr. Overdahl.

Mr. OVERDAHL. Yes, I would agree that I think that it is really not the role of a regulator to decide how that standardization should occur. That is something that really is a choice of market participants, and they have to evaluate the advantage of standardization that comes along with liquidity, perhaps, and perhaps the use of a central counterparty for clearing, that advantage versus the advantage of getting a highly customized deal that will meet their specific business needs. And that is really a business decision of market participants and one that I think we would be extremely reluctant to get in the middle of.

Senator ALLARD. Ms. Dick.

Ms. DICK. Yes, with regard to standardization of contracts, I think as my colleagues have mentioned, what we have seen in the over-the-counter derivative markets are perhaps larger and longer-lived in the banking industry, the interest rate and foreign exchange, is that they are really not mutually exclusive. Many of these contracts start out in these markets in true customized contract form, and then as we have even seen in the credit derivative market, the documentation becomes more standardized, certain names become the reference names people are looking for, and those can be more standardized. And as I think both my colleagues mentioned, it is really the market participants that drive which—you know, that these contracts become more standardized.

So we see the central counterparty, again, being an alternative to help reduce counterparty risk, operational issues. We see the standardization of contracts as one that we will likely see follow the path we have seen in other over-the-counter markets. But I believe there will be a large number of these trades that will continue to be over the counter because that is really the nature of the risk that some client, again, is trying to manage.

Senator ALLARD. At the risk of starting an argument among the panelists here, I want to ask the next question. The Fed had decided to infuse cash with the secondary—or the risk—the loans that were high-risk loans. And, of course, though, this has had an impact on industrial—or investment banks, and I assume that they put together some of these derivatives perhaps and do the swaps and whatnot. And then Chairman Bernanke has just decided to extend that.

Mr. Overdahl and Ms. Dick, do you think that is helpful? Or should we let these things just live and die on their own merits? And then maybe Mr. Parkinson would like to respond.

Mr. OVERDAHL. I am afraid I am just really not in a position to make that judgment.

Senator ALLARD. Do they feed into the derivatives and the swaps on the investment banks, some of the things they put together? Do they feed into investments in swaps?

Mr. OVERDAHL. Well, certainly, they are major participants and dealers in the markets.

Senator ALLARD. Yes.

Mr. OVERDAHL. So I am not sure—could you help me out here with——

Senator ALLARD. Well, I am just fishing a little bit. [Laughter.]

I admit that. But I am just wondering if there is a downside to this or a positive side as far as you are looking at OTC——

Chairman REED. Extending the——

Senator ALLARD. Yes, yes.

Mr. OVERDAHL. Well, you know, our role as securities regulators is not to oversee the entire over-the-counter market. It is a very limited role in our jurisdiction. So certainly, you know, our focus is on the consolidated—the CSE groups of investment banks and making sure that their policies and procedures for risk management are in place. I am not sure beyond that there is really much of a role.

Senator ALLARD. But the Fed is starting to assume a role, and so does that mean you look at them a little differently as far as their security?

Mr. OVERDAHL. Well, I am not sure it is looked at any differently. Certainly we have worked closely with our Fed counterparts through the MOU that was just signed the other day, information sharing, making sure that the look that we are seeing with our people who are on the ground in these banks, in the investment banks, are sharing information with our counterparts at the Federal Reserve, and that we are seeing the look that they are seeing from a bigger picture, from the primary dealers and others that may help us do our job better.

Senator ALLARD. Ms. Dick, do you want to comment?

Ms. DICK. Senator Allard, I think you have correctly noted some of the issues that have arisen in this period of market turmoil over the last 9 months, one of them, a key issue being that of liquidity—liquidity in markets, liquidity in institutions. And, Chairman Reed, you had mentioned this in your opening comments as well. Some of the actions we see now in financial markets that are driven by either other participants or perhaps facilitated by the fact that they have a number of tools with which to take exposures in the credit derivatives market would be in the individual names of firms.

The liquidity issues, some of the issues associated with market stability, are all issues that I think we are regulators recognize are a distinct priority for each of us and ensuring that our firms can both manage their own risks safely and soundly but also key market participants can contribute to a stable financial market in each of these instruments, and perhaps more broadly with respect to the financial system.

There are a number of issues, many of which we have been discussing through this forum. We have talked about at the hearing today with respect to the regulators both domestically and internationally that I think will have to be resolved through perhaps additional guidance or standard by the regulators, but also some risk management practices in the firms that will have to be enhanced with respect to areas such as liquidity risk management, aggregation of risk exposures for individual names, as Mr. Parkinson mentioned, reference names, and derivative counterparties. So I think there are a number of these types of ancillary issues that certainly have some implications for the credit derivative market, but also are going to have to be addressed by the supervisors.

Senator ALLARD. Mr. Parkinson, do you want to comment or do you want to pass?

Mr. PARKINSON. In general terms, I think there is a connection between the Bear Stearns episode and the actions we took to stabilize the financial system in that instance and the subject matter of this hearing, and that is that we recognize that in providing liquidity and facilitating the acquisition of Bear Stearns, that entails a certain amount of moral hazard and that people may come to expect it will take such actions and that those actions will protect their interests and that that might lead them to be less rigorous about protecting their own interests.

So I think one of the things we are trying to do to mitigate that moral hazard risk is strengthen the infrastructure of financial mar-

kets so that some of the concerns that really required us to intervene would no longer be concerns because the infrastructure had been made stronger so that the system can better withstand the failure of a large firm. And one of those infrastructure initiatives—by no means the only one, but one of the main ones that we have been emphasizing is this initiative to strengthen the infrastructure for the OTC derivatives markets, and, in particular, the credit derivatives markets. So there is a connection there as you perceived.

Senator ALLARD. Thank you, Mr. Chairman.

Chairman REED. Thank you, Senator Allard.

Thank you very much for your very thoughtful testimony and for your dedicated service. Thank you very much.

I will now call up the second panel.

Senator ALLARD. Mr. Chairman, while we are waiting for this panel, I wonder if I might insert some records that were requested be put in the record by Senator Crapo, who is a Member of this Subcommittee.

Chairman REED. Without objection, the statement will be made part of the record, and all statements of Members of the Committee will be made part of the record.

We are ready now to introduce the second panel, and we thank all of you gentlemen for joining us this afternoon.

Our first witness is Dr. Darrell Duffie. Dr. Duffie is the Dean Witter Distinguished Professor of Finance at Stanford University, the Graduate School of Business. He is the author of a number of books and articles on topics in finance and related fields and is currently working on a paper on the global derivatives market.

Mr. Robert Pickel is the Executive Director and CEO of the International Swaps and Derivatives Association, ISDA. He also serves as a member of the board of directors of the Institute for Financial Markets, a member of the Bretton Woods Committee, and a member of the board of the Capital Markets Journal.

Mr. Craig Donohue is Chief Executive Officer of the Chicago Mercantile Exchange Group. Before joining CME as an attorney in 1989, Mr. Donohue was associated with the Chicago law firm of McBride Baker & Coles. During his time at CME, he has been involved in the merger between CME and the Chicago Board of Trade.

Our fourth witness is Mr. Edward J. Rosen of Cleary Gottlieb Steen & Hamilton, who is outside counsel to The Clearing Corporation. He is co-author of the two-volume book titled "U.S. Regulation of the International Securities and Derivatives Markets."

Gentlemen, thank you for joining us, and all your statements will be made part of the record, so if you would like to summarize or abbreviate, that is fine.

We will start with Dr. Duffie. Dr. Duffie.

You might want to push that button.

STATEMENT OF DARRELL DUFFIE, DEAN WITTER DISTINGUISHED PROFESSOR OF FINANCE, GRADUATE SCHOOL OF BUSINESS, STANFORD UNIVERSITY

Mr. DUFFIE. Thank you. Thank you, Mr. Chairman and distinguished Members of the Committee.

The financial industry got ahead of itself by allowing extreme growth of its credit derivatives markets before it had safe and effective ways to manage the associated risks. I have been concerned about inadequate methods for the pricing and risk management of the types of credit derivatives that played a role in the recent credit crisis, and I have also been concerned about a lack of robust operational infrastructure. I am going to focus now on the operational issues such as trade documentation and clearing.

Credit derivatives are traded almost entirely in the over-the-counter market, where a dealer normally acts as a seller to buyers of default protection, and as a buyer to sellers of default protection. In order to balance their positions, dealers often take positions with other dealers. In addition, hedge funds often expose one dealer to another when they reassign their positions in an existing contract. As a result, dealers find themselves significantly exposed to the event of default by some other dealers, normally a very remote but potentially dangerous possibility.

Had Bear Stearns collapsed before the 2005 initiative of the Fed led to reduced documentation backlogs, and had quick action by the Fed and JPMorgan not occurred, the unwinding of Bear Stearns' derivatives portfolio could have been extremely dangerous. In the absence of clear and up-to-date records of derivatives positions, dealers would have been uncertain of their own and other dealers' exposures and could have responded by a dramatic withdrawal of financing to each other, which could have indeed caused other dealers to fail, with potentially disastrous economic consequences.

In addition to a lack of good records, the market has suffered from an unnecessary buildup of exposure of dealers to each other. For a simple illustrative example, suppose that Goldman Sachs, for example, has exposure to Merrill Lynch through a $1 billion credit derivatives position, while at same time Merrill Lynch has a similar $1 billion exposure to JPMorgan, and JPMorgan in turn has the same exposure to Goldman. If all three dealers in this circle of exposures were to reassign their contractual positions to a central clearing counterparty, then each dealer's positions would net to zero. None of them would be exposed through these positions, nor would the central clearing counterparty.

Through a new electronic confirmation platform known as DerivServ, I believe that the trade documentation problem has now been largely addressed, although even more progress should be made in that direction. The Clearing Corporation is likely to come online in the credit derivatives market later this year and will reduce dealers' exposures to each other significantly for standardized credit derivatives, which constitute the bulk of dealer exposures. The Clearing Corporation offers roughly the benefits of exchange-based clearing, although we have yet to see the details.

The market is achieving a more robust infrastructure through these and other procedural improvements, such as new protocols for auction-based cash settlement of contracts and for novation.

These infrastructure improvements have come to the over-the-counter derivatives market rather late. Many of their benefits have been available all along through exchange trading.

Separate from the issue of operational risks, exchanges and over-the-counter markets offer different merits as venues for finding

counterparties and for negotiating prices. Exchanges are more transparent and more easily regulated. They are natural for trading highly standardized contracts. The OTC market suffers from a lack of price transparency. On the other hand, the OTC market is more flexible and, thus, better suited to financial innovation and to customization for clients, especially those seeking to transfer large amounts of a specific type of risk.

I would be concerned about the unintended consequences of a regulatory allocation of certain types of financial trading between the OTC and exchange markets. Aside from the chance of getting it wrong or of dampening incentives for future innovation, there is also the question of international competition. The United States has the world's premier derivatives exchange, but is competing with the United Kingdom for leadership in the OTC derivatives market. Over several decades, the U.S. over-the-counter derivatives market has nevertheless served as an engine for innovation and economic growth in the financial services sector in a manner analogous to the role of Silicon Valley in the manufacturing sector.

Thank you.

Chairman REED. Thank you, Dr. Duffie.

Mr. Pickel, please.

STATEMENT OF ROBERT PICKEL, CHIEF EXECUTIVE OFFICER, INTERNATIONAL SWAPS AND DERIVATIVES ASSOCIATION

Mr. PICKEL. Chairman Reed and Ranking Member Allard, thank you very much for inviting ISDA to testify before the Subcommittee. ISDA represents participants in the privately negotiated derivatives industry and today has over 830 member institutions from 56 countries around the world. It is our pleasure to share with you our insights on "Reducing Risks and Improving Oversight in the OTC Credit Derivatives Market."

The vast majority of credit derivatives take the form of the credit default swap, which is a contractual agreement to transfer the default risk of one or more reference entities from one party to the other. They are the fastest-growing part of the OTC derivatives business and the source of a great deal of innovation.

Credit derivatives arose in response to two needs in the financial industry. The first was the need to hedge credit risk. Prior to the existence of credit derivatives, lenders had a limited number of ways to protect themselves if the financial condition of a borrower were to deteriorate. One was to take collateral and the other was by selling the loan, which normally requires the consent of the borrower. A second need was diversification of credit risk. Financial economists have long noted the benefits of applying a portfolio approach to investments by means of diversification, but practical considerations made diversification difficult to achieve in the credit markets before credit derivatives. By allowing banks to take a short credit position, credit derivatives enable banks to hedge their exposure to credit losses without disrupting their relationship with their customers. And a protection seller can increase its exposure to certain entities, diversifying risk in a cost-efficient way.

Two features of the market have enhanced the ability of credit derivatives to fulfill the two needs of hedging and diversification. The first feature is standard legal transaction documentation pub-

lished by ISDA. Along with other ISDA documentation, these definitions factiliate transactions and enhance legal certainty, which is a necessary condition for derivatives activity. The second is index trading, that is, buying and selling protection on a diversified index of entities instead of a single firm. By providing additional opportunities for investors to take positions in credit risk, index trading has vastly increased the liquidity of credit derivatives generally. The result is that banks and other firms seeking to hedge credit risk can do so more efficiently and at a lower cost. This greater efficiency in turn means that credit risk can be more widely and deeply dispersed in the economy so that the costs of default are felt less acutely in any one sector.

ISDA has made continuous efforts to improve the legal documentation for credit derivatives. We have published a series of documents to cover new products and to adapt the documentation framework to the increasing use of automation in the marketplace. The success of the market and the entrance of new market participants such as investment managers and managed funds has led to the increasing use of novations, a process in which one party to the contract assigns or novates its obligations to a third party. After concerns were raised as to whether proper notifications to the remaining party in the trade were being widely shared, in 2005 we published a Novation Protocol, which has proved extremely successful in reducing the number of outstanding confirmations due to novations.

Standard credit derivative documentation currently provides for physical settlement of transactions following the occurrence of a credit event. Through nine credit events over the last 3 years, ISDA and its members have established an alternative mechanism that utilizes an auction process that facilitates cash settlement while preserving the option of physical settlement.

ISDA and a group of the major credit derivative dealers have commenced the process of incorporating this mechanism into our definitions. It is anticipated that this process will be completed by year end.

The rapid growth in the credit derivatives market has increased the need to automate post-trade activities. Financial products Markup Language—FpML—is the technical standard developed by ISDA for electronic messaging covering the OTC derivatives lifecycle and is widely used in the industry. Currently a high percentage of trades—greater than 90 percent—are confirmed electronically, and the industry continues to strengthen the infrastructure. One example of this is the Trade Information Warehouse, a central repository managed by the Depository Trust & Clearing Corporation that keeps the legally binding version of all trades and to which all market participants submit their trades.

Starting in May, ISDA has facilitated discussions among a working group to explore methods that could be used to reduce the current gross notional credit default swap market size. The process, known as "Portfolio Compression," offers tangible benefits to CDS market participants through potential capital savings and a reduction in operational risk by decreasing the number of trades.

The market for OTC derivatives has grown rapidly, thanks both to the usefulness of these products as a risk management tool and

to the strong legal and operational infrastructure that currently exists for OTC derivatives. While continued innovations will challenge existing frameworks, and while market participants and regulators alike will need to continue to be vigilant, there is no question that the infrastructure for OTC credit derivatives is strong and improving.

Thank you very much for allowing ISDA to testify today. I look forward to answering any questions you may have.

Chairman REED. Thank you very much, Mr. Pickel.

Mr. Donohue, please.

STATEMENT OF CRAIG S. DONOHUE, CHIEF EXECUTIVE OFFICER, CHICAGO MERCANTILE EXCHANGE GROUP INC.

Mr. DONOHUE. Chairman Reed, thank you for inviting CME Group to be here today and to testify before your Subcommittee. You have already heard a great deal about the value and importance of these products and markets, as well as the exponential growth that has occurred in these markets in recent years, and so I will not belabor those factors. But I believe you have also heard today that the trading confirmation, risk management, and settlement systems in these markets have not kept pace with that growth or with the sophistication of market participants and the full range of trading strategies that they now use in these markets.

There are solutions that can increase transparency and reduce risk within the credit default swaps market. For more standardized credit products, the transparent price discovery and multilateral trading and clearing mechanisms of an exchange model allow for monitoring risks on a current basis, reducing systemic risks, and enhancing certainty and fairness for all market participants.

At the same time, an exchange model would offer regulators the information and transparency they need to assess risks and to prevent market abuses. An exchange model would reduce the informational asymmetries in today's credit default swaps market and protect the broader financial markets.

Let me provide a few specific examples of the problems inherent in this market and the solutions that an exchange-based model could offer.

First, CDS markets are opaque. Best price information is not readily available as it would be on a centralized marketplace. Efficient and accurate mark-to-market practices are hindered by the lack of transparency in the CDS markets. Disagreements are common, leading to subjective and inconsistent marks and potentially incomplete disclosure to investors of unrealized losses on open positions.

Earlier this week, as an example, Toronto Dominion Bank announced a nearly $94 million loss, believed to be related to credit derivative indices and index tranches that had been incorrectly priced by a senior trader. Traders often generation their own marks in the credit derivatives market due to perceived unreliability of some end-of-day pricing services. In an exchange-based model with transparent and reliable end-of-day marks and market data dissemination to all credit derivatives market participants, portfolio-based valuation errors of this type are much less likely to occur.

Second, risk assessment information is inadequate, and risk management procedures are inconsistent across the market. Precise information on gross and net exposures is simply not available. The true consequences of a default by one or more participants cannot be measured—exactly the sort of systemic risk brought to light by the Bear Stearns crisis, which caused major disruptions in the market. As Bear Stearns faltered, credit spreads for most dealers widened, volatility increased, and liquidity declined, and ultimately intervention became necessary. Transparent market information, combined with risk management protocols enforced by a neutral clearinghouse, could have mitigated this outcome. Risk managers would have been more accurate and timely in terms of their understanding of the firm's positions, exposures, and collateral requirements. The clearinghouse and regulators would be able to manage concentration risks within a particular portfolio and stress test the consequences of a major default.

Third, gross exposures for bilateral CDS transactions are far larger than necessary, adding to the risk of a cascading series of failures across the markets. Adjusting exposures through novated trades is overly complex and time-consuming, and such trades often remain unconfirmed for weeks. The benefits that an exchange model would bring to this market are substantial. Centralized electronic trading would offer scalable, efficient mechanisms to market participants and bring price transparency to the entire market, improving accounting practices and public reporting. Such systems would permit nearly instantaneous trade confirmation. An experienced clearinghouse could substantially reduce systemic risks. The CME clearinghouse currently holds more than $60 billion of collateral on deposit and routinely moves more than $3 billion per day among market participants. We conduct real-time monitoring of market positions and aggregate risk exposures, twice-daily financial settlement cycles, advanced portfolio-based risk calculations, and we monitor large account positions and perform daily stress testing.

We are not here today to ask Congress to mandate one solution. Much has already been said about The Clearing Corporation proposal, although public information is limited. We believe that there are alternative structures that could better suit the needs of all market participants. We recommend that financial market regulators be encouraged to foster an open and competitive environment in which different solutions can compete.

The best path will be one that permits multiple offerings to bring to market new innovations that will help the credit default swaps market mature and evolve, and we look forward to working with the appropriate regulatory community to achieve that end.

Thank you, sir.

Chairman REED. Thank you very much, Mr. Donohue.

We are scheduled to have a vote at any moment, so, Mr. Rosen, please begin, but forgive me if I have to interrupt and recess for a moment.

Mr. ROSEN. I will do that, Mr. Chairman. Thank you.

Chairman REED. If you could bring the microphone forward and push the button.

STATEMENT OF EDWARD J. ROSEN, CLEARY GOTTLIEB STEEN & HAMILTON LLP, OUTSIDE COUNSEL TO THE CLEARING CORPORATION

Mr. ROSEN. Thank you, Mr. Chairman. TCC welcomes this opportunity to share its plans to develop a clearinghouse for credit default swaps, or CDS, as they are commonly known.

The Clearing Corporation was originally established as the Board of Trade Clearing Corporation more than 80 years ago, in 1925, and currently clears for a number of derivatives markets. This is an area in which The Clearing Corporation has demonstrated competence.

Over the past 18 months, TCC and its owners have undertaken an intensive effort to structure and develop a CDS clearinghouse, and it has worked in close consultation with a number of Federal regulators and industry in that process. I would point out that CCTC, the entity that TCC intends to create for this purpose, will not be involved in the negotiation or the execution phase of transactions, but will accept transactions that are eligible for clearing once they have been executed, and it intends to do that through the DTCC DerivServ platform that has been the vehicle for driving down the backlog in confirmations over the past couple of years very successfully.

Participation in the new clearing corporation, CCTC, will be open to all qualified participants, but there will be stringent and standard criteria for membership, including significant minimum net capital requirements, creditworthiness requirements, operational and risk management requirements, and a very significant presence in the credit default swap market.

As has been noted before, it is contemplated that the clearing organization will be a New York State bank and a Federal Reserve System member bank and, as such, will be regulated by the New York Fed as well as the New York State Banking Department. The clearing organization is working diligently with those groups in order to accomplish the chartering of CCTC within a prompt timeframe.

Although the qualitative and quantitative details are not nailed down at this early stage, I think the Committee can be very comfortable that the clearing operations will be structured in a manner at CCTC that conforms to all U.S. regulatory requirements, as well as international standards, both for banks and clearinghouses. An overview of that structure is outlined in our written testimony, and we would be pleased to elaborate on it at your request.

I would like to give a very concrete set of examples as to how the OTC market will interface with the clearinghouse and what the implications will be. I am going to start by presuming that Senator Schumer runs a large New York bank and he has lent $100 million to the AAA Buggy Whip Company. Now, he hails from New York, but he ultimately comes to realize what a buggy whip is, and he decides that he may want to diversify or hedge his exposure to that company. So he calls you and says, "Mr. Chairman, I am willing to pay you X dollars every quarter if you are willing to agree that in the event that this buggy whip company fails, you will buy AAA Buggy Whip loans with a face value of $100 million from me for $100 million, regardless of what their value is." Senator Schumer,

being a persuasive fellow, and you, being attracted to the revenue stream, agree.

Now, time passes and you have second thoughts about the credit exposure that you have to the AAA Buggy Whip Company, so you call up Senator Schumer and you say, "Are you amenable to unwinding this transaction?" And Senator Schumer says, "Well, no, I like my position now but, in any event, would want a very steep price for unwinding it." So you call Senator Crapo, who runs a different bank, and you make the same proposition to Senator Crapo that he will stand ready upon payment by you on a quarterly basis of X or Y dollars to buy those loans from you for $100 million, regardless of their value if the Company fails. He agrees because he is a supporter of liquid markets, and you are a persuasive fellow.

Now, you look at your position and you say, "I am hedged. I have no market risk." And you are right. However, you do have $200 million in notional exposure to CDS, and I hesitate to say this, but in their absence I feel somewhat more comfortable, you also have the credit risk that Senator Schumer's bank is not going to perform its obligations to pay you periodically, and you are subject to the risk that Senator Crapo's bank will not be around to pay you in the event that the AAA Buggy Whip Company goes under.

If you are in Wall Street in this position, you would be welcomed to the club because this is the position that most major banks find themselves in, although, obviously, the scenario is significantly larger in size and in consequences.

Now, if the three of you were all participants in CCTC and you submit your trades to the clearinghouse, here is what happens. The clearinghouse steps into the middle of your transactions, so the credit default protection that you provided to Senator Schumer you are now providing to the clearing corporation and it is providing that in turn to Senator Schumer. The credit protection that you purchased from Senator Crapo you are now purchasing from the clearing corporation and it is purchasing it in turn from Senator Crapo. You are both purchasing and selling the same credit protection to the clearing corporation, and in the process of novating that transaction, your two transactions are utterly extinguished. You have no more exposure, you have no notional exposure, and you have no credit risk. You do not have credit risk to the clearing organization. You do not have credit risk to either of your colleagues' banks.

The benefits of this are self-evident. Of course, Senator Crapo and Senator Schumer both have credit risk to the clearing corporation, and the clearing corporation to them, and the infrastructure that is being developed for CCTC will be rigorously developed with state-of-the-art risk management infrastructure in order to address those credit risks both to protect CCTC against the default of a member, but also to ensure that the default of a single member does not cascade throughout the participants at the clearing corporation.

I see I am over my time.

Chairman REED. Thank you very much.

Let me begin with a question I addressed initially to the previous panel, which is that some commentators and some individuals who are significant investors have suggested that this is the next big

shoe that will fall, this whole related issue of credit default swaps, and I wonder, just your comments and having heard the previous panel also, beginning with Dr. Duffie.

Mr. DUFFIE. There is still some systemic risk associated with failures of dealers, but the risk has been mitigated by reduction of trade documentation backlog. And once the clearing corporation or clearing more generally along the lines described by Mr. Donohue has been set up—pardon me, Mr. Rosen has been set up, that will further reduce the systemic risk to the point that I think we will be much better off than we were 2 years ago.

Chairman REED. Mr. Pickel, your comments?

Mr. PICKEL. Yes, I think the continued efforts on the operational side to reduce backlogs, to put this mechanism in place for settling trades will be a significant focus for us. We are also focusing on what we have always focused on, which is the robustness of our documentation infrastructure, key provisions such as netting and collateral. Keep in mind that these credit derivatives are done under an ISDA master agreement, and the relationships extend between two parties beyond just credit derivatives to the whole range of transactions that might exist. And so it is a risk management proposition for participants, the two parties to the contract, to maintain that overall portfolio of trades, not just the credit derivatives but also the entire derivatives portfolio between them.

Chairman REED. Thank you.

Mr. Donohue.

Mr. DONOHUE. Sir, I think that is a difficult question to answer because of the lack of information about gross and net exposures that exist in the market. But we know from 150 years of successful operation of the central counterparty clearing system at the CME Group that the market wants confidence. They want confidence in the ability to have their counterparties perform, and a central counterparty clearing system provides and enhances that confidence to market users.

So we do not know the answer to that question, but more transparency and the application of true central counterparty clearing services will help answer that question and help reduce risks in the market.

Chairman REED. Thank you.

Mr. Rosen, your comments?

Mr. ROSEN. I agree, Mr. Chairman. I think that there is not a panacea. I think there are a number of steps that need to be taken, and I think we need to continue to take them. And I think a central counterparty system will be a major element in that effort, but not a panacea.

Chairman REED. The impression that I got from the first panel was that they see the role of both an exchange-based approach and a clearinghouse approach, and the question I would have now is—I guess I will rephrase that. In an ideal world, market participants would move to those arrangements that were most favorable to them, most profitable to them. Are there any obstacles at the moment to that sort of smooth migration, marketplace, regulatory obstacles or other obstacles? And let me begin again with Dr. Duffie.

Mr. DUFFIE. Well, the over-the-counter market has taken the first move or advantage on standardization of their major products,

such as the CDX contract, and they, in fact, have intellectual property rights over the use of that particular index, which is very popular.

The exchanges might have more difficulty convincing trade to migrate to the exchange on a contract like that without the ability to offer precisely that contract now that liquidity has been established in the OTC market.

But, generally, I think the premise of that question, that market participants will migrate to whatever trading venue is most suitable for them, is about right. Regulators have an important role to play in ensuring the systemic soundness of clearing corporations, whether exchange or OTC.

Chairman REED. But, again, and not just for Dr. Duffie but for the rest of the panel, is there anything that you point to now that are obstacles to that market migration or things that should be done in a positive way to provide for the smooth transition to either exchange or clearing?

Mr. DUFFIE. I myself am not aware of any major obstacles.

Chairman REED. Mr. Pickel, your comments?

Mr. PICKEL. I think it is important to keep in mind that the development of this particular product area is quite different from some of the other derivatives markets we have seen develop over the last 25 years. In many of those areas, interest rates, currencies, there were well-established exchange-traded markets that existed either before the OTC or really developed simultaneously with the OTC. In fact, since the CFMA we have seen, you know, both exchange and OTC business grow significantly, and there is a reason for that. They are related. They provide a means of—the exchange provides a means of offsetting risk in the OTC trades.

Credit derivatives developed initially as an OTC market, and that is how it is—the liquidity is there. There is an ability to trade. I think we are seeing, you know, a further standardization of transactions, which might lead more naturally to exchange-traded products. There have been some efforts to establish exchange-traded products. We have tried to work with the exchanges. The CME has a product where they utilize our definitions. The recovery rates are fixed recovery rates, unlike the OTC products, which is a variable recovery rate. We have also worked with the exchanges over in Europe, Eurex and Euronex Life, to discuss with them some of the products that they are looking to roll out in the credit derivative space.

So I think there is—you know, there is self-percolating here, and we will have to see where it goes and what the market reaction will be.

Chairman REED. Mr. Donohue.

Mr. DONOHUE. Mr. Chairman, if I could clarify just briefly before answering your specific question, I do think it is important to think differently. It is not, in our view, a difference between an exchange solution and a CCP or a central counterparty solution but, rather, whether we choose to bring a bundled trade execution as well as clearing solution to market, or, alternatively, just offer central counterparty clearing services while continuing to allow market users to transact bilaterally as well as on an exchange type of platform.

With that explanation, I do think it will be important for us to encourage the various regulators that are interested in these issues—and that certainly does include the Federal Reserve, the CFTC, and the SEC—to work together to help foster a competitive environment where different organizations with capability in these matters can offer innovative new solutions. Whether they be trading execution solutions or central counterparty clearing solutions, there are a variety of very complex legal issues that could prevent those solutions from coming to market quickly if the regulators do not work together to help solve those problems.

Chairman REED. Mr. Rosen, the same question.

Mr. ROSEN. Yes, the securities law issues that the first panel mentioned are issues that are important and would need to be resolved in order for the CCP clearing solution to go forward.

Chairman REED. Well, I want to thank you gentlemen, and I have just been informed that we have 9 minutes left on the vote, and I think more importantly and significantly that Senator Kennedy is on the floor to vote. So I am going to rush over there, if you will forgive me. If there are additional questions from my colleagues or from the staff, they will be submitted to you in writing, and if you could respond no later than July 16th—we will try to get the questions to you by July 16th, and please respond within the shortest possible time.

Thank you very much for your excellent testimony. The hearing is adjourned.

[Whereupon, at 4:19 p.m., the hearing was adjourned.]

[Prepared statements, responses to written questions, and additional material supplied for the record follow:]

For release on delivery
2:00 p.m. EDT
July 9, 2008

Statement of

Patrick M. Parkinson

Deputy Director, Division of Research and Statistics

Board of Governors of the Federal Reserve System

before the

Subcommittee on Securities, Insurance, and Investment

Committee on Banking, Housing, and Urban Affairs

United States Senate

July 9, 2008

Chairman Reed, Ranking Member Allard, and members of the Subcommittee, I am pleased to appear today to discuss the over-the-counter (OTC) credit derivatives market. First, I will provide some information on credit derivatives, the markets in which those instruments are traded, the risks that their use entails, and some key practices for managing those risks. Then I will discuss the oversight of the credit derivatives markets by the prudential supervisors of the firms that act as dealers in credit derivatives, including joint efforts by supervisors and market participants to strengthen the infrastructure of those markets. Finally, I will discuss the potential benefits of central counterparty (CCP) clearing as well as those of exchange trading of credit derivatives. Although the focus of this hearing is on credit derivatives, most of my remarks are applicable to OTC derivatives generally.

The OTC Credit Derivatives Market

Background Information

A credit derivative is a financial contract whose value is derived from the value of debt obligations issued by one or more reference entities. The predominant type of credit derivative is a credit default swap (CDS). In a CDS, a "protection buyer" pays premiums to a "protection seller." In return, in the event of a default or other specified credit event, the protection seller is obligated to pay the protection buyer the notional or par value for the debt, thereby transferring the risk of default from the buyer to the seller. Most reference entities are corporations, including corporations rated investment-grade and those with lower ratings. Over the last few years, CDS referencing mortgage-backed securities and other asset-backed securities (CDS on ABS) also have been traded. A single-name CDS references a single corporation or ABS, while a multiname CDS references a basket of reference entities or, more commonly, an index composed of many single-name CDS.

Markets in Which Credit Derivatives Are Traded

Although credit derivatives have been listed on exchanges, to date the vast majority of credit derivatives have been executed bilaterally with derivatives dealers in OTC markets. The dealers include 15 to 20 large, globally active commercial and investment banks. The principal centers for trading are London and New York. Trades typically are executed over the telephone or through voice brokers. Use of various electronic trading platforms to facilitate bilateral execution of CDS has been growing, especially in Europe, but remains fairly limited. More than half of trading in CDS is trading between dealers. Other than dealers, the most active participants in CDS markets are asset managers, including both hedge fund managers and managers of regulated investment companies.

Estimates of the size of the global market for CDS indicate that the market has been growing very rapidly. Global market estimates published by the Bank for International Settlements show that the notional amount outstanding at year-end 2007 was $58 trillion, about twice the level just a year earlier. The gross replacement cost of those contracts, which measures the current market value of the protection against credit events affecting the $58 trillion of debt, was about $2 trillion at year-end. Growth of index and other multiname CDS has been especially rapid in recent years and those instruments now account for more than 40 percent of both the notional amount and the current market value of all CDS.

The very rapid growth of the credit derivatives market reflects their perceived value for managing credit risks. The single-name CDS markets typically are far more liquid than the underlying bond or loan markets, in large measure because the cost of taking short positions is far lower. Fixed-income asset managers use credit derivatives to obtain or adjust their credit exposures. Portfolio managers at banks use single-name CDS to manage concentrations of risk

to their largest borrowers. Furthermore, the very liquid markets for CDS indexes allow asset managers to adjust the risk profile of their entire debt portfolios much more quickly and at much lower cost than was possible before these instruments were available. The availability of CDS also facilitates underwriting and making markets in the underlying debt markets, and thereby benefits issuers and investors that do not directly use credit derivatives.

Risks of Using Credit Derivatives

The use of credit derivatives entails risks as well as benefits. The types of risk are essentially the same as those associated with financial activity generally--market risk, credit risk, operational risk, legal risk, and reputational risk. Of particular importance is counterparty credit risk--that is, the risk that a counterparty to a credit derivatives contract could fail to perform its contractual obligations, resulting in losses to the nondefaulting counterparty. For example, in the case of a CDS, if the protection seller itself becomes insolvent, the protection buyer would lose the value of that protection and would need to replace it by purchasing protection from another seller. If the premiums required by the market for protection against default by the reference entity had risen since the protection had been purchased from the insolvent seller, the protection buyer would be exposed to a loss equal to the present value of the difference between the premiums paid on the new contract and the premiums paid on the original contract.

Key Practices for Managing Risks

Participants in the credit derivatives market and other OTC derivatives markets manage their counterparty credit risks by carefully selecting and monitoring their counterparties, by documenting their transactions under standard legal agreements that permit them to net gains and losses across contracts with a defaulting counterparty, and by entering into agreements that require counterparty exposures to be collateralized. Market participants effectively preclude

firms from acting as dealers if they are not rated A or higher. Dealers evaluate the credit worthiness of their counterparties and assign them internal credit ratings. Those whose internal ratings are equivalent to below investment grade usually are required to enter into collateral agreements that include initial margin requirements as well as variation margin requirements. Transactions with hedge funds typically are supported by collateral agreements, as are transactions between dealers. Laws in the United States and many other jurisdictions have been amended in recent years to clarify that netting and collateral agreements are legally enforceable. Still, the measurement and management of counterparty credit risks on credit derivatives are challenging. Furthermore, as I will focus on today, weaknesses in the infrastructure for the credit derivatives markets and other OTC derivatives markets have created operational risks that could undermine the effectiveness of counterparty risk-management practices.

