

January 2010

Counterparty Regulation and Its Limits: The Evolution of the Credit Default Swaps Market

Houman B. Shadab
New York Law School

Follow this and additional works at: https://digitalcommons.nyls.edu/nyls_law_review



Part of the [Antitrust and Trade Regulation Commons](#), [Banking and Finance Law Commons](#), [Contracts Commons](#), [Law and Economics Commons](#), [Legal Remedies Commons](#), and the [Secured Transactions Commons](#)

Recommended Citation

Houman B. Shadab, *Counterparty Regulation and Its Limits: The Evolution of the Credit Default Swaps Market*, 54 N.Y.L. SCH. L. REV. 689 (2009-2010).

This Article is brought to you for free and open access by DigitalCommons@NYLS. It has been accepted for inclusion in NYLS Law Review by an authorized editor of DigitalCommons@NYLS.

HOUMAN B. SHADAB

Counterparty Regulation and Its Limits: The Evolution of the Credit Default Swaps Market

ABOUT THE AUTHOR: Houman B. Shadab is Associate Professor of Law at New York Law School, J.D., University of Southern California, 2002; B.A., University of California at Berkeley, 1998. This essay is based on a talk delivered at the Fear, Fraud, and the Future of Financial Regulation Symposium sponsored by the Center for Business Law and Policy at New York Law School held on April 24, 2009. The author thanks participants in the symposium for comments and Faith Stevelman for the opportunity to present his views. Portions of this essay are based upon research derived from Houman B. Shadab, *Guilty by Association? Regulating Credit Default Swaps*, 4 *ENTREPREN. BUS. L.J.* 407 (2010).

COUNTERPARTY REGULATION AND ITS LIMITS

I. INTRODUCTION

Over-the-counter (“OTC”) derivatives are widely regarded as “unregulated” financial instruments. While it is true that OTC derivatives are subject to relatively minimal federal regulation, OTC derivatives are in fact subject to a robust form of control and governance in the form of counterparty regulation.¹ Counterparty regulation arises when two or more parties are continually exposed to counterparty credit risk for the duration of a long-term contract, and it consists of specific governance mechanisms such as the daily adjustment of collateral and the netting out of redundant trades.² Counterparty regulation governs derivatives transactions but not securities transactions. This essay reviews recent significant developments in the market for one type of OTC derivatives contract in particular—the market for credit default swaps (“CDSs”)—and suggests that these developments illustrate the strengths and limitations of counterparty regulation. Given the overall strength of CDS counterparty regulation during the financial crisis, and cooperative efforts being undertaken by CDS market participants and regulators to improve CDS market infrastructure, comprehensive federal regulation of CDSs does not seem necessary to achieve greater transparency and financial stability.

A CDS is a contract involving two parties that trade credit risk: a credit protection buyer and a credit protection seller. Each party to a CDS trade is a counterparty to the other. A CDS always references one or more debt obligations, such as a loan made by a bank or the bonds of a public company. Under the terms of a CDS contract, a protection buyer must make periodic payments to the protection seller, and will typically do so on a quarterly basis for a period of five years. The protection buyer will generally pay a fee proportionate to the credit risk of the debt obligation referenced by the CDS. In return, the protection seller must pay the protection buyer if a credit event takes place. A credit event is a negative development relating to the specified reference debt obligation, such as a failure to pay under the obligation or the bankruptcy of the entity that issued the reference obligation. If a credit event occurs, a CDS requires the protection seller to pay the protection buyer the diminished value of the reference debt obligation. In this sense, a CDS is a type of insurance for credit risk that can help banks and other companies better manage their credit risks. For example, a bank that decides it made too many loans to a specific company or sector of the economy can purchase CDS protection on those loans.

1. See PRESIDENT’S WORKING GROUP ON FINANCIAL MARKETS, OVER-THE-COUNTER DERIVATIVES MARKETS AND THE COMMODITY EXCHANGE ACT 34 (1999) (noting that “[w]ith respect to OTC derivatives dealers, private counterparty discipline currently is the primary mechanism relied upon for achieving the public policy objective of reducing systemic risk”), available at <http://www.treas.gov/press/releases/reports/otcact.pdf>.

2. “Netting” refers to a practice (also referred to as “trade compression” or “tearing-up”) whereby dealers cancel out mutually offsetting CDS positions so as to manage only the net risk between themselves and counterparties. See Robert R. Bliss & George G. Kaufman, *Derivatives and Systemic Risk: Netting, Collateral, and Closeout* 8–11 (Fed. Reserve Bank of Chi., Working Paper No. 2005-03, 2005) (describing netting), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=730648.

CDS contracts are not traded on centralized exchanges like stocks or futures, but rather between bank-owned dealers and CDS end-users. The primary participants in the CDS market are CDS dealers, banks that use CDSs in their loan portfolios, hedge funds, and insurance companies. The overwhelming majority of CDS trades take place between dealers.³ Two of the most common types of CDS products are single-name CDSs and CDS indexes. A single-name CDS references the bonds of a single company or nation. A CDS index is similar in structure to well-known stock indexes such as the Dow Jones Industrial Average and S&P 500. Instead of tracking the price of a group of stocks that make up a stock index, however, a CDS index tracks the prices of a group of component CDSs. A popular CDS index is the Markit CDX North American Investment Grade, which is comprised of 125 underlying CDSs referencing North American investment grade companies.⁴ A payment by the protection seller on the index must be made if any one of the component companies experiences a credit event.

