

GAO

Testimony

Before the Subcommittee on Capital
Markets, Insurance, and Government
Sponsored Enterprises

For Release on Delivery
Expected at 10:00 a.m. EST
Thursday, March 5, 2009

SYSTEMIC RISK

Regulatory Oversight and Recent Initiatives to Address Risk Posed by Credit Default Swaps

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Highlights of [GAO-09-397T](#), a testimony to Congressional Requesters

Why GAO Did This Study

The U.S. financial system is more prone to systemic risk today because (1) the current U.S. financial regulatory system is not designed to adequately oversee today's large and interconnected financial institutions, (2) not all financial activities and institutions fall under the direct purview of financial regulators, and (3) market innovations have led to the creation of new and sometimes complex products that were not envisioned as the current regulatory system developed. Credit default swaps (CDS) are one of the products that have assumed a key role in financial markets.

My statement will discuss (1) the extent to which U.S. financial regulators and the UK regulator oversee CDS, (2) risks and challenges that CDS present to the stability of financial markets and institutions and similar concerns that other products may pose, and (3) the recent steps that financial regulators and the industry have taken to address risks posed by CDS and similar efforts that may be warranted for other financial products. GAO reviewed research studies and congressional testimonies. We interviewed financial regulators and a variety of financial market participants.

In January 2009, GAO designated the financial regulatory system as a high-risk area in need of congressional attention. Issues involving systemic risk regulation in general and CDS in particular should be considered as part of that effort.

[View GAO-09-397T](#) or [key components](#). For more information, contact Orice M. Williams at (202) 512-8678 or williamso@gao.gov.

SYSTEMIC RISK

Regulatory Oversight and Recent Initiatives to Address Risks Posed by Credit Default Swaps

What GAO Found

The current regulatory structure for CDS does not provide any one regulator with authority over all participants in the CDS market, making it difficult to monitor and manage potential systemic risk. Federal oversight of CDS trading and monitoring of the CDS market are largely conducted through the banking regulators' safety and soundness oversight of supervised banks that act as CDS dealers. The Securities and Exchange Commission and the Commodity Futures Trading Commission lack the authority to regulate CDS broadly as financial products. Regulators have sought to address potential systemic risks arising from CDS activities mainly through collaborative efforts with other supervisors and key market participants. However, the extent to which regulators routinely monitor the CDS activity of unregulated market participants is unclear. The Financial Services Authority in the United Kingdom has authority over most CDS products and can collect information about the CDS market, but it has pursued most of its regulatory efforts in collaboration with U.S. regulators.

CDS pose a number of risks to institutions and markets, many of which are not unique. These include counterparty credit, operational, concentration, and jump-to-default risks. Market participants and observers noted that CDS referencing asset-backed securities (ABS) and collateralized debt obligations (CDOs), particularly those related to mortgages, currently pose greater risks to institutions and markets than other types of CDS. Other risks and challenges from CDS relate to the lack of transparency in CDS markets, the potential for manipulation related to the use of CDS as a price discovery mechanism, and the use of CDS for speculative purposes. Regulators and market participants noted that over-the-counter (OTC) derivatives, to varying degrees, may pose some similar risks and a few identified equity derivatives as the OTC derivatives that were most similar to CDS.

Financial regulators and market participants have initiated several efforts to mitigate these risks. These efforts target primarily operational and counterparty credit risks and include improving the operational infrastructure of CDS markets, creating a clearinghouse or central counterparty process to clear CDS trades, and establishing a central trade registry for CDS. If effectively implemented and sustained, these initiatives could begin to address some of the risks noted. But the effectiveness of these recent initiatives could be limited because participation is voluntary and regulators lack the authority to require all market participants to report their trades to a repository. Moreover, customized and highly structured CDS, which can include CDS with complex reference entities that may present additional risks, generally lack the standardization necessary for centralized clearing. Other ideas to reform CDS markets, such as mandatory clearing or limiting some types of trades, have important limitations that would need to be addressed. Finally, many participants and observers agreed that OTC derivatives other than CDS generally share some of the same risks and could benefit from similar efforts to mitigate their impact.

Chairman Kanjorski and Members of the Subcommittee:

I appreciate the opportunity to participate in the hearing today to broadly discuss systemic risk and in particular the systemic risk posed by credit default swaps (CDS) and other over-the-counter (OTC) derivatives. As you well know, there is no single definition for systemic risk. Traditionally, systemic risk was viewed as the risk that the failure of one large institution would cause other institutions to fail. This micro-level definition is one way to think about systemic risk. Recent events have illustrated a more macro-level definition: the risk that an event could broadly affect the financial system rather than just one or a few institutions. In our January 2009 report on the U.S. financial regulatory system, we pointed out that the current regulatory system was not designed to adequately oversee today's large and interconnected financial institutions, whose activities pose new risks to the institutions themselves and systemic risk to the broader financial system.¹ We also noted that not all financial activities and institutions fall under the direct purview of financial regulators and that market innovations had led to the creation of new and sometimes complex products whose complexity and substantial role in the financial system was not envisioned as the current regulatory system developed. Credit default swaps are one of the products that have assumed a key role in financial markets. They are being used by financial institutions that are subject to varying degrees of regulation, and the market for CDS is largely unregulated in the United States.

My statement today focuses on the results of prior work and our recent review of CDS and the risks that they and other OTC derivatives pose to the financial system (initiated at the request of Ranking Member Bachus and Chairman Kanjorski). Specifically, I will discuss (1) the extent to which U.S. financial regulators and the UK regulator oversee CDS, (2) risks and challenges that CDS present to the stability of financial markets and institutions and similar concerns that other products may pose, and (3) the recent steps that financial regulators and the industry have taken to address risks posed by CDS and whether similar efforts may be warranted for other financial products.

¹GAO, *Financial Regulation: A Framework for Crafting and Assessing Proposals to Modernize the Outdated U.S. Financial Regulatory System*, GAO-09-216 (Washington, D.C.: Jan. 8, 2009).

To achieve our objectives, we analyzed publicly available reports, congressional testimonies, and other documents issued by international financial organizations, academics, financial regulators, industry groups, and market participants. We also corresponded with the New York State Insurance Department, the UK Financial Services Authority (FSA), and two clearinghouses. We interviewed staff from the Board of Governors of the Federal Reserve System (FRS), Commodity Futures Trading Commission (CFTC), Federal Reserve Bank of New York (FRBNY), Office of the Comptroller of the Currency (OCC), Office of Thrift Supervision (OTS), President's Working Group on Financial Markets (PWG), and the Securities and Exchange Commission (SEC). Finally, we spoke with representatives of three CDS dealer banks, a credit rating agency, an industry trade group, five hedge funds, a large provider of derivatives trade and settlement services, and a large provider of CDS pricing and valuation services, as well as speaking with two industry observers. We provided a summary of our findings to the FRS, OCC, OTS, and SEC, and this statement was based on those summaries and incorporates their comments as appropriate.

We conducted our work from October 2008 to February 2009 in accordance with all sections of GAO's Quality Assurance Framework that are relevant to our objectives. The framework requires that we plan and perform the engagement to obtain sufficient and appropriate evidence to meet our stated objectives and to discuss any limitations in our work. We believe that the information and data obtained and the analysis conducted provide a reasonable basis for our findings and conclusions.