Oversight of the OTC Credit Derivatives Market

Although the credit derivatives market often is described as unregulated, by its nature it is subject to significant regulatory oversight. All transactions in the market are intermediated by dealers and all major dealers are commercial or investment banks that are subject to prudential regulation by U.S. or foreign banking regulators or by the Securities and Exchange Commission (SEC). The prudential supervisors devote considerable attention to the dealers' management of the risks associated with activities in the credit derivatives market and other OTC derivatives markets. In particular, they have been issuing guidance on counterparty credit risk management since the mid-1990s and have updated it several times, notably after the near failure in 1998 of Long-Term Capital Management, which was a major participant in the interest rate derivatives market. With the rapid growth of the credit derivatives market and other derivatives markets and the increasing participation of hedge funds in those markets, the management of counterparty

exposures to hedge funds has been given careful attention, including a thorough review of relevant risk-management practices by the President's Working Group on Financial Markets (PWG) in 2006. That review fed into the *Principles and Guidelines Regarding Private Pools of Capital* that the PWG issued in July 2007, which provided updated guidance on the management of such counterparty exposures.

The volatility and illiquidity in financial markets over the past year have provided a severe test of major dealers' counterparty risk-management practices. Thus far, the results with respect to hedge fund exposures have been remarkably good. Although quite a few hedge funds have performed very poorly, counterparty credit losses to their dealer counterparties have been negligible. By contrast, the financial difficulties of some monoline financial guarantors have forced some of the firms that act as dealers to write down substantially the value of credit protection that the dealers had purchased from the guarantors on collateralized debt obligations and other structured credit products. Because the guarantors had been considered highly creditworthy and because the exposures against which they sold protection were considered to pose very little credit risk, their CDS counterparties had generally not required the guarantors to enter into collateral agreements. In light of this experience, the Financial Stability Forum's (FSF) April 2008 report to the G-7 Ministers and Central Bank Governors called on prudential supervisors to extend guidance on management of counterparty exposures to hedge funds to other large, highly leveraged counterparties, including other dealers and financial guarantors.

Supervisory Efforts to Strengthen the Infrastructure of the OTC Credit Derivatives Market

In addition to their efforts to ensure that individual derivatives dealers manage the risks associated with credit derivatives and other OTC derivatives effectively, prudential supervisors, under the leadership of the Federal Reserve Bank of New York (FRBNY), have been working

with dealers and other market participants since September 2005 to strengthen arrangements for clearing and settling OTC derivatives transactions. For too many years, post-trade processing of OTC derivatives transactions remained decentralized and paper-based despite enormous growth in transactions volumes. Among other problems, dealers reported large backlogs of unconfirmed trades, a significant portion of which had been outstanding for 30 days or more. The failure to confirm trades promptly can exacerbate counterparty credit risks by allowing errors in counterparties' records of their transactions to go undetected, which could lead them to underestimate exposures or to fail to collect margin when due. Such backlogs also could significantly complicate and delay the close-out and replacement of trades with a defaulting counterparty.

By 2005, backlogs of unconfirmed trades were especially large in the credit derivatives market, in part because market participants, including hedge funds, frequently closed out their positions in CDS through a transaction known as a novation. In a novation, one party steps out of the contract and is replaced by another party. The master agreements that govern OTC derivatives trading require the party seeking to step out to obtain the prior written consent of its counterparty, but dealers were frequently accepting novations from market participants without any evidence that they had obtained such prior consent. These sloppy practices not only contributed to backlogs of unconfirmed CDS, but also created confusion about the identities of trade counterparties and thereby undermined the effectiveness of counterparty credit risk management.

With encouragement and close monitoring by their prudential supervisors, the dealers worked with market participants to address these weaknesses. By making greater use of available platforms for electronic confirmation of CDS trades, they quickly reduced the

backlogs. By September 2006, the dealers reported that, in the aggregate, they had reduced confirmations outstanding more than 30 days by 85 percent. In 2006, the dealers agreed to expand their efforts to tackle backlogs in the equity derivatives market, again by making greater use of electronic confirmation services. Dealers also quickly announced their support for a novation protocol for credit and interest rate derivatives that had been developed by the International Swaps and Derivatives Association. The protocol provides that if the party initiating the novation has not received written confirmation from the original counterparty by the close of business on the date the novation is struck, it is deemed to have two contracts, one with the original counterparty and another with the counterparty that agreed to accept the novation. The protocol thereby provides the party initiating the novation a strong incentive to obtain the original counterparty's consent promptly.

Although these achievements were impressive, the financial turmoil during the summer of 2007 convinced prudential supervisors and other policymakers that further improvements in the market infrastructure were needed. Specifically, CDS backlogs grew almost fivefold from June to August 2007, reversing much of the previous improvement. Although the backlogs subsequently receded, this episode demonstrated that backlog reductions were not sustainable during volume spikes. Moreover, it underscored that, in many respects, the post-trade processing performance of the OTC derivatives markets still lags significantly the performance of more mature markets and still has the potential to compromise market participants' management of counterparty credit risks and other risks.

In their reports on the financial market turmoil, both the PWG and the FSF asked prudential supervisors, under the leadership of the FRBNY, to take further actions to strengthen the OTC derivatives market infrastructure. Specifically, they asked the supervisors to insist that

the industry set ambitious standards for trade data submission and resolution of trade-matching errors. More timely and accurate submission of trade data is critical to avoiding the buildup of backlogs following volume spikes. They also asked supervisors to ensure that the industry promptly incorporates into standard CDS documentation a protocol that would permit cash settlement of obligations following a default or other credit event involving a reference entity, based on the results of an auction. Adoption of the cash settlement protocol is intended to address concerns that a physical settlement process for CDS could be disorderly in the event of large-scale or multiple contemporaneous defaults. Finally, the PWG and FSF also recommended that the supervisors ask the industry to develop a longer-term plan for an integrated operational infrastructure for OTC derivatives that covers all major asset classes and product types and addresses the needs of other market participants as well as dealers.

The FRBNY convened a meeting of supervisors and market participants on June 9 to discuss how to address the PWG and FSF recommendations. They agreed on an agenda for bringing about further improvements in the OTC derivatives market infrastructure. With respect to credit derivatives, this agenda includes: (1) further increasing standardization and automation, with the ultimate objective of matching trades on the date of execution; (2) incorporating an auction-based cash settlement mechanism into standard documentation; (3) reducing the volume of outstanding CDS contracts via greater use of services that orchestrate multilateral terminations; and (4) developing well-designed central counterparty services to reduce systemic risks. They also agreed to extend the infrastructure improvements in the credit derivatives market over time to encompass the OTC equity, interest rate, foreign exchange, and commodity derivatives markets.

Potential Benefits of Greater Centralization of Market Infrastructure

Central Counterparty Clearing of Credit Derivatives

A central counterparty is an entity that offers to interpose itself between counterparties to financial contracts, becoming the buyer to the seller and the seller to the buyer. Trades on derivatives exchanges routinely are cleared through a CCP, in part so that market participants can accept the best bids or offers without considering the creditworthiness of the party making the bid or offer. Indeed, in electronic exchanges, the use of a CCP permits anonymous trading. CCP services also have been offered to counterparties in OTC derivatives markets. For example, since September 1999, LCH.Clearnet Limited has operated SwapClear, a London-based CCP for interest rate swaps between dealers. SwapClear clears almost 50 percent of global single-currency swaps between dealers. Several plans are now under development to provide CCP services to the credit derivatives market.

A CCP has the potential to reduce counterparty risks to OTC derivatives market participants and risks to the financial system by achieving multilateral netting of trades and by imposing more-robust risk controls on market participants. However, a CCP concentrates risks and responsibility for risk management in the CCP. Consequently, the effectiveness of a CCP's risk controls and the adequacy of its financial resources are critical. If its controls are weak or it lacks adequate financial resources, introduction of its services to the credit derivatives market could actually increase systemic risk.

A CCP that seeks to offer its services in the United States would need to obtain regulatory approval. The Commodity Futures Modernization Act of 2000 included provisions that permit CCP clearing of OTC derivatives and require that a CCP be supervised by an appropriate authority, such as a federal banking agency, the Commodity Futures Trading

Commission, the SEC, or a foreign financial regulator that one of the U.S. authorities has determined to satisfy appropriate standards. A CCP for credit derivatives with standardized terms that was not regulated by the SEC might need an exemption from securities clearing agency registration requirements.

If a CCP for credit derivatives sought to organize as a bank subject to regulation by the Federal Reserve or if we were consulted by any other regulator of a proposed CCP, we would evaluate the proposal against the *Recommendations for Central Counterparties*, a set of international standards that were agreed to in November 2004 by the Committee on Payment and Settlement Systems (CPSS) of the central banks of the Group of Ten countries and the Technical Committee of the International Organization of Securities Commissions (IOSCO). If one or more CCPs for credit derivatives that meet the CPSS-IOSCO standards are introduced, the Federal Reserve will encourage market participants to use those services to the fullest extent possible. We would also encourage such CCPs to clear trades for a broad range of market participants, either directly or through intermediaries. Market participants should be excluded from participating only if doing so would entail risks to the CCP that it cannot mitigate effectively.

Exchange Trading of Credit Derivatives

An exchange is a mechanism for executing trades that allows multiple parties to accept bids or offers from other participants. As I have already stated, trades on an exchange usually are intermediated by a CCP. Exchange trading requires a significant degree of standardization of contracts. In many cases, counterparties to OTC derivatives trades seek to customize the terms of trades to meet very specific risk-management needs, so many OTC trades are not amenable to exchange trading. However, many OTC derivatives, including many credit derivatives have

become sufficiently standardized that exchange trading is feasible and the scope for exchange trading probably could be expanded by further standardization of contracts while still meeting risk-management needs.

Where exchange trading of OTC credit derivatives is feasible, it can produce several benefits. First, trades executed on an exchange usually are intermediated by a CCP and, as I have discussed, a well-designed CCP can reduce risks to counterparties and the financial system. Second, an electronic exchange can be designed so that trades are locked in at execution, essentially achieving trade matching in real time and eliminating confirmation backlogs. Third, exchange trading has the potential to increase market liquidity by allowing participants to directly trade against bids and offers posted by a broader range of parties, including asset managers as well as derivatives dealers. Fourth, exchange trading has the potential to significantly increase transparency with respect to bids and offers and the depth of markets at those bids and offers. For these reasons, policymakers should encourage greater standardization of contracts, which would facilitate more trading on exchanges. However, they should not lose sight of the fact that one of the main reasons the credit derivatives market and other OTC markets have grown so rapidly is that market participants have seen substantial benefit to customizing contract terms to meet their individual risk-management needs. They must continue to be allowed to bilaterally negotiate customized contracts where they see benefits to doing so.

Conclusions

The credit derivatives market is an important innovation that provides significant benefits to the banks and asset managers that use these instruments and to the financial system generally. However, their use entails risks, including counterparty credit risks, that market participants need to manage effectively. Supervisors need to continue to pay close attention to individual dealers'

management of the risks associated with intermediating the credit derivatives market and other derivatives markets. They also need to continue to foster collective actions by dealers and other market participants to move rapidly toward the goal of implementing a clearing and settlement infrastructure for the credit derivatives market and other OTC derivatives markets that is as efficient as the infrastructure for more mature markets. Supervisors and other policymakers should encourage the introduction and use of well-designed CCP clearing services for credit derivatives and should encourage greater standardization of contracts, which would facilitate more trading on exchanges.

Testimony Regarding Reducing Risks and Improving Oversight in the OTC Credit Derivatives Market

By James A. Overdahl
Chief Economist
U.S. Securities and Exchange Commission

Before the Subcommittee on Securities, Insurance, and Investment
Of the Senate Committee on Banking, Housing, and Urban Affairs

July 9, 2008

Chairman Reed, Ranking Member Allard, and Members of the Subcommittee:

I am pleased to have the opportunity to testify today regarding the Securities and Exchange Commission's efforts to encourage sound risk management practices and enhance the infrastructure in the over-the-counter ("OTC") credit derivatives market. You are all well aware of The Clearing Corporation's recent announcement to establish a central counterparty ("CCP") for credit default swaps ("CDS"). This is an important step in reducing systemic risk and achieving greater operational efficiency in the market.

The Commission has extensive experience with the benefits of centralized clearance and settlement systems for securities. Over the years, these systemically important systems have reduced costs of securities trading, and have been carefully structured to manage and reduce counterparty risk.

Congress recognized the importance of a strong national clearance and settlement system for securities with the Securities Acts Amendments of 1975 ("1975 Amendments") to the Securities Exchange Act of 1934 ("Exchange Act"). In the 1975 Amendments, Congress directed the Commission to facilitate the establishment of a national system for the prompt and accurate clearance and settlement of securities transactions. The 1975 Amendments also provided the Commission with regulatory authority over securities clearing agencies. As the financial markets evolved, that directive was revised by the Market Reform Act of 1990 to reflect the interdependence of options, futures, and equity markets that trade products involving securities or security indices.

The 1975 Amendments were in direct response to the Paperwork Crisis of the late 1960's that nearly brought the securities industry to a standstill and directly or indirectly resulted in the failure of large numbers of broker-dealers. The causes of the Paperwork Crisis are similar to the issues that we have been trying to resolve in the OTC derivatives market. The crisis resulted from a combination of sharply increased volume and inattention to securities processing. As a result, the industry's clearance and settlement procedures were inefficient and lacked automation, thus implicating the finances of the securities firms. Today, almost forty years later, increasing automation in the processing of OTC derivatives transactions is one of the key goals of the OTC confirmations initiative, in which the Commission is a very active participant, called the "Fed 14 Initiative."

As I mentioned earlier, the 1975 Amendments require securities clearing agencies to register with the Commission pursuant to Section 17A(b) of the Exchange Act and Rule 17Ab2-1 thereunder, or obtain an exemption from registration to carry out certain limited clearing agency functions.[1] The Commission has authority to register entities that provide securities clearance and settlement services as clearing agencies or grant them an exemption from registration. This authority is the key component of the Commission's regulation of these entities. An exemption from registration as a clearing agency depends on ongoing compliance with conditions consistent with the principles of Section 17A and the goals of the Commission's regulatory oversight. Exempt clearing agencies are not required to file proposed rule changes.

Securities clearing agencies undergo a rigorous application process. The process enables the Commission to determine whether the applicant can process securities transactions and minimize risk. The Commission's determinations involve several areas that we believe have led to the U.S. securities clearance and settlement system's ability to reduce risk, increase operating efficiency, and operate at relatively low cost to the financial markets. The Commission's statutory mandate also reflects key findings by Congress that serve as principles to ensure a safe and secure market infrastructure.

The findings are as follows:

(1) The prompt and accurate clearance and settlement of securities transactions, including the transfer of record ownership and the safeguarding of securities and funds related thereto, are necessary for the protection of investors and persons facilitating transactions by and acting on behalf of investors.
(2) Inefficient procedures for clearance and settlement impose unnecessary costs on investors and persons facilitating transactions by and acting on behalf of investors.
(3) New data processing and communications techniques create the opportunity for more efficient, effective, and safe procedures for clearance and settlement.
(4) The linking of all clearance and settlement facilities and the development of uniform standards and procedures for clearance and settlement will reduce unnecessary costs and increase the protection of investors and persons facilitating transactions by and acting on behalf of investors.[2]

The Commission uses its broad authority to examine registered and exempt clearing agencies for compliance with the federal securities laws and to verify that registered clearing agencies, which are self-regulatory organizations, comply with their own rules. Exempt clearing agencies are examined for compliance with the conditions of their exemptions. The Commission

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[1] Under Section 17A of the Exchange Act the Commission is authorized to grant conditional or unconditional exemptions from the provisions of Section 17A if it determines such an exemption is consistent with the public interest, the protection of investors, and the provisions of Section 17A (including the prompt and accurate clearance and settlement of securities transactions and the safeguarding of securities and funds).

[2] 15 U.S.C. 78q-1(a)(1)(A)-(D).

approves the rules of registered clearing agencies by publishing the rules for comment and approving them only after considering their compliance with the requirements of the Act and the comments received from the public.

Over the past 33 years, the SEC has not only registered securities clearing agencies, but also has worked with the industry and other regulators to improve the infrastructure and respond to challenges. For example, following the 1987 Market Break, the Commission convened a Task Force of industry participants to develop recommendations on ways to improve the clearance and settlement of securities transactions. The Task Force made several important recommendations, including that the SEC shorten the settlement cycle from five days to three. During the same period, the SEC worked with the securities industry to ensure that the U.S. clearance and settlement system exceeded the standards set forth by the Group of Thirty in 1989.

In 2001 and 2004, the SEC was at the forefront of establishing higher standards to reflect the complexities of an ever increasing global and interconnected securities market. The SEC did this by helping to draft the Committee on Payment and Settlement Systems and International Organization of Securities Commission ("CPSS-IOSCO") reports called the Recommendations for Securities Settlement Systems and Recommendations for Central Counterparties. These reports establish today's standards on how a clearance and settlement system must operate.

After the September 11th terrorist attacks, the Commission, together with the Federal Reserve Board and the Office of the Comptroller of the Currency, undertook a study of the lessons learned by the financial markets. This has led to the establishment of business continuity and recovery goals for the core clearing organizations and significant participants in our financial marketplace.

For almost two decades, the SEC has been working with the industry to implement straight-through processing ("STP") throughout the securities marketplace. STP has been described "as the seamless integration of systems and processes to automate the trade process from end-to-end – trade execution, confirmation, and settlement – without manual intervention or the re-keying of data."[3] In more practical terms, achieving STP would mean greater efficiency, lower costs, and enhanced business continuity because the entire process would be automated. Today, all transactions on the largest U.S. equity exchanges are matched immediately so that there are no confirmation backlogs or lost data. In our view, our efforts to improve and automate the processing of equity transactions dating back to the early 1990s have helped market participants to have a better understanding of the need to improve the processing for OTC derivative instruments today.

Next, I'd like to share with you a quote from a report on clearance and settlement published by the International Securities Market Association in 1999:

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[3] "STP Glossary," prepared by the Securities Industry Financial Markets Association and available at http://www.sifma.org/services/techops/stp/other/STPGlossaryv3.0.xls.

These days, anybody can replicate the contracts an exchange can offer; anybody can set up the hardware to become an electronic exchange. Maybe the only way left to differentiate yourself is by really good clearing and settlement.

Strong clearance and settlement systems are the backbone of the success of the U.S. securities market. They are, and must continue to be, strong, resilient, flexible, and cost efficient. Their success, which is world renowned, relies on a dedicated core of exchanges, clearing agencies, and hundreds of banks, brokerage firms, and companies working together, while still remaining competitive. The degree of interdependence is staggering.

Today, our securities markets are considered the best in the world, so it should be no surprise that the clearing agencies supporting those markets are also considered among the world's best. Some of the clearing agencies regulated by the Commission are subsidiaries of the Depository Trust and Clearing Corporation ("DTCC"). These clearing agencies provide clearing, settlement, and information services for equities, corporate and municipal bonds, government and mortgage-backed securities, and money market instruments. The Depository Trust Company, a clearing agency registered with the Commission, and a subsidiary of DTCC, provides custody and asset servicing for 3.5 million securities issues from the United States and 110 other countries and territories, valued at $40 trillion. In 2007, the clearing agencies registered with the Commission that are DTCC subsidiaries settled more than $1.86 quadrillion in securities transactions. Thanks to netting, transaction settlement obligations were reduced by 98 percent.

In addition to the Commission's experience with clearance and settlement for securities, the Commission has a strong interest in the clearance and settlement of CDSs because of its oversight of the largest internationally active U.S. securities firms through its voluntary consolidated supervised entities ("CSE") program. Each of the CSE firms plays a significant role in the OTC derivatives market. Through the CSE program, the Commission oversees not only the U.S.-registered broker-dealer, but also supervises the holding company and all affiliates on a consolidated basis, including unregulated entities such as derivatives dealers. These prudential supervision activities provide a window into broader market trends involving credit derivatives that has proven useful in understanding the potential impact of these instruments on the broader financial system. The Commission also has oversight of public reporting companies under the Exchange Act that are users and sellers of credit derivatives.

In particular, the CSEs make active markets in credit derivatives and rely on them significantly to hedge and take proprietary positions. This trading generates significant market, credit, and operational risk for the CSEs. The buying and selling of default protection creates short and long exposures – market risk – to the index, entity, or asset referenced in the CDS contract. At the same time, the buying and selling of default protection creates potential credit risk exposure to trading counterparties. Given that the CSEs execute hundreds of CDS agreements a day, the risk management and control resources required to do so in a prudent way are substantial. A significant part of the Commission's CSE supervision program is dedicated to monitoring and assessing CSEs' market and credit risk exposures arising from such trading and dealing activities.

In terms of operational risk, credit derivatives pose unique challenges. From the perspective of a consolidated supervisor, one challenge is that CSE firms' efforts to reduce market and credit risk exposures can often serve to *increase* the operational risk borne by the firm. This is because the easiest way to reduce risk often is to enter into a new, offsetting trade, rather than unwind an existing one. This means a new confirm, a new reference entity, a new counterparty, a new position to be booked and reconciled and mapped to the myriad of risk and control systems – all in the service of reducing risk. This paradox, in part, motivates the SEC's interest in participating in initiatives focused on improving the operational efficiency of credit derivatives trading.

Another important motivating factor stems from the Commission's review of the events leading to the collapse of Bear Stearns, which included a significant number of its derivatives counterparties novating their trades to other dealers. Whether done out of an abundance of caution or with less benign intent, the dramatic increase in novations served to generate negative market perceptions of Bear Stearns' health, feeding rumors. At the same time, a larger number of counterparties began disputing margin call amounts on derivatives trades, adding further to the negative perceptions. Bear Stearns' ability to cope with the operational demands of these developments stressed systems and personnel internally. Greater operational efficiency with regards to credit derivatives may have materially mitigated some of these impacts.

As Erik Sirri, the Director of the Division of Trading and Markets, recently testified before this subcommittee, since the events of mid-March that culminated in the sale of Bear Stearns, the SEC has revised its analysis of the adequacy of capital and liquidity and is currently directing investment banks supervised under the voluntary CSE program to undertake additional stress testing at the holding company level. The Commission has also engaged both international and domestic regulators in a cooperative manner to share information and to discuss the broader policy implications of these events. Strengthening CDS infrastructure would reduce risks in dealing with firms under stress.

As I mentioned earlier, the SEC is participating in the Federal Reserve initiative to improve the confirmation backlog of OTC derivatives, which has made progress over the last several years, including an 85 percent reduction in unconfirmed trades. The CSEs are some of the most active market participants in these markets, and have taken this opportunity to enhance their operational effectiveness. While supporting and in many cases driving the search for a more permanent solution, in the short-term the firms are seeking to reduce gross exposures by tearing-up, or netting, offsetting positions. They are doing so both bilaterally with trading partners as well as multilaterally through vendor-provided solutions. At the moment, this is easiest to do with index trades.

The SEC and other regulators, such as the Federal Reserve, are discussing whether and how the market for OTC derivatives contracts might benefit from a central clearing party for the CDS market and further elimination of confirmation backlog, among other things. Senior Commission staff represented the SEC at a June 9th meeting addressing these topics hosted by the Federal Reserve Bank of New York. The dealer community is also moving forward on an initiative to improve settlement of OTC contracts, a process in which the SEC is also participating. A CCP, such as a clearing house, ideally would be sized to handle spikes in

transaction volume, would promote certainty of contract settlement and thereby minimize risk, as well as reduce the negative effects of misinformation and rumors that may occur during high volume periods.

Looking forward to the contemplated CCP for CDSs, one paramount concern would be the ability of the CCP to implement sound risk management practices. This is because a CCP concentrates risk. A CCP typically "novates" bilateral trades so that it assumes any counterparty risks. Novation allows the CCP to enter into separate contractual arrangements with both counterparties – becoming buyer to one and seller to the other. As part of its risk management, a CCP may subject novated contracts to initial and variation margin requirements or establish a clearing fund. The CCP also may implement a loss sharing arrangement among its participants to respond to a participant insolvency or default. Thus, a CCP can serve a valuable function in reducing systemic risk by preventing the failure of a single market participant from having a disproportionate effect on the overall market. A CCP also may facilitate the offset and netting of obligations arising under contracts that are cleared through the system.

While providing a number of potential benefits, a CCP for credit derivatives or any OTC derivatives contracts is subject to substantial challenges. This is because the markets for OTC derivatives are generally less liquid than markets for exchange-traded instruments. As a result, the traditional procedures for a CCP to handle a default may not be as effective for these products. The traditional procedures for handling a default, which are used by CCPs for most exchange-traded derivatives, call for the CCP to terminate all of its contracts with the defaulting participant, and promptly enter the market and replace the contracts. This will hedge against further losses on the open positions created by termination of the defaulter's contracts. But if the markets for the contracts cleared by the CCP are illiquid or under stress, entering the market may induce adverse price movements, especially if the defaulting participant's positions are large. Consequently, the application of traditional default procedures to illiquid OTC contracts may entail significant risk to the CCP.

Accordingly, one should not view a CCP as a silver bullet for concerns about the management of exposures related to credit derivatives. Even with a CCP, preventing a systemic risk buildup would require dealers and other market participants to manage their remaining bilateral exposures effectively and the dealers' management of their bilateral exposures would require ongoing supervisory oversight. Nonetheless, developing a CCP for clearing CDSs would be an important step in accomplishing this goal.

The current plan from The Clearing Corporation to create a CCP, as we understand it, relates only to post-trade operations. These operations, as discussed above, would mitigate some forms of credit risk. The trade is executed off-exchange, *i.e.*, in the OTC market, when an agreement is reached between two individual counterparties.

It is not uncommon for derivative contracts that are initially developed in the OTC market to become exchange-traded, as the market for the product matures. While the contracts traded in the OTC market are subject to individual negotiation (other than price and quantity), an exchange creates a market for a standardized form of the contract that is not subject to individual negotiation (other than price and quantity). These exchange-traded contracts typically coexist

with the OTC contracts. In this regard, we note that last year the Commission approved a proposal by the Chicago Board Options Exchange to list and trade Credit Default Options ("CDOs") and Credit Default Basket Options.[4] The CDOs are modeled after CDSs and structured as binary call options[5] that settle in cash based on confirmation of one or more specified adverse credit developments (such as payment default) involving obligation(s) referenced in the CDO, such as a debt security.

Exchange trading of credit derivatives would add both pre- and post-trade transparency to the market which could add credibility to the pricing of credit derivatives. Exchange trading could also reduce liquidity risk by providing a centralized market, which would allow participants to better initiate and close out positions efficiently and at the best available prices.

As you can see, developments in the derivatives space pose significant operational and regulatory challenges, which will have to be addressed as this market matures. Again, thank you for this opportunity to discuss these important issues. I am happy to take your questions.

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[4] See Exchange Act Release No. 55871 and Exchange Act Release No. 56275 (August 17, 2007), 72 FR 47097 (August 22, 2007) [File No. SR-CBOE-2007-26] (order approving the listing and trading of credit default basket options).

[5] A "binary call option" is an option contract that will pay the contract holder a fixed amount upon exercise.

For Release Upon Delivery
2 p.m., July 9, 2008

TESTIMONY OF

KATHRYN E. DICK

DEPUTY COMPTROLLER FOR CREDIT AND MARKET RISK

COMPTROLLER OF THE CURRENCY

BEFORE THE

SUBCOMMITTEE ON SECURITIES, INSURANCE, AND INVESTMENT

OF THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS

UNITED STATES SENATE

JULY 9, 2008

Statement Required by 12 U.S.C. § 250:

The views expressed herein are those of the Office of the Comptroller of the Currency and do not necessarily represent the views of the President.

I. Introduction

Good afternoon Chairman Reed, Ranking Member Allard and members of the Subcommittee. My name is Kathy Dick and I am a Deputy Comptroller for Credit and Market Risk at the Office of the Comptroller of the Currency (OCC). I am pleased to be here today to testify at the Subcommittee's hearing on Reducing Risks and Improving Oversight in the Over-The-Counter (OTC) Credit Derivatives Market.

As you know, the OCC charters, regulates, and supervises all national banks. At the end of 2007, there were 1,709 banks in the national banking system, with total assets of $7.8 trillion; that is one of every five banks in the United States, with 70 percent of all commercial banking assets. These include the country's largest, most complex banks, a number of which are significant participants in the derivatives markets. Although more than 1,000 commercial banks reported holdings of derivatives in their first quarter call report filings, the bulk of derivatives activity within the commercial banking industry is concentrated in a small number of institutions, most of which are national banking organizations.[1] It is the OCC's view that bank derivatives businesses are appropriately concentrated in these large national banks because they have the resources, including risk management expertise and control systems, to control derivatives-related risks in a safe and sound manner. This concentration also reflects the important role these large national banks serve as financial intermediaries for a wide range of clients who use derivatives to manage and facilitate their business transactions and risk exposures. Given banks' role as financial intermediaries, ensuring that the OTC derivatives market operates

[1] Please see the attached OCC Quarterly Report on Bank Trading and Derivatives Activities – First Quarter 2008.

efficiently and effectively is of concern for both the OCC and the banks we supervise. Accordingly, the OCC spends a considerable amount of time and resources evaluating the risk control systems these banks use to manage risks in derivatives markets.

I have structured my testimony to focus on the areas of particular interest to this Subcommittee, as outlined in your June 27, 2008, letter of invitation. My testimony today will include the supervision of credit derivatives activities in national banks, the work being done to strengthen the infrastructure in the credit derivatives market, the OCC's view on benefits that may be derived from establishing a central counterparty for clearing credit derivatives and the possible implications of an exchange for credit derivatives, and finally the OCC's view on the need for additional legislation in this area.

First, I will provide background on what credit derivatives are, the size of the credit derivatives market and the volume of this activity in the banks supervised by the OCC.

Credit derivatives are financial contracts that allow market participants to take, or reduce, credit risks. For example, an institution can reduce the credit risk associated with a loan or bond by purchasing credit protection on the obligor using a credit default swap. Similarly, credit default swaps enable financial institutions to manage their credit risk profile by purchasing credit protection against obligors in an industry where an undesirable concentration of exposures exists and to further diversify their credit risk by selling protection on entities in other industries where the institution has little or no exposure. Like other financial derivatives, when used properly, credit derivatives can help to diversify credit risk, improve earnings, and lower the risk profile of an institution.

The credit derivatives market experienced significant growth over the previous four years, coinciding with a period in which both interest rates and credit spreads were historically low. In this benign market environment, investor demand for higher yielding products drove banks and dealer firms, in their capacity as risk intermediaries, to structure investment products that sometimes included a credit derivatives component. For example, collateralized debt obligations may contain both cash credit instruments, such as loans and bonds, as well as credit derivatives as the source of underlying exposures.

Based upon financial information from quarterly call report data, the credit derivatives market among all U.S. insured commercial banks totals more than $16 trillion in notional exposure as of March 31, 2008, up from $1.0 trillion at year-end 2003.[2] This compares with a total notional amount of $180.3 trillion for all derivatives in U.S. insured commercial banks at the end of the first quarter of 2008. Credit derivatives have grown at a compounded annual growth rate of 100% since 2003, while total notional derivatives have grown at a rate of 21% over the same period. It is important to note that the total notional amount is not a good proxy for risk in derivatives contracts, but generally is indicative of levels of business volumes.

The primary derivatives-related risks focused on by the OCC are credit risk, price risk, and operational risk. Credit risk in derivatives transactions arises from the exposure that exists to the counterparty in the transaction. This counterparty credit risk is significant and varies over time because it changes as market factors change. Banks therefore use models to estimate how much exposure they will have to a counterparty over the life of a portfolio of derivatives contracts, as well as shorter time intervals, as

[2] OCC's Quarterly Report on Bank Trading and Derivatives Activities - First Quarter 2008.

appropriate. During the last twelve months, financial institutions experienced a significant growth in current credit exposure, driven by decreasing interest rates, widening credit spreads, and ongoing market volatility. At the end of the first quarter, net current credit exposure from all derivatives reported by insured U.S. banks was $465 billion, 50% higher than in the fourth quarter and 159% higher than a year ago. Gross counterparty exposures from credit derivatives have grown even more rapidly, increasing 86% in the first quarter, and 500% over the past 12 months.

Unlike credit risk, price risk in derivatives activities – that is, changes in the market value of derivatives contracts – in the large national banks has traditionally been low because of their primary role as financial intermediaries. For example, the current credit risk exposure for the three largest national banks' derivatives activities was $311 billion as of the end of the first quarter and by comparison, the quarterly average Value at Risk (VaR) reported for these three firms was $553 million. Price risk is typically controlled and measured by a VaR system, which is a statistical measure that banks use to quantify the maximum loss that could occur, over a specified time horizon and at a certain confidence interval, during normal market conditions.

Of growing concern in the OTC derivatives markets over recent years has been the issue of operational risk, which includes losses that may occur due to back office and process failures. The significant growth in the credit derivatives market over the last several years has contributed to greater levels of operational risk exposures due to system infrastructure constraints and the potential for operational errors. To date, we have not identified any significant operational losses that have arisen in national banks due to back office or processing problems, but the vulnerability is greater today due to the increase in

the size of the credit derivatives market as well as the rising levels of concern about counterparty and underlying obligor credit quality.

II. OCC Supervision of Derivatives

As I noted earlier, derivatives activity in the U.S. commercial banking system is dominated by a small group of large financial institutions. The top five banks involved in the trading of derivatives are national banks supervised by the OCC. These five large commercial banks represent 97% of the total commercial bank industry notional amount and 93% of total trading revenues as of March 31, 2008. Looking specifically at credit derivatives, these same five institutions conduct nearly all of the trading activity for U.S. commercial banks.

The OCC has been, and continues to be, a leader in the supervision of derivatives activity. In 1993, the OCC issued comprehensive guidance on the risk management practices required to conduct the derivatives business in a safe and sound manner (OCC Banking Circular 277). OCC examiners conducted the first horizontal review for derivatives activities in 1994 using that guidance. In subsequent years, the OCC issued additional guidance to both field examiners and bankers highlighting our supervisory expectations regarding this activity. In 1996, when credit derivatives were first becoming prominent, we issued guidance to examiners on supervisory issues related to banks' use of these products. These guidelines were supplemented with the "Risk Management of Financial Derivatives" examination handbook that was issued in 1997. In 1999, we updated Banking Circular 277 and our examination handbook with guidance that summarized key lessons learned from the market disruptions associated with

deterioration in Asian, Eastern European and Latin America countries and the failure of Long Term Capital Management. Later this year, we plan to issue another update of our guidance to reflect lessons learned from the current market disruption.

In 1995, the OCC began conducting a quarterly analysis of the derivatives market using financial information from call report data submitted by national banks. We originally designed and published this work in an effort to help others to evaluate risks in the national banking system and to understand the risk profile of these institutions with regard to trading activities. In addition, this analysis allows us to identify trends in derivatives activity or potential risk management concerns systemically and for individual institutions, which we then discuss with our field staff.

The foundation of the OCC's supervisory efforts in the derivatives area is our continuous, on-site presence of examiners at each of our largest banks. Supervisory strategies are developed for each institution that are risk-based and focused on the more complex banking activities. Our risk-based supervision is flexible, allowing strategies to be revised to reflect the changing risk profile of the supervised institutions.

Our supervisory goal is to ensure banks have sound risk governance processes given the nature of their risk-taking activities. At these large banks, resident teams of OCC specialists in capital markets and credit risk, supplemented by PhD economists trained in quantitative finance, engage in evaluations of the suite of risks arising from derivatives activities in general, and also credit derivatives activities specifically. This process involves regular monitoring of risk positions as well as periodic, targeted examinations of specific trading areas or business operations including credit derivatives. The purpose of our targeted examinations is to validate that management has appropriate

practices in place to identify, measure, monitor and control trading risks. We evaluate the integrity and effectiveness of their risk management systems, and perform transactional testing. We also evaluate the level of operational risk associated with trading activities and the appropriateness of position valuations and financial reporting.

Our supervisory conclusions, including any risk management concerns, are communicated directly to bank senior management. Thus, not only is there ongoing evaluation, but there is also a process for timely and effective corrective action when needed.

III. Strengthening the Credit Derivatives Infrastructure

As the volume of credit derivatives activities increased in recent years, there were early warning signs that the system infrastructure, with its manual processing environment for trade confirmations, was not keeping pace. The early warning signs arose in the form of metrics released by the International Swaps and Derivatives Association (ISDA) in its annual margin survey which showed deteriorating trends with respect to the volume and length of time that confirmations were remaining outstanding in all derivatives portfolios, but significantly in credit derivatives space.