A notable feature of the CDS market was its rapid growth and size after the turn of the century. According to surveys conducted by the International Swaps and Derivatives Association (“ISDA”) and the Bank for International Settlements (“BIS”), the notional value⁵ of CDS contracts grew from approximately \$632 billion in 2001 and reached a high of \$57.8 trillion at the end of 2007.⁶ By August 2009, the notional value of CDS agreements dropped to approximately \$30 trillion.⁷ As discussed below, this decrease came about primarily because of industry-led efforts to eliminate redundant contracts, thereby reducing the gross notional value of contracts outstanding.

This essay proceeds as follows: Part II explains why counterparty regulation is a characteristic feature of OTC derivatives markets and not the securities markets. Part III argues that counterparty regulation helps to explain why the CDS market remained liquid and generally effective throughout the financial crisis, despite significant failures involving subsidiaries or affiliates of insurance companies selling protection to banking institutions on their mortgage-related securities. Part III also explores reasons why CDS market participants are undertaking infrastructural

-
3. See Matthew Leising, *CME Group, Citadel Said to Lack Credit-Default Swap Customers*, BLOOMBERG, Mar. 19, 2009, <http://www.bloomberg.com/apps/news?pid=20601087&sid=a4LBDf2UtsEE&refer=home> (reporting that according to the Depository Trust & Clearing Corp. (“DTCC”), “[b]anks trading with other banks accounted for 80 percent of all [CDS] trades in the week ended March 13, [2009]”).
 4. See Markit CDS Product Summary, <http://www.markit.com/en/products/data/indices/credit-and-loan-indices/cdx/cdx.page?> (last visited Feb. 15, 2010).
 5. The “notional value” of a CDS is the amount of the loan referenced by the contract. For example, a CDS contract that references a \$1 million loan has a notional value of \$1 million.
 6. See David Mengle, *Credit Derivatives: An Overview*, ECON. REV., Fourth Quarter 2007, at 1, 7; BANK FOR INTERNATIONAL SETTLEMENTS, *OTC DERIVATIVES MARKET ACTIVITY IN THE SECOND HALF OF 2008* 7 (2009).
 7. Press Release, Depository Trust & Clearing Corporation, DTCC Values Additional CDS Contracts in Trade Information Warehouse at \$5.7 Trillion (Aug. 3, 2009), http://www.dtcc.com/news/press/releases/2009/cds_contract_values.php (noting that \$5.7 trillion in customized CDSs were reported to the DTCC’s trade warehouse in addition to the \$26.5 trillion already in the warehouse as of July 24, 2009).

COUNTERPARTY REGULATION AND ITS LIMITS

improvements in cooperation with the Federal Reserve Bank of New York (“New York Fed”). Finally, Part IV notes that federal regulatory reform of OTC derivatives may undermine counterparty regulation or improve it where deficient, and provides some recommendations for how counterparty regulation can be strengthened.

II. CREDIT DEFAULT SWAP GOVERNANCE

The relationship between two parties to a CDS contract is comprised of the rights, duties, and market structures that arise primarily from private bargaining and contract law. This is because at least up through 2009, federal regulation of CDSs has been limited to the Securities and Exchange Commission’s (“SEC”) jurisdiction over CDSs for fraud, market manipulation, and insider trading.⁸ CDSs are not regulated as securities or futures under federal law or as insurance or gambling contracts under state law.⁹ However, because the major CDS dealers are owned by commercial banks, bank regulators have the ability to directly oversee banks’ CDS trading activities.¹⁰ From 2004 to 2008, the SEC had indirect oversight over certain investment banks’ utilization of CDSs through the SEC’s now-defunct Consolidated Supervised Entity program.¹¹ During and after the financial crisis, the governance and structure of the CDS market has also increasingly been a product of cooperative efforts between CDS market participants and regulators, spearheaded by the New York Fed. Federal reform of the structure of OTC derivatives regulation that will likely pass in 2010 will significantly impact how CDSs are regulated. Although the details of OTC derivatives regulatory reform have yet to be finalized and enacted into law, the following basic reforms are likely: CDSs will presumptively be required to be cleared by a central counterparty; users of non-cleared CDSs will be required to set aside relatively large amounts of collateral; and a wide range of CDS market participants will be required to bring