Summary

The current regulatory structure for CDS and other OTC derivatives does not provide any one regulator with the authority over all market participants, making potential systemic risk hard to monitor and manage. In the United States, federal oversight of CDS trading is largely conducted through the banking regulators' safety and soundness oversight of the supervised banks that act as dealers in the market. Unlike equities or futures markets that are regulated by SEC and CFTC respectively, CDS are not regulated broadly as financial products because SEC and CFTC lack authority to do so. Federal financial regulators, namely the banking regulators, generally monitor activity in the CDS market through information obtained from their supervised entities, but comprehensive and consistent data on the overall market have not been readily available. Regulators have sought to address potential systemic threats arising from CDS activities mainly through collaborative efforts with other U.S. and foreign supervisors and key market participants. However, the extent to

which regulators routinely monitored the CDS activity of unregulated market participants is unclear. While U.S. federal financial regulators do not have authority over CDS as a product, in the United Kingdom, FSA has authority over most CDS products and can collect information on those products. Despite this broader authority, FSA has pursued most of its regulatory efforts in collaboration with U.S. regulators.

CDS pose a number of risks, including

- **Counterparty credit risk**—the risk to each party in an OTC derivatives contract that the other party will not perform the contractual obligations.
- **Operational risk**—the potential for losses that could occur from human errors or failures of systems or controls.
- **Concentration risk**—the potential for loss when a financial institution establishes a large net exposure in similar types of CDS.
- **Jump-to-default risk**—the risk that the sudden onset of a credit event will cause an abrupt change in a firm’s CDS exposure.

Market participants pointed out that the degree of risk associated with CDS can vary depending on (1) the type of CDS, (2) the reference entity for the CDS, and (3) how the CDS is used. Market participants and observers noted that CDS referencing asset-backed securities (ABS) and collateralized debt obligations (CDOs), particularly those related to mortgages, currently pose greater risks to institutions and markets than other types of CDS. Other risks and challenges from CDS relate to the lack of transparency in CDS markets, the potential for manipulation related to the use of CDS as a price discovery mechanism, and the use of CDS for speculative purposes. It is also important to note that many of these risks are not unique to CDS. Regulators and market participants noted that OTC derivatives may share some similar types of risks as CDS, but the degree of risk can vary. Equity derivatives were identified as the OTC derivatives that were most similar to CDS in terms of the risks and challenges that they presented.

Recognizing the threat that CDS and other OTC derivatives could pose to the financial system, regulators and market participants have initiated several efforts to address certain risks posed by CDS. These efforts have primarily targeted operational and counterparty credit risks and include improving the operational infrastructure of CDS markets, creating a clearinghouse or central counterparty process to clear CDS trades, and establishing a central trade registry for CDS. If effectively implemented and sustained, these initiatives have the potential to begin to address some

of the risks related to the use of CDS and other OTC derivatives. However, the effectiveness of these recent initiatives could be limited because participation is voluntary and regulators lack the authority to require all market participants to report their trades to a repository. Moreover, the more customized and highly structured CDS, which can include CDS on complex reference entities (e.g., ABS and CDOs) that may present additional risks to institutions and financial markets, generally lack the standardization necessary for centralized clearing. As a result, individual institutions' management of CDS risks remains critical to these institutions' safety and soundness. Similarly, management of counterparty credit risk is critical to any future central clearinghouse, which would concentrate exposure to CDS and could pose systemic risk. Other ideas to reform CDS markets, such as mandatory clearing or limiting some types of CDS trades, have important limitations or challenges that would also have to be addressed. Many participants and observers agreed that OTC derivatives other than CDS generally share some of the same types of risks, although to varying degrees, and could benefit from similar efforts to mitigate their impact.

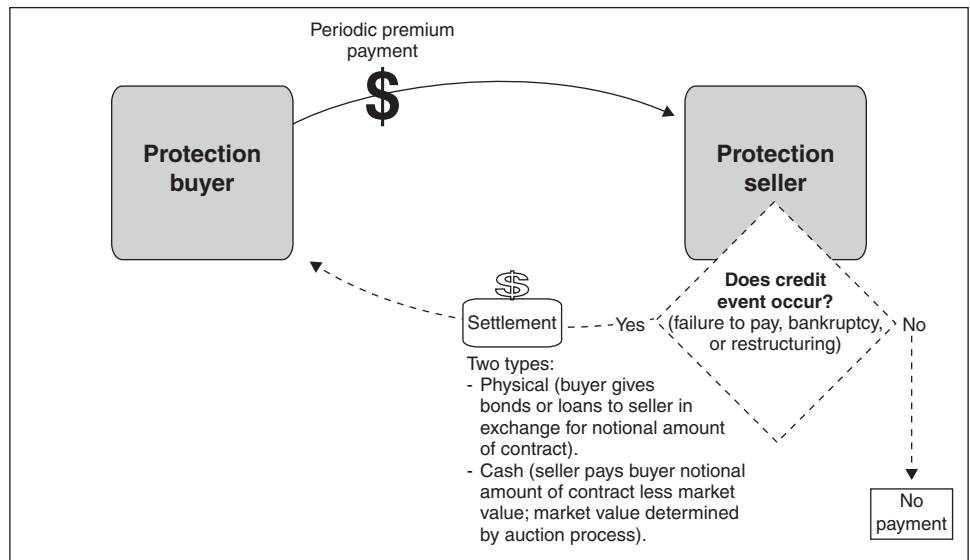
Background

As originally designed, CDS are bilateral contracts that are sold over the counter and transfer credit risks from one party to another. The seller, who is offering credit protection, agrees, in return for a periodic fee, to compensate the buyer, who is purchasing it, if a specified credit event, such as default, occurs (see fig. 1). There are three standard types of CDS contracts, depending on the underlying reference entity.

- A single-name CDS is based on a single reference entity such as a bond, institution, or sovereign entity.
- A multi-name CDS references more than one corporate or sovereign entity and can be divided into those that reference at least 2 but not more than 10 entities and those that reference more than 10 entities.
- An index CDS is based on an index that may include 100 or more corporate entities.

The contract term often ranges from 1 to 10 years, with most standard CDS contracts having a 5-year duration.

Figure 1: Overview of a CDS Contract



Source: GAO.

Participants in the CDS market include commercial banks, broker dealers, hedge funds, asset managers, pension funds, insurance and financial guaranty firms, and corporations. CDS can provide a number of benefits, such as giving some market participants another tool to manage credit risk. They also are a way to replicate an investment in a debt instrument such as a bond. However, in 2008, as the United States and the world faced one of the worst financial crises in history, some market observers identified CDS as one of several financial products they believed had contributed to the overall tightening in the credit markets following the bankruptcy of Lehman Brothers and the near-collapse of American International Group (AIG), which was a major CDS seller. Although authoritative information about the actual size of the market is generally not available, some have estimated the amount of outstanding contracts—as measured by the notional amount of the CDS contracts—at over \$50 trillion in 2008. However, more recent figures place the notional amount at around \$28 trillion, in part reflecting trade compression efforts. These market events and the estimated size of the CDS market have raised concerns about the risks that CDS and similar financial products may pose to the stability of the financial system. Furthermore, questions have been raised about the current level and structure of oversight of CDS and their impact on the financial system. In the last 3 years, CDS market participants and financial regulators have been taking actions to help

mitigate various risks and challenges related to CDS activities, with a particular focus on the market's infrastructure.