The Federal Reserve Bank of New York convened a group of global supervisors and key market participants in September 2005 to begin what has become an ongoing dialogue on over-the-counter derivatives infrastructure issues. This initiative and continual dialogue between supervisors and the industry has driven significant market improvements in a relatively short time horizon. Collectively, supervisors have focused industry attention on reducing the volume of outstanding confirmation backlogs while

increasing automation to ensure a stronger financial market infrastructure going forward. As a result of this effort, we have seen an average reduction of 86% of outstanding confirmations greater than thirty days among participants from initial peaks. This effort has been aided by the 2005 ISDA Novations Protocol, which reinforced industry requirements to obtain the proper consent of affected parties when processing transferred or novated contracts. Similarly, automation of credit derivatives has more than doubled since September 2005, such that approximately 91% of all trades are now processed electronically.

This collaborative effort has delivered other significant milestones in industry infrastructure improvements. The industry developed a trade information warehouse that holds records of many legacy and current credit derivatives trades. This centralized trade information should aid in future trading, quarterly payments and credit event management. It has already helped in early stage central settlement of quarterly premium payments by netting those payments and thereby reducing the dollar flow of cash payments by approximately 98%.

Despite this improvement, however, supervisors recognized last summer that bank processing platforms were still sensitive to volume changes, as evidenced by rising confirmation backlogs resulting from the volume spike that occurred at the beginning of the current turmoil in credit markets. As a result, bank supervisors redoubled efforts to reduce confirmation backlogs, and shifted the focus to front-office initiatives to address the scale issues exposed by last year's market turmoil. The front-office focus emphasizes the need for dealers to routinely match and clear trades on the trade date, and to maximize efficiency through standardization and automation.

As the primary regulator for national banks, the OCC has been an active participant in this interagency effort. For the institutions we supervise, the OCC has been responsible for evaluating the monthly operational risk reports, identifying systemic risk issues, and discussing implementation issues. We have provided input to the industry group regarding the adequacy of the industry-wide solutions and commitments, and the development of appropriate risk metrics. The OCC participates in regular conference calls with supervisors from around the globe to discuss industry progress and to reinforce the infrastructure improvement goals.

The recent joint meeting among supervisors and key derivatives market participants on June 9, 2008, involved the discussion of several newer initiatives and resulted in us reaching agreement on an expanded set of future goals. The industry is in the process of developing a new commitment letter to supervisors that will address new processing goals, a central counterparty clearinghouse, a credit event management mechanism, a reduction of outstanding trade volumes via multilateral trade terminations, and an extension of the project across other derivatives markets including interest rate, equities, foreign exchange and commodity derivatives.

IV. Central Counterparties and Exchanges

As I noted earlier, bank derivative trading activities pose material counterparty credit and operational risks. In the interest of bank safety and soundness, as well as for the health of the entire financial system, the OCC encourages market-based efforts to promptly reduce these risks. The OCC does not have a position, however, on the specific

format or vehicle to achieve that objective, provided that it effectively reduces these credit and operational risks.

One initiative under consideration by supervisors and industry participants is the development of a central counterparty for the clearing of credit derivatives. This is a concept that would enhance risk mitigation by providing for multilateral netting among the major dealers. A central counterparty could facilitate the management of counterparty credit risk exposures and reduce operational risks across the industry. The central counterparty would manage both counterparty credit and operational risks by truncating the volume of trades among counterparties via a multilateral netting process and by implementing forward-looking margin requirements. Multilateral netting permits long and short positions among multiple counterparties to "net down" to a much smaller volume of open transactions because the central counterparty serves as the seller to every buyer, and the buyer to every seller. With a smaller volume of contracts to be tracked and managed left outstanding, the clearinghouse helps to reduce operational risk.

A clearinghouse model provides a central counterparty and involves ownership guaranty funding and participant margin structure to protect against counterparty credit risk. Given a variety of system, standardization, risk analysis, and pricing issues that may need to be resolved, a clearinghouse might initially have limited application to only index trades and there may be additional challenges that would need to be addressed as it progresses to other credit derivatives products.

Another issue under consideration is an exchange concept for credit derivatives. It is our understanding that the introduction of an exchange structure to the OTC credit derivatives market would require significant standardization and potentially transform the

nature of that market. Given the proven success of the OTC derivatives markets to deliver customized financial products, and current market-based efforts underway to address credit and operational risks, we do not see a need for the OCC to favor one solution over another.

V. Legislative Oversight Evaluation

The OCC has had a longstanding position that we do not believe that OTC derivatives products need to be regulated, in part because the vast majority of significant participants in these markets are regulated. As I have described, the OCC carefully monitors the participation of national banks in OTC derivatives markets and we spend considerable resources, individually and collectively with other supervisors, providing direct supervisory oversight to the largest national banks who actively participate in these markets.

More broadly, the OCC works closely with other domestic and international regulators to exchange information and coordinate the supervision of key market players that could pose systemic risks to the financial system. In addition to the collaborative credit derivatives infrastructure project previously discussed, the OCC is an active participant in the President's Working Group on Financial Markets, the Senior Supervisors Group, the Basel Committee on Banking Supervision, the Financial Stability Forum, and the Joint Forum of senior bank, insurance, and securities supervisors that Comptroller Dugan chairs. These working groups recently released a number of reports, discussing key lessons learned and setting forth recommendations for financial

institutions and their supervisors to enhance market and institutional resilience.[3] We contributed to and support these initiatives.

Through these various mechanisms, we are satisfied that we have the necessary tools at our disposal to effectively supervise these banking activities and as such, we do not see a need for legislative intervention to supplement our ability to regulate the credit derivatives of national banks.

VI. Conclusion

As I described earlier, it is our belief that credit derivatives, when used properly, can help financial institutions to diversify credit exposures, improve earnings, and lower their risk profiles. Large national banks that are active participants in this market, serve primarily as financial intermediaries for bank clients interested is achieving a particular credit risk profile or exposure. The OCC closely monitors the activities of these national banks to ensure that they have appropriate senior management oversight, robust risk management systems and the necessary infrastructure to support these risk intermediation activities. While the growth of the credit derivatives market has placed visible strains on some firms' operational infrastructures, the OCC and other global supervisors are actively working with industry participants to resolve these issues, and we have seen meaningful progress in these efforts to-date.

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[3] Senior Supervisors Group Report, "Observations on Risk Management Practices," at http://www.newyorkfed.org/newsevents/news/banking/2008/SSG_Risk_Mgt_doc_final.pdf; Senior Supervisors Group Report, "Leading-Practice Disclosures for Selected Exposures" at http://www.newyorkfed.org/newsevents/news/banking/2008/SSG_Leading_Practice_Disclosures.pdf; President's Working Group, "Policy Statement on Financial Market Developments," at http://www.ustreas.gov/press/releases/reports/pwgpolicystatemkttumoil_03122008.pdf; Financial Stability Forum, "Enhancing Market and Institutional Resilience," at http://www.fsforum.org/publications/FSF_Report_to_G7_11_April.pdf.

Comptroller of the Currency
Administrator of National Banks

Washington, DC 20219

OCC's Quarterly Report on Bank Trading and Derivatives Activities First Quarter 2008

Executive Summary

- U.S. commercial banks generated first quarter 2008 trading revenues in cash and derivative instruments of $1.13 billion, compared to $9.97 billion of trading losses in the fourth quarter of 2007.
- Net current credit exposure increased 50% to $465 billion from the fourth quarter, and is 159% higher than a year ago. The rapid increase in credit exposure results from sharply lower interest rates and higher credit spreads, which created a large increase in derivatives receivables.
- The notional value of derivatives held by U.S. commercial banks increased $14.7 trillion, or 9 percent, to $180.3 trillion in the first quarter.
- Derivative contracts remain concentrated in interest rate products, which comprise 79% of total derivative notional value. The notional value of credit derivative contracts, 99% of which are credit default swaps, increased 4% during the quarter to $16.4 trillion.

The OCC's quarterly report on bank derivatives activities and trading revenues is based on Call Report information provided by all insured U.S. commercial banks and trust companies, as well as on other published financial data.

Derivatives activity in the U.S. banking system is dominated by a small group of large financial institutions. Five large commercial banks represent 97% of the total industry notional amount, 93% of total trading revenues, and 85% of industry net current credit exposure.

While bank supervisors normally have concerns about market or product concentrations, there are three important mitigating factors with respect to derivatives activities. First, there are a number of other providers of derivatives products, such as investment banks and foreign banks, whose activity is not reflected in the data in this report. Second, because the highly specialized business of structuring, trading, and managing derivatives transactions requires sophisticated tools and expertise, derivatives activity is appropriately concentrated in those institutions that have made the resource commitment to be able to operate this business in a safe and sound manner. Third, the OCC has examiners on-site at the largest banks to continuously evaluate the credit, market, operation, reputation and compliance risks of derivatives activities.

Revenues

Credit market turmoil continues to weigh heavily on bank trading revenues. Banks reported trading revenues of $1.13 billion in the first quarter, rebounding from a $9.97 billion trading loss – the first ever for the banking system – in the fourth quarter. Despite the improvement, revenues in the first quarter are sharply lower than in recent first quarters (a record $7.0 billion in 2007 and $5.7 billion in 2006), as banks continued to incur writedowns on CDO exposures related to subprime mortgages and faced a challenging trading environment in credit markets.

Trading performance in interest rate and foreign exchange contracts was strong, each exceeding the same quarter of last year and their 8 quarter averages. Interest rate revenues were $2.8 billion, the third-highest quarter ever, compared to a loss of $357 million in the fourth quarter and an 8 quarter average of $1.8 billion.

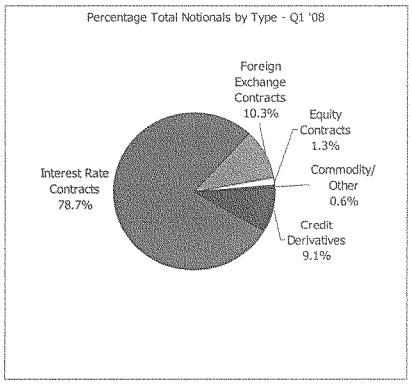
Foreign exchange revenues increased $210 million to $2.1 billion, a solid showing when compared to an 8 quarter average of $1.8 billion.

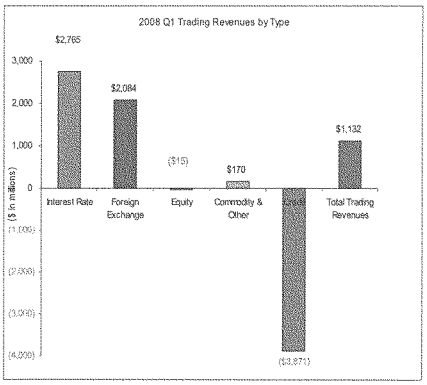
Trading results for credit-related instruments continued to depress overall trading performance, although losses declined sharply during the quarter. Banks incurred credit trading losses of $3.9 billion in the first quarter, compared to a loss of $11.8 billion in the fourth quarter. In addition to further CDO writedowns, banks also took losses related to auction rate securities and leveraged loans. Commodity revenues increased $81 million to $170 million, while equity revenues declined $221 million to a loss of $15 million.

Trading Revenue $ in millions	Q1 '08	Q4 '07	Change Q1 vs. Q4	% Change Q1 vs. Q4	Q1 '07	Change Q1 vs. Q1	% Change Q1 vs. Q1
Interest Rate	2,765	(357)	3,122	874%	2,413	352	15%
Foreign Exchange	2,084	1,873	210	11%	1,831	253	14%
Equity	(15)	205	(221)	-107%	1,735	(1,750)	-101%
Commodity & Other	170	88	81	92%	175	(6)	-3%
Credit	(3,871)	(11,780)	7,909	67%	878	(4,749)	-541%
Total Trading Revenues	1,132	(9,970)	11,102	111%	7,032	(5,900)	-84%

Trading Revenue	2008 Q1	Avg Past	ALL Quarters Since Q4, 1996			Past 8 Quarters		
$ in millions		12 Q1's	Avg	Hi	Low	Avg	Hi	Low
Interest Rate	2,765	1,638	1,135	2,950	(472)	1,755	2,950	(357)
Foreign Exchange	2,084	1,517	1,389	2,675	690	1,838	2,675	1,265
Equity	(15)	680	452	1,829	(305)	766	1,829	(15)
Commodity & Other	170	145	105	789	(320)	177	789	(111)
Credit*	(3,871)	N/A	N/A	883	(11,780)	(3,309)	883	(11,780)
Total Trading Revenues	1,132							

*Credit trading revenues became reportable in Q1, 2007. Highs and lows are for available quarters only.





Data Source: Call Reports. Note: Beginning 1Q07, credit exposures are broken out as a separate revenue category.

Credit Risk

Credit risk is a significant risk in bank derivatives trading activities. The notional amount of a derivative contract is a reference amount from which contractual payments will be derived, but it is generally not an amount at risk. The credit risk in a derivative contract is a function of a number of variables, such as: whether counterparties exchange notional principal, the volatility of the underlying market factors (interest rate,

currency, commodity, equity or corporate reference entity), the maturity and liquidity of contracts, and the creditworthiness of the counterparties.

Credit risk in derivatives differs from credit risk in loans due to the more uncertain nature of the potential credit exposure. With a funded loan, the amount at risk is the amount advanced to the borrower. The credit risk is unilateral; the bank faces the credit exposure of the borrower. However, in most derivatives transactions, such as swaps (which make up the bulk of bank derivatives contracts), the credit exposure is bilateral. Each party to the contract may (and, if the contract has a long enough tenor, probably will) have a current credit exposure to the other party at various points in time over the contract's life. Moreover, because the credit exposure is a function of movements in market rates, banks do not know, and can only estimate, how much the value of the derivative contract might be at various points of time in the future.

The first step in measuring credit exposure in derivative contracts involves identifying those contracts where a bank would lose value if the counterparty to a contract defaulted today. The total of all contracts with positive value (i.e., derivatives receivables) to the bank is the gross positive fair value (GPFV) and represents an initial measurement of credit exposure. The total of all contracts with negative value (i.e., derivatives payables) to the bank is the gross negative fair value (GNFV) and represents a measurement of the exposure the bank poses to its counterparties.

For a portfolio of contracts with a single counterparty where the bank has a legally enforceable bilateral netting agreement, contracts with negative values may be used to offset contracts with positive values. This process generates a "net" current credit exposure, as shown in the example below:

Counterparty A Portfolio	**# of Contracts**	**Value of Contracts**	**Credit Measure/Metric**
Contracts With Positive Value	6	$500	Gross Positive Fair Value
Contracts With Negative Value	4	$350	Gross Negative Fair Value
Total Contracts	10	$150	Net Current Credit Exposure (NCCE) to Counterparty A

A bank's net current credit exposure across all counterparties will therefore be the sum of the gross positive fair values for counterparties lacking legally certain bilateral netting arrangements (this may be due to the use of non-standardized documentation or jurisdiction considerations) and the bilaterally netted current credit exposure for counterparties with legal certainty regarding the enforceability of netting agreements.

This "net" current credit exposure is the primary metric used by the OCC to evaluate credit risk in bank derivatives activities. A more risk sensitive measure of credit exposure would also consider the value of collateral held against counterparty exposures. While banks are not required to report collateral held against their derivatives positions in their Call Reports, they do report collateral in their published financial statements. Notably, large trading banks tend to have collateral coverage of 30-40% of their net current credit exposures from derivatives contracts.

Net current credit exposure for U.S. commercial banks increased $156 billion, or 50 percent, in the first quarter to $465 billion. Sharp declines in interest rates and rising credit spreads led to a $1,210 billion increase in the gross positive fair values (i.e., derivatives receivables) of derivative contracts. Receivables from interest rate exposures increased $757 billion, or 58 percent, to $2.0 trillion. Receivables from credit exposures increased $258 billion, or 87%, to $556 billion. Legally enforceable netting agreements allowed banks to reduce the gross credit exposure of $3.2 trillion by 85.6% (more than the 84.8% in the fourth quarter and 83.9% in the third quarter) to $465 billion in net current credit exposure. Net current credit exposure is 159% higher than in the first quarter of 2007.

$ in billions	Q108	Q407	Change	%
Gross Positive Fair Value (GPFV)	$ 3,237	$ 2,027	$ 1,210	60%
Netting Benefits	2,772	1,718	1,055	61%
Netted Current Credit Exposure (NCCE)	465	309	156	50%
Potential Future Exposure (PFE)	849	744	104	14%
Total Credit Exposure (TCE)*	1,313	1,053	260	25%
Netting Benefit %	85.65%	84.76%	0.89%	
3 Year Interest Swap Rate	2.77%	3.93%	-1.16%	

*Effective 2Q07, total credit exposure uses the amount reported by banks for risk-based capital purposes.

The second step in evaluating credit risk involves an estimation of how much the value of a given derivative contract might change in the bank's favor over the remaining life of the contract; this is referred to as the "potential future exposure" (PFE). PFE increased 14% in the first quarter to $849 billion. The total credit exposure (PFE plus the net current credit exposure) increased from $1,053 billion in the fourth quarter of 2007 to $1,313 billion in the first quarter of 2008.

The fair value of contracts past due 30 days or more totaled $232 million, down $239 million from the fourth quarter. Past due contracts are only 0.05% of net current credit exposure. During the first quarter of 2008, U.S. commercial banks charged-off $15 million in derivatives receivables, or 0.003 percent of the net current credit exposure from derivative contracts. [See Graph 5c.] For comparison purposes, Commercial and Industrial (C&I) loan net charge-offs declined from $2,852 million to $2,194 million, and were 0.16% of total C&I loans for the quarter.

With the exception of several high profile periods in the past, such as the 1998 period when losses at a highly leveraged hedge fund (Long Term Capital Management) created instability in financial markets, credit losses from derivatives contracts are generally small. The low incidence of charge-offs on derivatives exposures results from two main factors: 1) the credit quality of the typical derivatives counterparty is higher than the credit quality of the typical C&I borrower; and 2) most of the large credit exposures from derivatives, whether from other dealers, large non-dealer banks or hedge funds, are collateralized on a daily basis.

Market Risk

Banks control market risk in trading operations primarily by establishing limits against potential losses. Value at Risk (VaR) is a statistical measure that banks use to quantify the maximum loss that could occur, over a specified horizon and at a certain confidence level, in normal markets. It is important to emphasize that VaR is not the maximum potential loss; it provides a loss estimate at a specified confidence level. A VaR of $50 million at 99% confidence measured over one trading day, for example, indicates that a trading loss of greater than $50 million in the next day on that portfolio should occur only once in every 100 trading days under normal market conditions. Since VaR does not measure the maximum potential loss, banks stress test their trading portfolios to assess the potential for loss beyond their VaR measure.

Call Report instructions do not require banks to report their VaR measures; however, the large trading banks disclose their average VaR data in published financial reports. To provide perspective on the market risk of trading activities, it is useful to compare the VaR numbers over time and to equity capital and net income. As shown in the table below, market risks reported by the three largest trading banks, as measured by VaR, are small as a percentage of their capital.

$ in millions	JPMorgan & Co.	Citigroup Inc.	Bank of America Corp.
Average VaR Q1 '08	$122	$341	$90
Average VaR 2007	$107	$142	$53
03-31-08 Equity Capital	$125,627	$128,219	$156,309
2007 Net Income	$15,365	$3,617	$14,982
Avg VaR Q1 '08 / Equity	0.10%	0.27%	0.06%
Avg VaR Q1 '08 / 2007 Net Income	0.79%	9.43%	0.60%

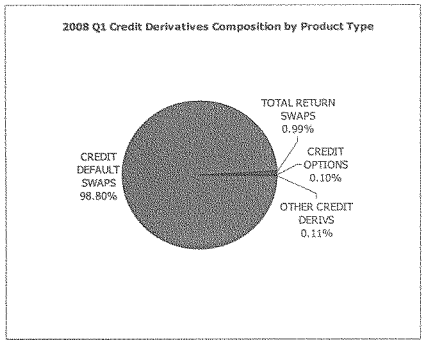
Data Source: 10K & 10Q SEC Reports.

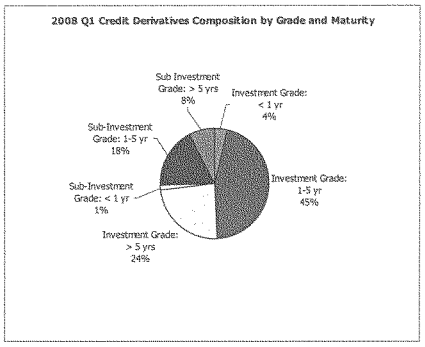
To test the effectiveness of their VaR measurement systems, trading institutions track the number of times that daily losses exceed VaR estimates. Under the Market Risk Rule that establishes regulatory capital requirements for U.S. commercial banks with significant trading activities, a bank's capital requirement for market risk is based on its VaR measured at a 99% confidence level and assuming a 10-day holding period. Banks back-test their VaR measure by comparing the actual daily profit or loss to the VaR measure. The results of the back-test determine the size of the multiplier applied to the VaR measure in the risk-based capital calculation. The multiplier adds a safety factor to the capital requirements. An "exception" occurs when a dealer has a daily loss in excess of its VaR measure. Call Reports do not include a line item for the number of "exceptions." Some banks, however, make such disclosures in their published financial reports. Because of the unusually high market volatility and large write-downs in CDOs in the recent quarters, as well as poor market liquidity, a number of banks experienced back-test exceptions and therefore an increase in their capital multiplier.

Concentrations in highly rated but illiquid ABS CDOs, as well as non-normal market conditions, have caused several large dealer institutions (both bank and non-bank) to incur significant trading losses in the past two quarters. Historically, these ABS CDOs had not exhibited significant price variability given their "super senior" position in the capital structure, so measured risk in VaR models was very low. However, rapidly increasing default and loss estimates for subprime mortgages have caused an abrupt and significant reassessment of potential losses in these super senior ABS CDOs. Because VaR models rely on historical price movements and assume normal market conditions, this particular risk measurement tool may not have fully captured the effect of severe market dislocations. As such, the OCC advocates the use of complementary risk measurement tools such as stress testing and scenario analysis.

Credit Derivatives

Credit derivatives have grown rapidly over the past several years as dealers increasingly used them to structure securities to help meet investor demand for higher yields. From 2003 to 2007, credit derivative contracts grew at a 100% compounded annual growth rate. Given current credit market turmoil, however, credit derivative growth has eased. In the first quarter, credit derivatives grew only 4%, or $581 million, to $16.4 trillion. Tables 11 and 12 provide detail on individual bank holdings of credit derivatives by product and maturity, as well as the credit quality of the underlying hedged exposures. As shown in the first chart below, credit default swaps represent the dominant product at 99% of all credit derivatives notionals [See charts below, Tables 11 and 12, and Graph 10.]





Contracts referencing investment grade entities with maturities from 1-5 years represent the largest segment of the market at 45% of all credit derivatives notionals. Contracts of all tenors that reference investment grade entities are 73% of the market. (See chart on right above).

The notional amount for the 33 U.S. commercial banks that sold credit protection (i.e., assumed credit risk) was $8.1 trillion, an increase of $0.2 trillion, or 3%, from the adjusted $7.8 trillion of the fourth quarter. The notional amount for the 35 banks that purchased credit protection (i.e., hedged credit risk) was $8.4 trillion, an increase of $0.3 trillion. [See Tables 1, 3, 11 and 12 and Graphs 2, 3 and 4.]

As is often the case with a new and rapidly growing market, operational issues became a supervisory concern in the credit derivatives market in recent years. Currently, the OCC is working with other financial supervisors and major market participants to address infrastructure issues in credit derivatives. This collaborative process is also addressing the processing of equity and other derivatives products.

Notionals

Changes in notional volumes are generally reasonable reflections of business activity, and therefore can provide insight into revenue and operational issues. However, the notional amount of derivatives contracts does not provide a useful measure of either market or credit risks.

The notional amount of derivatives contracts held by U. S. commercial banks in the first quarter increased by $14.7 trillion, or 9%, to $180.3 trillion. Derivative notionals are 25% higher than a year ago. The first quarter increase follows an unusual fourth quarter 2007 decline in notionals due to declines in interest rate notionals. In the first quarter, however, interest rate contracts advanced 9%, or $13 trillion, as higher levels of interest rate volatility resulted in greater client flows and proprietary trading activity.

$ in billions	Q1 '08	Q4 '07	$ Change	% Change	% of Total Derivatives
Interest Rate Contracts	141,865	129,574	12,290	9%	79%
Foreign Exchange Contracts	18,497	16,614	1,883	11%	10%
Equity Contracts	2,411	2,522	(111)	-4%	1%
Commodity/Other	1,130	1,073	57	5%	1%
Credit Derivatives	16,441	15,861	581	4%	9%
Total	180,344	165,645	14,699	9%	100%

Note: Numbers may not add due to rounding.

Similar to previous quarters, bank derivatives contracts are dominated by swaps contracts, which represent 62% of total notionals.

$ in billions	Q1 '08	Q4 '07	$ Change	% Change	% of Total Derivatives
Futures & Forwards	22,361	18,967	3,394	18%	12%
Swaps	112,553	103,090	9,464	9%	62%
Options	28,989	27,728	1,261	5%	16%
Credit Derivatives	16,441	15,861	581	4%	9%
Total	180,344	165,645	14,699	9%	100%

Note: Numbers may not add due to rounding.

Commercial bank derivatives activity is heavily concentrated in the three largest dealers, which hold 92% of all contracts. The five largest dealers hold 97% of all contracts and the largest 25 banks with derivatives activity account for nearly 100% of all contracts. [See Tables 3, 5 and Graph 4.]

A total of 1,003 insured U.S. commercial banks reported derivatives activities at the end of the first quarter, an increase of 48 banks from the prior quarter.

GLOSSARY OF TERMS

Bilateral Netting: A legally enforceable arrangement between a bank and a counterparty that creates a single legal obligation covering all included individual contracts. This means that a bank's receivable or payable, in the event of the default or insolvency of one of the parties, would be the net sum of all positive and negative fair values of contracts included in the bilateral netting arrangement.

Credit Derivative: A financial contract that allows a party to take, or reduce, credit exposure (generally on a bond, loan or index). Our derivatives survey includes over-the-counter (OTC) credit derivatives, such as credit default swaps, total return swaps, and credit spread options.

Derivative: A financial contract whose value is derived from the performance of underlying market factors, such as interest rates, currency exchange rates, and commodity/equity prices. Derivative transactions include a wide assortment of financial contracts including structured debt obligations and deposits, swaps, futures, options, caps, floors, collars, forwards and various combinations thereof.

Gross Negative Fair Value: The sum total of the fair values of contracts where the bank owes money to its counterparties, without taking into account netting. This represents the maximum losses the bank's counterparties would incur if the bank defaults and there is no netting of contracts, and no bank collateral was held by the counterparties. Gross negative fair values associated with credit derivatives are included.

Gross Positive Fair Value: The sum total of the fair values of contracts where the bank is owed money by its counterparties, without taking into account netting. This represents the maximum losses a bank could incur if all its counterparties default and there is no netting of contracts, and the bank holds no counterparty collateral. Gross positive fair values associated with credit derivatives are included.

Net Current Credit Exposure (NCCE): For a portfolio of derivative contracts, NCCE is the gross positive fair value of contracts less the dollar amount of netting benefits. On any individual contract, current credit exposure (CCE) is the fair value of the contract if positive, and zero when the fair value is negative or zero. NCCE is also the net amount owed to banks if all contracts were immediately liquidated.

Notional Amount: The nominal or face amount that is used to calculate payments made on swaps and other risk management products. This amount generally does not change hands and is thus referred to as notional.

Over-the-Counter Derivative Contracts: Privately negotiated derivative contracts that are transacted off organized exchanges.

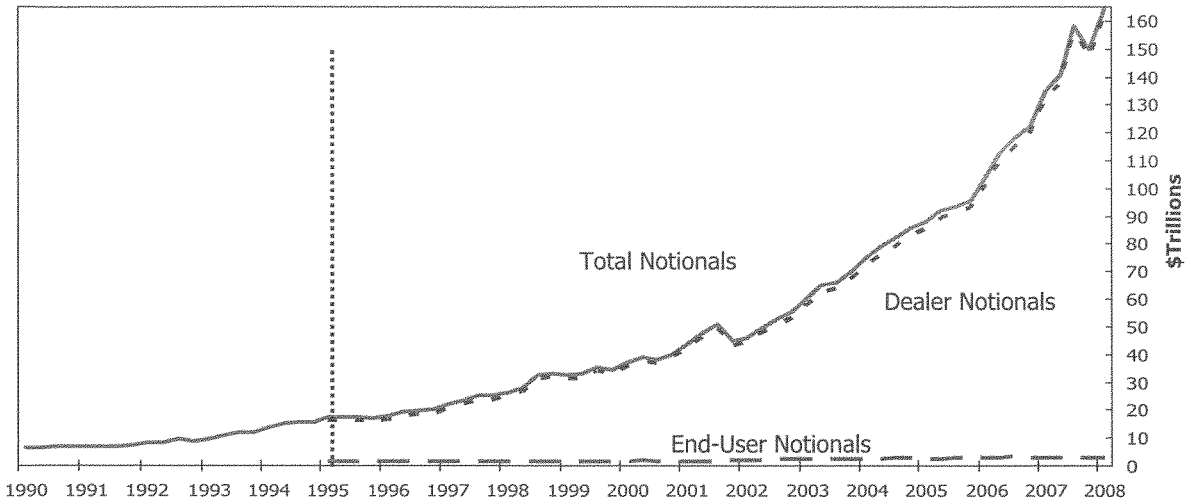
Potential Future Exposure (PFE): An estimate of what the current credit exposure (CCE) could be over time, based upon a supervisory formula in the agencies' risk-based capital rules. PFE is generally determined by multiplying the notional amount of the contract by a credit conversion factor that is based upon the underlying market factor (e.g., interest rates, commodity prices, equity prices, etc.) and the contract's remaining maturity. However, the risk-based capital rules permit banks to adjust the formulaic PFE measure by the "net to gross ratio," which proxies the risk-reduction benefits attributable to a valid bilateral netting contract. PFE data in this report uses the amounts upon which banks hold risk-based capital.

Total Credit Exposure (TCE): The sum total of net current credit exposure (NCCE) and potential future exposure (PFE).

Total Risk-Based Capital: The sum of tier 1 plus tier 2 capital. Tier 1 capital consists of common shareholders' equity, perpetual preferred shareholders' equity with noncumulative dividends, retained earnings, and minority interests in the equity accounts of consolidated subsidiaries. Tier 2 capital consists of subordinated debt, intermediate-term preferred stock, cumulative and long-term preferred stock, and a portion of a bank's allowance for loan and lease losses.

Graph 1

Derivatives Notionals by Type of User
Insured Commercial Banks



	1998				1999				2000				2001				2002				2003				2004				2005				2006				2007				2008
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	**Q1**
Total Notionals	26.0	28.0	32.5	32.9	32.5	32.8	35.4	34.5	37.3	39.0	37.9	40.1	43.6	47.4	50.9	45.0	45.9	49.6	52.6	55.4	60.7	65.0	66.2	70.1	75.3	79.4	82.3	85.5	88.0	92.1	93.7	95.6	104.7	112.7	118.3	122.5	134.6	140.7	158.2	149.8	**163.9**
Dealer Notionals	24.5	26.6	31.0	31.4	31.0	31.3	33.9	33.0	35.7	37.3	36.5	38.9	42.4	46.2	49.6	43.2	43.9	47.5	50.2	53.3	58.3	62.4	63.7	67.7	72.8	76.9	79.7	82.9	85.5	89.6	91.1	93.0	102.1	110.1	115.3	119.6	131.8	138.1	155.3	147.2	**161.1**
End-User Notionals	1.4	1.4	1.5	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.5	1.2	1.2	1.2	1.3	1.8	1.9	2.0	2.4	2.1	2.4	2.6	2.5	2.4	2.5	2.5	2.6	2.6	2.5	2.5	2.6	2.6	2.6	2.6	3.0	2.8	2.9	2.6	2.8	2.6	**2.8**

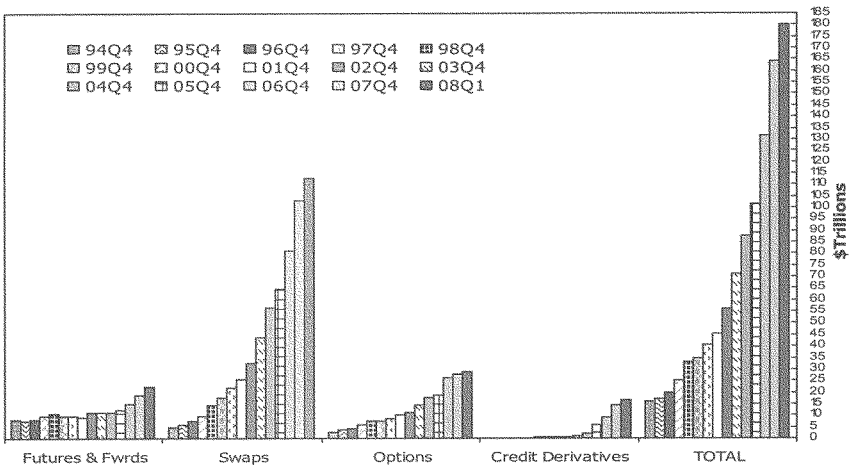
Note: As of 1Q95, shown by the dotted line, there were changes in reporting such as: breakouts of notional by type of user and eliminating spot fx.
This graph does not include credit derivatives.
Numbers may not add due to rounding.
Data Source: Call Reports.

Graph 2

Derivative Contracts by Product

All Commercial Banks

Year-ends 1994 - 2007, Quarterly - 2008



Derivative Contracts by Product ($ Billions)*

	94Q4 $	95Q4 $	96Q4 $	97Q4 $	98Q4 $	99Q4 $	00Q4 $	01Q4 $	02Q4 $	03Q4 $	04Q4 $	05Q4 $	06Q4 $	07Q4 $	08Q1 $
Futures & Fwrds	8,109	7,399	8,041	9,550	10,918	9,390	9,877	9,313	11,374	11,393	11,373	12,049	14,877	18,967	**22,361**
Swaps	4,823	5,945	7,601	9,705	14,345	17,779	21,949	25,645	32,613	44,083	56,411	64,738	81,328	103,090	**112,553**
Options	2,841	3,516	4,393	5,754	7,592	7,361	8,292	10,032	11,452	14,605	17,750	18,869	26,275	27,728	**28,989**
Credit Derivatives				55	144	287	426	395	635	1,001	2,347	5,822	9,019	15,861	**16,441**
TOTAL	15,774	16,861	20,035	25,064	32,999	34,817	40,543	45,386	56,074	71,082	87,880	101,478	131,499	165,645	**180,344**

*In billions of dollars, notional amount of total: futures, exchange traded options, over the counter options, forwards, and swaps. Note that data after 1994 do not include spot fx in the total notional amount of derivatives.

Credit derivatives were reported for the first time in the first quarter of 1997. As of 1997, credit derivatives have been included in the sum of total derivatives in this chart.

Note: Numbers may not add due to rounding.