-
8. See Securities Act § 17(a), 15 U.S.C. § 77q(a) (2006); Securities Exchange Act §§ 9(a)(2)–(5), 15 U.S.C. §§ 78i(a)(2)–(5) (2006); Securities Exchange Act § 15(c)(1), 15 U.S.C. § 78o(c)(1) (2006) (rules for brokers and dealers); Securities Exchange Act §§ 16(a)–(b), 15 U.S.C. §§ 78p(a)–(b) (2006) (applying section 16 anti-insider trading reporting and short-swing profit provisions to security-based swaps); Securities Exchange Act § 20(d), 15 U.S.C. § 78t(d) (2006) (including security-based swaps among the types of instruments which cannot be traded on the basis of material nonpublic information).
 9. See Securities Act § 2A(b)(1), 15 U.S.C. § 77b-1(b)(1) (2006) (excluding a “security-based swap agreement” from the definition of “security”); Securities Exchange Act § 3A(b)(1), 15 U.S.C. § 78c-1(b)(1) (2006) (same); Commodity Exchange Act § 2(d)(1), 7 U.S.C. § 2(d)(1) (2006) (defining an “excluded derivative transaction”); Commodity Exchange Act § 1a(13)(i), 7 U.S.C. § 1a(13)(i) (2006) (defining “excluded commodity” to include debt securities which are referenced by CDSs); Commodity Exchange Act § 2(g), 7 U.S.C. § 2(g) (2006) (excluding certain excluded swaps from CEA applicability to futures); 7 U.S.C. § 16(e)(2) (2006) (CEA applicability to swaps “supersede[s] and preempt[s] the application of any State or local law that prohibits or regulates gaming or the operation of bucket shops”); State of New York Insurance Department, Circular Letter No. 19, at 6–7 (Sept. 22, 2008).
 10. *Systemic Risk: Regulatory Oversight and Recent Initiatives to Address Risk Posed by Credit Default Swaps: Hearing Before the Subcomm. on Capital Mkts., Ins., and Gov’t Sponsored Enters. of the H. Comm. on Fin. Svcs.*, 111th Cong. 6–9 (2009) (statement of Orice M. Williams, Director, Financial Markets and Community Investment).
 11. See *id.* at 8; Press Release, U.S. Sec. & Exch. Comm’n, Chairman Cox Announces End of Consolidated Supervised Entities Program (Sept. 26, 2008), <http://www.sec.gov/news/press/2008/2008-230.htm>.

greater transparency to their transactions and be subject to new requirements regarding registration, reporting, recordkeeping, position limits, and business conduct standards.¹²

A. Counterparty Regulation

Counterparty credit risk (or simply counterparty risk) is the risk that a contractual counterparty will be unable to make payments required by the contract.¹³ Counterparty risk does not arise in long-term contracts where one side has fully performed, its duties have been discharged, and it is merely waiting for performance by the other. In such a case it is solely the party that has already completed performance that is subject to nonperformance risk. Counterparty risk, on the other hand, is bilateral: it arises only when each party is exposed to the failure of the other to pay.¹⁴

Counterparty risk does not arise in a securities transaction—when stocks or bonds are sold. In the sale of a security, the legal obligations of each party relating to final settlement of the contract are extinguished within a few days after the sale with no bilateral risk remaining.¹⁵ At that time, the purchaser is exposed to investment risk and has an incentive to monitor the issuer for conduct that may impact the value of the security including the issuer's ability to pay the investor any dividend or interest payments. However, the issuer has no incentive to monitor the investor for counterparty risk because the investor's payment obligations have already been performed. The risks that investors pose to issuers, rather, stem from a variety of sources relating to investors exercising control over the issuer by voting or other means, or impacting the price of the security through purchases or sales. None of these risks relate to an investor's obligation to make any payment, under a contractual duty or otherwise.

By contrast, counterparty risk does arise in an OTC derivatives transaction.¹⁶ As Robert Bliss and Robert Steigerwald note, the multi-year duration and bilateral risk of OTC derivatives contracts mean that counterparty risk is an essential aspect of the transactions:

With derivatives . . . the length of time between the execution of a transaction and settlement is *essential to the contract*. Put another way, the fundamental economic purpose of a derivatives transaction involves the reciprocal

12. See Hans-Christian Latta & Milena Tantcheva, *United States: Proposals For Broad Regulation Of Derivatives Markets Emerge In Congress*, MONDAQ, Nov. 3, 2009, <http://www.mondaq.com/unitedstates/article.asp?articleid=88674>.

13. See Michael Pykhtin & Steven Zhu, *A Guide to Modelling Counterparty Credit Risk*, GARP RISK REV., July/Aug. 2007, at 16, available at <http://ssrn.com/abstract=1032522>.

14. See *id.* at 16–17.

15. Robert R. Bliss & Robert S. Steigerwald, *Derivatives Clearing and Settlement: A Comparison of Central Counterparties and Alternative Structures*, ECON. PERSPECTIVES, 4Q/2006, at 23 (“[T]he obligations of the buyer and seller of a security are settled within a few days, typically no more than three or five days, depending upon the security and the market involved.”).

16. See Pykhtin & Zhu, *supra* note 13, at 16. See generally Eduardo Canabarro & Darrell Duffie, *Measuring and Marking Counterparty Risk*, in ASSET/LIABILITY MANAGEMENT OF FINANCIAL INSTITUTIONS 122, 122 (Leo M. Tilman ed., 2003), available at http://www.stanford.edu/~duffie/Chapter_09.pdf.