CDS Oversight Highlights the Challenges of an Outdated Regulatory System

In the United States, federal financial oversight of CDS is limited. Banks, whose activities as CDS dealers account for a large percentage of CDS trading, are subject to safety and soundness oversight by banking regulators. Bank regulators therefore have the authority to act on their concerns about the extent to which a banking organization's CDS trading affects the health of the bank. However, oversight of banks acting as dealers does not directly extend into the CDS product market itself. In addition, federal financial market regulators—primarily SEC and CFTC—are generally limited or restricted in their ability to oversee CDS broadly as a product because they lack statutory authority. SEC has antifraud and antimanipulation authority over CDS, but it may face challenges in enforcing this authority because of statutory restrictions on its rule-making ability. Federal financial regulators have sought to address potential systemic threats arising from CDS activities mainly through collaborative efforts with other supervisors and key market participants. While U.S. federal financial regulators do not have authority over CDS as a product, in the United Kingdom, which has a CDS market comparable in size to the U.S. market, FSA has authority over most CDS products. However, its regulatory efforts have generally been pursued in collaboration with U.S. regulators.

Federal Regulation of CDS Generally Focuses on the Activities of Dealer Banks

Federal banking regulators can oversee the CDS activity of the financial institutions they supervise. These regulators' oversight captures most CDS activity because banks act as dealers in the majority of transactions. All of the major CDS dealers are commercial banks or subsidiaries of bank or financial holding companies that are subject to regulation by U.S. or foreign holding company regulators.² Also, bank regulators have some authority to review the effect of a bank's relations with an affiliate on the health of the bank. However, bank regulators do not regulate the CDS markets. Moreover, bank regulators generally do not differentiate CDS from other types of credit derivatives in their supervision of institutions, because most credit derivatives volume is comprised of CDS. Regulators

²Some CDS activities are conducted at these banks' broker-dealer subsidiaries, which are subject to SEC oversight.

focus their oversight on institutions' derivatives portfolios regardless of their structure.

Banking regulators' oversight of CDS activity is largely limited to activity that is deemed to pose risks to the safety and soundness of the institutions they regulate. Accordingly, federal banking regulators generally oversee dealer banks in the U.S. mainly as part of their ongoing examination programs. However, as we reported in 2008, some regulators continued to be concerned about the counterparty credit risk created when regulated financial institutions transacted with entities that were less regulated, such as hedge funds, because these activities could be a primary channel for potential systemic risk.³

FRS officials explained that when examiners identified an increasing use of credit derivatives at certain regulated banks, they expanded the scope of their examinations to include a review of risks arising from the banks' trading of these products. These exams generally were broad in scope, although occasionally they focused on CDS, and assessed the products' financial risk and the way banks monitored and managed that risk. According to officials, some of the examination findings included concerns related to management of counterparty credit risk, including collateral practices, risk management systems, models for risk identification, and governance issues.

OCC officials explained that, as the prudential regulator of the large dealer banks, its on-site examiners conducted ongoing risk-focused examinations of the more complex banking activities, which could include CDS transactions. OCC targets its risk-focused examinations using risks or trends that it notices across banks. According to OCC officials, its on-site examiners monitor derivatives activity daily in the large dealer banks and look for trends and exceptions in the banks' information to gauge risk. For example, they may examine new counterparties that have not gone through an internal counterparty review process. OCC also conducts a quarterly analysis of the derivatives market using call report data submitted by all insured U.S. commercial banks to evaluate risks from trading activities, including CDS, in the national banking system. However, this oversight does not provide a clear snapshot of potential

³GAO, *Hedge Funds: Regulators and Market Participants Are Taking Steps to Strengthen Market Discipline, but Continued Attention Is Needed*, GAO-08-200 (Washington, D.C.: Jan. 24, 2008).

concentrations of risk in participants outside of national banks. Similarly, FRBNY collects data from OTC derivatives dealers that participate in an FRBNY-led initiative to improve the operational infrastructure for CDS, including information on operational metrics such as confirmation backlogs and transaction volumes but not on CDS exposures.

Under consolidated supervision, some subsidiaries of holding companies that engage in CDS activities may not receive the same degree of monitoring as regulated entities receive from their prudential supervisors. OCC officials explained that, while most CDS activity is conducted in banking entities because CDS trading is a permissible bank activity, some derivatives activity is conducted in nonbank subsidiaries of holding companies. OCC, like other federal bank regulators, has authority to review how a bank's relations with an affiliate (specifically, an affiliate that is not a subsidiary of the bank) affects the health of the bank. However, OCC supervises the bank, not the affiliate. In such cases, OCC officials said that they would collaborate with FRS to examine activity in the other nonbank subsidiaries if they deemed it necessary.

Similarly, even though SEC oversees broker-dealers, the agency does not regulate the CDS markets they deal in. Until September 2008, SEC provided oversight of major investment bank conglomerates at the consolidated level through its Consolidated Supervised Entity (CSE) program.⁴ According to SEC officials, investment banks generally conducted CDS transactions in subsidiaries not registered as U.S. broker-dealers, and therefore SEC did not have an ongoing on-site examination program for these entities. Rather, the CSE program monitored information aggregated at the holding company level that included the activities of these affiliates, including their CDS transactions. According to SEC, a significant part of the CSE supervision program was dedicated to monitoring and assessing market and credit risk exposures arising from trading and dealing activities. The CSE program conducted targeted exams related to three specific projects—reviews of liquidity pools, price verification of commercial real estate, and management of counterparty exposures—which SEC officials explained could include CDS activities but did not have CDS as a specific focus.

⁴The investment bank conglomerates formerly regulated under SEC's CSE program are now supervised at the consolidated level as bank holding companies. The CSE program no longer exists, although SEC continues to oversee these firms' registered broker-dealer subsidiaries.

Similarly, OTS is responsible for overseeing thrift holding companies through its consolidated supervision program. These entities include AIG, GE Capital Services, Morgan Stanley, and American Express Company, which are large global conglomerates with many subsidiaries. OTS does not conduct ongoing on-site examinations of all unregulated subsidiaries. OTS officials explained that the agency monitored the holding companies' enterprisewide risk-management practices to determine how the companies identified and managed risk and supplemented this monitoring with limited on-site visits of unregulated subsidiaries as it deemed necessary. For example, when AIG's external auditor identified internal control problems with AIG Financial Products, a nonthrift subsidiary that was active in the CDS market and ultimately identified as posing a systemic risk to the financial system because of its role in the market, OTS examined its operations. However, OTS officials told us that thrifts generally have engaged in limited CDS activities.

Federal financial regulators generally supplement data from their supervised entities or other information they collect with data from sources such as the International Swaps and Derivatives Association, Inc. (ISDA), the Bank for International Settlements, the British Bankers Association, and the rating agency Fitch to compare their banks to the larger universe of market participants. More recently, information has been available to regulators from the industry's central trade repository, the Trade Information Warehouse (TIW).