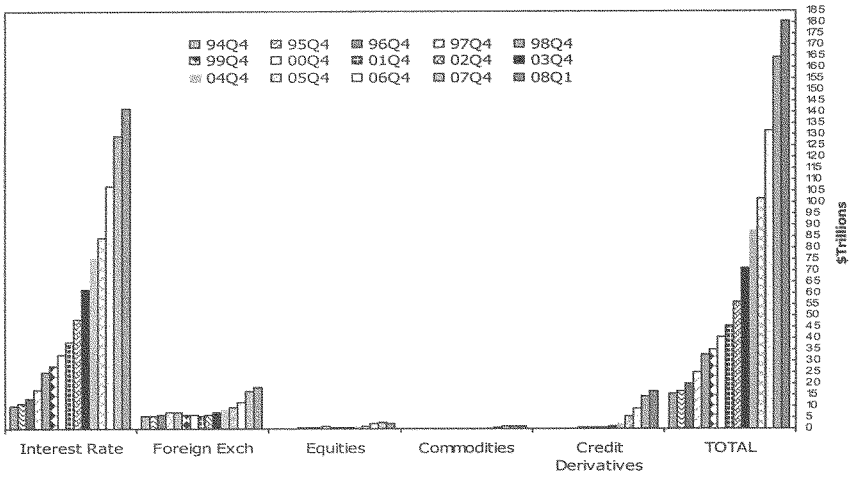
Data Source: Call Reports

Graph 3

Derivative Contracts by Type

All Commercial Banks

Year-ends 1994 - 2007, Quarterly – 2008



Derivative Contracts by Type ($ Billions)*

$ in billions	94Q4 $	95Q4 $	96Q4 $	97Q4 $	98Q4 $	99Q4 $	00Q4 $	01Q4 $	02Q4 $	03Q4 $	04Q4 $	05Q4 $	06Q4 $	07Q4 $	08Q1 $
Interest Rate	9,926	11,095	13,427	17,085	24,785	27,772	32,938	38,305	48,347	61,856	75,518	84,520	107,415	129,574	**141,865**
Foreign Exch	5,605	5,387	6,241	7,430	7,386	5,915	6,099	5,736	6,076	7,182	8,607	9,282	11,900	16,614	**18,497**
Equities		237	197	331	501	672	858	770	783	829	1,120	1,255	2,271	2,522	**2,411**
Commodities		141	170	163	183	171	222	179	233	214	289	598	893	1,073	**1,130**
Credit Derivatives				55	144	287	426	395	635	1,001	2,347	5,822	9,019	15,861	**16,441**
TOTAL	15,774	16,861	20,035	25,064	32,999	34,816	40,543	45,385	56,075	71,082	87,880	101,477	131,499	165,645	**180,344**

*In billions of dollars, notional amount of total: futures, exchange traded options, over the counter options, forwards, and swaps. Note that data after 1994 do not include spot fx in the total notional amount of derivatives.

As of Q206 equities and commodities types are shown as separate categories. They were previously shown as "Other Derivs".

Credit derivatives were reported for the first time in the first quarter of 1997. Since then, credit derivatives have been included in the sum of total derivatives in this chart.

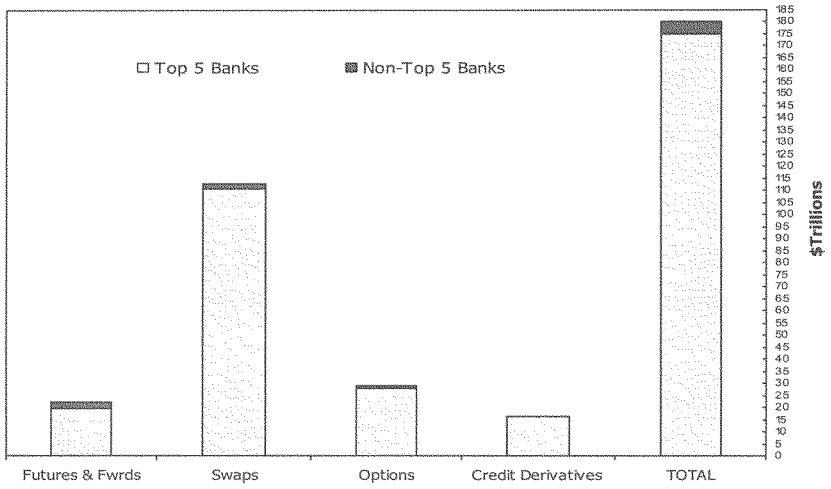
Note: Numbers may not add due to rounding.

Data Source: Call Reports

Graph 4

Five Banks Dominate in Derivatives

All Commercial Banks, First Quarter 2008



Concentration of Derivative Contracts ($ Billions)*

	$ Top 5 Bks	% Tot Derivs	$ Non-Top 5 Bks	% Tot Derivs	$ All Bks	% Tot Derivs
Futures & Fwrds	19,695	10.9	2,666	1.5	22,361	12.4
Swaps	110,693	61.4	1,861	1.0	112,553	62.4
Options	28,039	15.5	950	0.5	28,989	16.1
Credit Derivatives	16,366	9.1	75	0.0	16,441	9.1
TOTAL	174,793	96.9	5,551	3.1	180,344	100.0

*In billions of dollars, notional amount of total: futures, exchange traded options, over the counter options, forwards, and swaps. Note that data after 1994 do not include spot fx in the total notional amount of derivatives.

Credit derivatives were reported for the first time in the first quarter of 1997.

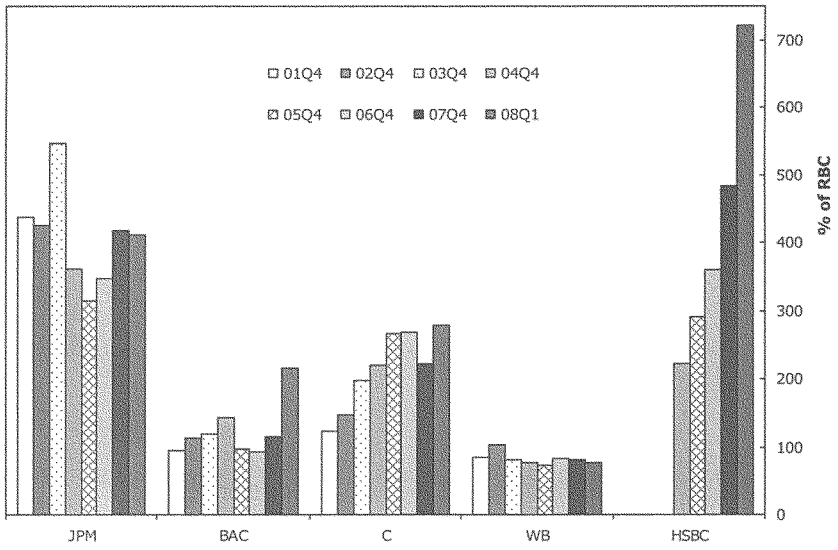
Data Source: Call Reports

Percentage of Total Credit Exposure to Risk Based Capital

Graph 5A

Top 5 Commercial Banks by Derivatives Holdings

Year-ends 2001 - 2007, Quarterly - 2008



Total Credit Exposure to Risk Based Capital (%)

	01Q4	02Q4	03Q4	04Q4	05Q4	06Q4	07Q4	08Q1
JPMORGAN CHASE	438.8	427.4	547.8	361.1	315.4	347.5	418.7	**411.6**
BANK OF AMERICA	94.7	114.2	118.6	143.4	97.1	92.9	115.2	**215.4**
CITIBANK	123.3	146.9	198.0	221.3	266.7	268.1	223.0	**279.1**
WACHOVIA	83.9	102.5	80.6	77.6	73.1	82.8	81.4	**77.6**
HSBC				222.7	290.7	359.1	483.3	**721.3**
Avg % (Top 5 Banks)	185.2	197.8	236.3	205.2	208.6	230.1	264.3	**341.0**

**Merger Treatment:
JPM and BANK ONE merger. First Call Report-04Q1. Prior data JPM in the graph.
WB and First Union merger. First Call Report-02Q2. Prior quarters represent First Union data in the graph.

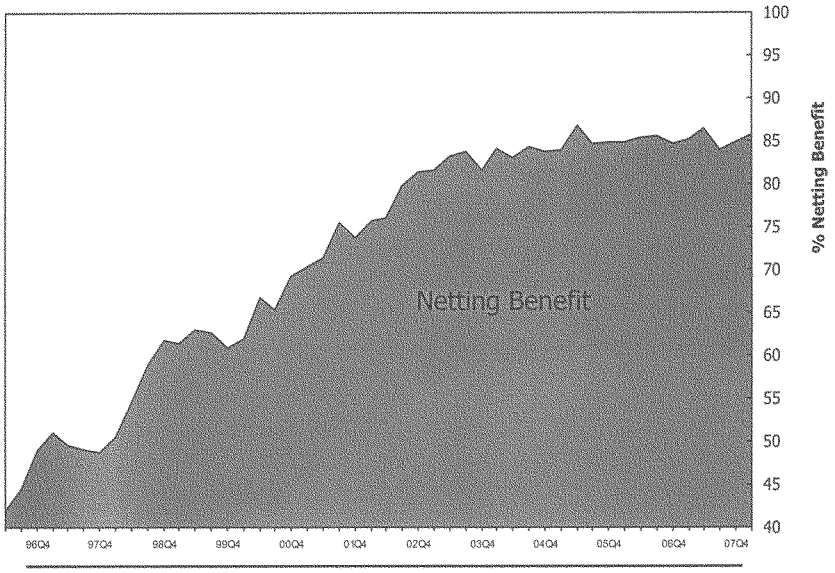
Data Source: Call Reports

Graph 5B

Netting Benefit: Amount of Gross Exposure Eliminated Through Bilateral Netting

All Commercial Banks with Derivatives

1996 Q2 - 2008 Q1



Netting Benefit (%)*

96Q2	96Q3	96Q4	97Q1	97Q2	97Q3	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	00Q1
42.0	44.5	49.0	51.1	49.6	49.1	48.7	50.6	54.6	58.9	61.7	61.5	62.9	62.7	60.9	62.0

00Q2	00Q3	00Q4	01Q1	01Q2	01Q3	01Q4	02Q1	02Q2	02Q3	02Q4	03Q1	03Q2	03Q3	03Q4	04Q1
66.8	65.4	69.3	70.4	71.5	75.5	73.8	75.7	76.2	79.9	81.5	81.7	83.3	83.8	81.7	84.2

04Q2	04Q3	04Q4	05Q1	05Q2	05Q3	05Q4	06Q1	06Q2	06Q3	06Q4	07Q1	07Q2	07Q3	07Q4	**08Q1**
83.1	84.3	83.7	83.9	86.9	84.7	84.9	84.9	85.4	85.5	84.7	85.2	86.4	83.9	84.8	**85.6**

*Note: The netting benefit is defined as: $ amount of netting benefits/gross positive fair value.

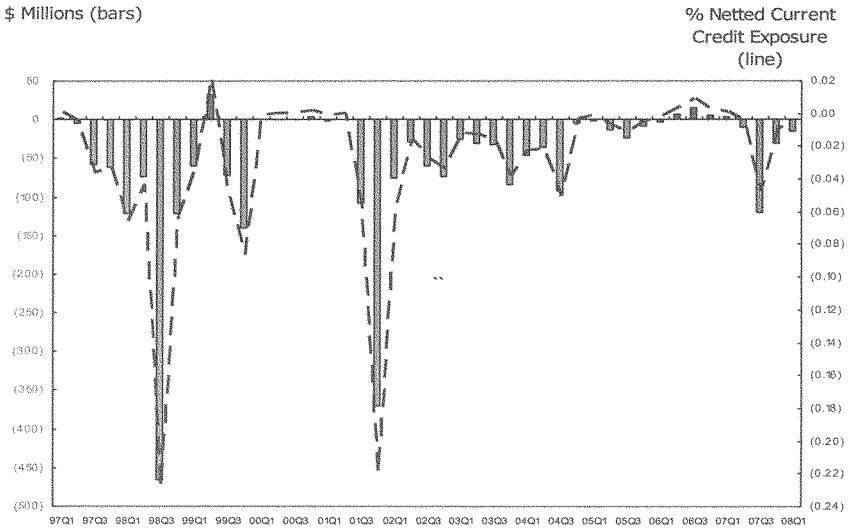
Data Source: Call Reports

Graph 5C

Quarterly (Charge-Offs)/Recoveries From Derivatives

Commercial Banks with Derivatives

1997 Q1 - 2008 Q1



Quarterly (Charge-Offs)/Recoveries From Derivatives ($ Millions)

97Q1	97Q2	97Q3	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	00Q1	00Q2	00Q3
1.9	(4.5)	(57.2)	(60.6)	(121.3)	(72.9)	(466.4)	(121.2)	(58.9)	33.1	(72.1)	(141.0)	0.0	1.0	1.0

00Q4	01Q1	01Q2	01Q3	01Q4	02Q1	02Q2	02Q3	02Q4	03Q1	03Q2	03Q3	03Q4	04Q1	04Q2
3.0	(2.0)	1.0	(107.3)	(370.0)	(75.8)	(28.2)	(59.0)	(73.7)	(25.3)	(29.9)	(32.3)	(83.7)	(46.7)	(34.9)

04Q3	04Q4	05Q1	05Q2	05Q3	05Q4	06Q1	06Q2	06Q3	06Q4	07Q1	07Q2	07Q3	**07Q4**	**08Q1**
(92.2)	(5.4)	(1.3)	(14.2)	(23.0)	(8.3)	(3.6)	7.0	16.0	5.8	2.9	(9.2)	(119.4)	**(30.7)**	**(14.8)**

* Note: The figures are for each quarter alone, not year-to-date.

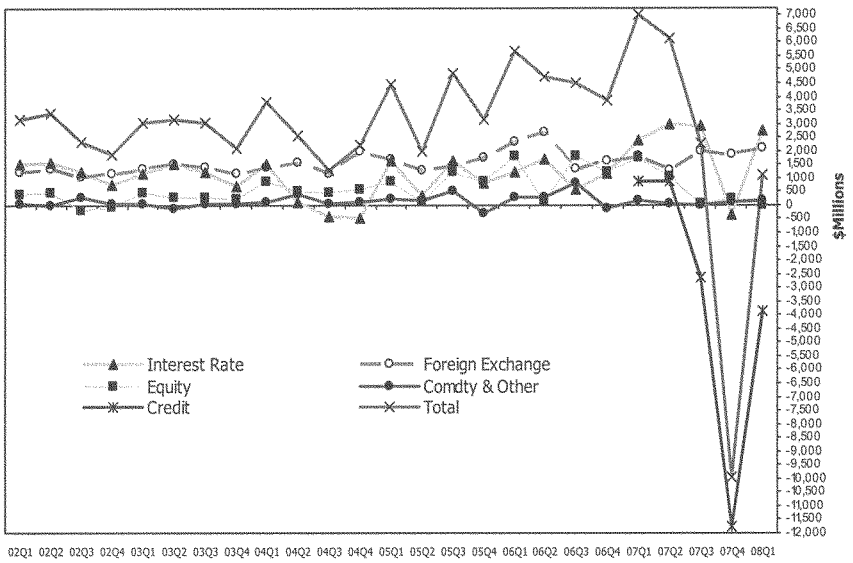
Data Source: Call Reports

Graph 6A

Quarterly Trading Revenues
Cash & Derivative Positions

All Commercial Banks

2002 Q1 – 2008 Q1



Cash & Derivative Revenue ($ Millions)*

	02Q1	02Q2	02Q3	02Q4	03Q1	03Q2	03Q3	03Q4	04Q1	04Q2	04Q3	04Q4	05Q1	05Q2	05Q3	05Q4	06Q1	06Q2	06Q3	06Q4	07Q1	07Q2	07Q3	07Q4	08Q1
Interest Rate	1,497	1,557	1,228	752	1,147	1,504	1,238	669	1,514	124	(414)	(472)	1,643	362	1,649	813	1,247	1,668	552	1,151	2,413	2,950	2,896	(357)	**2,765**
Foreign Exchange	1,214	1,346	1,031	1,138	1,358	1,488	1,410	1,158	1,371	1,570	1,162	1,982	1,699	1,301	1,454	1,765	2,310	2,675	1,355	1,613	1,831	1,265	2,005	1,873	**2,084**
Equity	407	490	(172)	(64)	485	300	299	257	849	497	485	574	888	131	1,244	845	1,803	103	1,829	1,216	1,735	1,024	27	205	**(15)**
Comdty & Other	24	(26)	278	30	55	(117)	78	40	89	405	24	114	212	166	507	(292)	313	274	769	(111)	175	25	7	88	**170**
Credit																					878	883	(2,655)	(11,780)	**(3,871)**
Total Trading Revenue*	3,141	3,366	2,364	1,856	3,045	3,175	3,025	2,124	3,823	2,596	1,257	2,198	4,441	1,960	4,854	3,130	5,673	4,720	4,525	3,869	7,032	6,146	2,281	(9,970)	**1,132**

* Note: The trading revenue figures above are for cash and derivative activities. Revenue figures are for each quarter alone, not year-to-date.

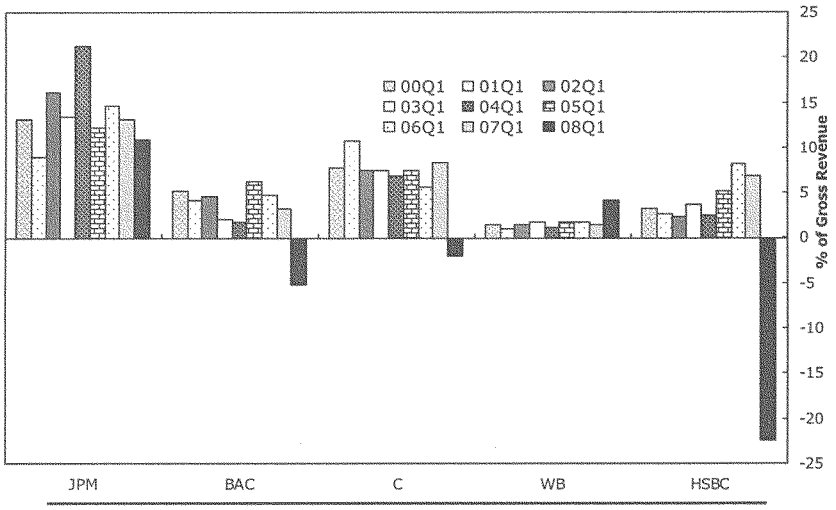
Note: Numbers may not add due to rounding.

Data Source: Call Reports

Graph 6B

Quarterly Trading Revenue as a Percentage of Gross Revenue
Cash & Derivative Positions

Top 5 Commercial Banks by Derivatives Holdings, Q1, 2000 – 2008



Trading Revenue as a Percentage of Gross Revenue (top banks, ratios in %)*

	00Q1	01Q1	02Q1	03Q1	04Q1	05Q1	06Q1	07Q1	**08Q1**
JPMorgan Chase (JPM)	13.2	9.0	16.2	13.5	21.3	12.2	14.6	13.1	**10.9**
Bank America (BAC)	5.2	4.1	4.6	2.1	1.8	6.2	4.8	3.3	**-5.2**
Citibank (C)	7.7	10.7	7.5	7.5	6.9	7.5	5.7	8.3	**-2.0**
Wachovia (WB)	1.4	1.0	1.4	1.8	1.6	1.7	1.7	1.5	**4.2**
HSBC Bank USA	3.2	2.7	2.3	3.7	9.7	5.2	8.2	6.8	**-22.5**
Total % (Top 5 Banks)			7.9	6.6	8.1	7.7	5.6	7.4	**1.4**
Total % (All Banks)	3.5	3.4	3.1	3.0	3.5	3.6	3.8	4.0	**0.6**

* Note that the trading revenue figures above are for cash and derivative activities. Revenue figures are quarterly, not year-to-date, numbers.
Historical data for total top 5 banks previous to fourth quarter 2001 not calculated due to merger activity.
Merger Treatment see Graph 5A.

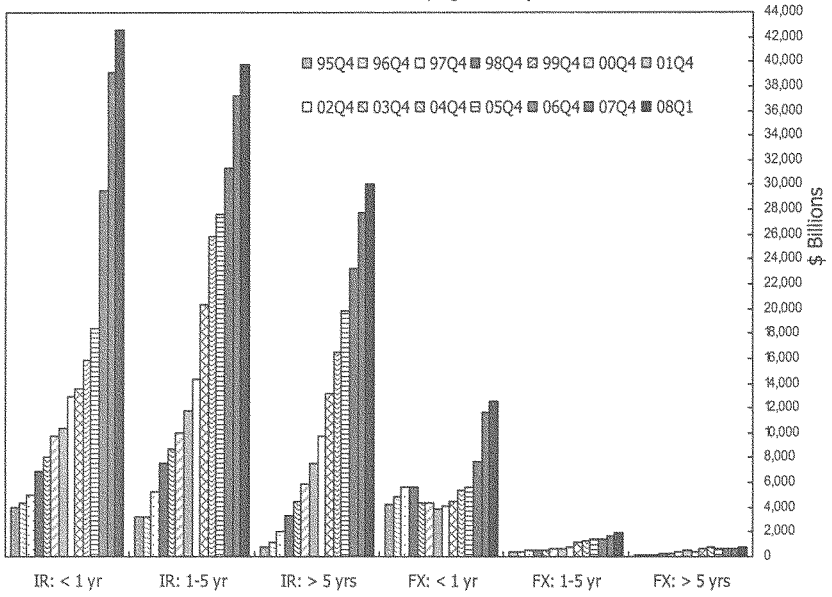
Data Source: Call Reports

Graph 7

Notional Amounts of Interest Rate and Foreign Exchange Contracts by Maturity

All Commercial Banks

Year-ends 1995 - 2007, Quarterly - 2008



Notional Amounts: Interest Rate and Foreign Exchange Contracts by Maturity ($ Billions)*

	95Q4	96Q4	97Q4	98Q4	99Q4	00Q4	01Q4	02Q4	03Q4	04Q4	05Q4	06Q4	07Q4	**08Q1**
IR: < 1 yr	3,942	4,339	4,974	6,923	8,072	9,702	10,357	12,972	13,573	15,914	18,482	29,546	39,083	**42,620**
IR: 1-5 yr	3,215	3,223	5,230	7,594	8,730	9,919	11,809	14,327	20,400	25,890	27,677	31,378	37,215	**39,745**
IR: > 5 yrs	775	1,214	2,029	3,376	4,485	5,843	7,523	9,733	13,114	16,489	19,824	23,270	27,720	**30,103**
FX: < 1 yr	4,206	4,826	5,639	5,666	4,395	4,359	3,785	4,040	4,470	5,348	5,681	7,690	11,592	**12,525**
FX: 1-5 yr	324	402	516	473	503	592	661	829	1,114	1,286	1,354	1,416	1,605	**1,925**
FX: > 5 yrs	87	113	151	193	241	345	492	431	577	760	687	593	619	**715**

*Note: Figures above exclude foreign exchange contracts with an original maturity of 14 days or less, futures contracts, written options, basis swaps, and any other contracts not subject to risk-based capital requirements.

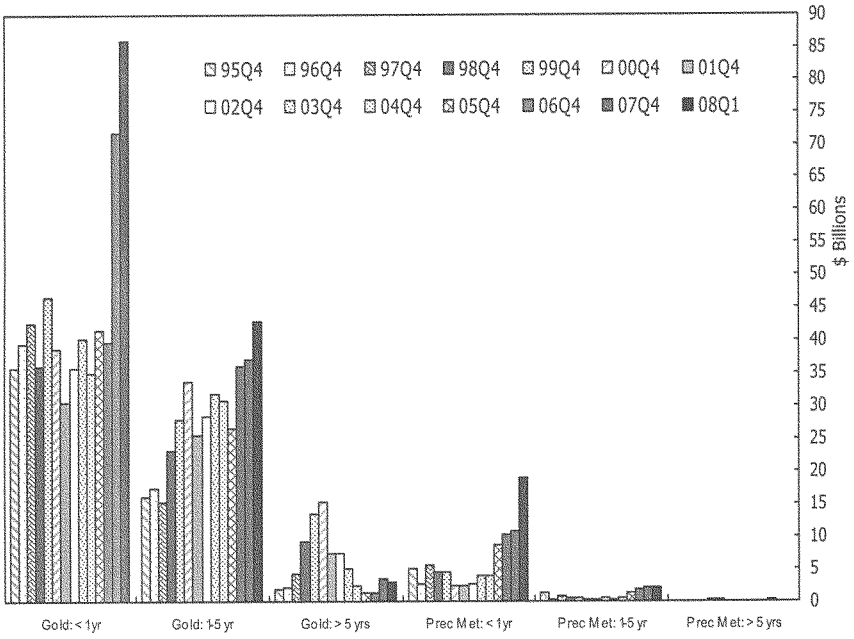
Data Source: Call Reports

Graph 8

Notional Amounts of Gold and Precious Metals Contracts by Maturity

All Commercial Banks

Year-ends 1995 - 2007, Quarterly - 2008



Notional Amounts: Gold and Precious Metals Contracts by Maturity ($ Billions)*

	95Q4	96Q4	97Q4	98Q4	99Q4	00Q4	01Q4	02Q4	03Q4	04Q4	05Q4	06Q4	07Q4	**08Q1**
Gold: < 1 yr	36	39	43	36	47	39	31	36	40	35	42	40	72	**86**
Gold: 1-5 yr	16	17	15	23	28	34	26	28	32	31	27	36	37	**43**
Gold: > 5 yrs	2	2	4	9	13	15	7	8	5	2	1	1	3	**3**
Prec Met: < 1 yr	5	3	6	5	4	3	2	3	4	4	9	10	11	**19**
Prec Met: 1-5 yr	1	0	1	1	1	0	0	0	0	1	1	2	2	**2**
Prec Met: > 5 yrs	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**

*Note: Figures above exclude foreign exchange contracts with an original maturity of 14 days or less, futures contracts, written options, basis swaps, and any other contracts not subject to risk-based capital requirements.

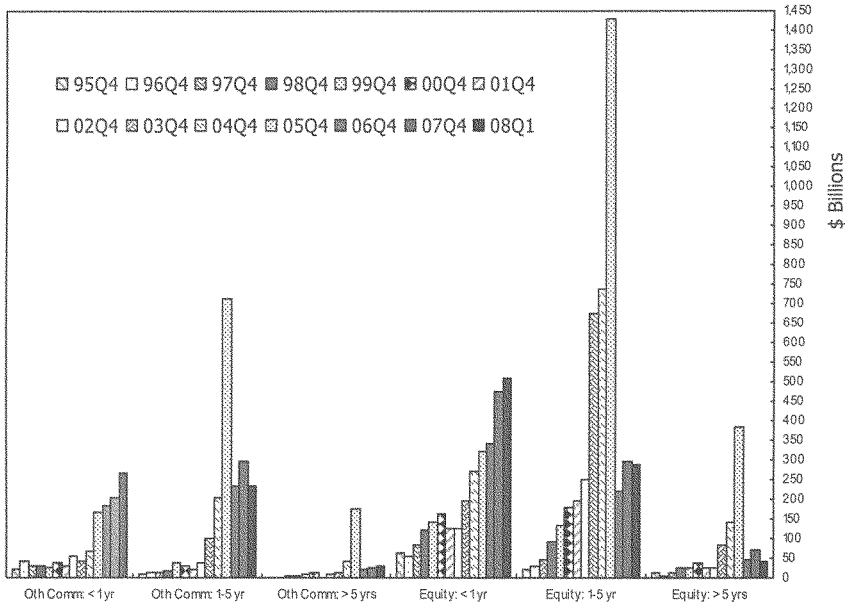
Data Source: Notionals as reported in Schedule RC-R of Call Reports.

Graph 9

Notional Amounts of Commodity and Equity Contracts by Maturity

All Commercial Banks

Year-ends 1995 - 2007, Quarterly - 2008



Notional Amounts: Commodity and Equity Contracts by Maturity ($ Billions)*

	95Q4	96Q4	97Q4	98Q4	99Q4	00Q4	01Q4	02Q4	03Q4	04Q4	05Q4	06Q4	07Q4	**08Q1**
Oth Comm: < 1 yr	22	40	29	30	24	36	28	55	41	68	165	185	205	**265**
Oth Comm: 1-5 yr	9	11	12	18	37	27	23	35	102	206	714	235	298	**233**
Oth Comm: > 5 yrs	0	1	2	4	8	11	2	9	14	40	175	20	23	**31**
Equity: < 1 yr	62	54	84	122	143	162	124	127	197	273	321	341	473	**510**
Equity: 1-5 yr	23	27	47	90	134	180	195	249	674	736	1,428	221	297	**288**
Equity: > 5 yrs	11	6	13	26	25	38	23	25	84	140	383	45	70	**40**

*Note: Figures above exclude foreign exchange contracts with an original maturity of 14 days or less, futures contracts, written options, basis swaps, and any other contracts not subject to risk-based capital requirements.

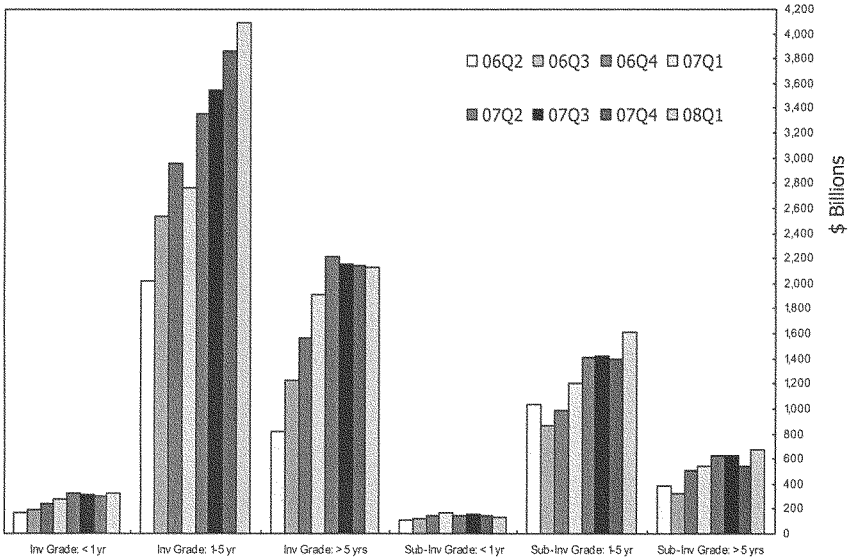
Data Source: Notional amounts as reported in Schedule RC-R of Call Reports.

Graph 10

Notional Amounts of Credit Derivative Contracts by Maturity

All Commercial Banks

2006 Q2 – 2008 Q1



Notional Amounts: Credit Derivatives Contracts by Maturity ($ Billions)*

	06Q2	06Q3	06Q4	07Q1	07Q2	07Q3	07Q4	**08Q1**
Investment Grade: < 1 yr	163	193	243	281	328	307	304	**319**
Investment Grade: 1-5 yr	2,023	2,540	2,962	2,768	3,359	3,545	3,860	**4,088**
Investment Grade: > 5 yrs	817	1,224	1,560	1,917	2,210	2,154	2,138	**2,127**
Sub-Investment Grade: < 1 yr	107	117	139	164	144	158	149	**134**
Sub-Investment Grade: 1-5 yr	1,036	869	984	1,201	1,405	1,416	1,400	**1,608**
Sub Investment Grade: > 5 yrs	387	331	506	537	629	621	543	**672**

*Note: Figures above exclude foreign exchange contracts with an original maturity of 14 days or less, futures contracts, written options, basis swaps, and any other contracts not subject to risk-based capital requirements.

Notional amounts as reported in Schedule RC-R of Call reports. As of March 31, 2006, the Call Report began to include maturity breakouts for credit derivatives.

Data Source: Call Reports

TABLE 1

NOTIONAL AMOUNT OF DERIVATIVE CONTRACTS
TOP 25 COMMERCIAL BANKS AND TRUST COMPANIES IN DERIVATIVES
MARCH 31, 2008, $ MILLIONS
NOTE: DATA ARE PRELIMINARY

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL FUTURES (EXCH TR)	TOTAL OPTIONS (EXCH TR)	TOTAL FORWARDS (OTC)	TOTAL SWAPS (OTC)	TOTAL OPTIONS (OTC)	TOTAL CREDIT DERIVATIVES (OTC)	SPOT FX
1	JPMORGAN CHASE BANK NA	OH	$1,407,568	$89,997,271	$1,810,507	$2,766,242	$7,391,655	$57,540,634	$12,366,997	$8,121,236	$411,173
2	BANK OF AMERICA NA	NC	1,355,154	37,939,665	998,518	662,044	3,656,817	25,898,242	3,625,059	3,098,984	173,250
3	CITIBANK NATIONAL ASSN	NV	1,292,503	37,691,434	281,809	380,133	4,589,482	21,921,982	7,166,837	3,351,191	426,989
4	WACHOVIA BANK NATIONAL ASSN	NC	666,241	4,884,775	261,027	187,465	165,554	3,241,223	575,606	453,900	23,280
5	HSBC BANK USA NATIONAL ASSN	DE	188,463	4,279,737	81,229	11,717	458,017	2,090,701	297,060	1,341,013	71,252
6	WELLS FARGO BANK NA	SD	486,886	1,440,229	194,989	22,708	625,411	442,276	152,757	2,088	19,284
7	BANK OF NEW YORK	NY	128,342	1,058,618	58,477	21,056	264,794	348,624	363,615	2,052	30,614
8	STATE STREET BANK&TRUST CO	MA	147,472	904,593	1,339	1,786	817,261	17,888	66,082	238	34,388
9	PNC BANK NATIONAL ASSN	PA	128,623	248,705	28,073	32,788	6,193	135,477	40,380	5,793	1,037
10	SUNTRUST BANK	GA	174,716	241,369	45,716	8,720	24,241	124,495	36,040	2,158	1,493
11	MELLON BANK NATIONAL ASSN	PA	41,727	192,105	10,690	817	150,209	28,737	1,652	0	23,834
12	NORTHERN TRUST CO	IL	67,962	164,605	0	0	153,413	10,359	570	264	17,860
13	NATIONAL CITY BANK	OH	152,519	158,612	28,983	1,200	33,708	36,975	55,496	2,250	493
14	KEYBANK NATIONAL ASSN	OH	97,979	134,344	23,958	1,005	12,491	81,744	6,552	8,594	972
15	U S BANK NATIONAL ASSN	OH	237,269	99,610	3,311	12,000	23,685	49,122	9,836	1,656	690
16	REGIONS BANK	AL	139,766	69,741	8,740	4,000	1,420	52,491	2,867	222	7
17	BRANCH BANKING&TRUST CO	NC	131,916	61,752	7,091	0	9,646	36,578	8,090	348	23
18	FIFTH THIRD BANK	OH	64,564	55,993	33	0	9,129	36,093	10,483	255	922
19	RBS CITIZENS NATIONAL ASSN	RI	130,820	54,602	0	0	4,408	49,074	868	252	244
20	MERRILL LYNCH BANK USA	UT	63,003	46,761	11,650	0	1,522	24,000	342	9,248	0
21	FIRST TENNESSEE BANK NA	TN	37,064	37,901	240	0	18,630	12,956	6,076	0	1
22	LASALLE BANK NATIONAL ASSN	IL	71,098	36,884	0	0	227	24,320	10,068	2,269	0
23	UNION BANK OF CALIFORNIA NA	CA	57,413	32,063	0	0	4,082	17,546	10,435	0	980
24	UBS BANK USA	UT	27,989	31,177	0	0	0	31,177	0	0	0
25	DEUTSCHE BANK TR CO AMERICAS	NY	38,216	30,693	0	0	355	24,348	1,412	4,578	0
TOP 25 COMMERCIAL BANKS & TCs WITH DERIVATIVES			$7,335,274	$179,893,240	$3,856,379	$4,113,680	$18,422,349	$112,277,063	$24,815,180	$16,408,588	$1,238,786
OTHER COMMERCIAL BANKS & TCs WITH DERIVATIVES			2,683,819	450,976	8,017	2,917	74,035	276,266	56,915	32,826	1,909
TOTAL COMMERCIAL BANKS & TCs WITH DERIVATIVES			10,019,092	180,344,216	3,864,396	4,116,597	18,496,385	112,553,329	24,872,094	16,441,414	1,240,695

Note: Credit derivatives have been included in the sum of total derivatives. Credit denvatives have been included as an "over the counter" category, although the Call Report does not differentiate by market currently.
Note: Before the first quarter of 1995 total derivatives included spot foreign exchange. Beginning in the first quarter, 1995, spot foreign exchange was reported separately.
Note: Numbers may not add due to rounding.
Data source: Call Reports, schedule RC-L

TABLE 2

NOTIONAL AMOUNT OF DERIVATIVE CONTRACTS
TOP 25 HOLDING COMPANIES IN DERIVATIVES
MARCH 31, 2008, $ MILLIONS
NOTE: DATA ARE PRELIMINARY