COUNTERPARTY REGULATION AND ITS LIMITS

obligations of the parties over the life of the contract [T]he parties to a derivatives contract are principally dependent upon each other's creditworthiness to assure future performance in the absence of mechanisms to transfer that risk [S]ubstantial performance (that is, credit) risk is an integral factor in the completion of derivatives transactions, compared with securities or payments transactions.¹⁷

To manage and reduce counterparty risk, derivatives counterparties may undertake a wide variety of actions. These actions constitute counterparty regulation—a bilateral governance mechanism that arises when two parties to a contract monitor the conduct of each other and take other precautions to minimize the risk of nonperformance by their counterparty. Counterparty regulation arises in response to counterparty risk and typifies the relationship between derivatives counterparties. Thus, counterparty regulation consists of several different types of activities which include requiring and managing collateral, early settlement in the event of a credit ratings downgrade, netting out redundant agreements, and limiting one's exposure to any single counterparty.¹⁸

In the CDS market, counterparty regulation is made up of three fundamental practices. First, CDS dealers typically seek to limit their exposure to any single counterparty based upon that counterparty's ability to fulfill the terms of a CDS contract. According to a survey of CDS dealers by the Government Accountability Office ("GAO"), dealers measure the total counterparty risk from a particular counterparty and do not let exposure to any single counterparty go above pre-established limits.¹⁹ For example, a dealer will only purchase a certain amount of CDSs from a particular protection seller to prevent overexposing itself to the risk that the seller may not be able to meet its obligations to make a payout upon the happening of a credit event.

A second practice is known as netting (which is also referred to as trade compression or tearing-up) whereby dealers cancel out mutually offsetting CDS positions so as to manage only the net risk between themselves and their counterparties.²⁰ Netting reduces the overall amount of CDS contracts and gross risk exposures without changing the underlying economic position of the parties.²¹ By the end of 2008, major U.S.

17. Bliss & Steigerwald, *supra* note 15, at 23.

18. See CHRIS MARRISON, *THE FUNDAMENTALS OF RISK MEASUREMENT* 249–51 (2002); Bliss & Steigerwald, *supra* note 15, at 24.

19. U.S. GOVERNMENT ACCOUNTABILITY OFFICE, *CREDIT DERIVATIVES: CONFIRMATION BACKLOGS INCREASED DEALERS' OPERATIONAL RISKS, BUT WERE SUCCESSFULLY ADDRESSED AFTER JOINT REGULATORY ACTION 15* (2007).

20. See Bliss & Kaufman, *supra* note 2, at 8–11 (describing netting); U.S. GOVERNMENT ACCOUNTABILITY OFFICE, *supra* note 19, at 23 ("In a tear-up process, an automated system matches up offsetting positions across many market participants, allowing those trades to be, in effect, terminated and thereby removing the need to confirm such trades."); EUROPEAN CENTRAL BANK, *CREDIT DEFAULT SWAPS AND COUNTERPARTY RISK* 42–44 (2009).

21. See MARKIT, *THE CDS BIG BANG: UNDERSTANDING THE CHANGES TO THE GLOBAL CDS CONTRACT AND NORTH AMERICAN CONVENTIONS* 5–6 (2009), available at http://www.markit.com/cds/announcements/resource/cds_big_bang.pdf.

commercial bank-dealers had reduced their gross OTC derivatives exposures through netting by 88.7%, and \$30.2 trillion in notional value of CDSs had been eliminated through trade compression by TriOptima in particular.²²

Third, CDS counterparties typically use and adjust collateral daily to reduce the risk of the protection seller not being able to make the required payout upon the happening of a credit event. As the Reserve Bank of Australia noted:

[CDS] market participants typically negotiate terms that give the CDS buyer the right to demand an initial margin (usually collateral such as cash or government bonds) from the CDS seller as some minimum protection should the seller default. If CDS premiums subsequently rise (thus increasing the cost of purchasing replacement protection should the CDS seller default), more collateral may be posted. Conversely, if prices fall, collateral can be returned, or the CDS buyer might even be required to post collateral to the seller.²³

The use of collateral underlying CDS trades has increased in recent years. By 2007, an estimated two-thirds of CDS credit exposures were collateralized.²⁴

None of the foregoing implies that the risk management practices and other structures underlying counterparty regulation will always be adequate to prevent substantial losses to CDS counterparties or disruptions to the financial system. Counterparty regulation relies on the economic interests of derivatives counterparties and not government regulation to ensure that risk is appropriately measured, managed, and contained. In this sense, counterparty regulation is a form of “self-regulation” because the conduct of the parties to the transaction and the rules and procedures adopted by the dealer trade group ISDA govern and determine the counterparties’ relationship.²⁵ Accordingly, counterparty regulation is subject to the limitations on effectiveness generally applicable to all market transactions, which range from simple error to well-defined market failures such as collective action problems.²⁶

22. See COMPTROLLER OF THE CURRENCY, OCC’S QUARTERLY REPORT ON BANK TRADING AND DERIVATIVES ACTIVITIES FOURTH QUARTER 2008 4, 14 (2008); EUROPEAN CENTRAL BANK, *supra* note 20, at 44.