CDS Are Not Generally Regulated As a Product, Making Monitoring Their Role in the Market a Challenge

Federal market regulators—SEC and CFTC— do not have authority to regulate the CDS markets directly. With respect to CDS trading, their authorities are limited or restricted. In 1999, the PWG unanimously urged Congress to adopt recommendations aimed at mitigating certain legal uncertainties related to OTC derivatives. One recommendation was to exclude from oversight certain bilateral transactions between sophisticated counterparties and eliminating impediments to clearing OTC derivatives. A CDS is this type of transaction. Congress largely adopted the PWG recommendations when it passed the Commodity Futures Modernization Act of 2000 (CFMA). As a result, the Commodity Exchange Act (CEA) was amended to exclude the OTC CDS market from the regulatory and enforcement jurisdiction of CFTC. Federal securities laws also exclude CDS from SEC oversight, although SEC retains antifraud enforcement authority.

SEC's authority over CDS activity conducted outside of a registered broker-dealer is generally limited to enforcing antifraud provisions,

including prohibitions against insider trading. These provisions apply because CDS generally are considered security-based swap agreements under CFMA. However, because SEC is generally statutorily prohibited under current law from promulgating record-keeping or reporting rules regarding CDS trading in the OTC market outside of a registered broker-dealer, its ability to enforce its authority is difficult. However, in the past 3 years SEC has initiated a number of CDS-related enforcement cases for alleged violations of its antifraud prohibitions, including cases involving market manipulation, insider trading, fraudulent valuation, and financial reporting. More recently, in September 2008 SEC initiated an investigation into possible market manipulation involving CDS. In connection with the investigation, SEC announced that it would require certain hedge fund managers and other entities with CDS positions to disclose those positions to SEC and provide other information under oath. According to SEC, depending on the results the investigation may lead to more specific policy recommendations regarding CDS.

SEC officials indicated that investigations of OTC CDS transactions have been far more difficult and time-consuming than those involving exchange-traded equities and options because of the prohibition on requiring recording keeping and reporting for CDS. The lack of clear and sufficient record-keeping and reporting requirements for CDS transactions has resulted in incomplete and inconsistent information being provided when requested, according to SEC officials. The officials said that this restriction had made it more difficult to investigate and take effective action against fraud and manipulation in the CDS market than in other markets SEC oversaw. In October 2008, the SEC Chairman requested that Congress remove the CFMA restrictions on SEC's rulemaking authority with respect to CDS. The current Chairwoman has indicated that she supports removal of these restrictions as well.

Federal Regulators' Approach to Monitoring Systemic Risk from CDS Has Hinged on Collaborative Efforts

Federal financial regulators have sought to address potential systemic threats arising from CDS activities mainly through collaborative efforts with other supervisors and market participants. According to federal financial regulators, they address potential systemic risks by working closely with each other and international regulators to exchange information and coordinate the supervision of regulated market participants that could pose systemic risks to the financial system. Some of these collaborative forums include the PWG, the Senior Supervisors Group, the Basel Committee on Banking Supervision, the Financial Stability Forum, and the Joint Forum. However, it is unclear to what

extent the activities of unregulated subsidiaries or other unregulated market participants were also being reviewed as part of these initiatives.

FRS officials indicated that, in carrying out its responsibilities for conducting monetary policy and maintaining the stability of the financial system, the Federal Reserve monitored markets and concentrations of risk through data analysis and direct contact with market participants. According to FRS officials, in supervising banks and bank holding companies they focused on CDS activity as it pertained to institutional stability. FRS ensures that the appropriate infrastructure is in place so that the system can absorb “shocks.” FRS officials explained that, by ensuring that important market participants could avoid the most adverse impacts from these shocks—such as through counterparty credit risk management—systemic risk could be mitigated.

Over the last several years, FRS has identified opportunities to increase the market’s resiliency to systemic shocks related to CDS—for example, by implementing a market process for settling CDS contracts, reducing the notional amounts of outstanding contracts, and improving the operational infrastructure of the CDS market in collaboration with other supervisors. For example, since September 2005 financial regulators in the U.S. and Europe have collaborated with the industry to improve the operational infrastructure of the CDS market and to improve counterparty risk management practices. However, some market participants and observers noted that the current regulatory structure did not enable any one regulator to monitor all market participants and assess potential systemic risks from CDS and other types of complex products.

In the United Kingdom, FSA Generally Has Broader Authority Than U.S. Regulators Collectively

While U.S. regulators do not have authority over CDS as a product, in the United Kingdom, where available evidence suggests CDS volume is comparable to that in the United States, FSA has authority over most CDS products. FSA officials explained that most CDS-related regulatory efforts have been pursued in collaboration with U.S. regulators, such as the effort to improve the operational infrastructure for CDS that was led by FRBNY and the Senior Supervisors Group’s effort to enhance risk management practices. FSA officials also explained that, more recently, it had been monitoring all aspects of OTC infrastructure and industry commitments, including central clearing for CDS, credit event settlement, collateral management processes, trade compression, and position transparency. Much of this monitoring is conducted through data collected directly from regulated firms.

The New York State Insurance Supervisor Has a Role in Overseeing Insurers' CDS Activities

The New York State insurance supervisor also has authority to oversee certain aspects of insurers' OTC derivatives activities, including CDS transactions. According to the New York State Insurance Department, it has regulated the use of derivatives by insurance companies, including CDS, since the late 1990s. The Department is the primary regulator for most U.S. financial guaranty insurers (FGIs), which are also known as bond insurers. According to the Department, aside from FGIs few insurance companies buy or sell CDS because New York state law generally prohibits insurers from significantly leveraging their portfolios. Insurance companies generally use CDS for hedging credit risk and for investment purposes. According to department officials, in its role as regulator for FGIs the department ensures that insurance companies maintain consistent underwriting criteria and adequate reserves for these activities. Under New York law, insurers must file detailed disclosures about their derivatives transactions in their quarterly and annual statements. Also, prior to engaging in any derivatives activity insurers must file a derivatives use plan that documents their ability to manage derivatives transactions. According to department officials, the department has requested detailed information from FGIs and engages in ongoing dialogue with them concerning insurance contracts referencing CDS.

However, if an insurance company uses subsidiaries that are not affiliated with the insurance company, oversight may be limited. For example, the superintendent of the New York State Insurance Department testified that it did not oversee the activities of AIG Financial Products because AIG Financial Products was not affiliated with the insurance companies the department regulates.

Risks and Challenges Presented by CDS and Other Financial Products

Risks to financial institutions and markets from CDS include counterparty credit risk, operational risk, concentration risk, and jump-to-default risk. However, market participants suggested that the degree of risk associated with CDS varied depending on (1) the type of CDS, (2) the reference entity for the CDS, and (3) how the CDS was used. More specifically, CDS referencing ABS and CDOs, particularly those related to mortgages, were identified as posing greater risks to institutions and markets than other types of CDS. Other risks and challenges include the lack of transparency in CDS markets, the potential for manipulation related to the use of CDS as a mechanism for price discovery, and the use of CDS for speculative purposes. Regulators and market participants noted that some OTC derivatives may share similar risks. However, the degree of risk can vary substantially by product type. Equity derivatives specifically were

identified as the OTC derivatives that were most similar to CDS in terms of the risks and challenges that they presented.