RANK	HOLDING COMPANY	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	FUTURES (EXCH TR)	OPTIONS (EXCH TR)	FORWARDS (OTC)	SWAPS (OTC)	OPTIONS (OTC)	CREDIT DERIVATIVES (OTC)	SPOT FX
1	JPMORGAN CHASE & CO.	NY	$1,642,862	$89,831,343	$1,915,199	$2,820,284	$7,398,869	$57,119,637	$12,352,809	$8,224,545	$411,173
2	CITIGROUP INC.	NY	2,199,848	41,310,119	696,237	3,570,002	4,927,299	20,853,726	7,354,914	3,907,941	375,989
3	BANK OF AMERICA CORPORATION	NC	1,743,478	38,956,532	1,080,438	795,404	4,545,133	25,820,440	3,628,820	3,086,298	172,826
4	WACHOVIA CORPORATION	NC	808,575	4,871,992	261,788	188,988	171,226	3,198,911	580,824	470,255	23,280
5	HSBC NORTH AMERICA HOLDINGS INC.	IL	493,011	4,247,881	86,844	12,717	486,336	2,017,426	304,542	1,340,016	73,528
6	TAUNUS CORPORATION	NY	750,323	1,436,203	134,948	234,787	744,414	282,673	16,685	22,696	110
7	WELLS FARGO & COMPANY	CA	595,221	1,425,976	198,418	23,513	625,483	429,840	145,740	2,982	19,284
8	BANK OF NEW YORK MELLON CORPORATION, THE	NY	205,151	1,208,593	69,168	21,874	382,673	367,885	364,941	2,052	48,580
9	STATE STREET CORPORATION	MA	154,479	904,043	1,339	1,786	817,261	17,338	66,082	238	34,388
10	PNC FINANCIAL SERVICES GROUP, INC., THE	PA	140,026	244,832	28,200	33,021	6,631	131,232	40,140	5,607	1,037
11	SUNTRUST BANKS, INC.	GA	178,987	241,768	45,716	8,720	24,241	123,894	37,040	2,158	1,493
12	METLIFE, INC.	NY	557,132	177,547	9,149	0	17,774	64,627	82,827	3,169	0
13	NORTHERN TRUST CORPORATION	IL	77,480	164,582	1	0	153,413	10,336	570	264	17,860
14	NATIONAL CITY CORPORATION	OH	155,047	155,971	28,983	1,200	33,708	34,334	55,496	2,250	493
15	KEYCORP	OH	101,596	139,754	24,358	2,010	12,491	84,698	7,602	8,594	972
16	BARCLAYS GROUP US INC.	DE	485,626	118,310	5,227	0	60,427	23,397	25,345	3,914	0
17	U.S. BANCORP	MN	241,781	103,369	3,311	12,000	23,685	52,881	9,836	1,656	690
18	REGIONS FINANCIAL CORPORATION	AL	144,251	71,231	8,740	4,000	1,420	53,621	3,227	222	7
19	CITIZENS FINANCIAL GROUP, INC.	RI	161,759	67,130	0	0	4,408	61,172	1,291	259	244
20	FIFTH THIRD BANCORP	OH	111,396	60,124	33	0	9,129	38,998	11,188	776	922
21	BB&T CORPORATION	NC	136,417	58,113	7,096	0	9,646	32,928	8,097	348	23
22	CAPITAL ONE FINANCIAL CORPORATION	VA	150,609	40,326	0	0	1,021	39,306	0	0	1
23	FIRST HORIZON NATIONAL CORPORATION	TN	37,269	38,301	240	0	18,630	13,356	6,076	0	1
24	UNIONBANCAL CORPORATION	CA	57,933	31,663	0	0	4,082	17,146	10,435	0	980
25	TD BANKNORTH INC.	ME	118,171	27,943	0	0	12,111	11,216	4,541	74	18
TOP 25 HOLDING COMPANIES WITH DERIVATIVES			$11,448,430	$185,933,647	$4,605,431	$7,730,306	$20,491,511	$110,901,017	$25,119,068	$17,086,314	$1,183,898

Note: Currently, the Y-9 report does not differentiate credit derivatives by contract type. Credit derivatives have been included in the sum of total derivatives.
Note: Prior to the first quarter of 2005, total derivatives included spot foreign exchange. Beginning in that quarter, spot foreign exchange has been reported separately.
Note: Numbers may not add due to rounding.
Data source: Consolidated Financial Statements for Bank Holding Companies, FR Y- 9, schedule HC-L

TABLE 3

DISTRIBUTION OF DERIVATIVE CONTRACTS
TOP 25 COMMERCIAL BANKS AND TRUST COMPANIES IN DERIVATIVES
MARCH 31, 2008, $ MILLIONS
NOTE: DATA ARE PRELIMINARY

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	PERCENT EXCH TRADED CONTRACTS	PERCENT OTC CONTRACTS	PERCENT INT RATE CONTRACTS	PERCENT FOREIGN EXCH CONTRACTS	PERCENT OTHER CONTRACTS	PERCENT CREDIT DERIVATIVES
					(%)	(%)	(%)	(%)	(%)	(%)
1	JPMORGAN CHASE BANK NA	OH	$1,407,568	$89,997,271	5.1	94.9	79.6	8.7	2.7	9.0
2	BANK OF AMERICA NA	NC	1,355,154	37,939,665	4.4	95.6	83.2	7.4	1.2	8.2
3	CITIBANK NATIONAL ASSN	NV	1,292,503	37,691,434	1.8	98.2	75.9	14.3	0.8	8.9
4	WACHOVIA BANK NATIONAL ASSN	NC	666,241	4,884,775	9.2	90.8	83.4	4.8	2.5	9.3
5	HSBC BANK USA NATIONAL ASSN	DE	188,463	4,279,737	2.2	97.8	49.9	16.5	2.2	31.3
6	WELLS FARGO BANK NA	SD	486,886	1,440,229	15.1	84.9	94.2	3.4	2.3	0.1
7	BANK OF NEW YORK	NY	128,342	1,058,618	7.5	92.5	82.4	16.4	1.0	0.2
8	STATE STREET BANK&TRUST CO	MA	147,472	904,593	0.3	99.7	3.1	96.9	0.0	0.0
9	PNC BANK NATIONAL ASSN	PA	128,623	248,705	24.5	75.5	85.4	11.7	0.5	2.3
10	SUNTRUST BANK	GA	174,716	241,369	22.6	77.4	90.8	3.6	4.7	0.9
11	MELLON BANK NATIONAL ASSN	PA	41,727	192,105	6.0	94.0	20.9	77.7	1.4	0.0
12	NORTHERN TRUST CO	IL	67,962	164,605	0.0	100.0	4.6	95.2	0.0	0.2
13	NATIONAL CITY BANK	OH	152,519	158,612	19.0	81.0	96.3	2.2	0.0	1.4
14	KEYBANK NATIONAL ASSN	OH	97,979	134,344	18.6	81.4	81.4	11.7	0.4	6.4
15	U S BANK NATIONAL ASSN	OH	237,269	99,610	15.4	84.6	87.1	11.1	0.1	1.7
16	REGIONS BANK	AL	139,766	69,741	18.3	81.7	99.1	0.6	0.0	0.3
17	BRANCH BANKING&TRUST CO	NC	131,916	61,752	11.5	88.5	99.1	0.3	0.0	0.6
18	FIFTH THIRD BANK	OH	64,564	55,993	0.1	99.9	68.3	30.4	0.8	0.5
19	RBS CITIZENS NATIONAL ASSN	RI	130,820	54,602	0.0	100.0	92.0	7.5	0.0	0.5
20	MERRILL LYNCH BANK USA	UT	63,003	46,761	24.9	75.1	73.7	3.3	3.3	19.8
21	FIRST TENNESSEE BANK NA	TN	37,064	37,901	0.6	99.4	100.0	0.0	0.0	0.0
22	LASALLE BANK NATIONAL ASSN	IL	71,098	36,884	0.0	100.0	92.5	0.6	0.7	6.2
23	UNION BANK OF CALIFORNIA NA	CA	57,413	32,063	0.0	100.0	72.9	13.9	13.3	0.0
24	UBS BANK USA	UT	27,989	31,177	0.0	100.0	100.0	0.0	0.0	0.0
25	DEUTSCHE BANK TR CO AMERICAS	NY	38,216	30,693	0.0	100.0	50.9	7.4	26.8	14.9
TOP 25 COMMERCIAL BANKS & TCs WITH DERIVATIVES			$7,335,274	$179,893,240	$7,970,059	$171,923,180	$141,494,953	$18,466,451	$3,523,248	$16,408,588
OTHER COMMERCIAL BANKS & TCs WITH DERIVATIVES			2,683,819	450,976	10,934	440,042	369,802	30,984	17,364	32,826
TOTAL FOR COMMERCIAL BANKS & TCs WITH DERIVATIVES			10,019,092	180,344,216	7,980,994	172,363,222	141,864,755	18,497,435	3,540,612	16,441,414
				(%)	(%)	(%)	(%)	(%)	(%)	(%)
TOP 25 COMMERCIAL BANKS & TC: % OF TOTAL COMMERCIAL BKS &TCs WITH DERIVATIVES				99.7	4.4	95.3	78.5	10.2	2.0	9.1
OTHER COMMERCIAL BANKS & TCs: % OF TOTAL COMMERCIAL BKs & TCs WITH DERIVATIVES				0.3	0.0	0.2	0.2	0.0	0.0	0.0
TOTAL FOR COMMERCIAL BANKs & TCs: % OF TOTAL COMMERCIAL BANKs & TCs WITH DERIVATIVES				100.0	4.4	95.6	78.7	10.3	2.0	9.1

Note: Currently, the Call Report does not differentiate credit derivatives by over the counter or exchange traded. Credit derivatives have been included in the "over the counter" category as well as in the sum of total derivatives here.
Note: "Foreign Exchange" does not include spot fx.
Note: "Other" is defined as the sum of commodity and equity contracts.
Note: Numbers may not add due to rounding.
Data source: Call Reports, schedule RC-L

TABLE 4

CREDIT EQUIVALENT EXPOSURES
TOP 25 COMMERCIAL BANKS AND TRUST COMPANIES IN DERIVATIVES
MARCH 31, 2008, $ MILLIONS
NOTE: DATA ARE PRELIMINARY

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	BILATERALLY NETTED CURRENT CREDIT EXPOSURE	POTENTIAL FUTURE EXPOSURE	TOTAL CREDIT EXPOSURE FROM ALL CONTRACTS*	TOTAL CREDIT EXPOSURE TO CAPITAL RATIO
1	JPMORGAN CHASE BANK NA	OH	$1,407,568	$89,997,271	$128,697	$351,805	$480,502	411.6
2	BANK OF AMERICA NA	NC	1,355,154	37,939,665	59,147	163,194	222,341	215.4
3	CITIBANK NATIONAL ASSN	NV	1,292,503	37,691,434	123,111	215,207	338,318	279.1
4	WACHOVIA BANK NATIONAL ASSN	NC	666,241	4,884,775	29,435	19,355	48,790	77.6
5	HSBC BANK USA NATIONAL ASSN	DE	188,463	4,279,737	52,844	63,712	116,556	721.3
6	WELLS FARGO BANK NA	SD	486,886	1,440,229	18,877	7,192	26,069	59.1
7	BANK OF NEW YORK	NY	128,342	1,058,618	6,684	5,030	11,714	122.2
8	STATE STREET BANK&TRUST CO	MA	147,472	904,593	8,806	7,299	16,105	187.4
9	PNC BANK NATIONAL ASSN	PA	128,623	248,705	3,941	1,685	5,626	49.1
10	SUNTRUST BANK	GA	174,716	241,369	5,378	1,417	6,795	38.8
11	MELLON BANK NATIONAL ASSN	PA	41,727	192,105	2,148	1,143	3,290	92.3
12	NORTHERN TRUST CO	IL	67,962	164,605	2,854	1,916	4,770	107.2
13	NATIONAL CITY BANK	OH	152,519	158,612	1,732	413	2,145	14.8
14	KEYBANK NATIONAL ASSN	OH	97,979	134,344	3,194	1,552	4,746	40.2
15	U S BANK NATIONAL ASSN	OH	237,269	99,610	1,594	33	1,626	7.3
16	REGIONS BANK	AL	139,766	69,741	1,318	461	1,779	13.7
17	BRANCH BANKING&TRUST CO	NC	131,916	61,752	811	294	1,104	10.2
18	FIFTH THIRD BANK	OH	64,564	55,993	1,424	479	1,903	29.8
19	RBS CITIZENS NATIONAL ASSN	RI	130,820	54,602	733	420	1,153	11.9
20	MERRILL LYNCH BANK USA	UT	63,003	46,761	122	313	435	5.9
21	FIRST TENNESSEE BANK NA	TN	37,064	37,901	696	134	830	24.3
22	LASALLE BANK NATIONAL ASSN	IL	71,098	36,884	640	171	812	11.2
23	UNION BANK OF CALIFORNIA NA	CA	57,413	32,063	805	556	1,361	23.5
24	UBS BANK USA	UT	27,989	31,177	341	31	372	19.4
25	DEUTSCHE BANK TR CO AMERICAS	NY	38,216	30,693	797	994	1,791	21.0
	TOP 25 COMMERCIAL BANKS & TCs WITH DERIVATIVES		$7,335,274	$179,893,240	$456,129	$844,806	$1,300,934	103.8
	OTHER COMMERCIAL BANKS & TCs WITH DERIVATIVES		2,683,819	450,976	8,469	4,010	12,479	1.3
	TOTAL AMOUNT FOR COMMERCIAL BANKS & TCs WITH DERIVATIVES		10,019,092	180,344,216	464,598	848,815	1,313,413	3.9

*Total credit exposure is the sum of bilaterally netted current credit exposure and potential future exposure.

Commercial banks also hold on-balance sheet assets in volumes that are multiples of bank capital. For example:

EXPOSURES FROM OTHER ASSETS ALL COMMERCIAL BANKS	EXPOSURE TO RISK BASED CAPITAL
1-4 FAMILY MORTGAGES	186%
C&I LOANS	131%
SECURITIES NOT IN TRADING ACCOUNT	149%

Note: Total credit exposure is defined as the credit equivalent amount from derivative contracts (RC-R line 54) or the sum of Net Current Credit Exposure and PFE.
Note: The total credit exposure to capital ratio is calculated using risk based capital (tier one plus tier two capital).
Note: Currently, the Call Report does not differentiate credit derivatives by contract type. Credit derivatives have been included in the sum of total derivatives here.
Note: Numbers may not add due to rounding.
Data source: Call Reports, Schedule RC-R.

TABLE 5

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS HELD FOR TRADING
TOP 5 COMMERCIAL BANKS AND TRUST COMPANIES IN DERIVATIVES
MARCH 31, 2008, $ MILLIONS
NOTE: DATA ARE PRELIMINARY

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL HELD FOR TRADING & MTM	% HELD FOR TRADING & MTM	TOTAL NOT FOR TRADING MTM	% NOT FOR TRADING MTM
1	JPMORGAN CHASE BANK NA	OH	$1,407,568	$81,876,035	$81,856,523	100.0	$19,512	0.0
2	BANK OF AMERICA NA	NC	1,355,154	34,840,681	34,603,779	99.3	236,902	0.7
3	CITIBANK NATIONAL ASSN	NV	1,292,503	34,340,243	33,477,366	97.5	862,877	2.5
4	WACHOVIA BANK NATIONAL ASSN	NC	666,241	4,430,875	4,320,317	97.5	110,558	2.5
5	HSBC BANK USA NATIONAL ASSN	DE	188,463	2,938,723	2,923,569	99.5	15,155	0.5
TOP 5 COMMERCIAL BANKS & TCs WITH DERIVATIVES			**$4,909,930**	**$158,426,557**	**$157,181,553**	**99.2**	**$1,245,004**	**0.8**
OTHER COMMERCIAL BANKS & TCs WITH DERIVATIVES			5,109,163	5,476,245	3,925,139	71.7	1,551,106	28.3
TOTAL AMOUNT FOR COMMERCIAL BANKS & TCs WITH DERIVATIVES			**10,019,092**	**163,902,802**	**161,106,692**	**98.3**	**2,796,110**	**1.7**

Note: Currently, the Call Report does not differentiate between traded and not-traded credit derivatives. Credit derivatives have been excluded from the sum of total derivatives here.
Note: Numbers may not add due to rounding.
Data source: Call Reports, schedule RC-L

TABLE 6

GROSS FAIR VALUES OF DERIVATIVE CONTRACTS
TOP 5 COMMERCIAL BANKS AND TRUST COMPANIES IN DERIVATIVES
MARCH 31, 2008, $ MILLIONS
NOTE: DATA ARE PRELIMINARY

					TRADING		NOT FOR TRADING		CREDIT DERIVATIVES	
RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	GROSS POSITIVE FAIR VALUE*	GROSS NEGATIVE FAIR VALUE**	GROSS POSITIVE FAIR VALUE*	GROSS NEGATIVE FAIR VALUE**	GROSS POSITIVE FAIR VALUE*	GROSS NEGATIVE FAIR VALUE**
1	JPMORGAN CHASE BANK NA	OH	$1,407,568	$89,997,271	$1,120,914	$1,087,220	$827	$273	$243,348	$236,287
2	BANK OF AMERICA NA	NC	1,355,154	37,939,665	684,343	673,288	1,550	2,018	106,697	99,219
3	CITIBANK NATIONAL ASSN	NV	1,292,503	37,691,434	591,143	574,856	3,714	5,030	140,456	130,864
4	WACHOVIA BANK NATIONAL ASSN	NC	666,241	4,884,775	112,425	110,855	3,748	2,315	20,348	19,171
5	HSBC BANK USA NATIONAL ASSN	DE	188,463	4,279,737	76,042	75,685	406	142	42,619	43,010
TOP 5 COMMERCIAL BANKS & TCs WITH DERIVATIVES			$4,909,930	$174,792,882	$2,584,867	$2,521,905	$10,245	$9,778	$553,468	$528,551
OTHER COMMERCIAL BANKS & TCs WITH DERIVATIVES			5,109,163	5,551,334	65,877	62,967	20,084	13,118	2,540	467
TOTAL AMOUNT FOR COMMERCIAL BANKS & TCs WITH DERIVATIVES			10,019,092	180,344,216	2,650,743	2,584,872	30,329	22,896	556,008	529,018

Note: Currently, the Call Report does not differentiate between traded and non-traded credit derivatives. Credit derivatives have been included in the sum of total derivatives here.
*Market value of contracts that have a positive fair value as of the end of the quarter.
**Market value of contracts that have a negative fair value as of the end of the quarter.
Note: Numbers may not sum due to rounding.
Data source: Call Reports, schedule RC-L

TABLE 7

TRADING REVENUES FROM CASH INSTRUMENTS AND DERIVATIVES
TOP 5 COMMERCIAL BANKS AND TRUST COMPANIES IN DERIVATIVES
MARCH 31, 2008, $ MILLIONS
NOTE: REVENUE FIGURES ARE FOR THE QUARTER (NOT YEAR-TO-DATE)
DATA ARE PRELIMINARY

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL TRADING REV FROM CASH & OFF BAL SHEET POSITIONS	TRADING REV FROM INT RATE POSITIONS	TRADING REV FROM FOREIGN EXCH POSITIONS	TRADING REV FROM EQUITY POSITIONS	TRADING REV FROM COMMOD & OTH POSITIONS	TRADING REV FROM CREDIT POSITIONS
1	JPMORGAN CHASE BANK NA	OH	$1,407,568	$89,997,271	$2,473	$2,303	$193	($101)	$255	($177)
2	BANK OF AMERICA NA	NC	1,355,154	37,939,665	(988)	58	318	(114)	(187)	(1,062)
3	CITIBANK NATIONAL ASSN	NV	1,292,503	37,691,434	(380)	677	364	61	78	(1,560)
4	WACHOVIA BANK NATIONAL ASSN	NC	666,241	4,884,775	444	610	46	58	(68)	(202)
5	HSBC BANK USA NATIONAL ASSN	DE	188,463	4,279,737	(500)	(608)	409	59	71	(430)
TOP 5 COMMERCIAL BANKS & TCs WITH DERIVATIVES			$4,909,930	$174,792,882	$1,050	$3,040	$1,330	($37)	$149	($3,432)
OTHER COMMERCIAL BANKS & TCs WITH DERIVATIVES			5,109,163	5,551,334	82	(275)	754	22	21	(439)
TOTAL AMOUNT FOR COMMERCIAL BANKS & TCs WITH DERIVATIVES			10,019,092	180,344,216	1,132	2,765	2,084	(15)	170	(3,871)

Note: Effective in the first quarter of 2007, trading revenues from credit exposures are reported separately, along with the four other types of exposures. The total derivatives column includes credit exposure
Note: Trading revenue is defined here as "trading revenue from cash instruments and off balance sheet derivative instruments.
Note: Numbers may not sum due to rounding.
Data source: Call Reports, schedule RI.

TABLE 8

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE & MATURITY
TOP 5 COMMERCIAL BANKS AND TRUST COMPANIES IN DERIVATIVES
MARCH 31, 2008, $ MILLIONS
NOTE: DATA ARE PRELIMINARY

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	INT RATE MATURITY < 1 YR	INT RATE MATURITY 1 - 5 YRS	INT RATE MATURITY > 5 YRS	INT RATE ALL MATURITIES	FOREIGN EXCH MATURITY < 1 YR	FOREIGN EXCH MATURITY 1 - 5 YRS	FOREIGN EXCH MATURITY > 5 YRS	FOREIGN EXCH ALL MATURITIES
1	JPMORGAN CHASE BANK NA	OH	$1,407,568	$89,997,271	$24,757,969	$20,974,280	$16,420,179	$62,152,428	$5,138,911	$826,279	$223,968	$6,189,158
2	BANK OF AMERICA NA	NC	1,355,154	37,939,665	6,167,931	7,413,762	5,555,056	19,136,749	1,883,601	366,873	179,484	2,429,958
3	CITIBANK NATIONAL ASSN	NV	1,292,503	37,691,434	9,613,789	8,619,869	6,417,181	24,650,839	3,772,916	535,876	211,701	4,520,493
4	WACHOVIA BANK NATIONAL ASSN	NC	666,241	4,884,775	359,038	786,966	549,094	1,695,098	128,914	16,168	7,992	153,074
5	HSBC BANK USA NATIONAL ASSN	DE	188,463	4,279,737	438,523	901,223	561,026	1,900,772	418,156	116,783	74,901	609,840
TOP 5 COMMERCIAL BANKS & TCs WITH DERIVATIVES			$4,909,930	$174,792,882	$41,337,251	$38,696,099	$29,502,536	$109,535,886	$11,342,498	$1,861,979	$698,046	$13,902,523
OTHER COMMERCIAL BANKS & TCs WITH DERIVATIVES			5,109,163	5,551,334	1,282,258	1,048,544	600,908	2,931,710	1,182,089	62,860	16,661	1,261,610
TOTAL AMOUNT FOR COMMERCIAL BANKS & TCs WITH DERIVATIVES			10,019,092	180,344,216	42,619,508	39,744,644	30,103,444	112,467,595	12,524,587	1,924,840	714,707	15,164,134

Note: Figures above exclude any contracts not subject to risk-based capital requirements, such as foreign exchange contracts with an original maturity of 14 days or less, futures contracts, written options, and basis swaps.
Therefore, the total notional amount of derivatives by maturity will not add to the total derivatives figure in this table.
Note: Numbers may not add due to rounding.
Data source: Call Reports, schedule RC-R

TABLE 9

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE & MATURITY
TOP 5 COMMERCIAL BANKS AND TRUST COMPANIES IN DERIVATIVES
MARCH 31, 2008, $ MILLIONS
NOTE: DATA ARE PRELIMINARY

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	GOLD MATURITY < 1 YR	GOLD MATURITY 1 - 5 YRS	GOLD MATURITY > 5 YRS	GOLD ALL MATURITIES	PREC METALS MATURITY < 1 YR	PREC METALS MATURITY 1 - 5 YRS	PREC METALS MATURITY > 5 YRS	PREC METALS ALL MATURITIES
1	JPMORGAN CHASE BANK NA	OH	$1,407,568	$89,997,271	$54,713	$37,879	$2,638	$95,230	$11,272	$1,187	$5	$12,464
2	BANK OF AMERICA NA	NC	1,355,154	37,939,665	1,169	396	-	1,565	210	40	-	250
3	CITIBANK NATIONAL ASSN	NV	1,292,503	37,691,434	3,577	1,453	97	5,127	715	54	0	769
4	WACHOVIA BANK NATIONAL ASSN	NC	666,241	4,884,775	0	0	0	0	0	0	0	0
5	HSBC BANK USA NATIONAL ASSN	DE	188,463	4,279,737	25,845	3,270	-	29,115	6,528	626	-	7,154
TOP 5 COMMERCIAL BANKS & TCs WITH DERIVATIVES			$4,909,930	$174,792,882	$85,303	$42,998	$2,735	$131,037	$18,725	$1,907	$5	$20,637
OTHER COMMERCIAL BANKS & TCs WITH DERIVATIVES			5,109,163	5,551,334	366	0	0	366	0	0	0	0
TOTAL FOR COMMERCIAL BANKS & TCs WITH DERIVATIVES			10,019,092	180,344,216	85,669	42,998	2,735	131,402	18,725	1,907	5	20,637

Note: Figures above exclude any contracts not subject to risk-based capital requirements, such as foreign exchange contracts with an original maturity of 14 days or less, futures contracts, written options, and basis swaps.
Therefore, the total notional amount of derivatives by maturity will not add to the total derivatives figure in this table.
Note: Numbers may not add due to rounding.
Data source: Call Reports, schedule RC-R

TABLE 10

NOTIONAL AMOUNTS OF DERIVATIVE CONTRACTS BY CONTRACT TYPE & MATURITY
TOP 5 COMMERCIAL BANKS AND TRUST COMPANIES IN DERIVATIVES
MARCH 31, 2008, $ MILLIONS
NOTE: DATA ARE PRELIMINARY

RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	OTHER COMM MATURITY < 1 YR	OTHER COMM MATURITY 1 - 5 YRS	OTHER COMM MATURITY > 5 YRS	OTHER COMM ALL MATURITIES	EQUITY MATURITY < 1 YR	EQUITY MATURITY 1 - 5 YRS	EQUITY MATURITY > 5 YRS	EQUITY ALL MATURITIES
1	JPMORGAN CHASE BANK NA	OH	$1,407,568	$89,997,271	$222,087	$194,902	$26,057	$443,046	$298,620	$154,221	$8,922	$461,763
2	BANK OF AMERICA NA	NC	1,355,154	37,939,665	9,039	3,907	47	12,993	58,508	41,259	10,993	110,761
3	CITIBANK NATIONAL ASSN	NV	1,292,503	37,691,434	11,072	6,054	3,874	21,000	110,926	46,584	14,852	172,362
4	WACHOVIA BANK NATIONAL ASSN	NC	666,241	4,884,775	4,569	10,338	599	15,506	24,187	12,877	2,189	39,253
5	HSBC BANK USA NATIONAL ASSN	DE	188,463	4,279,737	1,469	722	-	2,191	8,669	18,558	1,986	29,213
TOP 5 COMMERCIAL BANKS & TCs WITH DERIVATIVES			$4,909,930	$174,792,882	$248,236	$215,923	$30,577	$494,735	$500,910	$273,499	$38,942	$813,351
OTHER COMMERCIAL BANKS & TCs WITH DERIVATIVES			5,109,163	5,551,334	17,116	17,128	175	34,420	8,794	14,281	1,017	24,092
TOTAL FOR COMMERCIAL BANKS & TCs WITH DERIVATIVES			10,019,092	180,344,216	265,352	233,051	30,752	529,155	509,703	287,780	39,960	837,443

Note: Figures above exclude any contracts not subject to risk-based capital requirements, such as foreign exchange contracts with an original maturity of 14 days or less, futures contracts, written options, and basis swaps.
Therefore, the total notional amount of derivatives by maturity will not add to the total derivatives figure in this table.
Note: Numbers may not add due to rounding.
Data source: Call Reports, schedule RC-R

TABLE 11

NOTIONAL AMOUNTS OF CREDIT DERIVATIVE CONTRACTS BY CONTRACT TYPE & MATURITY
TOP 5 COMMERCIAL BANKS AND TRUST COMPANIES IN DERIVATIVES
MARCH 31, 2008, $ MILLIONS
NOTE: DATA ARE PRELIMINARY

						CREDIT DERIVATIVES INVESTMENT GRADE				CREDIT DERIVATIVES SUB-INVESTMENT GRADE			
RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL CREDIT DERIVATIVES	MATURITY < 1 YR	MATURITY 1 - 5 YRS	MATURITY > 5 YRS	ALL MATURITIES	MATURITY < 1 YR	MATURITY 1 - 5 YRS	MATURITY > 5 YRS	ALL MATURITIES
1	JPMORGAN CHASE BANK NA	OH	$1,407,568	$89,997,271	$8,121,236	$156,035	$1,876,203	$1,097,839	$3,130,077	$61,870	$872,036	$310,064	$1,243,970
2	BANK OF AMERICA NA	NC	1,355,154	37,939,665	3,098,984	32,223	943,970	334,277	1,310,470	26,151	182,807	107,431	316,389
3	CITIBANK NATIONAL ASSN	NV	1,292,503	37,691,434	3,351,191	70,219	725,997	426,344	1,222,560	32,288	363,588	148,213	544,089
4	WACHOVIA BANK NATIONAL ASSN	NC	666,241	4,884,775	453,900	42,149	196,553	53,265	291,967	4,455	85,372	72,106	161,933
5	HSBC BANK USA NATIONAL ASSN	DE	188,463	4,279,737	1,341,013	15,625	328,353	205,856	549,834	7,991	94,331	33,369	135,692
TOP 5 COMMERCIAL BANKS & TCs WITH DERIVATIVES			$4,909,930	$174,792,882	$16,366,325	$316,251	$4,071,076	$2,117,581	$6,504,908	$132,755	$1,598,134	$671,183	$2,402,073
OTHER COMMERCIAL BANKS & TCs WITH DERIVATIVES			5,109,163	5,551,334	75,089	2,455	17,121	9,554	29,131	1,352	9,618	1,103	12,074
TOTAL AMOUNT FOR COMMERCIAL BANKS & TCs WITH DERIVATIVES			10,019,092	180,344,216	16,441,414	318,706	4,088,198	2,127,135	6,534,039	134,108	1,607,752	672,287	2,414,147

Note Figures above exclude any contracts not subject to risk-based capital requirements, such as foreign exchange contracts with an original maturity of 14 days or less, futures contracts, written options, and basis swaps.
Therefore, the total notional amount of derivatives by maturity will not add to the total derivatives figure in this table
Note: Numbers may not add due to rounding.
Data source: Call Reports, schedule RC-R

TABLE 12

DISTRIBUTION OF CREDIT DERIVATIVE CONTRACTS
TOP 25 COMMERCIAL BANKS AND TRUST COMPANIES IN DERIVATIVES
MARCH 31, 2008, $ MILLIONS
NOTE: DATA ARE PRELIMINARY

						TOTAL CREDIT DERIVATIVES		BOUGHT				SOLD			
RANK	BANK NAME	STATE	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL CREDIT DERVATIVES	BOUGHT	SOLD	CREDIT DEFAULT SWAPS	TOTAL RETURN SWAPS	CREDIT OPTIONS	OTHER CREDIT DERIVATIVES	CREDIT DEFAULT SWAPS	TOTAL RETURN SWAPS	CREDIT OPTIONS	OTHER CREDIT DERIVATIVES
1	JPMORGAN CHASE BANK NA	OH	$1,407,568	$81,876,035	$8,121,236	$4,143,616	$3,977,620	$4,119,788	$10,142	$3,212	$10,474	$3,970,637	$2,393	$3,865	$725
2	BANK OF AMERICA NA	NC	1,355,154	34,840,681	3,098,984	1,528,171	1,570,814	1,509,905	12,739	5,527	0	1,545,769	25,045	0	0
3	CITIBANK NATIONAL ASSN	NV	1,292,503	34,340,243	3,351,191	1,759,907	1,591,284	1,728,307	31,412	188	0	1,578,005	13,029	250	0
4	WACHOVIA BANK NATIONAL ASSN	NC	666,241	4,430,875	453,900	238,442	215,458	220,471	17,971	0	0	201,304	14,154	0	0
5	HSBC BANK USA NATIONAL ASSN	DE	188,463	2,938,723	1,341,013	651,080	689,934	634,637	16,293	150	0	676,385	13,549	0	0
6	WELLS FARGO BANK NA	SD	486,886	1,438,141	2,088	1,246	842	1,246	0	0	0	832	0	10	0
7	BANK OF NEW YORK	NY	128,342	1,056,566	2,052	2,050	2	1,884	166	0	0	2	0	0	0
8	STATE STREET BANK&TRUST CO	MA	147,472	904,355	238	238	0	238	0	0	0	0	0	0	0
9	PNC BANK NATIONAL ASSN	PA	128,623	242,912	5,793	3,985	1,808	3,985	0	0	0	1,808	0	0	0
10	SUNTRUST BANK	GA	174,716	239,212	2,158	1,297	861	756	541	0	0	313	541	0	7
11	MELLON BANK NATIONAL ASSN	PA	41,727	192,105	0	0	0	0	0	0	0	0	0	0	0
12	NORTHERN TRUST CO	IL	67,962	164,341	264	264	0	264	0	0	0	0	0	0	0
13	NATIONAL CITY BANK	OH	152,519	156,363	2,250	1,407	843	1,407	0	0	0	843	0	0	0
14	KEYBANK NATIONAL ASSN	OH	97,979	125,749	8,594	4,436	4,158	4,436	0	0	0	3,573	585	0	0
15	U S BANK NATIONAL ASSN	OH	237,269	97,953	1,656	481	1,175	56	0	0	425	0	0	0	1,175
16	REGIONS BANK	AL	139,766	69,519	222	57	165	57	0	0	0	165	0	0	0
17	BRANCH BANKING&TRUST CO	NC	131,916	61,405	348	62	285	0	52	0	10	0	0	0	285
18	FIFTH THIRD BANK	OH	64,564	55,738	255	72	183	0	0	0	72	0	0	0	183
19	RBS CITIZENS NATIONAL ASSN	RI	130,820	54,351	252	217	35	0	0	0	217	35	0	0	0
20	MERRILL LYNCH BANK USA	UT	63,003	37,513	9,248	9,248	0	9,248	0	0	0	0	0	0	0
21	FIRST TENNESSEE BANK NA	TN	37,064	37,901	0	0	0	0	0	0	0	0	0	0	0
22	LASALLE BANK NATIONAL ASSN	IL	71,098	34,614	2,269	767	1,502	0	0	767	0	0	0	1,502	0
23	UNION BANK OF CALIFORNIA NA	CA	57,413	32,063	0	0	0	0	0	0	0	0	0	0	0
24	UBS BANK USA	UT	27,989	31,177	0	0	0	0	0	0	0	0	0	0	0
25	DEUTSCHE BANK TR CO AMERICAS	NY	38,216	26,115	4,578	4,578	0	100	4,478	0	0	0	0	0	0
TOP 25 COMMERCIAL BANKS & TCs WITH DERIVATIVES			$7,335,274	$163,484,652	$16,408,588	$8,351,619	$8,056,969	$8,236,784	$93,794	$9,844	$11,198	$7,979,672	$69,295	$5,627	$2,375
OTHER COMMERCIAL BANKS & TCs WITH DERIVATIVES			2,683,819	418,151	32,826	31,238	1,588	27,088	59	57	4,034	354	25	195	1,014
TOTAL AMOUNT FOR COMMERCIAL BANKS & TCs WITH DERIVATIVES			10,019,092	163,902,802	16,441,414	8,382,857	8,058,557	8,263,872	93,852	9,901	15,232	7,980,026	69,320	5,822	3,389
					(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
TOP 25 COMMERCIAL BANKS & TC: % OF TOTAL COMMERCIAL BANKS &TCs WITH DERIVATIVES					99.8	50.8	49.0	50.1	0.6	0.1	0.1	48.5	0.4	0.0	0.0
OTHER COMMERCIAL BANKS & TCs: % OF TOTAL COMMERCIAL BANKS & TCs WITH DERIVATIVES					0.2	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL AMOUNT FOR COMMERCIAL BANKS & TCs: % OF TOTAL COMMERCIAL BANKS & TCs WITH DERIVATIVES					100.0	51.0	49.0	50.3	0.6	0.1	0.1	48.5	0.4	0.0	0.0

Note. Credit derivatives have been excluded from the sum of total derivatives here.
Note Numbers may not add due to rounding.
Data source: Call Reports, schedule RC-L

TESTIMONY OF

Darrell Duffie
Professor of Finance
Graduate School of Business, Stanford University

before the

U.S. Senate Committee on Banking, Housing, and Urban Affairs
Subcommittee on Securities, Insurance, and Investment

"Reducing Risks and Improving Oversight in the OTC Credit Derivatives Market"

July 9, 2008

Mr. Chairman, distinguished Members of the Committee. Thankyou for the chance to appear.