23. RESERVE BANK OF AUSTRALIA, FINANCIAL STABILITY REVIEW 69 (2009); *see also* COMPTROLLER OF THE CURRENCY, *supra* note 22, at 5 (stating that for U.S. commercial banks, “large credit exposures from derivatives, whether from other dealers, large non-dealer banks or hedge funds, are collateralized on a daily basis”).

24. See INTERNATIONAL SWAPS AND DERIVATIVES ASSOCIATION, INC. (ISDA), ISDA MARGIN SURVEY 2009 7–8 (2009); *see also* EUROPEAN CENTRAL BANK, *supra* note 20, at 44–50.

25. See CFA INSTITUTE, CENTRE FOR FINANCIAL MARKET INTEGRITY, SELF-REGULATION IN TODAY’S SECURITIES MARKETS: OUTDATED SYSTEM OR WORK IN PROGRESS? 1–2 (2007). Self-regulation in the OTC derivatives context is different than with exchanged-traded derivatives, however. In the exchange-traded context, futures exchanges are the entities primarily tasked with industry self-regulation. ROBERT ZWIRB, CADWALADER, WICKERSHAM & TAFT LLP, SELF-REGULATION IN THE FUTURES INDUSTRY (2008), available at <http://www.cadwalader.com/assets/article/050108ZwirbSelfReg.pdf>. In the OTC markets, centralized exchanges are not utilized, and it is the counterparties themselves that regulate behavior.

26. *See generally* ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 44–48 (4th ed. 2004) (explaining the different types of market failure).

B. Market Participant and Regulator Cooperation

In a seminal analysis of the different types of legal rules applicable to derivatives transactions, Professor Frank Partnoy developed a four-quadrant taxonomy based on whether the rules are ex ante or ex post, private or public. As applied to OTC derivatives, these four types of rules are the standardized contract provisions developed by the ISDA (ex ante, private), the rules applied by arbitrators in disputes (ex post, private), federal statutes such as the Commodities Futures Modernization Act of 2000 (ex ante, public), and judicial rulings likely emanating from the United States District Court for the Southern District of New York (ex post, public).²⁷ Partnoy suggests that these four sources of derivatives law should not be viewed as allegorical “four horsemen,” either bringing doom or salvation to the derivatives markets, but rather as part of the balance of what constitutes derivatives regulation.²⁸

This essay suggests that the current governance and structure of the derivatives markets is also the result of a “fifth horseman,” one that does not fit into the four categories Partnoy identifies above, but in some senses incorporates all of them. The fifth source of derivatives regulation consists of the cooperative activities of CDS market participants and regulators to increase the standardization, efficiency, and transparency of CDS transactions and the stability of CDS markets more generally. The outcomes of this collaboration are new ex ante contractual provisions. But because they are largely driven by or in anticipation of the conduct of legislators or regulators, and not just market participants, there is a public nature to them not present in straightforward amendments to ISDA provisions or arbitrational decision making. Although the changes are ex post in the sense of being in response to CDS transaction inadequacies revealed by the financial crisis, they are not public or ex post as are legislative and regulatory actions. These cooperative efforts entail no new public lawmaking whatsoever.

Although cooperation between CDS participants and regulators has mostly taken place in 2009 in response to the financial crisis, a clear precedent was established in 2005 when the United States and foreign regulators collaborated with CDS dealers to improve certain operational issues. As the CDS market was quickly increasing in size from 2003 to 2005, a large backlog of CDS trades began to accumulate at the major CDS dealers.²⁹ Two factors drove the backlog accumulation: (1) the rapid growth in CDS trades was outstripping the capabilities of manual confirmation processes, and (2) hedge funds were assigning CDS trades to third parties without the consent of their original counterparties (typically CDS dealers).³⁰ The large backlogs of unconfirmed trades increased dealers’ operational risks and had the potential to exacerbate market-wide risks if a credit event was required to be paid

27. See Frank Partnoy, *ISDA, NASD, CFMA, and SDNY: The Four Horsemen of Derivatives Regulation?*, in *THE BROOKINGS-WHARTON PAPERS ON FINANCIAL SERVICES: 2002* 213, 213–15 (Richard Herring & Robert E. Litan, eds., 2002).

28. See *id.* at 247–48.

29. See U.S. GOVERNMENT ACCOUNTABILITY OFFICE, *supra* note 19, at 11.

30. See *id.* at 12–14.

out.³¹ As a result, in September 2005, the New York Fed held a meeting attended by the fourteen largest CDS dealers and their respective regulators to discuss how dealers could decrease the backlogs.³² Subsequently, the dealers and other industry participants took actions both to increase the use of automated trades and decrease the practice of unilateral assignments of trades.³³ By October 2006, the number of outstanding trade confirmations was reduced by 76%, the share of trades confirmed electronically had more than doubled to 94%, and the practice of unilateral assignments had effectively come to an end.³⁴