Overview of the Risks and Challenges Posed by CDS

The main risks from CDS include counterparty credit risk, operational risk, concentration risk, and jump-to-default risk. In simple terms, counterparty credit risk is the risk to each party in an OTC derivatives contract that the other party will not fulfill the obligations of the contract. In addition to potentially not receiving contractual payments, a purchaser of CDS whose counterparty fails would suddenly be left without protection and could either have to replace the CDS contract at current, higher market values or go without protection. Banks and other financial institutions that have large derivatives exposures use a variety of techniques to limit, forecast, and manage their counterparty risk, including margin and collateral posting requirements.

However, regulators, market participants, and observers identified several challenges in managing CDS counterparty credit risk. First, although margin and collateral posting serve as a primary means of mitigating the risk of loss if a counterparty does not perform on its contractual obligations, calculating margin and collateral amounts can be difficult because of the challenges associated with determining the actual amount of counterparty exposure and the value of the reference asset. Specifically, it may be difficult for market participants to agree on the valuation of CDS contracts on ABS and CDOs. Second, margining practices are not standardized and vary depending on the counterparty. For example, market participants and observers suggested that institutions with high credit ratings, for which exposures were considered to pose little credit risk, were not initially required to post collateral. These firms included bond insurers and AIG Financial Products, a noninsurance subsidiary of AIG. However, when some of these institutions' ratings were downgraded, the institutions had difficulty meeting collateral calls. Third, the CDS market lacks comprehensive requirements for managing counterparty credit risk. More specifically, the bilateral collateral and margin requirements for OTC derivatives do not take into account the counterparty credit risk that each trade imposes on the rest of the system, allowing systemically important exposures to build up without sufficient capital to mitigate associated risks.

The second type of risk that I would like to discuss is operational risk. This is the risk that losses could occur from human errors or failures of systems or controls. With CDS, there are several operational steps that are required to process trades, such as trade confirmation, which were not

automated until recently and thus created backlogs in the system. In a report issued in 2007, we reported that these backlogs were largely due to a decentralized paper-based system and the assignment of trades to new parties without notifying the original dealer—a process known as novation.⁵ For instance, in September 2005, some 63 percent of trade confirmations (or 97,650) of the 14 largest credit derivatives dealers had been outstanding for more than 30 days. These large backlogs of unconfirmed trades increased dealers' operational risk, because having unconfirmed trades could allow errors to go undetected that might subsequently lead to losses and other problems. Potential problems also existed in the operational infrastructure surrounding physical settlement, novation, and valuation of CDS.

The third type of risk, concentration risk, refers to the potential for loss when a financial institution establishes a large net exposure in similar types of CDS. For example, AIG presented concentration risk because it sold a significant amount of CDS protection on related reference entities without also holding offsetting positions and did not sufficiently manage this risk. This risk tends to be greater for dealers that sell CDS protection because no margin and collateral requirements exist to ensure that the selling firm will be able to meet its potential obligations. Also, the potential exposures are greater and more uncertain than the fixed premium payments of a purchaser of CDS protection. Additionally, if a market participant decides to hold a large concentrated position, it could experience significant losses if a credit event occurred for one or more reference entities. But concentration risk can create problems for market participants even without a credit event involving the reference entity. For example, a market participant may face obligations to post collateral on a large net exposure of CDS if its financial condition changes, potentially resulting in financial distress for the dealer. AIG is the most recent example of this problem. When its credit rating was downgraded, the contracts required that it post collateral, contributing to the company's liquidity crisis.

Market participants suggested that the degree of risk from concentrated net exposures was tied to the nature of the reference entity or obligation. For example, a concentrated position in CDS on mortgage-related CDOs

⁵GAO, *Credit Derivatives: Confirmation Backlogs Increased Dealers' Operational Risks, but Were Successfully Addressed after Joint Regulatory Action*, [GAO-07-716](#) (Washington, D.C.: June 13, 2007).

may present more risk than CDS on a highly-rated corporation or U.S. government bonds. Further, concentration risks at one firm may also present challenges to other market participants and the financial system. According to a regulator and an observer, the lack of clear information on the net CDS exposures of market participants makes informed decisions about risk management difficult, a situation that becomes increasingly problematic when a credit event occurs. A regulator also testified that because the CDS market was interconnected, the default of one major participant increased the market and operational risks faced by more distant financial market participants and impacted their financial health. The near-collapse of AIG illustrates the risk from large exposures to CDS.

Finally, jump-to-default risk, as it relates to the CDS market, is the risk that the sudden onset of a credit event for the reference entity can create an abrupt change in a firm's CDS exposure. Such a credit event can result in large swings in the value of the CDS and the need to post large and increasing amounts of collateral and ultimately fund the settlement payment on the contract. The default of a reference entity could put capital strain on the CDS seller from increased collateral and payment obligations to settle the contract. For example, because CDS generally are not funded at initiation, a CDS seller may not have provided sufficient collateral to cover the settlement obligations.

CDS Can Also Pose a Number of Other Risks and Challenges

Other risks and challenges from CDS identified by market participants, observers, and regulators include a lack of transparency in the CDS market, the potential for manipulation related to the use of CDS as a price discovery mechanism, and the use of CDS for speculative purposes. According to some regulators, market participants, and observers, limited transparency or disclosure of CDS market activity may have resulted in the overestimation of risk in the market. Such a lack of transparency may have compounded market uncertainty about participants' overall risk exposures, the concentration of exposures, and the market value of contracts. For example, as mentioned previously at least one regulator and an observer suggested that it was unclear how the bankruptcy of Lehman Brothers would affect market participants, and this uncertainty contributed to a deterioration of market confidence. More specifically, it was reported that up to \$400 billion of CDS could be affected, but the Depository Trust and Clearing Corporation (DTCC) later stated that its trade registry contained \$72 billion of CDS on Lehman, and this amount was reduced to about \$21 billion in payments after bilateral netting. Some market participants suggested that concerns about transparency were even more prevalent with customized CDS products because the contracts

were not standardized and their prices were determined using estimates rather than prices from actual transactions.

Some regulators and an industry observer suggested the potential existed for market participants to manipulate these prices to profit in other markets that CDS prices might influence, such as the equity market, and that the lack of transparency could contribute to this risk. CDS price information is used by some market participants as an indicator of a company's financial health. Market participants use spreads on CDS contracts to gauge the financial health and creditworthiness of a firm. However, two regulators and an industry observer suggested that it was unclear whether CDS prices accurately reflected creditworthiness because the market was largely unregulated and the quality of data is questionable in an opaque market. According to testimony by an SEC official in October and November 2008, the lack of transparency in the CDS market also created the potential for fraud, in part because the reporting and disclosure of trade information to the SEC was limited. More specifically, the official testified that a few CDS trades in a relatively low-volume or thin market could increase the price of the CDS, suggesting that an entity's debt was viewed by the market as weak. Because market participants may use CDS as one of the factors in valuing equities, this type of pricing could adversely impact a reference entity's share price. One market observer we spoke with offered the following hypothetical example: if the CDS price moves up and the equity price moves down, an investor could profit from holding a short position in the equity by buying protection in the CDS market. The SEC official testified that a mandatory system of record keeping and reporting of all CDS trades to SEC should be used to guard against the threat of misinformation and fraud by making it easier to investigate these types of allegations. However, another regulator suggested that the price discovery role was not a unique role to CDS and that exchange-traded derivatives such as foreign exchange and interest rate derivatives also served a price discovery function.