Credit derivatives are typically just default insurance contracts. Some credit derivatives are customized to the needs of investors looking for specific sorts of diversification or protection.

The financial industry got ahead of itself by allowing extreme growth of its credit derivatives markets before it had safe and effective ways to manage the associated risks. I have been concerned about inadequate methods for the pricing and risk management of the types of credit derivatives that played a role in the recent credit crisis, and also about a lack of robust operational infrastructure. I am

going to focus now on operational issues such as trade documentation and clearing, but I am happy to try to answer more general questions.

Credit derivatives are traded almost entirely in the over-the-counter market, where a dealer normally acts as a seller to buyers of default protection, and as a buyer to sellers of default protection. In order to balance their positions, dealers often take positions with other dealers. In addition, hedge funds often expose one dealer to another when they re-assign their positions in an existing contract. As a result, dealers find themselves significantly exposed to the event of default by some other dealers, normally a very remote but potentially dangerous possibility.

Had Bear Stearns collapsed before the 2005 initiative of the Fed lead to reduced documentation backlogs, and had quick action by the Fed and J.P. Morgan not occurred, the unwinding of Bear Stearns' derivatives portfolio could have been extremely dangerous. In the absence of clear and up-to-date records of current derivatives positions, dealers would have been uncertain of their own and other dealers' exposures, and could have responded by a dramatic withdrawal of financing to each other, which could have indeed caused other dealers to fail, with potentially disastrous economic consequences.

In addition to a lack of good records, the market has suffered from an unnecessary buildup of exposure of dealers to each other. For a simple illustrative

example, suppose that Goldman Sachs has credit derivatives contracts that expose it to Merrill Lynch through a one-billion-dollar credit derivatives position, while at same time Merrill Lynch has a similar one-billion-dollar exposure to J.P. Morgan, and J.P. Morgan has the same exposure to Goldman. If all three dealers in this circle of exposures were to re-assign their contractual positions to a central clearing counterparty, then each dealer's positions would net to zero. None of them would be exposed, nor would the central clearing counterparty. In practice, however, the growth of the credit derivatives market has been accompanied by an exceptional increase in the exposures of dealers to each other that could have been significantly avoided by central clearing.

Through a new electronic confirmation platform known as DerivServ, I believe that the trade documentation problem has now been largely addressed, although even more progress should be made in that direction. A central clearing counterparty known as TCC is likely to come on line in the credit derivatives market later this year, and will reduce dealers' exposures to each other significantly for standardized credit derivatives, which constitute the bulk of dealer exposures. I have reviewed the architecture of the TCC, and it offers roughly the benefits that are offered through exchange-based clearing.

The market is achieving a more robust infrastructure through these and other procedural improvements, such as new protocols for auction-based cash settlement of contracts at credit events, and for "novation," meaning the assignment of a customer's position to a new dealer. Further improvements in the OTC market architecture are planned.

These infrastructure improvements have come to the over-the-counter derivatives market rather late. Many of their benefits have been available all along with exchange-based trading.

Separate from the issue of operational risks, exchanges and over-the-counter markets offer different merits as venues for finding counterparties and for negotiating prices. Exchanges are more transparent and more easily regulated. They are natural for trading highly standardized contracts. The OTC market suffers from a lack of price transparency. On the other hand, the OTC market is more flexible, and thus better suited to financial innovation and to customization for clients, especially those seeking to transfer large amounts of a specific type of risk.

I would be concerned about the unintended consequences of a regulatory allocation of certain types of financial trading between the OTC and exchange markets. Aside from the chance of getting it wrong or of dampening incentives for future innovation, there is also the question of international competition. The

United States has the world's premier derivatives exchange, but is competing with the United Kingdom for leadership in the OTC derivatives market.[1] Over several decades, the U.S. over-the-counter derivatives market has nevertheless served as an engine for innovation and economic growth in the financial-services sector in a manner analogous to the role of Silicon Valley in the manufacturing sector.

Thankyou. I would be happy to address questions.

[1] See "Competing for a Share of the Global Derivatives Markets: Trends and Policy Choices for the United States," by Darrell Duffie and Henry T.C. Hu, Working Paper, June 3, 2008, Graduate School of Business, Stanford University.

Testimony of Robert Pickel

CEO, International Swaps and Derivatives Association

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Introduction

Thank you very much for inviting ISDA to testify before the Senate Banking Committee's Subcommittee on Securities, Insurance and Investments. ISDA, which represents participants in the privately negotiated derivatives industry, is the largest global financial trade association, by number of member firms. ISDA was chartered in 1985, and today has over 830 member institutions from 56 countries on six continents. These members include most of the world's major institutions that deal in privately negotiated derivatives, as well as many of the businesses, governmental entities and other end users that rely on over-the-counter derivatives to manage efficiently the financial market risks inherent in their core economic activities. It is our pleasure to present this testimony on "Reducing Risks and Improving Oversight in the OTC Credit Derivatives Market."

About Credit Derivatives

The vast majority of credit derivatives take the form of the credit default swap, which is a contractual agreement to transfer the default risk of one or more reference entities from one party to the other. One party, the protection buyer, pays a periodic fee to the other party, the protection seller, during the term of the contract. The protection buyer is entitled to protection on an agreed upon face value of reference entity debt. If the reference entity experiences a credit event (such as a bankruptcy or a failure to pay), the protection seller is obligated to pay the protection buyer the notional amount of the contract, typically in exchange for debt of the reference entity as specified in the contract. The protection buyer does not have to have any exposure to the reference entity's credit in order to be compensated upon the occurrence of a credit event. The settlement procedure can be either physical settlement, in which the buyer delivers defaulted debt to the protection seller and receives the par value in return, or cash settlement, in which the protection seller compensates the buyer for the difference between par and the recovery value of certain obligations of the reference entity. Standard market practice is to select physical settlement, though in most cases this is now modified by the auction process discussed below.

The economic result of a CDS transaction can be illustrated as follows: the protection buyer effectively takes on a short position in the credit risk of the reference entity, which thereby relieves the buyer of exposure to default. By giving up reference entity credit risk, the buyer effectively gives up the opportunity to

profit from exposure to the reference entity. In return, the buyer's risk is minimized as it is protected by the fact that it will receive its expected economic return absent default of both the reference entity and the protection seller. The protection seller, in contrast, takes on a long position in the credit risk of the reference entity, which is essentially the same as the default risk taken on when lending directly to, or investing in a bond issued by, the reference entity. The main difference between the two is the need to fund the making of a loan or the purchase of a bond but not a sale of protection under a CDS.

In addition to credit default swaps, which make up about 95 percent of credit derivatives outstanding, there is one other type of credit derivative worth mentioning. A total return swap transfers the total economic performance of a reference obligation from one party to the other, and works as follows. The total return payer might own a particular bond and agree to pay the total return on that bond to the other party. The total return is generally equal to interest plus fees plus the appreciation or depreciation of the reference obligation. The total return receiver, for its part, will pay a money market rate plus a negotiated spread, which is generally independent of the reference obligation performance. If a credit event or a major decline in market value occurs, the total return will become negative, so the receiver will end up compensating the payer. The end result of a total return swap is that the total return payer is relieved of economic exposure to the reference obligation but has taken on counterparty exposure to the total return receiver.

Credit derivatives arose in response to two needs in the financial industry. The first need was to hedge credit risk or, to put it in the language of finance, to take a short credit risk position. Prior to the existence of credit derivatives, lenders had a limited number of ways to protect themselves if the financial condition of a borrower were to deteriorate. One was to take collateral, which might not be effective in many cases of financial distress, or by selling the loan, which normally requires the consent of the borrower.

A second need was diversification of credit risk. Financial economists have long noted the benefits of applying a portfolio approach to investments by means of diversification, but practical considerations made diversification difficult to achieve. Relationship considerations, for example, posed an obstacle to diversifying by deliberately reducing exposure to major clients. Buying protection by means of credit derivatives provides solutions to both of the foregoing problems. By allowing banks to take a short credit position, credit derivatives enable banks to hedge their exposure to credit losses. And by hedging selectively, a bank can reduce its exposure to certain entities, thereby attaining its diversification objective without jeopardizing the client relationship.

Credit Derivatives Facilitate Hedging and Diversification

Two features of the market have enhanced the ability of credit derivatives to fulfill the two needs of hedging and diversification. The first feature is standard legal transaction documentation, the most recent being the 2003 ISDA Credit Derivatives Definitions. Along with other ISDA derivatives documentation, these definitions facilitate transactions and enhance legal certainty, which is a necessary condition for derivatives activity. The second is index trading, that is, buying and selling protection on a diversified index of entities instead of a single firm. By providing additional opportunities for investors to take positions in credit risk, index trading has vastly increased the liquidity of credit derivatives activity. The result is that banks and other firms seeking to hedge credit risk can do so more efficiently and at a lower cost. This greater efficiency in turn means that credit risk can be more widely and deeply dispersed in the economy so that the costs of default are felt less acutely in any one sector.

The Infrastructure for Credit Derivatives Continues to Improve

(a) Novations

ISDA has made continuous efforts to improve the legal documentation for credit derivatives. The ISDA 2003 Credit Derivatives were quickly adopted by the market; since then ISDA has published a series of other documents to cover new products and to adapt the documentation framework to the increasing use of automation in the market place.

The success of the market and the entrance of new market participants such as investment managers and managed funds has led to the increasing use of novations, a process in which one party to the contract assigns or novates its rights and obligations to a third party. After concerns were raised as to whether proper notifications to the remaining party in the trade were being widely shared, in 2005 ISDA developed a Novation Protocol, which has proved extremely successful in reducing the number of outstanding confirmations due to novations.

(b) Hardwiring the Auction Mechanism Into Standard Documentation

Standard credit derivative documentation currently provides for physical settlement of transactions following the occurrence of a credit event involving the reference entity on the trade. As the volume of outstanding transactions has grown over the last several years, the prospect of an orderly settlement through delivery of bonds and loans has been thrown into doubt. In eight of the last nine credit events over the last three years, ISDA has published a protocol to allow parties to amend their outstanding trades to facilitate cash settlement while preserving the option of physical settlement. (A protocol was not necessary for the other credit event, as that

occurred in relation to a reference entity that was traded under ISDA's loan CDS documentation, in which the auction mechanism has already been hardwired.) Under the revised terms an auction has been conducted to establish a price for one or more deliverable obligations. Each of these auctions has produced an outcome that has been generally accepted in the market as an appropriate valuation of deliverable obligations.

Over the course of the last year some, such as the President's Working Group and the New York Federal Reserve, have called for incorporation of the auction protocol into the standard ISDA credit derivative documentation. Participation in the auction by adherence to the protocol is a voluntary process and, while the vast majority of active market participants have participated in the process, some have expressed concern that one or more major market participants could choose to stay outside the protocol and auction process. As the robustness of the auction process is enhanced by greater participation, the broad-based consensus that has existed for previous auctions could be compromised, producing an auction result that might not be as widely accepted as previous auctions.

ISDA has anticipated incorporation of the auction mechanism into its standard credit derivative documentation, using the experience of past credit events to make minor modifications to the mechanism. The mechanism has not been utilized for a credit event in Europe or for a credit event involving a very large reference entity with a large number of outstanding obligations. While the mechanism would no doubt benefit from being tested in those circumstances, it is clear now that it is more important to incorporate the mechanism into the standard documentation so that the vast majority of market participants are committed to follow the process.

ISDA and a group of the major credit derivatives dealers are actively working on the process of incorporating the auction mechanism embodied in the ISDA CDS settlement protocols into the ISDA Credit Derivatives Definitions. ISDA has shared the dealer group's position on the issues with key buy side representatives. The process will also be opened out to the full ISDA membership so that the views of the entire market can be taken into account. It is anticipated that the process will be complete by year-end.

(c) Automating Transaction Information

The rapid growth in the credit derivatives market has increased the need to automate post-trade activities. Financial products Markup Language (FpML), the technical standard for electronic messaging covering the OTC derivatives lifecycle, which is developed under the auspices of ISDA, is widely used in the industry. Currently a high percentage of trades (>90%) are confirmed electronically and the industry continues to strengthen the infrastructure. One example of this is the continuous developments of the Trade Information Warehouse, a central repository

managed by the Depository Trust & Clearing Corporation (DTCC) that keeps the legally binding version of all trades and to which all market participants submit their trades. The Trade Information Warehouse will be used for centralized payment settlement of all trades and will facilitate more efficient processing of post-trade events, including settlement of credit events.

(d) Portfolio Compression

Starting in May, ISDA has facilitated discussions among a working group comprising dealer and some end-user firms to explore methods that could be used to reduce the current gross notional CDS market size to better reflect the true net risk position. Portfolio Compression, as the process is called, allows for the replacement of a portfolio of trades with the same reference entity and maturity with two trades, while keeping the risk profile identical. The process offers tangible benefits to CDS market participants through potential capital savings and a reduction in operational risk by decreasing the number of trades.

In order to execute portfolio compression in the single-name CDS market, ISDA coordinated and recently completed an RFP process to select a central platform for this service. Initial compression cycles will take place in August and September of 2008. The dealers are committed to full implementation of portfolio compression in an accelerated timeframe.

Conclusion

The market for OTC derivatives has grown rapidly, thanks both to the usefulness of these products as a risk management tool and to the strong legal and operational infrastructure that currently exists for OTC derivatives. While continued innovations will challenge existing frameworks, and while market participants and regulators alike will need to continue to be vigilant, there is no question that the infrastructure for OTC credit derivatives is strong and improving.

Thank you very much for allowing ISDA to testify; I look forward to answering any questions you might have.

Statement of
Craig S. Donohue
Chief Executive Officer of CME Group Inc.
Before the
United States Senate
Subcommittee on Securities, Investment and Insurance
Of The
Committee on Banking, Housing and Urban Affairs
July 9, 2008

I am Craig Donohue, CEO of CME Group Inc. ("CME Group" or "CME"). Thank you Chairman Reed and Ranking Member Allard for inviting us to testify at this hearing on "Reducing Risks and Improving Oversight in the OTC Credit Derivatives Market" and giving us the opportunity to discuss approaches to reducing systemic risks in these critical markets.

As you are well aware, trading in credit derivatives – primarily credit default swaps ("CDSs") – has grown exponentially in a very short period of time. At the end of 2007, notional exposures in CDS trades exceeded $60 trillion. These products have become critical to the financial markets as a means of benchmarking the cost of raising funds in the capital markets, and as mechanisms to allocate credit risks and hedge corporate debt portfolios. However, the development of systems to manage this enormous market has not kept pace with the rapid growth in trading and the sophistication of market participants and their trading strategies. Market information is opaque and uncertain. The confirmation system suffers from enormous backlogs, in which trades may remain unconfirmed for weeks. Risk management systems are fragmented and produce frequent disputes and inconsistencies in mark-to-market and collateralization practices.

If a major dealer were to default, it would inject enormous instability into the credit markets and in turn the markets for other products, potentially triggering a cascading series of failures across the global financial markets. As you know, the Federal Reserve Bank of New York and other interested parties are actively seeking solutions to these risks. While some progress is being made, much more work remains. We appreciate the invitation to testify before the Subcommittee today because we believe that the

transparent price discovery and multilateral trading and clearing mechanisms of regulated exchanges such as CME Group are the best available tools for monitoring and managing risks on a current basis, reducing systemic risk across the financial system, and enhancing certainty and fairness in credit markets.

As I will discuss, such an integrated multilateral trading and clearing model will offer the best route to improved risk management and enhanced efficiency for all participants in the credit derivatives market and also for the underlying companies on which credit derivatives are based. At the same time, it will offer regulators the immediate information and transparency they need to prevent fraud, manipulation and market abuse. In both cases, we believe this model will greatly reduce significant information asymmetries in the credit markets and protect the broader financial markets against systemic risk.

Background

Credit derivatives became increasingly important beginning in the mid 1990s. The market expanded tremendously during the past five years, as market participants including investment banks, commercial banks, hedge funds, insurance companies, asset managers and others increasingly sought to insure against unwanted credit risks in their fixed income portfolios. Credit derivatives give asset managers a means of offsetting credit risks associated with individual corporate debt issues or overall corporate debt portfolios of their institutional clients, which may include foundations, endowments and pension funds. Others use credit derivatives to take positions in corporate bonds or the corporate debt market as a whole. Credit specialists seek to profit from the volatility in credit spreads that emerges during periods of economic uncertainty. Credit derivatives have become the core benchmark products used by corporate borrowers and market participants to measure the cost of raising funds in the capital markets.

Major investment and commercial banks serve as dealers or market makers in the credit derivatives market. These dealer banks also maintain sizeable credit derivatives positions in order to manage risks in their own loan and corporate bond portfolios. The proprietary trading desks of these dealer banks contribute a substantial part of the daily trading volume in the credit derivatives markets.

To be clear, credit derivatives have not themselves created instability or excess risk. The market has grown precisely because credit derivatives

are an extremely useful innovation that permits dispersion and realignment of certain risks. However, the credit derivatives market, the policies, practices and regulations that apply to them, and the necessary infrastructure and systems capabilities that impact them, have not kept pace with the rapid growth in trading and open positions.

Current Trading Practices

CDSs are executed bilaterally between two counterparties, a protection buyer and a protection seller. Indicative quotes are most often disseminated by email directly from brokers, but CDS market transactions are largely voice-based. Unlike the corporate bond market, there are no price reporting requirements for CDS trades. Standardization is limited except in the index products. While these bilateral trading methods allow counterparties to address specific risks, this model also makes the products more difficult to price, difficult to mark to market, and difficult to manage over the life of the trade. Most importantly, bilateral trading of customized products in an opaque market precludes the netting of positions that occurs on organized exchanges with a central counterparty clearing model. Customization of credit derivatives contributed to the enormous size of outstanding exposures, because a credit derivative purchaser or seller cannot unwind a position except with its original counterparty. Consequently, in order to receive the most competitive price, participants in this market often manage and adjust their positions through the creation of new offsetting positions with different counterparties. While index transactions have now become relatively standardized, many single-name credit default swaps remain customized, preventing timely and efficient trade confirmation, which hinders effective risk management and increases overall risk.

The vast number of outstanding positions that are maintained on a bilateral basis creates the systemic risk that caused such well-founded alarm earlier this year during the Bear Stearns crisis. As one major participant in the market suffered severe distress, credit spreads for most dealers widened, credit market volatility increased and liquidity declined. Counterparties worried over the status of unconfirmed transactions. Intervention became necessary to ensure that a Bear Stearns collapse did not lead to a cascading series of defaults across the financial markets.

Benefits of an Integrated Trading Platform and CCP Clearing

An integrated exchange and central counterparty ("CCP") clearing model for the credit derivatives markets would have substantially reduced

such risks. A centralized execution platform would aggregate liquidity and improve efficiency. It would provide the market with much-needed price discovery and transparency, and also audit trail information for use by risk managers and regulators.

Central counterparty clearing that is available to all participants would further improve the model by mutualizing risk across the entire market. Clearing limits systemic risks by protecting all parties against the effects of a default by any one participant. With an independent and neutral guarantor as the counterparty to all, excess exposures are netted, no firm is uniquely exposed to the failure of another, and the market has no cause to speculate as to which firm may be the next domino to fall. Straight-through processing of trade confirmations gives risk managers accurate, real-time views of risk exposures. The clearinghouse employs dynamic risk management, twice daily marks-to-market, settlement variation payments and adjustments to collateral requirements. Because these requirements are established and enforced by a neutral third party, they impose further discipline on participants and give confidence to the market, thereby reducing volatility and enhancing liquidity for all.

By contrast, in the current OTC trading environment, volatility is greater and liquidity can evaporate for those firms that are – or that are perceived to be – in financial distress. The crisis can then feed upon itself, pushing weaker but otherwise stable firms into insolvency. In addition to the ballooning size of outstanding exposures, the credit derivatives markets are subject to many of the other problems and risks inherent in OTC markets:

- First, the markets are opaque: protection buyers cannot readily determine the best prices for the products they seek, as they could on a centralized marketplace. Efficient and accurate mark-to-market practices, which are critical for ongoing risk management and proper accounting, are further hindered by the lack of transparency in the markets. Disagreements over how to value existing positions are common, leading to subjective and inconsistent mark-to-market calculations and potentially incomplete disclosure to investors of unrealized losses on open positions. Additionally, movements in the credit derivatives markets can have a material impact upon other markets, including those that are traded on-exchange.

- Second, the risk assessment information that is available to regulators and even to market participants is inadequate. Precise information on gross and net exposures across the market is not available; instead, each market participant knows its own exposures, which it must assess against its best estimate of the entire market. The protection buyer seeks to hedge its positions by shifting credit risk in the reference entity from itself to the protection seller. In doing so, however, the protection buyer effectively exchanges credit risk in the reference entity for credit risk in the protection seller – without visibility into the range of risks in the seller's own credit derivatives positions. The true consequences and costs of a default by one or more participants cannot be measured by any of the disparate parties to these bilateral transactions. No independent exchange or regulator is available to evaluate and manage aggregate risks across the whole, or to fairly assess and manage concentration risks within a particular firm's or customer's portfolio.

- Third, the OTC market lacks standardized risk management protocols for bilateral CDS transactions. Portfolio valuation used to determine initial and variation margin is derived from proprietary internal systems, leading to disparities in exposure calculations, infrequent portfolio reconciliation and disputes related to margin calls. Dispute resolution is agreed on a bilateral basis and relies on the availability and cooperation of third parties in providing prices, resulting in uncertain and disparate outcomes across a portfolio and the market as a whole. Even the timing of margin delivery differs across the industry. Furthermore, collateralization is often one-sided, in that the dealer banks require collateral from their buy-side CDS counterparties but do not consistently post collateral themselves. While recent proposals for inter-dealer solutions will solidify collateralization among the dealers, this approach fails to protect buy-side participants against default, many of whom have very significant exposures. The assymetry in collateralization practices exacerbates risk and market uncertainty.

- Fourth, trade processing and confirmation is enormously inefficient compared to what occurs on organized exchanges, particularly with respect to novated transactions. Electronic matching and confirmation solutions currently available for bilateral CDS trades are not yet fully scalable and may be susceptible to failure during periods of market

turmoil. In the current system, novated trades often remain unconfirmed for 30 to 45 days. On several occasions during the past three years, the Federal Reserve Bank of New York has assembled the major CDS market participants to strongly suggest that poor confirmation procedures were an unacceptable roadblock to effective risk management.

Recent Developments

Over the past few years, market forces have responded to regulatory calls relating to the operational and risk management problems inherent in the credit derivatives markets and begun to address these issues. For example:

- CMA, a company recently acquired by CME Group, provides credit market pricing data and intra-day services that increase productivity, efficiency and transparency. CMA focuses upon information services and redistributes pricing data received from buy-side market participants.
- Markit, which is owned by a consortium of sixteen major banks, also offers credit market pricing data and owns the most actively traded credit default swap indexes. Markit and Creditex, an inter-dealer broker recently acquired by IntercontinentalExchange, jointly developed Credit Event Fixings in close cooperation with ISDA, which are designed to ensure a fair, efficient and transparent process for the cash settlement of credit derivative trades following a credit event. Creditex and Markit have jointly acted as administrators of the Credit Event Fixings since their inception in June 2005.
- Additionally, TriOptima, a privately-owned company, offers its triReduce service to the CDS market, which is a means for mass multilateral termination or netting of OTC contracts.

These and other types of services and offerings have allowed for some level of increased efficiency and transparency. However, none of these solutions – individually or collectively – provides for the processing efficiencies and systemic risk mitigation that an exchange model with CCP clearing would provide. An exchange model that integrates a trading platform with CCP clearing would provide much more effective price discovery through transparent means that are accessible to all market participants. It would generate market data and audit trail information that

will greatly enhance risk management systems and regulatory oversight. Confirmation of trades would occur virtually in real time, giving risk managers the timely and accurate position information that they need to assess risks and exposures in their portfolios. Trading of standardized products with central counterparty clearing would greatly reduce gross exposures by permitting market participants to adjust positions much more easily than they can in a bilateral environment.

Exchange Model Solutions

An exchange model, which integrates a transparent and neutral trading platform with CCP clearing, would offer the CDS market scalable solutions to keep pace with the rapid growth of trading and independent and effective risk management practices that would greatly reduce systemic risk.

On the execution side, moving to an exchange model would offer standardization of product and price transparency through a multilateral trading facility. This offers all participants a level playing field, in which the best prices are known and available to all. Externally distributed market information would give a timely and accurate view of developments in the credit markets to all financial markets participants, regulators, the public and the companies on which credit derivatives are ultimately based. Accounting for open positions and public reporting to investors would be improved. The real-time stream of market data would also permit more effective market supervision and regulation.

The costs of trading and post-trade processing are also substantially reduced. Trading can occur through an efficient and low-cost electronic platform. Trading may also continue to occur through existing bilateral means, but trades in the standardized products of the exchange can be submitted to the exchange for novation and clearing. Straight-through processing allows near-instantaneous confirmation of trades, and enhances position management. Disputes about trades occur less frequently and are resolved far more quickly. Risk managers can more clearly and quickly monitor and manage the aggregate risks to which their firm is exposed.

Central counterparty clearing is the critical second half of the integrated exchange model approach. Central counterparty clearing of standardized instruments permits the most complete and effective multilateral netting of exposures. With the cooperation of market participants and the assistance of interested regulators, existing open trades could be substituted into the standardized cleared products. Any such "tear

up" of current exposures, which would best reduce risks associated with existing positions, would be complex to implement. Adopting a CCP clearing model, however, would achieve a more comprehensive reduction of current risks than existing compression services can offer.

A central counterparty can also offer objective daily settlement methodology for mark-to-market purposes, based upon neutral, market-based processes implemented by experienced personnel, rather than the more subjective views of the trade participants themselves. An independent clearinghouse, with a risk-neutral position and no stake in market direction, would be positioned to fairly assess risk and manage collateral requirements fairly on behalf of all market participants.

Finally, a neutral central counterparty would most reliably guarantee performance on behalf of all market participants through a well-capitalized, dynamically-managed guarantee pool. Improved accuracy and transparency of position values, combined with central counterparty clearing, would also materially reduce capital charges for firms that are active participants in these markets. Better transparency around market prices and trading activity would permit risk management practices that are both more prudent and more capital-efficient.

Collectively, these enhancements would lead to a more orderly and more liquid market for credit derivatives. A transparent exchange-traded and cleared credit market would serve the needs of corporate issuers, banks, hedge funds, asset managers and other market participants to benchmark the cost of raising funds and balance and distribute the credit risks in their investment portfolios. It would also present fewer risks to the broader financial markets and the US economy in times of financial stress.

CME Group is actively working to develop solutions that will enhance the evolution of the credit derivatives market. As the leading global derivatives exchange, we have a long history of developing standardized products in cooperation with market participants. We also manage the world's largest derivatives clearing facility. We are uniquely positioned to bring effective, mutualized risk management practices to these markets.

In 2007, CME Group matched over 316 million transactions on our trading platforms, with a notional value that exceeded one quadrillion dollars. Transactions on CME's electronic trading platforms are matched and confirmed within milliseconds, and immediately novated by the CME Clearinghouse. In 2007, the clearinghouse cleared more than 2.8 billion

contracts traded on CME and The Chicago Board of Trade, our two fully-regulated futures exchanges, in addition to clearing OTC transactions in foreign exchange and commodities. The Clearinghouse currently holds more than $60 billion of collateral on deposit and routinely moves more than $3 billion per day among market participants, with movements of up to $10 billion on exceptionally volatile days.

The risk management practices that an experienced clearinghouse would bring to this market are critical. The CME Clearinghouse performs continuous real-time monitoring of market positions and aggregate risk exposures, together with twice-daily financial settlement cycles, to remove financial risk from the markets we clear. The clearinghouse conducts advanced portfolio-based risk calculations to ensure that posted collateral will cover potential losses. We monitor individual large account positions and perform daily stress testing to identify potential risk exposures. Finally, our clearinghouse has a proven ability to scale operations to meet the demands of new markets and unexpected volatility.

CME Group is actively exploring solutions to reduce the risks and inefficiencies of the current credit derivatives markets. We believe that the best solution must be one that involves all market participants and addresses their different interests, goals and objectives in the credit derivatives markets in an open and equal access environment. We believe that an exchange model does so. In an exchange model, dealers will serve crucial roles as market makers for listed credit products, and as intermediaries that may execute trades and clear on behalf of their prime brokerage clients. The needs of protection buyers will also be met: successful on-exchange products would concentrate liquidity and offer the buy side the best available prices for the contracts they seek. Active buy-side trading firms would also be able to make markets in listed products, furthering the price improvement process.

The needs of regulatory agencies and the public would also be met. Clearing of credit derivatives products would substantially reduce the systemic risks of unknown size in the current OTC credit markets. The dynamic risk management and mutualization of risk that occurs with clearing would go further to prevent a "domino effect" of cascading defaults than can the compression services offered in the OTC market. Transparent pricing, active market surveillance and appropriate reporting requirements will improve accounting and corporate disclosures concerning credit derivatives and reduce the risks of manipulation and other market-distorting

practices. Successful exchange-traded products would also provide investors and policy-makers a reliable stream of credit derivatives market data.

Unresolved Issues

We have met with the CFTC and the Federal Reserve and will meet with the SEC this week to promote the integrated exchange and CCP clearing model that I have proposed. We believe that there is a path that will permit futures exchanges to trade and clear this product subject to the CFTC's jurisdiction and to allow securities and options exchanges to trade and clear the product subject to the SEC's jurisdiction. The recent MOU between the CFTC and the SEC demonstrates a new era of cooperation in bringing novel products to market and allowing competition between regulated futures and securities markets. We hope to make progress with all of the concerned agencies and avoid any delays in bringing solutions to market that might, in the past, have been hindered by jurisdictional disputes. We are strong proponents of regulatory accommodation that promotes competition. In the case of CDSs, there is a risk that regulatory uncertainty, or a forced regulatory outcome, may not adequately address the particular needs of this market; anything that hinders prompt implementation of an effective solution extends the systemic risks in the current market.

We recommend that financial market regulators be encouraged to foster an open environment in which various solutions can compete to meet the needs of market participants and to satisfy important public policy goals. Our goal is to advance these markets beyond their current opaque, inefficient and risky practices. This requires product structures that conform to existing practices, and rules and regulatory oversight that are suited to those products and the manner in which they are traded. That may not occur if exchange-traded credit products must be fitted within regulatory frameworks that were developed for entirely different markets.

The firms that are the primary dealers in the credit derivatives markets must accept changes that will make these markets more transparent and efficient, and more actively managed from a risk standpoint. I do not mean to suggest that the dealers in these markets do not see the risks or are not prepared to make changes. These firms are themselves subject to the risks of these markets. Their back offices are frustrated by the slow confirmations and frequent problems in documentation. Their risk managers

worry about the size of exposures and the possibility of cascading defaults. Their CFOs and accountants seek accurate mark-to-market information and a sensible approach to reporting. The dealers also have been working to develop solutions. It is important, however, that these solutions be genuinely progressive and not merely stopgap measures or means of forestalling changes that will bring greater transparency and oversight to the credit derivatives markets.

CME Group is actively working to develop solutions that will enhance transparency and opportunities for participation, greatly improve efficiency, and reduce the threat of systemic failures in the credit derivatives markets. We are prepared to work with the Federal Reserve, the Treasury Department, the Commodity Futures Trading Commission and the Securities and Exchange Commission to resolve regulatory uncertainty and establish effective regulatory approaches for these markets. The credit derivatives markets have become a critical means of dispersing and allocating credit risks. Without them, our capital markets would be less efficient and effective. Credit derivatives are not a problem that needs to be fixed. But the credit derivatives market is a market that needs to adopt trading and confirmation practices and a risk management structure that is appropriate for a market of such size and importance to the global economy.

I thank the Subcommittee for the opportunity to share CME Group's views, and I look forward to your questions.

TESTIMONY OF THE CLEARING CORPORATION

REGARDING

REDUCING THE RISKS AND IMPROVING OVERSIGHT IN THE OTC CREDIT DERIVATIVES MARKET

SUBCOMMITTEE ON SECURITIES, INSURANCE, AND INVESTMENT

COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS

UNITED STATES SENATE

JULY 9, 2008

The Clearing Corporation (TCC) appreciates this opportunity to offer the Committee its views regarding the over-the-counter (OTC) credit derivatives market and to discuss its plans to clear certain OTC credit default swaps (CDS). We commend the Committee for its interest in industry efforts to improve the efficiency of the OTC credit derivatives market and to enhance opportunities for risk reduction. These are issues of significant interest to TCC, its clearing participants and the entire financial community.

TCC (originally known as Board of Trade Clearing Corporation) began providing clearing services for the futures markets more than eighty years ago, in 1925. Over the past 18 months, TCC and its participants have been working together to develop a prudent and robust framework for a CDS clearinghouse. TCC and its participants have worked in close consultation with a number of financial regulators in connection with this initiative.

TCC's proposed CDS clearing initiative will provide a central counterparty that will operate rigorous risk management systems and will be subject to comprehensive federal and

state oversight. We believe TCC's proposed clearing service has the potential to provide significant risk reduction and operational efficiencies for the CDS market.

TCC welcomes this opportunity to provide the Committee with an overview of its CDS clearing initiative.

BACKGROUND

As the Committee is aware, although CDS are a relatively recent financial innovation, they have quickly become an extremely important and widely used tool for the mitigation of credit risk.

Very generally, a CDS enables a party (the "protection buyer") that has exposure to the credit risk of a company (the "reference entity"), in exchange for making periodic payments, to obtain protection from a third party (the "protection seller") against the risk that the reference entity will become insolvent and unable to pay its obligations. Under a typical CDS, the protection buyer makes periodic fixed payments to a protection seller. In exchange, the protection seller is obligated to purchase from the protection buyer, at par value, an agreed principal amount (the "notional amount") of specified obligations in the event that the reference entity experiences one or more specified "credit events" (such as a payment default or bankruptcy). The reference entity can be a company, a sovereign nation or any other borrower. The deliverable obligations can consist of a specific obligation of the reference entity, a category of obligation, or all repayment obligations.

Thus, a CDS transaction enables a lender, for example, to purchase protection against a borrower's payment default. At the same time, it enables the protection seller to receive income in exchange for assuming exposure to the borrower's credit. There is no requirement that either party to a CDS hold the debt of the reference entity. CDS transactions

thus enable market participants to take "long" or "short" positions on the credit quality of companies without transacting in the debt obligations of those companies.

In addition to CDS written on a single reference entity (so-called "single name" CDS), CDS can be written with respect to groups of reference entities. These "index" CDS allow market participants to more efficiently manage or assume exposure to the creditworthiness of various sectors of the economy. Index CDS now represent the largest segment in the CDS market.

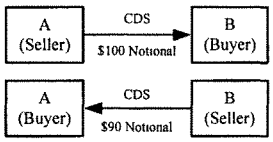
Prior to the advent of CDS, no tradable financial instrument existed that would enable a company exposed to a third party's default risk to manage that credit risk efficiently and in a liquid market. As a result, CDS have provided enormous benefits both to Wall Street and to Main Street. They enable financial institutions to hedge the credit risks inherent in the corporate financings that are necessary to grow our economy. This enhances the stability of financial institutions and reduces the cost of funds for borrowers. It also frees up additional credit capacity, enabling financial institutions to expand the credit facilities they are able to make available to their corporate clients.

It is therefore not surprising that CDS have seen significant growth in recent years.