Without the encouragement and supervision of the New York Fed and other regulators, CDS dealers by themselves were apparently unable to coordinate a solution to the backlog problem. According to David Mengle, head of research for ISDA, the dealers were stuck in a prisoner's dilemma situation.³⁵ No single dealer had an incentive to act to remedy the problem, and, in fact, each had an incentive to retain lucrative trading business by *not* requiring hedge funds to first obtain the consent of their counterparty before they assigned a trade.³⁶ Nonetheless, when the backlog problem was ultimately resolved, all dealers were better off.³⁷ The collective action problem, well recognized in the economics literature as a market failure that could warrant government intervention, was an instance of the failure of counterparty regulation in the CDS market. As Mengle observed:

The case of novations demonstrates that collective action problems can threaten the feasibility of private sector efforts but that thoughtful regulatory action can facilitate a solution. Although all parties had an interest in a solution, none believed the other side was willing to take the necessary steps. Further, competitive considerations made dealers reluctant to exert pressure on one of their most active client groups. The regulatory intervention provided sufficient cover for dealers to insist on adherence by their clients. In this case, a relatively light touch by a regulator was sufficient to bring about a solution.³⁸

The effectiveness of counterparty regulation is therefore limited in cases where market actors are unable to or have incentives to not take actions unilaterally that would benefit the industry of markets as a whole. At the same time, because each industry participant has an incentive to see a reduction in their counterparty risk, meeting with regulators and obtaining commitments from market participants can be sufficient without additional mandates in the form of legislation or regulation. So long as that remains true, collective action problems and other problems impeding

31. *See id.* at 14–17.

32. *Id.* at 19.

33. *See id.* at 23–26.

34. *See id.* at 20, 25–26.

35. *See generally* COOTER & ULEN, *supra* note 26, at 38–42 (explaining the prisoner's dilemma).

36. *See* Mengle, *supra* note 6, at 19.

37. *See* U.S. GOVERNMENT ACCOUNTABILITY OFFICE, *supra* note 19, at 27–28.

38. Mengle, *supra* note 6, at 20.

COUNTERPARTY REGULATION AND ITS LIMITS

purely market-based solutions can be solved. The existence of counterparty risk creates unique incentives to cooperate with regulators to overcome such problems and thereby diminishes the need for government regulation.

III. CDS COUNTERPARTY REGULATION AND THE FINANCIAL CRISIS

A. The Benefits of Counterparty Regulation in Credit Risk Transfer

Counterparty regulation in the context of CDS transactions gave rise to fundamentally sound risk management practices and market structures. CDS protection buyers were generally able to obtain the protection they paid for throughout the financial crisis without causing sudden, destabilizing obligations to CDS protection sellers. Perhaps the most prominent example was the bankruptcy of Lehman Brothers—the largest corporate bankruptcy in U.S. history.³⁹ Despite the fact that Lehman bonds were worth less than eight cents on the dollar, CDS sellers were generally able to meet their obligations because dealers had made offsetting trades, and market participants utilized and managed risk with collateral. Moreover, only 7.2% (\$5.2 billion) of the notional value of the CDSs written on Lehman was actually required to be paid out.⁴⁰ In fact, Merrill Lynch was the only major financial institution to suffer a significant trading loss from its CDS positions due to the Lehman bankruptcy.⁴¹ In addition, despite a record number of corporate bankruptcies and CDS payouts in February 2009, CDS risk management and auction settlement practices were sufficiently effective to prevent credit events from causing broader disruptions in the financial system.⁴² In the overwhelming majority of CDS transactions, unmanageable losses or broader, destabilizing financial shocks failed to manifest. Furthermore, the CDS market generally remained liquid as parties continued to trade their contracts despite the major market disruptions that were occurring.⁴³

By contrast, the markets for credit risk transfer instruments structured as securities suffered a major disruption beginning in the second half of 2008, as the issuance of collateralized debt obligations (“CDOs”) collapsed and investors in such

39. Peter Madigan, *Lehman Brothers Bankruptcy to be Largest in History*, RISK.NET, Sept. 16, 2008, available at <http://www.risk.net/risk/news/1504939/lehman-brothers-bankruptcy-largest-history>.

40. See Press Release, Depository Trust & Clearing Corporation, DTCC Trade Information Warehouse Completes Credit Event Processing for Lehman Brothers (Oct. 22, 2008), http://www.dtcc.com/news/press/releases/2008/dtcc_processes_lehman_cds.php.

41. See EUROPEAN CENTRAL BANK, *supra* note 20, at 33.

42. See Laura Mandaro, *CDS Auctions Reach Record High in February*, MARKETWATCH, Feb. 27, 2009, available at <http://www.marketwatch.com/story/bankruptcy-defaults-push-cds-auctions-a>.