Another challenge identified by regulators and market participants was the frequent use of CDS for speculative purposes, an issue that has raised some concerns among some regulators and industry observers. Some have suggested that the practice should be banned or in some way restricted. However, other regulators and market participants disagree and note that speculators in the CDS market provide liquidity to the market and facilitate hedging. Many of the concerns stem from uncovered or "naked" CDS positions, or the use of CDS for speculative purposes when a party to a CDS contract does not own the underlying reference entity or obligation. Because uncovered CDS can be used to profit from price changes, some

observers view their function as speculation rather than risk transfer or risk reduction. For example, one regulatory official stated that these transactions might create risks, because speculative users of CDS have different incentives than other market participants. In addition, one regulator stated that when participants used CDS for speculative purposes, there was no direct transfer or swap of risk. Instead, the transaction creates risk from which the participant aims to profit. Market participants also noted that the risks associated with CDS did not stem from their use for speculation but from a failure to manage the risks, particularly CDS of ABS. Market participants and an observer also explained that a restriction on uncovered CDS would create a market bias in favor of protection buyers, because it is easier for them to hold a covered position. This bias could impact the liquidity of the market, because trading would be confined to those with an exposure to the referenced entity. Finally, market participants noted that firms used CDS to manage risks from many economic exposures in addition to risks such as counterparty credit exposures that arise from holding the underlying reference obligation.

A Number of Other OTC Derivatives Pose Similar Risks and Challenges

In addition to CDS, we also explored whether other products posed similar risks and challenges. Regulators and market participants identified a number of other OTC derivatives that presented similar risks and challenges, such as counterparty credit risk and operational risk. These OTC derivative products include interest rate, foreign exchange, and commodity derivatives. While the types of risk may be similar, the degree of risk can vary. However, equity derivatives specifically were identified as the OTC derivatives that are most similar to CDS in terms of the risks and challenges that they presented. OTC equity derivatives, such as equity swaps and options, were said to be similar to CDS because of the potential for abrupt shifts in exposure, a lack of transparency, and the ability to customize the product. Nevertheless, according to regulators and industry observers, the CDS market differs from other OTC derivatives markets because it poses greater risks due to the potential for greater increases in payment obligations and larger impacts from life-cycle events such as those associated with jump-to-default risk.

Regulators and the Industry Have Undertaken a Number of Initiatives Recently to Address Risks Posed By CDS and Other Financial Products

Financial regulators and the industry have initiated several efforts to begin addressing some of the most important risks posed by CDS and similar products, particularly operational and counterparty credit risks. These efforts include improving the operational infrastructure of CDS markets, implementing a clearinghouse or central counterparty to clear CDS trades, and establishing a central trade registry for CDS. If implemented effectively and sustained, the recent initiatives could begin to address some of the risks related to the use of CDS. However, their effectiveness will likely be constrained by two factors. First, participation in a clearinghouse and central trade registry is generally voluntary. And second, the efforts would not include the more customized and highly structured CDS that can include CDS on complex reference entities that may pose significant risks to institutions and financial markets. A number of other reforms to the CDS market have surfaced but face challenges. These include mandatory clearing or restricting CDS trades. Finally, OTC derivatives that share some of the risks related to CDS could benefit from similar efforts to mitigate their impact.

Actions Associated with Managing Risks Related to CDS Have Focused on Three Areas

Financial regulators and market participants have recently taken steps to try to address risks posed by CDS. The efforts have focused on three main areas: (1) operational and infrastructure improvements, (2) creation of a central trade repository, and (3) development of clearinghouses to clear CDS contracts.

Operational and Infrastructure Improvements

Regulators and industry members have cooperated since 2005 on four projects to identify and address operational risks posed by CDS. In addition to managing operational risks from CDS, several of these efforts should assist participants in managing counterparty credit risks in general.

- First, the industry has worked to reduce the backlog of CDS processing events, including unconfirmed trades. In 2005, a joint regulatory initiative involving U.S. and foreign regulators directed major CDS dealers to reduce the backlog of unconfirmed trades and address the underlying causes of these backlogs. In response, market participants increased the use of electronic confirmation platforms. Since November 2006, most CDS trades are confirmed electronically through an automated confirmation system known as Deriv/Serv. By increasing automation and requiring endusers to obtain counterparty consent before assigning trades, dealers were able to significantly reduce the number of total confirmations outstanding. As a result of these efforts

to improve trade processing, many participants view the CDS market as the most automated among OTC derivatives.

- Second, the industry has sought to improve novation, the process whereby a party to a CDS trade transfers, or assigns, an existing CDS obligation to a new entity. In 2005, the joint regulatory initiative suggested that the novation process had contributed to the large backlog of unconfirmed trades, because the assignment of trades to new parties often occurred without the consent of the original counterparty. In such cases, a party to a CDS contract might not be aware of the identity of its new counterparty, possibly increasing operational and counterparty credit risks. To streamline the novation process, ISDA introduced a novation protocol in 2005 that required counterparty consent before assigning a trade. However, until recently parties to the novation communicated using phone and e-mail, both of which can be inaccurate and inefficient. More recently, the industry has committed to processing all novation consents for eligible trades through electronic platforms.
- Third, the industry has attempted to reduce the amount of outstanding trades via “portfolio compression.” In 2008, a Federal Reserve initiative resulted in a working group of dealers and investors that collaborated with the industry trade group ISDA to pursue portfolio compression of CDS trades. The process involves terminating an existing group of similar trades and replacing them with fewer “replacement trades” that have the same risk profiles and cash flows as the initial portfolio, and thus eliminating economically redundant trades. According to FRBNY, the compression of CDS trades results in lower outstanding notional amounts and helps to reduce counterparty credit exposures and operational risk. By the end of October 2008, FRBNY reported that trade compression efforts had reduced the notional amount of outstanding CDS by more than one-third.
- Finally, the industry has taken steps to implement a cash settlement protocol for CDS contracts. CDS contracts traditionally used physical settlement that required a protection buyer to deliver the reference obligation in order to receive payment. Because many CDS are uncovered, the protection buyer would have to buy the underlying referenced entity to deliver, potentially causing buyers to bid up prices and limiting the profits from protection and speculation. To address this concern, ISDA developed protocols to facilitate cash settlement of CDS contracts. The cash settlement protocols rely on auctions to determine a single price for defaulted reference obligations that is then used to calculate payout amounts to be paid at settlement. This process

Creation of a Central Trade Repository Illustrates the Limits of a Voluntary System

has been used to settle CDS contracts involved in recent credit events, including Lehman Brothers, Washington Mutual, Fannie Mae, and Freddie Mac.

In November 2006, DTCC created the TIW to serve as the industry's central registry for CDS. TIW contains an electronic record of most CDS trades, and DTCC and market participants plan to increase its coverage. In addition to placing most new trades in TIW, CDS dealers and other market participants also plan to submit existing and eligible CDS trades to TIW.