The Bank for International Settlements (BIS) has estimated that, as of December 2007, the outstanding notional amount of CDS was just under $58 trillion. We estimate that a majority of the market is comprised of the inter-bank sector, and that the lion's share of the notional amount within that sector is comprised of index CDS.

It should be noted that the notional amount of outstanding CDS does not represent the actual amount at risk in the CDS market. It is important not to confuse the aggregate notional size of the CDS market (or any other derivatives market) with the probable risk of loss associated with the market, which is very significantly lower. There are several factors relevant to assessing the probable risk of loss within the CDS market, including most significantly the net exposure of the participants, after taking into account offsetting positions;[1] the probability that the underlying reference entities will default; and the probable recovery amounts that the participants will collect upon the occurrence of probable defaults. In the case of protection buyers, probable risk of loss is also affected by the probability of the protection seller's default and the amount of collateral held by the protection buyer to secure the protection seller's obligations.

Aggregate Notional versus Net Exposure



Aggregate Notional: $190

Net Exposure:
A is a net seller of $10 notional
B is a net buyer of $10 notional

The BIS estimated that, as of December 2006, the net credit exposure within the CDS market was just 0.49% of the outstanding notional amount of CDS. This number does not take into account the application of collateral and other risk mitigating factors, but demonstrates the relationship between the aggregate notional amount of the CDS market and the actual amount at risk.

As bilateral transactions, CDS expose each party to the risk of the other party's non-performance.[2] This counterparty risk is a primary concern for CDS market participants.

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[1] CDS market participants frequently enter into multiple CDS, both as protection buyers and protection sellers, with respect to the same reference entity or entities. As a result, many of these CDS are economically offsetting, resulting in no or significantly reduced net exposure.

[2] In the case of a protection buyer, this risk only manifests itself as a risk of actual loss in circumstances where both the reference entity experiences a credit event and the protection seller defaults.

Each CDS market participant's ability to honor its CDS obligations directly affects its counterparties' risk calculations. As a result, the credit terms applicable to CDS, governing collateral and related requirements, tend to be extremely important and are frequently subject to significant individual negotiation.

The size and significance of the CDS market has spurred public and private sector interest in the development of market mechanisms to improve efficiencies and mitigate certain of the operational and credit risks associated with CDS. In response to this market interest, TCC and its participants have been actively pursuing the development of a clearinghouse for CDS and plan to integrate these clearinghouse operations with the asset servicing capabilities of The Depository Trust & Clearing Corporation's (DTCC) Deriv/SERV, a service that has proven extremely successful in significantly reducing the post-trade operational backlogs associated with the CDS market.

The primary objectives of this clearing initiative are to reduce the outstanding CDS notional in the market by netting down offsetting transactions to the maximum extent possible and to ensure that the resulting transactions are adequately collateralized in order to minimize the consequences of the failure of any individual participant.

DISCUSSION

The Clearing Corporation's History and Experience

TCC is a Delaware corporation with a proven track record clearing and guaranteeing trades as an independent clearinghouse since 1925. A closely-held corporation, TCC is owned by 11 major financial institutions, three leading OTC derivatives inter-dealer

brokers, an international exchange and a leading OTC services provider.[3] Currently, TCC has over 50 participants and provides derivatives clearing services for multiple exchanges and marketplaces, including the Chicago Climate Futures Exchange, the United States Futures Exchange, the Eurex Global Clearing Link, OTC Benchmark Treasury Futures, and the Financial and Energy Exchange (FEX Australia). As a registered derivatives clearing organization, TCC is currently regulated by the Commodity Futures Trading Commission.

The Clearing Corporation Trust Corporation

In an effort to reduce CDS counterparty risk, TCC is in the process of creating the Clearing Corporation Trust Company (CCTC), a wholly-owned, limited purpose New York trust company. TCC is currently working with the New York Banking Department and the Federal Reserve Bank of New York in order to obtain for CCTC a New York State banking charter as a limited purpose trust company and membership in the Federal Reserve System. As a New York State limited purpose trust company and Federal Reserve System member bank, CCTC would be subject to direct supervision and examination by the Federal Reserve Bank of New York as well as by the New York State Banking Department. TCC also anticipates ongoing consultation and cooperation with other interested financial market regulators.

CCTC's business will be limited initially to the provision of clearing services for the CDS market. It will act as a central counterparty to its participants, guaranteeing all CDS transactions accepted for clearing and collecting margin and other credit support from its participants to collateralize their clearing obligations. We anticipate that CCTC will initially

[3] TCC's shareholders include: Bank of America, Citigroup, Credit Suisse, Creditex Group, Deutsche Bank, Eurex, GFI Group, Goldman Sachs, ICAP, JP Morgan, Lehman Brothers, the Markit Group, Merrill Lynch, MF Global, Morgan Stanley and UBS.

accept for clearance only specified index CDS transactions and will ultimately expand its operations to accept other indices, index tranches, and single-name CDS transactions.

CCTC Participants

Participation in CCTC will be open to all qualified applicants. In order to qualify as a participant of CCTC, an applicant will be required to satisfy CCTC's participant criteria. These are currently expected to include the following requirements:

- minimum net capital of $5 billion;
- minimum long-term debt rating of "A" from Standard & Poor's (or its equivalent from other nationally recognized rating agencies);
- demonstrated operational competence in CDS, including positions having a minimum outstanding notional contract value of $500 billion;
- demonstrated risk management capabilities; and
- participation in CDS industry organizations (such as the International Swaps and Derivatives Association and DTCC's Deriv/SERV).

These requirements are consistent with international standards for central counterparties as articulated by the Bank for International Settlements in its 2004 report "Recommendations for Central Counterparties", which requires "participants to have sufficient financial resources and robust operational capacity to meet obligations arising from participation" in a clearing organization.[4]

TCC expects that all of TCC's owner banks and dealers (each of whom currently meets these requirements) will participate as clearing participants of CCTC. As noted above, we believe the inter-dealer market represents the most significant portion of the outstanding notional

[4] Recommendations for Central Counterparties, Bank for International Settlements, Committee on Payment and Settlement Systems and Technical Committee of the International Organization of Securities Commissions (IOSCO), November 2004.

amount of the CDS market and that TCC's shareholder banks and dealers account for the majority of this volume. Accordingly, CCTC should be in a position from its inception to clear a significant portion of the CDS market and to reduce significantly the associated counterparty risk.

As participation in CCTC will be open to all qualified applicants, TCC anticipates that its participant base will quickly expand beyond TCC's shareholders to other qualified market participants, further reducing counterparty risk in the CDS market.

Clearing CDS Transactions

Post Trade Acceptance of Matched Transactions

In order to clear transactions, CCTC must first receive accurate and reliable information regarding the transactions that are submitted for clearing. Additionally, as a clearinghouse, CCTC's primary role will be to reduce the credit risk associated with cleared CDS transactions. Accordingly, CCTC's trade submission process is designed to ensure that it maintains a matched book of offsetting CDS contracts, a prerequisite for any central counterparty.

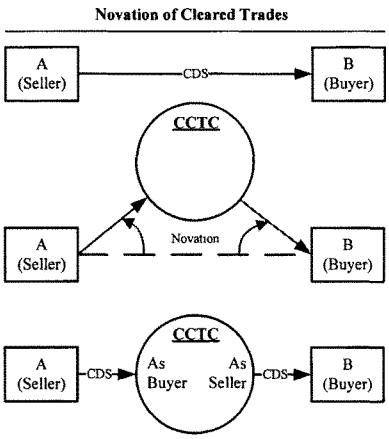
Currently, CDS are bilaterally negotiated and executed. Major market participants frequently use DTCC's Deriv/SERV matching and confirmation service when documenting their CDS transactions. This service creates accurate, electronic records of transaction terms and counterparties. As part of this service, market participants separately submit the terms of an executed CDS transaction to the service in electronic form. Paired submissions are compared to verify that their terms match in all required respects. If a match is confirmed, the parties receive an electronic confirmation of the submitted transaction. Confirmed transactions are forwarded to the Deriv/SERV Transaction Information Warehouse,

which serves as the primary registry for confirmed transactions and has recently begun to manage payment flows, settlements, and adjustments to contract terms through the life of the transaction.[5] This provides additional operational efficiencies to market participants who use the service.

CCTC will leverage the Deriv/SERV infrastructure to operate its CDS clearing service. Deriv/SERV's matching service will forward to CCTC qualifying matched transactions under which both parties have elected clearing.

[5] Use of the DTCC Deriv/SERV confirmation matching facility by major CDS market participants has contributed significantly to the substantial decrease in post trade unprocessed CDS confirmations at major firms.

Novation



In order to achieve the benefits of multilateral netting, CCTC will act as the central counterparty to all submitted transactions.

Under CCTC's clearing rules, each bilateral CDS contract between two clearing participants that is submitted for clearing will be "novated". As part of this process, the submitted contract is replaced by two superseding CDS contracts, one between CCTC and each of the parties to the submitted transaction. Under these new contracts, CCTC will act as "protection buyer" to the original "protection seller" and as "protection seller" to the original "protection buyer".

In order to further mitigate risk to CCTC and its clearing participants, all cleared CDS transactions will be governed by a uniform credit support framework and related clearing rules.

Reducing Counterparty Credit Risk

Because CCTC will be a counterparty to each of its participants, CCTC is exposed to the risk of its participants' default. To address this risk, CCTC will both require its participants to provide credit support for their obligations under cleared CDS transactions and establish rules that "mutualize" (as described below) the risk of a participant's default across all CCTC participants. CCTC's risk management infrastructure will be structured specifically for the CDS market. The credit support collected by CCTC to secure its CDS participants'

obligations will not be subject to the claims of futures market participants transacting in other futures and derivatives contracts cleared by TCC.

Credit Support Requirements

CCTC will maintain strict margin collateral requirements subject to regulation and oversight by the Federal Reserve System Board of Governors and the New York State Banking Department. These collateral requirements will also be consistent with industry practice and international standards established for central counterparties.[6] The amount of collateral required of each clearing participant will be continuously adjusted to reflect the size of, and risk associated with, the participant's cleared transactions. Margin will consist of two components: initial margin based upon a risk-based calculation of potential loss in the event of a significant adverse market movement; and variation or replacement margin, based upon an end-of-day mark-to-market of outstanding positions. Acceptable collateral will initially include only cash and G7 government debt. Participants will be required to cover any end-of-day margin deficit by the following morning and CCTC will have the discretion to require and collect additional margin as it deems necessary.

CCTC will also maintain a guaranty fund to cover losses arising from a participant's default on cleared CDS transactions that exceed the amount of margin collateral held by CCTC. Each clearing participant will be required to contribute to the guaranty fund, based on anticipated CDS position exposures, when it becomes a participant. The adequacy of the guaranty fund will be monitored daily and additional contributions will be determined on at least a quarterly basis, based on the size of participant exposures within the clearinghouse. As a

[6] See note 5 above.

result, the guaranty fund will grow in proportion to the risk associated with the aggregate volume of CDS transactions cleared by CCTC over time.

Mutualization

Mutualization is designed to protect CCTC from losses arising from a participant's default by making other participants' contributions to the guarantee fund available to cover the defaulting participant's losses.

In the event of a clearing participant's default, CCTC will first look to the margin collateral posted by the clearing participant. If the margin is insufficient to cover the defaulting participant's obligations to CCTC, CCTC will then look to the defaulting participant's contribution to the guaranty fund. Ultimately, if the defaulting participant's margin collateral and guaranty fund contribution are insufficient to cover its obligations, the risk of a clearing participant's default will be mutualized, as CCTC will be authorized to use, to the extent needed, other clearing participants' guaranty fund contributions to satisfy any remaining obligations of the defaulting clearing participant.

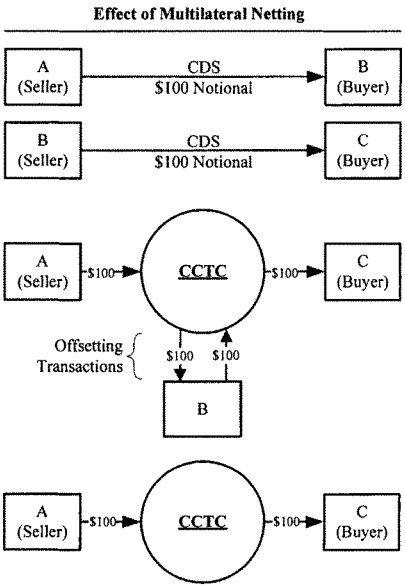
Transaction Administration

Once transactions submitted for clearing are novated, the resulting positions will be communicated to Deriv/SERV's CDS warehouse, which will maintain a duplicate registry of all open CDS positions that have been accepted for clearance by CCTC. CCTC will use Deriv/SERV's Coupon Payment Facility to administer the calculation and transfer of periodic payments owed by protection buyers to protection sellers under outstanding CCTC-cleared CDS contracts.

Credit Risk and Operational Benefits Arising from CCTC's Proposed Operations

By requiring the collateralization of outstanding transactions and mutualizing the risk of loss, CCTC will simultaneously reduce the risk of inter-dealer counterparty credit losses and reduce the risk that a major participant's default in the CDS market will lead to other participants' defaults. TCC and its shareholders believe that these mechanisms will reinforce other private and public sector initiatives to promote financial stability.

Operational Benefits



In addition to credit risk mitigation, CCTC's clearing service will also offer its participants significant operational efficiencies. One direct result of transaction novation to a central counterparty is the facilitation of multilateral netting. Because CCTC is a central counterparty to all cleared CDS transactions, offsetting transactions entered into by a single clearing participant will be netted down to a single exposure, even where offsetting transactions are initially executed with different clearing participants. Multilateral netting will significantly reduce the outstanding notional amount of each participant's CDS transactions as well as the number of transactions it must administer and manage.

Additionally, because CCTC is the central counterparty to each participant, each clearing participant will only face a single counterparty on its cleared CDS transactions; CCTC. This will greatly simplify clearing participants' cashflow management since payments due on different CDS contracts can be netted to a single daily payment obligation or entitlement. With fewer transactions and counterparties to manage, clearing participants will be better able to track and manage their positions and to further reduce any residual operational backlogs.

CCTC anticipates that these operational and credit risk reduction benefits will provide a strong incentive for its participants to confirm their CDS transactions using the Deriv/SERV service so as to ensure their eligibility for clearing.[7]

A Phased Approach

When CCTC's CDS clearing service launches, it will first address the reduction of existing open index CDS transactions. This is expected to significantly reduce the outstanding notional amount of inter-bank index CDS transactions, possibly by as much as an order of magnitude or more. On a regular basis, CCTC will process and clear outstanding inventories of qualifying CDS transactions. Once existing CDS inventories have been addressed, CCTC will begin its "live" clearing service and clearing participants will be able to indicate at execution of a transaction that the transaction is to be submitted to CCTC for clearing.

Based on current scheduling and consultation with regulators, TCC intends to launch CCTC's clearing services by the end of this year. The first products CCTC expects to clear include untranched CDX North American Investment Grade, High Yield and Crossover

[7] As noted above, CCTC's proposed structure and operations remain in development and will be subject to comprehensive federal and New York state supervision as well as industry consultation. As a result, while we anticipate that the foregoing description will remain accurate, logistical, operational and regulatory considerations may affect CCTC's ultimate clearing structure.

indices. Over the following year, CCTC anticipates that it will expand the range of CDS contracts eligible for clearing, starting with additional CDX indices (including tranches), iTraxx indices, and, subsequently, single name CDS.

OTC Clearing Generally

A number of clearinghouses currently provide clearing services for bilaterally negotiated OTC contracts. By and large, each of the services is substantially similar in overall structure to the clearing service expected to be provided by CCTC. Each requires the submission of trades with matched economic terms so the clearinghouse maintains a matched book. Each provides for a central counterparty, a central counterparty guaranty, margining and other credit support requirements applicable to all participants. Although variations exist in these clearing models, TCC does not, however, believe that these variations are consequential as a practical matter.

CONCLUSION

We believe TCC's clearing initiative has the potential to significantly reduce counterparty credit risk, deliver important operational efficiencies and make a constructive contribution, in combination with other public and private sectors initiatives, to financial market stability. TCC welcomes an ongoing dialogue with this Committee, Congress and the supervisory community in connection with this initiative.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR REED FROM PATRICK M. PARKINSON

Q.1. The explosion in credit derivatives basically occurred during a time when corporate defaults were near record historical lows. But a few months ago, Moody's Investors Service projected that the junk-bond-default rate is likely to climb to a range of 7% to 7.5% in the next 12 months—substantially up from the current rate of less than 2%. If these projections are correct, what might the implications be for credit derivatives markets and those markets' corollary impact on overall financial markets?

A.1. According to the statistics published by the Bank for International Settlements (BIS) for December 2007, credit default swaps on below-investment-grade reference entities were 16 percent of total single-name credit default swaps. If the prediction for an increase in the junk-bond default rate is borne out, the number of settlements on credit default swaps will increase. Settling multiple defaults may pose a challenge to the market infrastructure. Part of the supervisory agenda for improving the infrastructure of OTC derivatives markets includes improving the process for settling credit default swaps following a default, including incorporating a cash settlement mechanism into standard documentation for credit default swaps. The industry has committed to achieve this by year-end 2008.

A second implication of an increase in the junk-bond default rate is the potential for counterparty credit risk exposures on credit default swaps to increase. Counterparty credit risk is of particular importance in credit derivatives markets. Dealers manage their counterparty credit risks in a variety of ways, but it remains a challenging task which is made more challenging by the weaknesses in the market infrastructure that, as I discussed in my testimony, supervisors and market participants are working to address.

Q.2. According to news accounts, during the leveraged-buyout boom in 2006 and early 2007, a number of credit default swaps grew substantially in value before details of certain buyout deals were publicly announced, raising concerns over issues of possible insider-trading. Please comment on this issue and what regulatory actions might be needed to reduce such insider trading?

A.2. Section 10(b) of the Securities Exchange Act of 1934 and Rule 10b–5 issued thereunder by the Securities and Exchange Commission (SEC) have been interpreted to prohibit the purchase or sale of a security on the basis of material non-public information about the security or its issuer in breach of a duty of trust or confidence. Congress enacted the Commodity Futures Modernization Act of 2000 (CFMA) to, among other things, provide legal certainty for certain swap agreements under U.S. laws. Title III of the CFMA makes clear that certain SEC rules and regulations (and related judicial precedents) that prohibit fraud, manipulation or insider trading apply to "securities-based swap agreements" to the same extent as they apply to securities. As such, participants effecting transactions in credit default swaps that qualify as security-based swap agreements would be subject to the insider trading restrictions under Rule 10b–5 promulgated and enforced by the SEC.

Q.3. We understand that your agencies are conducting closeout drills to see how the market would handle the unwinding of trades after the default of a major counterparty, given what might have happened with Bear Stearns if it were to have gone bankrupt.

- What have you seen from these exercises?
- Do you feel that firms would be able to efficiently handle unwinding such trades?

A.3. The Federal Reserve recently met with a small number of large, complex financial institutions to understand the processes they have in place with respect to closing out a major counterparty. We will be conducting additional meetings at other institutions in September along with other supervisory agencies to understand the full range of practices. All of the firms interviewed to date recognize that they need to have procedures in place to aggregate data and potentially close out a major counterparty. However, the level of preparedness differs from firm to firm. Some firms are still evaluating their approach while others have detailed policies and procedures in place and have stress tested potential close-outs of selected counterparties. We are encouraging firms to take the following steps: (1) develop the operational capacity to aggregate all counterparty exposures and payment obligations for a complex counterparty within a matter of hours; (2) formulate written policies and procedures for managing the relationship with a counterparty under stress; and (3) conduct periodic scenario analyses around the potential closeout of a major counterparty. The private-sector Counterparty Risk Management Policy Group III recently made similar recommendations to major market participants.

Q.4. In your testimony and answers to questions, you indicated that you think you have the access to information that you need for overseeing the OTC credit derivatives market. One of the major concerns with Bear Stearns was that there was no clear sense of the counterparties that held trades, and what the impact would be on the market. Do you have access to counterparty positions for the institutions that you supervise? In other words, do you know how exposed your institutions are to particular counterparties? Is this information available in reports provided directly to you, or is this discovered as needed when reviewing risk management systems at these firms?

A.4. Yes, we do have access to counterparty positions for the institutions we supervise. The information is available in reports provided directly and routinely to us. As needed, we obtain ad hoc updates on banks' exposures, as well as information on the causes of changes in counterparty exposures. While this information allows us to assess the direct counterparty exposures to the banking organization in question, the assessment of indirect exposures that might-result from any market impact of the close-out of a major market participant's positions is much more difficult to assess.

Q.5. The issue of standardization is often raised as an impediment to a clearing system or an exchange paired with clearing. How much standardization is required for clearing as compared to an exchange?

A.5. A central counterparty (CCP) clearing service must make clear to its participants what types of contracts are eligible for clearing. At a minimum, to the extent that a CCP wants to make use of existing electronic trade confirmation services, the contracts must be sufficiently standardized to be eligible for confirmation using those services. But a CCP may choose to place further limits on eligibility, based in part on its assessment of the reliability of available methods for assigning valuations to contracts and quantifying potential changes in those market values. For example, LCH.Clearnet's SwapClear service, which clears nearly 50 percent of global inter-dealer interest rate swaps, clears only "plain vanilla" interest rate swaps in major currencies and with maturities less than or equal to certain maximums (*e.g.*, 30 years for U.S. dollar-denominated swaps). It has chosen not to clear interest rate options. An exchange is likely to require considerably more standardization of terms for the contracts it lists. For example, exchanges typically standardize interest reset dates, maturities, and notional principal amounts.

Q.6. Is there any one standard for reporting information about this market? It appears that the OCC requires data on bank call reports, the Bank for International Settlements gathers data, and the International Swaps and Derivatives Association (ISDA) also gathers information. Is there any movement towards an industry standard for measuring total volume, concentration risks, etc., so that regulators can better oversee market-wide risks?

A.6. I believe that the best source of data on the OTC derivatives markets are the statistics published semiannually by the Bank for International Settlements (BIS). (Unlike the OCC data, the BIS data cover all major dealers, not just U.S. commercial banks. Unlike the OCC or the ISDA data, the BIS data are based on reporting procedures that avoid double-counting of transactions between dealers.) The BIS data include notional amounts and gross market values by contract type (foreign exchange, interest rate, equity, commodity, and credit), by instrument type (forwards, swaps, and options), and, for foreign exchange and interest rate contracts, by currency. Measures of market concentration for various instrument types also are reported, which show that the OTC derivatives markets generally are unconcentrated. (See *http://www.bis.orgipubilotchyo8O5.htrn*)

Q.7. What form of oversight should be established over exchanges in terms of credit derivatives? What are the strengths of that regulator overseeing this exchange?

A.7. In principle, exchanges for credit derivatives can be overseen effectively by either the SEC or the CFTC. Both agencies have extensive experience overseeing exchange-traded derivatives. The particular regulations that would need to apply would depend in part on the nature of market participants. To date, participants in the CDS markets have predominantly been sophisticated parties, including banks, securities firms, hedge funds, and traditional asset managers. If this continues to be the case, the need for regulation to protect investors would be limited. Any regulatory regime would need to address the potential for market manipulation and for trading on the basis of non-public information.

Q.8. What are the limitations in the proposed clearing entity because membership will not be open to all market participants? Does this limit the risk-sharing strengths of the clearing entity if hedge funds and other market participants are unlikely to join as members?

A.8. A critical element of any CCP's procedures for managing its exposures to defaults by its participants is the establishment of participation requirements that require participants to have sufficient financial resources and robust operational capacity to meet obligations arising from participation in the CCP. Consequently, a CCP cannot be expected to be open to all market participants. Nonetheless, participation requirements should not limit access on grounds other than risk, so as to ensure that the benefits of CCP clearing are extended as widely as possible and to avoid creating competitive imbalances among market participants. A CCP's exclusion of hedge funds from participation would be justifiable only if the CCP can demonstrate that participation of hedge funds would expose the CCP to unacceptable risks that cannot otherwise be mitigated through, for example, higher initial margin requirement.

Q.9. Is pricing transparency in this market a public policy goal? If not, why not?

A.9. Pricing transparency in the credit derivatives market is a goal. But the degree of pricing transparency that can or should be expected for nonstandardized contracts, which account for much of trading in OTC markets, is not the same as the degree of pricing transparency expected for standardized contracts, such as would be traded on exchanges. Currently various vendors collect and make available to subscribers quotes from dealers and other market participants on prices of a variety CDS contracts. But these are often indicative prices rather than firm bids or offers that market participants could execute against. Greater price transparency should be promoted by encouraging greater standardization of contracts, which would facilitate the trading of CDS on exchanges, where greater price transparency is feasible. Indeed, proponents of exchange trading correctly identify greater price transparency as an important potential benefit of such trading.

Q.10. What is your assessment for why exchange-traded credit derivatives have not yet picked up?

A.10. It is not entirely clear. Exchange-traded derivatives necessarily are more standardized than contracts traded in the OTC markets, and, in order to navigate the requirements of both the commodities laws and the securities laws, some exchanges have been forced to structure contracts in ways that may limit their appeal to market participants. No doubt some market participants see considerable benefit in tailoring contract terms to specific needs, which leads them to prefer OTC products. But many of the contracts traded in the OTC markets are fairly standardized. Some have charged that those exchange members that are OTC derivatives dealers have not encouraged their customers to use exchange-traded products because executing trades in the OTC markets is more profitable to the firms. But some exchange members are not OTC derivatives dealers, and, if there were significant demand for

exchange-traded contracts, one would think that those exchange members would be able to meet the demand.

Q.11. What have you learned from the CDO and MBS problems that we can apply to the credit derivatives markets? Have you spotted the lessons learned and begun to apply them?

A.11. The problems in the MBS markets and in the markets for CDOs collateralized by MBS had their roots in a breakdown of underwriting standards for subprime mortgages and certain other mortgages in recent years. The breakdown in underwriting standards was made possible by a breakdown in market discipline on those involved in the securitization process, which, in turn, was made possible by flaws in credit rating agencies' assessments of those products and by excessive reliance on credit ratings by institutional investors and the asset managers that they employ. To some extent, the weakening of underwriting standards in the corporate credit markets over the same period reflected the securitization of such credit through CDOs (including synthetic CDOs created through use of credit derivatives). But the deterioration was not nearly as severe as in the subprime mortgage markets. Furthermore, participants in the CDS markets do not appear to rely heavily on credit ratings. Credit spreads typically widen well before ratings downgrades occur. Thus, it is not straightforward to draw lessons for the CDS markets from the problems in the MBS and CDO of MBS markets.

Q.12. If Bear had in fact declared bankruptcy, do you have a firm handle on how much would have had to be paid out and to whom? To what extent was the Fed intervention with Bear Stearns motivated by a lack of visibility into the credit derivatives market?

A.12. We did not have information on market participants' net positions in CDS for which Bear Stearns was the reference credit. However, concerns about potential losses from writing credit protection on Bear Stearns were not an important consideration in the decision to intervene. We were concerned about potential losses to firms that had acted as counterparty to Bear Stearns in credit derivatives and other derivatives. But we had access to Bear Stearns's estimates of its counterparties' exposures to Bear's default. In any event, our greatest concern was about the potential for Bear's bankruptcy to result in a loss of secured financing by other large firms that are critically dependent on such financing.

Q.13. If the Federal Reserve Bank of New York were to oversee the new clearinghouse for OTC credit derivatives, what would this oversight entail? Please explain how it would ensure that the concentration of risks in this entity were offset by robust risk management processes and systems. Also, how would the New York Federal Reserve track information to review systemic risk?

A.13. As specified in its Policy Statement on Payments System Risk, the Federal Reserve expects central counterparties, at a minimum, to meet the Recommendations for Central Counterparties that were developed by the Committee on Payment and Settlement Systems of the G–10 Central Banks and the Technical Committee of the International Organization of Securities Commissions (CPSS–IOSCO Recommendations). The CPSS–IOSCO Rec-

ommendations recognize that a CCP concentrates risk and responsibility for risk management and lay out comprehensive risk management standards that are intended to ensure that CCPs address the concentration of risk with suitably robust risk management processes and systems.

The Clearing Corporation plans to form a state-chartered bank to become a CDS central counterparty and to apply for that bank to be a member of the Federal Reserve Bank of New York. The Federal Reserve Board will not approve the membership application unless the Clearing Corporation is designed to meet the CPSS–IOSCO Recommendations. If the application is approved, the bank's CDS clearing activity would be subject to Federal Reserve supervisory authority. The Federal Reserve would use the same supervisory tools we use for supervising other depository institutions, which includes both ongoing monitoring and targeted, in depth, reviews. The reviews would focus on areas identified as important in the CPSS–IOSCO Recommendations. Examples of such areas to be reviewed are: governance of the organization, risk management controls, liquidity arrangements, and business continuity.

With respect to systemic risk, we would very carefully assess whether the Clearing Corporation meets the CPSS–IOSCO recommendation relating to the CCP's financial resources. That recommendation requires a CCP to maintain sufficient financial resources to withstand, at a minimum, a default by a participant to which it has the largest exposure in extreme but plausible market conditions.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR REED FROM KATHRYN E. DICK

Q.1. The explosion in credit derivatives basically occurred during a time when corporate defaults were near record historical lows. But a few months ago, Moody's Investors Service projected that the junk-bond-default rate is likely to climb to a range of 7% to 7.5% in the next 12 months—substantially up from the current rate of less than 2%. If these projections are correct, what might the implications be for credit derivatives markets and those markets' corollary impact on overall financial markets?

A.1. While default rates are increasing, not only for junk bonds but also investment grade bonds, we do not believe this is the primary area of supervisory concern in the credit derivatives market. This is because defaults will only trigger a large cash settlement if protection sellers have not posted collateral to secure their exposures. In practice, many protection sellers post both initial margin and variation margin. Initial margin helps to protect the protection buyer from changes in the market value of the transaction that may occur subsequent to the protection seller's failure to meet a margin call. Variation margin is the daily collateral provided to the protection buyer to secure the current market value of the transaction. In normal market circumstances, as a reference entity's credit quality declines, and its credit spreads increase, the protection buyer will require the protection seller to post daily variation margin to secure its obligation.

Based on recent events in the credit default swap market, we can see that the real credit risk in the credit derivatives market arises from counterparty risk exposures. In circumstances where highly rated entities sell credit protection and do not provide collateral to the protection buyers, a downgrade of the protection seller may result in the requirement to post large sums of collateral that cannot be raised in the short period of time required to meet margin calls. This can begin a negative spiral as protection sellers try to sell assets to raise cash and put downward pressure on already strained markets.

Q.2. According to news accounts, during the leveraged-buyout boom in 2006 and early 2007, a number of credit default swaps grew substantially in value before details of certain buyout deals were publicly announced, raising concerns over issues of possible insider-trading. Please comment on this issue and what regulatory actions might be needed to reduce such insider trading.

A.2. Bank trading desks are typically market makers in derivatives products and run a market-neutral position. This means they generally will have limited incentives to take positions based upon anticipated credit spread changes, particularly for individual reference entities. Banks' credit managers will also use credit derivatives as part of their credit portfolio management functions to address risks associated with loan portfolios. It is our experience that the trading and credit groups within national banks that actively engage in credit derivatives transactions are kept on the "public" side of the functional information wall to minimize risk of accessibility to material non-public information.

Our reviews of controls around the disclosure of material non-public information have found no evidence that national banks have taken advantage of trading on insider information. Financial institutions have both information controls and policies related to the use and distribution of material non-public information. Bank compliance departments and internal audit staff ensure compliance with insider trading rules and sharing of information. Controls include limited sharing of material non-public information between the private side and public side of the institution. In addition, compliance departments provide training, monitor inter-departmental communication, maintain restricted lists, and maintain records related to the institution's compliance with policies and procedures.

The OCC will continue to monitor the controls and will consider this area for expansion of scope in future examinations. If we determine there are weaknesses in controls around the distribution of material non-public information, we will ensure that deficiencies are corrected and issue guidance on the topic, as appropriate.

Q.3. We understand that your agencies are conducting closeout drills to see how the market would handle the unwinding of trades after the default of a major counterparty, given what might have happened with Bear Stearns if it were to have gone bankrupt.

- What have you seen from these exercises?
- Do you feel that firms would be able to efficiently handle unwinding such trades?

A.3. This is an important initiative that supervisors, under the auspices of the Senior Supervisors' Group, are working on with the industry. The close-out of a major counterparty goes beyond just consideration of the credit derivatives markets and must include assessments of interest rate, foreign exchange, equity, and commodity derivatives positions, as well as other credit exposures. We have seen the impact of a failure of a major counterparty in today's fragile financial markets, and we believe that appropriate processes to close-out a large counterparty are critical to reducing systemic risks.

The work underway by the Senior Supervisors' Group is coming to a close and the challenges we have identified across the population of firms studied include: aggregation of exposures, accuracy of pricing, and discrepancies in legal documentation. We will continue working with our domestic and international supervisory colleagues to address these issues and will ensure that OCC supervised entities take remedial action, where necessary, to correct any system or control deficiencies that hinder their ability to efficiently handle the close-out of a major counterparty.

This question highlights the need for the industry to continue using other means to reduce the volume of outstanding credit derivatives, including compression exercises where institutions coordinate with each other to cancel open contracts that offset each other. There are also several industry efforts to develop electronic trading and settlement platforms for derivatives in the U.S. and Europe. These platforms would be available to all industry participants and would provide the ability for participants to confirm transactions immediately. The electronic platforms would also allow for immediate payment and settlement between counterparties, thereby reducing operational and credit risks.

Q.4. In your testimony and answers to questions you indicated that you think you have the access to information that you need for overseeing the OTC credit derivatives market. One of the major concerns with Bear Stearns was that there was no clear sense of the counterparties that held trades, and what the impact would be on the market. Do you have access to counterparty positions for the institutions that you supervise? In other words, do you know how exposed your institutions are to particular counterparties? Is this information available in reports provided directly to you, or is this discovered as needed when reviewing risk management systems at these firms?

A.4. As noted in my testimony, the credit derivatives business is concentrated in a small number of large financial institutions. Through our Large Bank Supervision resident team process, our examiners in the largest national banks have access to counterparty exposure positions at the national banks they supervise. This information is readily available to the on-site examination teams and is typically prepared monthly but is also available on an ad-hoc basis if needed. We also routinely review aggregate exposure numbers for large margined and un-margined counterparties as part of our quarterly derivatives analysis.

That said, we cannot overemphasize the challenges our large national banks face when seeking to aggregate and analyze

counterparty exposures in a highly volatile market environment. As such, we remain focused on working with our national banks and fellow supervisors in identifying actions that can be taken to improve risk identification and management. One example is the risk identification benefit derived from the novation protocol process implemented by the industry in 2005 as a result of the OTC derivatives infrastructure project. Prior to that protocol, counterparties had assigned trades to other dealers without first obtaining the consent of the remaining counterparty. In that environment, many dealers did not necessarily know who their counterparties were on a large number of outstanding trades.

Q.5. The issue of standardization is often raised as an impediment to a clearing system or an exchange paired with clearing. How much standardization is required for clearing as compared to an exchange?

A.5. In our opinion, some degree of standardization of contracts is required for both a clearinghouse and an exchange, but the level of standardization cannot be easily quantified. Since a clearinghouse can exist without an exchange, but an exchange must offer a clearinghouse, the primary benefit of an exchange over a clearinghouse is the additional price transparency. The trade-off is that exchange participants can lose the ability to customize contracts, which is often important in the management of complex financial risks. The current credit market crisis underscores the importance of reducing operational and credit risks and restoring confidence between credit market participants. We support the development of a robust solution that best meets these objectives in the quickest period of time.

Q.6. Is there any one standard for reporting information about this market? It appears that the OCC requires data on bank call reports, the Bank for International Settlements gathers data, and the International Swaps and Derivatives Association (ISDA) also gathers information. Is there any movement towards an industry standard for measuring total volume, concentration risks, etc., so that regulators can better oversee market-wide risks?

A.6. No, there is no one standard for the reporting of information in the credit derivatives market. The call report data collected by the OCC is for insured U.S. commercial banks and trust companies only. Therefore, our data does not include derivatives totals for investment banks and foreign banks, some of whom are major dealers in the OTC derivatives market. The OCC Quarterly Derivatives Report attempts to provide transparency around the volume of derivatives activities for U.S. insured commercial banks. The Bank for International Settlements (BIS) makes certain adjustments to their data that the OCC does not. While the absolute numbers between the OCC and BIS reports are different, these reports show similar trends.