43. See MARKIT, *supra* note 21, at 7 (stating that “the CDS markets remained liquid and functioning during the collapse of Lehman Brothers and Bear Stearns”). However, the ABX CDS indices referencing U.S. subprime mortgage-backed securities became relatively illiquid at various times in 2008, reflecting the illiquidity and losses in their reference assets. See *Liquidation Sale, ABX Illiquidity Underlined*, STRUCTURED CREDIT INVESTOR, Mar. 5, 2008, <http://www.structuredcreditinvestor.com/story.asp?PubID=250&ISS=22155&SID=16461>.

securities suffered major losses.⁴⁴ A CDO is a debt security (bond) whose cash flows were often dependent upon those obtained from mortgage-backed securities. The contrasting outcomes for CDSs and CDOs is in part explainable by the lack of counterparty regulation in securities transactions, including CDOs. Sellers of mortgage-related credit risk who transfer securities have primary, short-term incentives in selling the securities to investors. Purchasers of such securities viewed them as long-term investments not subject to volatile price swings, and, unlike CDSs, purchasers did not have a daily market-pricing mechanism that required parties to exchange capital based upon market reassessments of value. The re-pricing and associated write-downs of CDOs came suddenly when two Bear Stearns hedge funds sold their CDO holdings in July of 2008 and subprime mortgage delinquencies began to rise.⁴⁵

CDOs also suffered from the fact that they are subject to credit ratings by credit ratings agencies. While credit ratings likely have some genuinely beneficial uses, regulatory overdependence on credit ratings ultimately led investors to rely too heavily on credit ratings for assessing the risk of CDOs.⁴⁶ CDSs, by contrast, typically do not receive credit ratings, and therefore do not suffer from ratings-based overdependence.

B. Counterparty Regulation Meets Its Limits

Yet despite the basic soundness of CDS risk management and market infrastructure, one corner of the CDS market revealed weaknesses. When the affiliates or subsidiaries of certain highly rated financial guarantors sold CDS protection to banking institutions referencing highly rated structured securities backed in substantial part by residential mortgages, protection sellers experienced significant financial distress as the value of the mortgage-related reference obligations began to drop. This scenario had two primary manifestations.

First, certain “monoline” bond insurers became overexposed to mortgage-related risk by guaranteeing the CDSs sold by the special-purpose vehicles they established. These CDSs typically referenced the lowest risk (highest grade), “super senior” portions of CDOs.⁴⁷ By the end of 2007, the monoline bond insurers guaranteed

44. See SECURITIES INDUSTRY AND FINANCIAL MARKETS ASSOCIATION (“SIFMA”), SIFMA GLOBAL CDO MARKET ISSUANCE DATA (2008), http://www.sifma.org/research/pdf/CDO_Data2008-Q4.pdf.

45. Hamish Risk, *Record CDO Fees Set Up Merrill, Citigroup for Worst Writedowns*, BLOOMBERG, Mar. 3, 2008, <http://www.bloomberg.com/apps/news?pid=20601109&sid=aTCaFu03ENY8>.

46. See Frank Partnoy, *Overdependence on Credit Ratings Was a Primary Cause of the Crisis* 18–20 (San Diego Legal Studies, Paper No. 09-015, 2009), available at http://www.law.yale.edu/documents/pdf/cbl/Partnoy_Overdependence_Credit.pdf; *Roundtable to Examine Oversight of Credit Rating Agencies: Roundtable Before the U.S. Securities and Exchange Commission* (Apr. 15, 2009) (statement of Lawrence J. White, Professor, NYU Stern School of Business), available at http://w4.stern.nyu.edu/news/docs/prof_white_sec_4-15-09.pdf.

47. See *The State of the Bond Insurance Industry: Hearing Before the Subcomm. on Capital Mkts., Ins., and Gov't Sponsored Enters. of the H. Comm. on Fin. Svcs.*, 110th Cong. 245–46 (2008) (statement of Patrick M. Parkinson, Deputy Director, Div. of Research and Statistics, Bd. Of Governors of the Fed. Res. Sys.).

COUNTERPARTY REGULATION AND ITS LIMITS

approximately \$127 billion of CDOs with mortgage-related collateral.⁴⁸ When mortgage-related debt securities began to decrease in value, several monoline insurers that guaranteed such securities with CDSs suffered financial losses, had their own bonds downgraded by credit ratings agencies, and, as of this writing, still stand the risk of being taken over by their respective state insurance regulator.⁴⁹ As a result of their downgrades and decreased creditworthiness, banks that purchased CDS protection had to write down the value of their CDSs purchased from the monolines.⁵⁰ For example, in 2008 Merrill Lynch reported a net credit valuation loss of \$10.4 billion that resulted largely from the decreased creditworthiness of its CDS counterparties, which included monoline bond insurance companies.⁵¹

Importantly, these troubled bond insurers did not post collateral (or otherwise set aside substantial reserves) upon entering the CDS transaction with their bank counterparty and instead were able to utilize their own AAA rating as an assurance to their counterparties of their own creditworthiness.⁵² This enabled the insurers to charge a low fee to bank protection buyers which, in turn, permitted the banks to execute what are known as negative basis trades. Banks executed negative basis trades by purchasing CDS protection on their mortgage-related CDOs and paying a lower premium on the CDS than they were receiving in interest payments from the CDO, which in turn allowed them to immediately book the profits from such a trade even before the CDO or CDS contracts expired.⁵³ Banks also purchased CDSs referencing their CDOs from the monolines to obtain regulatory capital relief, to avoid having to write down the value of their CDOs in case the CDOs' market value decreased, and for genuine hedging purposes.⁵⁴

48. Erik Holm & Jesse Westbrook, *N.Y. Regulator Pushes Banks to Rescue Bond Insurers*, BLOOMBERG, Jan. 24, 2008, <http://www.bloomberg.com/apps/news?pid=20601087&sid=aVPIJ2WgCKyw>.