TIW helps to address operational risks and transparency concerns related to the CDS market. For example, according to DTCC, it helps mitigate operational risk by reducing errors in reporting, increases transparency by maintaining up-to-date contract information, promotes the accuracy of CDS-related information, and simplifies the management of credit events. TIW also facilitates operational improvements such as automated life-cycle processing by interacting with electronic platforms for derivatives trades such as Deriv/Serv.

Additionally, TIW should assist regulators in monitoring and managing concentration risk from CDS. Although regulators can receive CDS-related information from their regulated entities, no regulator has the ability to receive this information from all market participants, and no single comprehensive source of data on the CDS market exists. However, a central trade repository that contains information on all CDS trades will allow regulators to monitor large positions of market participants and identify large and concentrated positions that may warrant additional attention. TIW also has helped to address some concerns about CDS market transparency by providing aggregate information on CDS trades. The information includes gross and net notional values for contracts on the top 1,000 underlying CDS single-name reference entities and all indexes and is updated weekly.

Despite the important benefits provided by TIW, several factors limit its usefulness as a tool to monitor the overall market. First, TIW does not include all CDS trades, particularly those that cannot be confirmed electronically. For example, TIW cannot fully capture all customized trades, such as CDS referencing ABS and CDOs, including those related to mortgages. While DTCC officials believed that TIW includes a large portion of CDS trades, they noted that they could not be certain because the size and composition of the entire market remain unknown. Second, TIW currently has no regulatory oversight to ensure the quality of the data,

Clearinghouses May Offer
Some Benefits, but Some CDS
May Be Too Customized for
Clearing

and regulators lack the authority to require that all trades be included in TIW, particularly those of nonbanks.

A clearinghouse can reduce risks associated with CDS, including counterparty credit risks, operational risks, and concentration risks, while also improving transparency. A clearinghouse acts as an intermediary to ensure the performance of the contracts that it clears. For CDS, market participants would continue to execute trades as bilateral OTC contracts. However, once registered with the clearinghouse the CDS trade would be separated into two contracts, with the clearinghouse serving as the counterparty in each trade. That is, the clearinghouse would have a separate contractual arrangement with both counterparties of the original CDS contract and serve as the seller to the initial buyer and the buyer to the initial seller. In this way, a clearinghouse would assume the counterparty credit risk for all of the contracts that it cleared.

If a clearinghouse is well-designed and its risks are prudently managed, it can limit counterparty credit risk by absorbing counterparty defaults and preventing transmission of their impacts to other market participants. Clearinghouses are designed with various risk controls and financial resources to help ensure that they can absorb counterparty failures and other financial losses. For example, clearinghouses impose standard margin requirements and mark positions to market on a daily basis. They also have other financial safeguards that typically include capital requirements, guaranty funds, backup credit lines, and the ability to call on capital from member firms, which often are large financial institutions.

A clearinghouse also can help to standardize margin and collateral requirements. It can impose more robust risk controls on market participants and assist in the reduction of CDS exposures through multilateral netting of trades. In doing so, it would facilitate the compression of market participants' exposures across positions and similar CDS products, thereby reducing the capital needed to post margin and collateral.

A clearinghouse also can help to address operational and concentration risks and improve CDS transparency. Market participants suggested that a clearinghouse would help to centralize market information and could facilitate the processing of CDS trades on electronic platforms. It can also help limit concentration risk through standardized requirements for margin collateral that may help reduce the leverage imbedded in CDS contracts and thus place limits on a firm's ability to amass a large net exposure selling CDS. Finally, according to some regulators and

prospective clearinghouses, a clearinghouse could improve CDS transparency by releasing information on open interest, end-of-day prices, and trade volumes.

However, like the other options for improving the CDS market, only certain standardized trades would be cleared by a clearinghouse, and market participants would decide which trades to submit for clearing. A clearinghouse can only clear trades with a sufficient level of standardization because the more customized the contract, the greater the risk management and operational challenges associated with clearing it. Initially, the proposed clearinghouses will clear standard-index CDS and some highly traded single-name corporate CDS. Regulators and market participants suggested that risks from more complex and structured CDS would have to be addressed outside of clearinghouses. One market participant volunteered that it would not be opposed to collateral requirements for CDS that were not cleared through a clearinghouse. Further, because clearing is voluntary, it is unclear what portion of CDS will be cleared and whether this volume will be sufficient to support the clearinghouses.

Regulators and market participants suggested that robust risk management practices were critical for clearinghouses because clearinghouses concentrated counterparty credit and operational risk and CDS presented unique risks. Failure to sufficiently manage these risks could threaten the stability of financial markets and major institutions if a clearinghouse were to fail. In addition, if jump-to-default risk is not sufficiently managed through margin requirements and other methods, it has the potential to create significant losses for the clearinghouses. According to market participants, the jump-to-default risk posed by CDS makes determining sufficient margin requirements difficult. If a required level of margin is considered too high, whether justified or not, market participants may be less likely to use the clearinghouse.

Although several groups have announced plans to create clearinghouses for CDS, none of the groups currently are clearing trades. First, as part of their efforts over the past year to improve the CDS market, FRBNY and several other regulators encouraged the industry to introduce central clearing of CDS contracts. The industry previously had begun moving toward the creation of a clearinghouse, and in July 2008, after FRBNY encouraged firms to develop clearinghouse proposals, several major

dealers committed to launching a clearinghouse by December 2008. None are currently operational, however.⁶ At least four groups have developed clearinghouse options for CDS, two in the United States (IntercontinentalExchange and CME Group) and two in Europe (LIFFE and Eurex Clearing). LIFFE opened for clearing in December 2008 but has had virtually no business as of February 2009.

Market participants and regulators identified advantages and disadvantages associated with having multiple clearinghouses clear CDS contracts. Some regulators noted that there could be advantages to having multiple clearinghouses at the early stages of development, particularly related to competition in designing and developing them. In addition, one market participant noted that with multiple clearinghouses the concentration of risk could be spread across multiple platforms. However, market participants suggested that having multiple clearing houses raised concerns about regulatory consistency in terms of setting standards and monitoring, especially for those in the U.S. and internationally. Market participants also indicated that multiple clearinghouses would create inefficiencies and remove some of the advantages gained from multilateral netting, because no single clearinghouse would enjoy the benefit of a complete portfolio of CDS. Moreover, participants would have to post collateral in multiple venues.

Under current law, a clearing organization for CDS—or other OTC derivatives—must be regulated, but any of several regulators may provide that oversight.⁷ FRS, CFTC, and SEC all have played a role in establishing a clearinghouse, including reviewing proposals seeking regulatory approval. CME is registered as a derivatives clearing organization with CFTC. ICE has established its clearinghouse in a subsidiary FRS member bank—ICE Trust. LIFFE is regulated by FSA, and Eurex is overseen by the German Federal Financial Supervisory Authority.

SEC has determined that the act of clearing CDS through a clearinghouse may result in the contracts being considered securities subject to the securities laws. To facilitate the clearing and settlement of CDS by

⁶The U.S.-based clearinghouses are still awaiting regulatory approval.