As we note in our quarterly derivatives analysis, there are a number of metrics that can be useful for assessing risk in derivatives markets. No single metric is perfect as a risk indicator, and a complement of data is typically needed to generate a meaningful assessment of market-wide risks. Because we have on-site examination teams in our largest national banks, we have access to a

significant amount of proprietary data to assist in our assessment of risks. Additionally, we use the sources noted above, as well as other information sources such as published financial reports. While we are not aware of any movement towards an industry standard for measuring derivatives risks, we do see continual improvement with regard to transparency and will continue to support such developments.

Q.7. What form of oversight should be established over exchanges in terms of credit derivatives? What are the strengths of that regulator overseeing this exchange?

A.7. As indicated in my testimony, the OCC's principal objectives are to see a reduction in operational and counterparty risks in the OTC derivatives market. In addition to industry efforts to reduce manual activity and compress OTC trade volumes, exchanges as well as clearinghouses have both been discussed as potential solutions. The OCC does not have a position on the specific format or vehicle that may be implemented to mitigate these risks. The role of financial institution regulators in the oversight of an exchange would depend on the structure and features that are ultimately chosen by market participants. The OCC reviews the activities of national banks that elect to participate in clearinghouse or exchange arrangements on a case-by-case basis.

Q.8. What are the limitations in the proposed clearing entity because membership will not be open to all market participants? Does this limit the risk-sharing strengths of the clearing entity if hedge funds and other market participants are unlikely to join as members?

A.8. There are still a number of solutions under consideration and we continue to believe that the best solution will the one(s) that is most comprehensive in terms of participation, while maintaining a strong financial base and the appropriate risk management framework. It is our understanding that the sponsors of the current clearinghouse proposal are reconsidering their earlier decision to limit clearinghouse membership only to dealers. In addition, there are other solutions being proposed that would allow for open membership and the trading of credit derivatives on an exchange. This could allow other financial entities, such as hedge funds, to conduct derivative trading activity in a more efficient manner. We recognize the need to identify and implement a structure that will effectively reduce operational and counterparty risks in a timely manner and are engaged in frequent discussions with the management teams at our national banks that will be involved in such ventures.

Q.9. Is pricing transparency in this market a public policy goal? If not, why not?

A.9. Pricing transparency in any market is desirable, but its benefits must also be weighed against the needs of market participants, including their preference for customized derivatives solutions to address specific risk management needs. We recognize that pricing transparency certainly is one benefit of both a clearinghouse as well as an exchange.

Q.10. What is your assessment for why exchange-traded credit derivatives have not yet picked up?

A.10. To date, there has been limited success with the use of exchange-traded credit derivatives. We believe that the primary reason for this is that users of credit derivatives desire the ability to customize contracts to meet specific risk mitigation needs. However, as the market develops, more standardized terms evolve and in some cases, such as credit derivatives index trades, there is already the ability for a high degree of standardization.

Q.11. What have you learned from the CDO and MBS problems that we can apply to the credit derivatives markets? Have you spotted the lessons learned and begun to apply them?

A.11. The major losses firms have taken during this turmoil have come from bonds and structured products with subprime mortgages as the underlying asset class. The problems experienced in the CDO and MBS markets stem from liberal underwriting practices which, in an environment of falling home prices, have led to significant levels of anticipated losses on bonds that contained residential real estate credit exposures. Other problems included investor overreliance upon credit ratings, excessively complex bond structures, and poor risk governance, such as the inability for some major dealers to aggregate sub-prime exposures across the firm.

While the major issues in the credit derivatives market relate to operational infrastructure (processing, confirmations, settlement upon credit events, etc.), one lesson from the credit market turmoil is that investors must fully understand their investment risks. Many structured credit products (e.g., CDOs of RMBS and CDO^2) are extremely complex, with risk profiles beyond the capacity of even very sophisticated investors to properly assess and value. Because of these concerns, there is no longer any market demand for these products.

These lessons underscore our continued emphasis on risk governance, in particular having independent risk management and control functions in banks to assess the risks taken and to obtain timely position valuations.

There are several initiatives underway, led by the President's Working Group, the Joint Forum, the Financial Stability Forum, and the Senior Supervisors' Group, to address the lessons learned from this current market turmoil and ensure proper risk management is in place across financial institutions. Although there are some recommendations for supervisors in these documents, most are directed to banks. Therefore, it is banks that will have to implement them. We will require banks to benchmark themselves against those recommendations and then evaluate their progress in addressing any "gaps" they have identified. The OCC also plans to supplement its guidance on derivatives to address the issues identified in these documents.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR CRAPO FROM KATHRYN E. DICK

Q.1. Should market participants have the broadest possible range of standardized and customized options for managing their financial risk and is there a danger that a one-sizefits-all attitude will harm liquidity and innovation?

A.1. While we believe that market participants should have the broadest possible range of standardized and customized options available for managing their financial risk, this flexibility must be balanced against the need for risk and price transparency. This is extremely beneficial in ensuring financial risk is managed appropriately. One of the greatest benefits of the credit derivatives market has been that it allows market participants to develop customized contracts for managing credit risk. We do not believe, however, that the development of a central clearinghouse will harm liquidity or innovation in the credit derivatives market and we do believe this type of infrastructure change is necessary to reduce unnecessary risks in the credit derivatives market.

Q.2. Is there a danger that centralizing credit risk in one institution could actually increase systemic risk?

A.2. This is why it is critical that appropriate risk management and controls are put in place for a central clearinghouse. The central clearing party must have strong risk controls, financial resiliency, and resources to withstand the failure of one or more large clearing members. A clearinghouse will not eliminate the potential of a large counterparty failure; if structured properly, it should reduce the systemic impact if such a failure occurs and thereby reduce the potential volatility to the credit derivatives market specifically and financial markets more broadly. In addition, a clearinghouse will improve operational efficiency by reducing the volume of outstanding confirmations via the ability to conduct multilateral netting of exposures, reduction in payment flows between counterparties, and improving the timeliness of settlements.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR REED FROM DARRELL DUFFIE

Q.1. The explosion in credit derivatives basically occurred during a time when corporate defaults were near record historical lows. But a few months ago, Moody's Investors Service projected that the junk-bond-default rate is likely to climb to a range of 7% to 7.5% in the next 12 months—substantially up from the current rate of less than 2%. If these projections are correct, what might the implications be for credit derivatives markets and those markets' corollary impact on overall financial markets?

A.1. The market infrastructure, including documentation and settlement mechanisms, should be able to accommodate this increase in default activity, and if current improvements continue as expected, substantially higher levels of default activity within another year or so. Default by a systemically important financial institution, however, would be very disruptive. Separate from the issue of infrastructure, substantially more defaults would obviously not be good for the general stability of financial markets and the performance of the economy. Speculative-grade default rates exceeded 10 percent in the 1989–91 recession and the 2001–2002 recession, so the forecasted corporate-debt default rate is not an especially alarming one in an historical context.

Q.2. Can you clarify how involved pension funds are in OTC credit derivatives? How equipped are pension funds to make determina-

tions about the risks involved in credit default swaps, and are they provided with adequate disclosures about the potential risks?

A.2. According to the best available data, from the British Bankers Association, pension funds are somewhat active in the credit derivatives market, but probably account for less than a few percent of global volumes. For reputational and legal reasons, dealers have some responsibility to verify that pension funds and any less financially sophisticated counterparties are aware of the risks that they take in derivatives positions such as these. Obviously, investors such as these, who are not normally specialized financial investors, would find it prudent to become aware of the risks on their own. In many cases, they have relevant internal controls. Any large entity responsible for trading on behalf of individual investors should have controls ensuring that trading activity conducted on its behalf is done by properly educated and informed representatives. Pension funds use credit derivatives both to offer risk protection to others, and also to protect themselves from default risk, by buying protection from counterparties. Even when exposing themselves to the risk of default of the borrowers named in the credit derivatives contract, pension funds and other protection sellers are taking much the same risk as if they had purchased direct debt obligations, such as bonds, of the named borrowers. Bonds subject to default, for example corporate bonds, are indeed normal investments for pension funds. From this point of view, the main distinction between direct bond investments and credit derivative protection selling is that credit derivatives do not require up-front cash. This means that the availability of pension fund capital is less of a brake on the risk appetite of the pension fund. In addition to creating exposures to the default of the borrowers stipulated in the credit derivatives contract, there is also exposure to the performance of the credit derivatives counterparty, for example a dealer. Normally, this risk is remote, but it should be considered, and it is present whether the pension fund is buying or selling protection.

Q.3. We understand that during the leveraged-buyout boom in 2006 and early 2007, a number of credit default swaps grew substantially in value before details of certain buyout deals were publicly announced, raising concerns over issues of possible insider-trading. Would you please comment on this issue and what regulatory actions might be needed to reduce such insider trading?

A.3. Yes, these concerns have been raised, and there are other potential situations of moral hazard arising from private information. For example bank lenders may have more information about a borrower's credit quality than the rest of the market, and participate in credit derivatives trading on that borrower. Members of creditor committees of defaulting firms are sometimes charged with representing other creditors, but may potentially not have disclosed that they have offset some or all of their economic exposure through credit derivatives. Although I am not a legal expert, it is my understanding that those with inside information or related conflicts of interest are restricted in their credit derivatives trading by existing laws and regulations, for example, those enforced by the Securities and Exchange Commission, and liable under those laws and regulations in much the same manner as when buying or

selling (or short selling) the underlying debt obligations. Disclosure is important in these circumstances, and it is my understanding that legal disclosure requirements are not as clearly defined or as demanding for credit derivatives as for outright asset positions. It would be best, however, for you to obtain more expert legal opinions, for example from the Securities and Exchange Commission. It is highly beneficial to have the relevant laws and regulations in harmony with those of other jurisdictions, because the credit derivatives market is global.

Q.4. What have we learned from the CDO and MBS problems that we can apply to the credit derivatives markets? Have we spotted the lessons learned and begun to apply them?

A.4. In many cases, credit derivatives were the vehicles by which CDO and MBS losses were transferred from one investor to another. To the extent that one wants to make it more difficult to transfer CDO and MBS losses, or default losses stemming from other asset classes in the future, one could attempt to slow down or reverse the growth and efficiency of the credit derivatives market. In my view, that would be a mistake. Risk transfer through credit derivatives allows those who want to buy protection, or to obtain diversification, to do so more efficiently. Moreover, credit derivatives prices are important sources of information on the financial health of borrowers, and on the valuation of portfolios of debt. (I will say more about that in response to one of your other questions.) With regard to the abuses and other failures that occurred in the MBS and CDO markets, it is natural to think of credit derivatives as devices that enabled investors to transfer to each other the losses as they occur, rather than the cause of the losses in the first instance. (As a matter of terminology, some would consider a CDO to be a form of "credit derivative," although I am using the term "credit derivative" in this context in the narrower sense of a default swap contract, of the sort that was discussed in my testimony.)

Q.5. What kind of data and pricing information should be available to regulators to help them oversee this market, especially with more trades going to The Clearing Corporation? Will more data be available by having a central clearing entity? Would even more data be available by having an exchange?

A.5. Some credit derivative pricing data are already available for selected high-volume CDS contracts from some financial news sources, such as Bloomberg, from some brokers, and from specialized information vendors, such as Markit Partners. Unfortunately, these data are not especially comprehensive, and are often only suggestive of actual transaction prices. In my view, it is worthwhile to consider a move toward the availability of transaction-level data in the CDS market in a manner analogous to that already available in the over-the-counter bond market, through the system known as TRACE. Prices for the vast majority of OTC corporate bond trades are now available to essentially anyone through TRACE. This allows investors to more easily "comparison shop" when trading, and in principle allows regulators simpler access to price information for their own purposes, for example when attempting to detect potential insider trading. Dealers could in some

cases be adversely affected by TRACE-like transparency in their profit margins on credit derivatives trades. Some investors who are attempting to create or offset exposures would be adversely affected by having some of the information regarding the size and prices of their trades (although not their identities) revealed to the market, causing prices to move against them before having completed the change in their overall position.

A central clearing corporation for the over-the-counter market would, according to the proposed design, play much the same legal role in a credit derivatives trade as any non-clearing counterparty. I am not aware of any currently proposed mechanism by which cleared trades would result in any more public disclosure than uncleared trades. A clearing corporation would presumably be a repository of a significant amount of trade information, along the lines of an exchange clearing corporation. Whether and how this information would be accessible to regulators is unclear to me. The Deriv/SERV information warehouse (which already includes the majority of inter-dealer credit derivative trade execution data) exists independently of the existence of a clearing corporation, and would presumably have much the same information, if not more information. An exchange would indeed provide much more data on prices and volumes for a given CDS contract than does the current OTC market, at least for any derivative that achieves liquid market conditions. This would be the case even with the advent of TRACE-like transparency for the OTC market, although the superiority of exchange-level transparency over OTC transparency would in that be dramatically reduced with TRACE-like OTC transparency. As a final note, transparency is generally desirable for a financial market, but there are some good reasons to allow investors (and the dealers that represent them) to retain a significant degree of privacy. For example, privacy creates better incentives for investing in fundamental financial research (for example, regarding the financial health of borrowers), and through that, more incentives for prices to reflect correct information.

Q.6. In your testimony you note that a clearing entity provides more or less the same benefits as an exchange. Can you elaborate on what these benefits are?

A.6. In my testimony, I was restricting attention on this point to the benefits associated with the clearing function for dealers. (A clearing corporation is not a trading venue like an exchange, so one would not compare the benefits with respect to trade execution, price discovery, and so on.) For each dealer-to-dealer trade, an exchange clearinghouse and an OTC central clearing counterparty effectively become the buyer to the dealer that is selling, and the seller to the dealer that is buying. In both cases, OTC clearing and exchange clearing, dealers are therefore protected from exposure to each other's default so long as the clearing entity remains solvent. For this reason, as I indicated in my testimony, it is important to ensure that an OTC central clearing counterparty is well designed. It should be well capitalized and adhere to other high standards for clearing entities, such as those of CPSS–IOSCO. I presume that regulators will ensure this, and will monitor such a clearing corporation carefully on an ongoing basis. If this were not the case,

my answer would obviously be different. Exchange-based clearing has been extremely safe and effective over many decades, and OTC-based clearing can be so as well. Obviously, failure of a clearing entity (whether exchange-based or OTC-based), or even the onset of fear of such a failure, could be calamitous.

Q.7. Your testimony notes that exchanges provide price transparency. Do you think that price transparency is an important feature for this market to have, given the increasing counterparty risks?

A.7. Yes, price transparency is highly beneficial, not only for reasons of counterparty risk, but also for other reasons that I have mentioned in response to your earlier question.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR CRAPO FROM DARRELL DUFFIE

Q.1. Should market participants have the broadest possible range of standardized and customized options for managing their financial risk and is there a danger that a one-size-fits-all attitude will harm liquidity and innovation?

A.1. A one-size-fits-all approach would indeed harm innovation. Standardization allows simpler methods for mitigating some of the market infrastructure problems that we have experienced, through easier trade documentation, clearing, and settlement. The appropriate degree of standardization, however, involves a tradeoff with the benefits of innovation and customization to customer needs. Generally, I believe that the markets should be left to determine how much standardization is appropriate. The safety and soundness of financial markets can be regulated more effectively, in my view, by other methods than mandating standardization of financial contracts.

Q.2. Is there a danger that centralizing credit risk in one institution could actually increase systemic risk?

A.2. The centralization of risk in one institution, such as an exchange or a central clearing corporation, could increase systemic risk if that central institution is not carefully designed and well capitalized. One approach to centralizing credit risk, exchange-based clearing, has proven to be extremely safe over many decades, including through a number of serious financial crises. A central clearing counterparty for the over-the-counter derivatives market could be essentially as safe as exchange-based clearing if it is similarly well designed and backed by significant capital or guarantees. So long as the institution into which risk is centralized performs as designed, it will reduce systemic risk, because it reduces the average level of exposure of counterparties to each other. The performance of a risk-centralizing institution is absolutely critical, however, for if it experienced a failure, the systemic effects could be grave. Because systemic risk is a cost borne by the public for which no single financial institution bears responsibility, there is a natural and important role for regulation in monitoring the careful design and ongoing safety of risk-centralizing institutions.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR REED FROM ROBERT PICKEL

Q.1. Do most firms in the OTC credit derivatives market use your master agreement? If so, doesn't that indicate a fair amount of standardization? How much standardization is required for clearing as compared to an exchange?

A.1. The ISDA Master agreement is the standard form used between counterparties in the OTC derivatives industry. The ISDA Master (and the attendant schedules, annexes and related confirmations) provides standardized definitions while leaving the material economic terms of the contract to negotiation between the parties. It is important to remember that a Master Agreement outlines the relationship between two parties with respect to a broad range of bi-laterally negotiated contracts (such as a credit default swap or an interest rate swap). A confirmation, on the other hand, documents an individual contract such as a credit default swap or an interest rate swap. Like the Master, a confirmation will have many standardized definitions but will leave the material economic terms to be individually negotiated by the counterparties.

Clearing would likely require a degree of standardization not required for purely bi-lateral contracts, which are dependent upon the creditworthiness of a counterparty. This is because in order to be cleared the contracts must presumably be fungible with other contracts in the clearinghouse.

Q.2. Can you clarify how involved pension funds are in OTC credit derivatives? How equipped are pension funds to make determinations about the risks involved in credit default swaps, and are they provided with adequate disclosures about the potential risks?

A.2. Pension funds, like other institutional investors, make use of credit derivatives to protect their portfolios against the risk of default of a major issuer of debt. Although it is difficult to generalize about the sophistication of pension funds it is worth noting that they are regulated entities and in at least some cases, such as CalPERS, among the largest and most sophisticated investors in the world.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR CRAPO FROM ROBERT PICKEL

Q.1. Should market participants have the broadest possible range of standardized and customized options for managing their financial risk and is there a danger that a one-size-fits-all attitude will harm liquidity and innovation?

A.1. ISDA believes that choice in the range of financial products is a fundamental principle for fostering innovation and liquidity in the financial markets. A flexible market structure allows innovative products to be created to address the ever-evolving needs of market participants. Successful products then become more standardized over time, primarily through ISDA's efforts in the areas of documentation and market practice. The singular achievement of privately negotiated derivatives is that, by encouraging that process to take place, the needs of market participants are most effectively served, enhancing market stability and reducing risk to the

system. Imposing one approach to managing risk will stifle innovation and restrict the ability of liquidity to coalesce around those products that most directly address market participants' needs.

Q.2. Is there a danger that centralizing credit risk in one institution could actually increase systemic risk?

A.2. Concentration of risk of any sort is always a cause for concern, and this is particularly true of counterparty credit risk. One way to address concerns about concentration of risk is to encourage risk to be dispersed through the system through contractual arrangements and risk mitigation techniques, such as the close-out netting and collateral provisions developed by ISDA over the years. Where risk is proposed to be concentrated in one institution, a high degree of care must be taken to minimize the possibility that concentration of risk in fact increases risk to the system. The tool kit for managing that risk may be clearly identified (capital requirements for clearing members, margin requirements for trades, back-up facilities), but it is the implementation of those tools and the creation of the necessary systems to reinforce their purpose that are critical steps to ensuring that centralizing credit risk does not have the adverse effect of increasing systemic risk.

ADDITIONAL MATERIAL SUPPLIED FOR THE RECORD

MANAGED FUNDS ASSOCIATION

WRITTEN STATEMENT
OF
MANAGED FUNDS ASSOCIATION

For the Hearing Entitled:

"Reducing Risks and Improving Oversight
in the OTC Credit Derivatives Market"

BEFORE THE SUBCOMMITTEE
ON SECURITIES, INSURANCE AND INVESTMENT
OF THE
COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS
OF THE
UNITED STATES SENATE

July 9, 2008

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WRITTEN STATEMENT OF MANAGED FUNDS ASSOCIATION

"REDUCING RISKS AND IMPROVING OVERSIGHT IN THE OTC CREDIT DERIVATIVES MARKET"

July 9, 2008

INTRODUCTION

Managed Funds Association (MFA), the voice of the global alternative investment industry, is pleased to provide the following written statement in connection with the hearing of the Senate Subcommittee on Securities, Insurance and Investment entitled "Reducing Risks and Improving Oversight in the OTC Credit Derivatives Market" to be held July 9, 2008 (the "Hearing"). MFA's members represent the vast majority of the largest hedge fund groups in the world, as well as funds of funds and managed futures funds. Established in 1991, MFA is the primary source of information for policymakers and the media and the leading advocate for sound business practices and industry growth. MFA members represent the vast majority of the largest hedge fund groups in the world who manage a substantial portion of the approximately $2 trillion invested in absolute return strategies. MFA is headquartered in Washington, D.C., with an office in New York, NY.

Credit derivatives are of great importance to MFA members as many of the funds they manage are active investors in these products. Over the last ten years, credit derivatives have become a critical means by which funds manage the risk and returns of the assets in their portfolios in order to meet the objectives of their investors. As such, MFA and its members have significant interest in strengthening the infrastructure and efficiency of the over-the-counter ("OTC") credit derivatives market.

IMPLICATIONS OF GROWTH

OF THE OTC CREDIT DERIVATIVES MARKET

Shortly after credit derivatives were introduced in the late 1990s, they were quickly recognized as important risk transfer and management tools by banks and dealers, as well as many investment managers. In addition, credit derivatives were viewed as a positive innovation in our financial markets because they created a broader distribution of credit risk that in turn serves to improve the financial system's overall ability to absorb economic shocks and losses. Finally, many market participants use credit derivatives as leading indicators of potential critical developments in the financial system and the possible deterioration of certain entities' creditworthiness ahead of credit downgrades by the rating agencies.

The OTC credit derivatives market experienced robust growth rather early in its development. When the International Swaps and Derivatives Association ("ISDA") published its first set of legal documentation for the negotiation and consummation of credit derivatives transactions in 1999, the aggregate notional value of the OTC credit derivatives market was approximately $200 billion. By June 2005, volume had increased to nearly $12.5 trillion. In conjunction with this growth, market participants became increasingly reliant on trade assignments, also known as "novations", as a means of liquidating or transferring credit derivative positions, which further increased the overall size of the market's trading volume. This extraordinary growth increased pressure on the operations departments of many market participants and resulted in a growing backlog of unsigned trade confirmations. The backlog has most recently created concern by many in determining the ultimate ownership of credit derivatives positions.

PRIVATE SECTOR SOLUTIONS TO REGULATORY CONCERNS

In 2005, the Federal Reserve Bank of New York and the U.K. Financial Services Authority voiced their concerns regarding the growth of the OTC credit derivatives market and the possible risks presented by the backlog of unsigned credit derivatives confirmations. Although regulators then acknowledged that industry efforts had been undertaken to address this issue, they encouraged the private sector to promptly take further decisive action. In response, the leading credit derivatives dealers sent a letter to the Federal Reserve Bank of New York setting forth the dealers' proposed remedies to the concerns raised by their regulators.

These remedies proved remarkably effective. Less than a year later, the backlog of outstanding credit derivatives confirmations had been reduced by over 80% on average. Other successful improvements to credit derivatives processing have occurred following the reduction of backlogs, such as the establishment of electronic processes to approve and confirm novations. All of these improvements are the result of and can be attributed to industry-wide efforts and partnerships with regulators, like the Federal Reserve Bank of New York.

MFA has consistently supported and participated in industry efforts to improve the operational infrastructure and efficiency of the OTC credit derivatives markets and has played an important role in improving market practices through collaboration with the major derivatives dealers. Specifically, MFA has been an active participant in the industry's "Operations Management Group" since its inception by participating in weekly meetings to address the industry's operational targets and objectives. In addition, over the last two years, MFA has organized and sponsored several seminars and meetings for its members in order to promote the objectives and standards that the industry seeks to achieve in the processing of OTC derivatives. MFA continues to educate its members and promote infrastructure investment with respect to technology that will permit market participants to achieve significant advances in the operational efficiency of the OTC credit derivatives markets.

This ongoing collaborative effort by the dealer and asset management community was highlighted yesterday in a speech by Federal Reserve Bank Chairman Ben Bernanke. Bernanke observed that the "New York Fed and other supervisors are working with market participants to fundamentally change how CDS and other OTC derivatives are processed by applying increasingly stringent targets and performance standards."

IMPROVEMENTS TO OPERATIONAL INFRASTRUCTURE

The efforts described above have led to dramatic improvements in the operational infrastructure for processing credit derivatives. Market participants have worked together to standardize several key credit derivative products, the result of which has allowed the market to embrace electronic confirmation platforms more broadly and move away from the inefficiencies associated with exchanging paper confirmations. MFA and its members have been overwhelmingly supportive of automated solutions for standardized products and believe that their widespread use is essential to maximizing operational efficiency.

Specifically, market participants have worked closely with industry utilities and information technology vendors to develop: (1) confirmation matching platforms permitting market participants to match trades electronically without the need to review and sign paper confirmations; (2) novation processing platforms that permit market participants to assign and settle trades efficiently via electronic means without the need to manually type out requests for consent via email; and (3) centralized electronic "warehouse" facilities that process post-trade events such as payments, credit events and related settlements with respect to credit derivative transactions stored in the facility. These electronic solutions permit market participants to confirm, assign and settle trades much more efficiently than ever would be possible in a paper world.

ASSET MANAGEMENT IMPLEMENTATION PLAN

Over the last several months, MFA has collaborated with ISDA and the Asset Management Group of the Securities Industry and Financial Markets Association, in conjunction with the dealer community, to create an implementation plan that will facilitate the ability of the market participants they represent to operate consistently with current industry targets for credit derivatives, including ambitious targets for electronic trade submission, matching and accuracy, as well as the migration of the industry to electronic novation platforms by the end of 2008. This strategy is comprised of three key elements: communication and educational outreach; facilitation of enhanced use of electronic platforms for confirmation and novation of eligible credit derivatives trades; and measures that will improve electronic confirmation matching rates.

CONCLUSION

The successful growth and development of the OTC credit derivatives market over the last decade are a great testament not only to the innovation and sophistication of this country's financial markets and its participants, but also the flexibility afforded by the regulatory framework under which they operate. The progress made by the dealer community in partnership with asset managers and end users to meet the challenges presented by the robust growth of credit derivatives demonstrates their collaborative ability and determination to address regulatory concerns as they may arise. These private sector initiatives have changed the way the OTC credit derivatives market operates in fundamental ways and will continue to enhance its operational efficiency.

MFA is pleased to offer this written statement in connection with this hearing and hopes that the views set forth are helpful to the Subcommittee in its deliberations. MFA would be pleased to work with the Subcommittee and its staff on any further efforts that it determines to undertake in respect of this important topic.

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON, D. C. 20551

DIVISION OF RESEARCH AND STATISTICS

August 5, 2008

The Honorable Michael Crapo
United States Senate
Washington, D.C. 20510

Dear Senator:

Enclosed is my response to your questions submitted following the hearing on "Reducing Risks and Improving Oversight in the OTC Credit Derivatives Market" before the Senate Banking Committee on July 9, 2008. A copy has also been forwarded to the Committee for inclusion in the hearing record.

Please let me know if I can be of further assistance.

Sincerely,

Patrick M. Parkinson
Deputy Director

Enclosure

Patrick Parkinson subsequently submitted the following in response to written questions received from Senator Crapo in connection with the July 9, 2008, hearing before the Committee on Banking, Housing, and Urban Affairs:

1. Should market participants have the broadest possible range of standardized and customized options for managing their financial risk and is there a danger that a one-size-fits-all attitude will harm liquidity and innovation?

Yes. Market participants should have the broadest possible range of standardized and customized options for managing their financial risk. While central counterparty clearing and exchange trading of relatively standardized contracts have the potential to reduce risk and increase market efficiency, market participants must be permitted to continue to negotiate customized bilateral contracts in over-the-counter markets.

2. Is there a danger that centralizing credit risk in one institution could actually increase systemic risk?

Yes. A central counterparty (CCP) concentrates risk and responsibility for risk management. If a CCP does not manage risks effectively, its introduction could increase systemic risk. Consequently, it is critical that any CCP for financial instruments, including over-the-counter derivatives, meets the international standards for risk management that are set out in the CPSS-IOSCO *Recommendations for Central Counterparties*.

Board of Governors of the Federal Reserve System
Federal Reserve Bank of New York

July 7, 2008

The Honorable Mike Crapo
United States Senate
Washington, D.C. 20510

Dear Senator:

Thank you for your letter regarding public policy with respect to the markets for credit default swaps (CDS). We agree that these markets are critical to managing credit risk and that they have continued to perform that function effectively during the recent financial market turmoil. As you observed, in their recent reports on the financial market turmoil, both the President's Working Group on Financial Markets (PWG) and the Financial Stability Forum (FSF) observed that the infrastructure for these markets has coped quite well.

Nonetheless, both the PWG and the FSF called for market participants to develop a longer-term plan for a more reliable operational infrastructure for CDS and other over-the-counter (OTC) derivatives. Despite significant improvements over the last several years, in some respects the performance of that infrastructure lags significantly the performance of more mature markets. For example, currently less than 45 percent of CDS trades are matched on trade date.

Efforts to make the market infrastructure more reliable should not inhibit either liquidity or innovation. To the contrary, removing remaining doubts about the reliability of the infrastructure should make market participants more willing to provide liquidity, especially during periods when the infrastructure might otherwise be strained by high volumes, price volatility, or counterparty concerns. Automation of post-trade processes requires a degree of standardization of the terms of transactions, but the degree of standardization involved need not constrain innovation significantly.

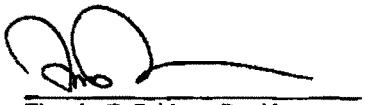
You mentioned specifically proposals for central counterparty clearing of CDS. One of the goals of the Commodity Futures Modernization Act of 2000 (CFMA) was to remove unnecessary impediments to centralized clearing. In the case of interest rate swaps, centralized clearing was introduced in 1999 and, in part because of the support provided by the CFMA, is now utilized by most major derivatives dealers. We are aware of no evidence that its introduction has harmed liquidity or innovation in those markets. We believe that proposals for centralized clearing can reduce systemic risk in the CDS markets, provided that the risks of centralized clearing are properly addressed.

The Honorable Mike Crapo
Page Two

Thank you again for your letter and we look forward to continuing to work with you in promoting robust financial markets.

Sincerely,

Ben S. Bernanke, Chairman
Board of Governors of the
Federal Reserve System



Timothy F. Geithner, President
Federal Reserve Bank of New York

U.S. Commodity Futures Trading Commission
Three Lafayette Centre,1155 21st Street, NW, Washington, DC 20581

Walter L. Lukken
Acting Chairman

(202) 418-5014
(202) 418-5550 Facsimile
wlukken@cftc.gov

July 8, 2008

The Honorable Michael Crapo
United States Senate
239 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Crapo:

Thank you for your letter soliciting views on the appropriate regulatory framework for oversight of the over-the-counter (OTC) derivatives markets, including credit default swaps (CDS) markets. The Commodity Futures Trading Commission (CFTC) has significant experience in overseeing clearinghouses for derivatives markets, including the clearing of OTC derivatives.

I agree that the tiered approach to regulation as enacted in the Commodity Futures Modernization Act (CFMA) has improved innovation and promoted economic growth. The CFMA also allowed for the first time the clearing of OTC derivatives as a way to improve the risk management of these transactions and minimize systemic risk. I am encouraged that several clearing proposals for OTC products are in the works and that the markets are working to find attainable solutions in conjunction with their regulators.

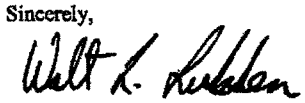
With regard to risk management solutions, in recent years, the CFTC has taken numerous steps to facilitate clearing in the OTC markets. In our experience, the clearing process offers the benefit of allowing market participants to focus solely on obtaining the best price, without regard to whether the parties executing opposite them are capable of performing their obligations. Furthermore, because the clearinghouse serves as the central counterparty to all transactions, market participants can close out their positions and exit the market without having to seek out the original parties to their opening trades. This, in turn, reduces potential market upheaval in the event of a participant default.

In times of economic turmoil and uncertainty, market participants are likely to seek out the security and financial integrity of a well-regulated marketplace. The CFTC witnessed this occurrence after the collapse of Enron when energy market participants sought the counter-party certainty of a regulated futures exchange and clearinghouse. The current environment also appears to be leading market participants to more regulated markets and clearing solutions, and we should encourage this migration.

However, I also recognize that there are trade-offs associated with this movement, including the fact that many OTC products are individually tailored and unique and may not readily transfer to a more standardized clearing environment. Certain OTC derivatives contracts that are customized and executed bilaterally can serve to transfer specific risks, but may not be successful when offered in a multilateral trading environment or for clearing. Regulators must not force a one-size-fits-all solution but should utilize the tiered regulatory approach of the CFMA to help the markets find workable solutions for these products.

The questions you have raised concerning the CDS market are important ones, and I stand ready to work with you and members of the PWG to answer them. If we can be of further assistance to you on proposed clearing initiatives, please contact me directly or have your staff contact Douglass Leslie in our Office of External Affairs. He can be reached directly at (202) 418-5077. Thank you for your leadership on this critical issue, and we look forward to working with you in the future.

Sincerely,



Walter L. Lukken

CHRISTOPHER COX
CHAIRMAN

HEADQUARTERS
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WASHINGTON, DC 20549

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

REGIONAL OFFICES
ATLANTA, BOSTON, CHICAGO,
DENVER, FORT WORTH,
LOS ANGELES, MIAMI, NEW YORK,
PHILADELPHIA, SALT LAKE CITY,
SAN FRANCISCO

July 8, 2008

The Honorable Mike Crapo
239 Dirksen Senate Office Building
United States Senate
Washington, DC 20510

Dear Senator Crapo:

Thank you for your recent letter regarding current private sector initiatives and public policy with respect to the over-the-counter (OTC) derivatives markets, including the market for credit default swaps (CDSs). Recent events in the credit markets have highlighted the need for greater attention to risk management practices of market participants and market infrastructure generally.

Both the President's Working Group on Financial Markets (PWG) and the Financial Stability Forum (FSF) recently concluded that the OTC credit markets and the infrastructure that supports them have functioned quite effectively despite extreme conditions in the financial markets. Although these markets have shown significant resilience in the face of difficult circumstances, both the PWG and the FSF have called on market participants to take collective action to strengthen the infrastructure for clearing and settling credit derivatives and other OTC derivatives. Indeed, while firms have made material improvements to the post-trade processing of credit derivatives, including a reduction by more than 85 percent in the backlog of unconfirmed trades, more needs to be done. For example, currently less than half of credit derivatives trades are matched on the trade date, a performance that is far poorer than in more mature markets and that could exacerbate risks to market participants.

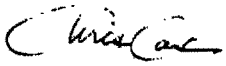
As you note, numerous private sector initiatives are currently underway to strengthen market infrastructure, including the possible establishment of a central counterparty for the credit default swap market. A well-designed and effectively regulated central counterparty clearing house may be an important way to further strengthen the OTC derivatives market infrastructure. A more robust settlement system could result in a greater willingness on the part of market participants to provide liquidity, which is critical during times of stressed market conditions.

I agree that industry initiatives and regulatory action should not come at the cost of decreased flexibility and efficiency of these markets, nor result in a one-size-fits-all approach. It is important to note, however, that while the flexibility of customized contracts may help to meet market participants' precise risk management needs, recent events have underscored that in stressed market conditions it can be very difficult to value customized contracts and to manage the associated market and counterparty risks. Indeed, the recent market turmoil may encourage market participants to reconsider the relative benefits and costs of standardized and customized contracts.

CHAIRMANOFFICE@SEC.GOV
WWW.SEC.GOV

Thank you again for your letter. As always, I greatly appreciate having the benefit of your thoughts on this important topic. Please call me at (202) 551-2100 or have your staff call Jonathan Burks, Director of the Office of Legislative and Intergovernmental Affairs, at (202) 551-2010 if you have any questions or comments

Sincerely,



Christopher Cox
Chairman