⁷Section 409 of the Federal Deposit Insurance Corporation Improvement Act of 1991, as added by CFMA, requires that a multilateral clearing organization for OTC derivatives be (1) either a bank subject to federal supervision, (2) registered with CFTC or SEC, or (3) supervised by an approved foreign financial regulator.

clearinghouses, SEC issued an interim final rule on temporary and conditional exemptions in January 2009. SEC stated that the conditions of these exemptions would allow the agency to oversee the development of the centrally cleared CDS market and CDS exchanges and to take additional action as necessary. SEC has determined that LIFFE has met the conditions for the temporary exemptions from registration under the securities laws. The exemption expires in September 2009, at which time SEC officials believe they will be better situated to evaluate how these exemptions apply to the cleared CDS market.

Given the overlapping jurisdiction and lack of regulatory clarity, FRS, CFTC, and SEC have signed a memorandum of understanding to ensure that each regulator applies similar standards across the different clearinghouse efforts. According to the regulators, the purpose of the memorandum is to foster cooperation and coordination of their respective approvals, ongoing supervision, and oversight of clearinghouses for CDS. Moreover, some said that the memorandum would help to prevent an individual regulator from taking a softer approach in its monitoring and oversight of required standards for clearinghouses, which could encourage more participants to use the less rigorously regulated clearinghouse. However, another regulator suggested that the memorandum still might not guarantee consistent application of clearinghouse standards and requirements, because each regulator had a different mission and approach to regulation.

Market participants identified several disadvantages related to the current state of oversight for clearinghouses. Some market participants suggested that there had been a lack of clarity and certainty regarding oversight of clearinghouses because of the involvement of multiple regulators. As noted, some market participants questioned whether consistent standards and oversight would be applied across clearinghouses. Market participants and one regulator noted the importance of coordinating oversight internationally to ensure consistent global standards and mitigate the potential for regulatory arbitrage. Finally, some market participants suggested that having multiple regulators for a clearinghouse created the potential for regulatory overlap and related inefficiencies.

Other Ideas to Manage CDS Risks

Market observers and others have proposed other ideas to address concerns related to CDS, including (1) mandatory clearing, (2) mandatory exchange trading, (3) a ban on uncovered CDS, and (4) mandatory reporting of CDS trades. While these proposals would address some

perceived problems with CDS markets, sources we interviewed identified important limitations and challenges for each of them.

- Mandatory clearing would ensure that CDS contracts benefited from the advantages of a clearinghouse, but regulators, market participants, and market observers explained that highly customized CDS would be impossible to clear because they lack the needed standardization.
- Mandatory exchange trading could offer improved price transparency and the benefits of clearing. But some market observers indicated that some CDS that were illiquid could not support an exchange and that the standardization of contracts would limit CDS' risk management benefits.
- Banning or otherwise restricting uncovered CDS could limit activity that some observers believe contributed to the recent distress of financial institutions, yet proponents of uncovered CDS argue that banning these contracts would severely limit market liquidity and eliminate a valuable tool for hedging credit risk.
- Finally, some regulators and market observers believe that mandatory reporting of CDS trades to a central registry would increase transparency and provide greater certainty that information on all CDS was being captured in one place. However, some market participants suggested that detailed reporting of CDS trades should be limited to regulators so that positions were not exposed publicly, and some participants explained that a similar reporting system for bond markets had had adverse consequences that stifled that market.

Other OTC Derivatives May Benefit from Similar Efforts

Regulators and the industry have initiated efforts to improve the operational infrastructure of OTC derivatives in general. However, each product has unique challenges because of differences in market maturity, volumes, and users, among other things. Despite these unique challenges, regulators, market participants, and observers told us that OTC derivatives, generally shared similar risks, such as operational and counterparty credit risks, and would benefit from initiatives to address those risks. As part of their efforts to improve the operational infrastructure of OTC derivatives markets, market participants have identified seven high-level goals:

- Global use of clearinghouse processing and clearing,
- Continuing portfolio compression efforts,

-
- Electronic processing of eligible trades (targets of the effort include equity, interest rate, and foreign exchange derivatives),
 - Elimination of material confirmation backlogs,
 - Risk mitigation for paper trades that are not electronically processed,
 - Streamlined trade life-cycle management, and
 - Central settlement for eligible transactions.

Some other OTC derivatives may also benefit from reductions in the amount of outstanding trades through portfolio compression efforts. FRBNY officials stated that they are looking at other OTC derivatives that had a critical mass of outstanding trades to determine whether they would benefit from compression. To the extent that further regulatory actions are explored for other OTC derivatives, regulators must consider the risks and characteristics of each class of OTC derivatives before taking additional actions.

In closing, I would like to provide some final thoughts. While CDS have received much attention recently, the rapid growth in this type of OTC derivative more generally illustrates the emergence of increasingly complex products that have raised regulatory concerns about systemic risk. Bank regulators may have some insights into the activities of their supervised banks that act as derivatives dealers, but CDS, like OTC derivatives in general, are not regulated products, and the transactions are generally not subject to regulation by SEC, CFTC, or any other U.S. financial regulator. Thus, CDS and other OTC derivatives are not subject to the disclosure and other requirements that are in place for most securities and exchange-traded futures products. Although recent initiatives by regulators and industry have the potential to address some of the risks from CDS, these efforts are largely voluntary and do not include all CDS contracts. In addition, the lack of consistent and standardized margin and collateral practices continue to make managing counterparty credit risk and concentration risk difficult and may allow systemically important exposures to accumulate without adequate collateral to mitigate associated risks. This area is a critical one and must be addressed going forward.

The gaps in the regulatory oversight structure of and regulations governing financial products such as CDS allowed these derivatives to grow

unconstrained, and little analysis was done on the potential systemic risk created by their use. Regulators of major CDS dealers may have had some insights into the CDS market based on their oversight of these entities, but they had limited oversight of nonbank market participants, such as hedge funds, or subsidiaries of others like AIG, whose CDS activities partly caused its financial difficulties. This fact clearly demonstrates that risks to the financial system and even the broader economy can result from institutions that exist within the spectrum of supervised entities. Further, the use of CDS creates interconnections among these entities, such that the failure of any one counterparty can have widespread implications regardless of its size. AIG Financial Products, which had not been closely regulated, was a relatively small subsidiary of a large global insurance company. Yet the volume and nature of its CDS business made it such a large counterparty that its difficulty in meeting its CDS obligations not only threatened the stability of AIG but of the entire financial system as well.

Finally, I would briefly like to mention what the current issues involving CDS have taught us about systemic risk and our current regulatory system. The current system of regulation lacks broad authority to monitor, oversee, and reduce risks to the financial system that are posed by entities and products that are not fully regulated, such as hedge funds, unregulated subsidiaries of regulated institutions, and other non-bank financial institutions. The absence of such authority may be a limitation in identifying, monitoring, and managing potential risks related to concentrated CDS exposures taken by any market participant. Regardless of the ultimate structure of the financial regulatory system, a systemwide focus is vitally important. The inability of the regulators to monitor activities across the market and take appropriate action to mitigate them has contributed to the current crisis and the regulators' inability to effectively address its fallout. Any regulator tasked with a systemwide focus would need broad authority to gather and disclose appropriate information, collaborate with other regulators on rule making, and take corrective action as necessary in the interest of overall financial market stability, regardless of the type of financial product or market participant.

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