49. See generally Economist Staff, *Buddy, Could You Spare Us \$15 Billion?*, CFO, Jan. 25, 2008, available at http://www.cfo.com/article.cfm/10590651/c_10591082?f; David Henry & Matthew Goldstein, *Death of a Bond Insurer*, BUSINESSWEEK, Apr. 3, 2008, available at http://www.businessweek.com/magazine/content/08_15/b4079024463824.htm; Alistair Barr, *Ambac Sees Quarterly Losses of Roughly \$1.3 Bln*, MARKETWATCH, July 28, 2009, <http://www.marketwatch.com/story/ambac-sees-quarterly-losses-of-roughly-13-bln-2009-07-28>; Shannon D. Harrington & Christine Richard, *Ambac Credit-Default Swaps Jump to Record on Surplus Concerns*, BLOOMBERG, July 28, 2009, <http://www.bloomberg.com/apps/news?pid=20602012&sid=a3jDyExiKJTU>; Nicole Bullock, *Muni Bonds Lose Ratings After Ambac Junked*, FIN. TIMES, July 31, 2009.

50. See Katharina Bart, *FOCUS: Investment Banks Seen With Hefty Monoline Write-Downs*, WALL ST. J., Mar. 26, 2009.

51. Merrill Lynch & Co., Inc., Annual Report (Form 10-K), at 18, 29, 34 (Dec. 28, 2008).

52. See Henny Sender, *Rock-solid Counterparty Hedges Spiral Out of Control*, FIN. TIMES, Feb. 13, 2008.

53. See *id.* (reporting that “the existence of [AAA-rated] rock solid hedge counterparties has allowed banks to book profits on trades that take advantage of price differentials for credit in the bond and derivatives markets”); Philip Alexander, *Securitisation Strategy Rethink*, THE BANKER, Dec. 1, 2008; Nicoletta Kotsianas, *CDS Negative-Basis Trading Jitters Hit Market*, CREDIT INVESTMENT NEWS, Feb. 18, 2008, at 10; JANET M. TAVAKOLI, STRUCTURED FINANCE AND COLLATERALIZED DEBT OBLIGATIONS: NEW DEVELOPMENTS IN CASH AND SYNTHETIC SECURITIZATION 348–49 (2008).

54. See DOMINIC O’KANE, LEHMAN BROTHERS INTERNATIONAL (EUROPE), CREDIT DERIVATIVES EXPLAINED 69 (2001) (“Since the introduction of the second Capital Adequacy Directive in 1996, EU

This same pattern of transactions and motivations repeated itself with banks and AIG Financial Products (“AIGFP”), a subsidiary of the international insurer and financial services conglomerate American International Group, Inc. (“AIG”). By year-end 2007, AIGFP sold CDS protection with a notional amount of \$527 billion, of which approximately \$61.4 billion referenced CDOs containing significant amounts of mortgage-backed securities as collateral.⁵⁵ Just like the monoline bond insurers, AIGFP’s CDSs written on CDOs were also primarily written on super senior CDO tranches.⁵⁶ Because AIGFP was not regulated as a bank and CDSs are not regulated as insurance products, AIGFP was not required to hold capital or reserves against its potential CDS payouts. AIGFP also did not post collateral upon entering into the agreements because AIG fully guaranteed AIGFP’s CDS obligations,⁵⁷ allowing AIGFP itself to assume AIG’s high credit rating in negotiating the swaps. Ultimately, as the CDOs’ mortgage-related collateral began to decrease in value, AIGFP was required to post collateral. By September 2008, as the value of mortgage-related securities kept dropping and AIG’s own bonds were downgraded, AIG ran out of cash and was unable to meet the approximately \$32 billion in collateral obligations and early termination payments it was required to pay under its CDS agreements.⁵⁸ As a result, the Federal Reserve and Treasury Department provided assistance to AIG several times and by March 2, 2009 had made \$182.5 billion in federal funds available to the company.⁵⁹

CDS counterparty regulation exhibited two basic failures in the case of the overexposed bond insurers and AIG. First, sufficient collateral or other capital was

banks have been allowed to use an approved value-at-risk (VaR) model . . . [which] may result in a lower capital requirement than implied under the banking book rules.”); Dieter Glüder, *Regulatory Impact of Synthetic Securitisation*, in *ASSET SECURITISATION AND SYNTHETIC STRUCTURES: INNOVATIONS IN THE EUROPEAN CREDIT MARKETS* 51, 52–53 (Rick Watson & Jeremy Carter eds., 2006) (stating that under Basel I, debt instruments matched with a CDS (and hence fully hedged) have lower capital reserve requirements in the trading book than the banking book); Craig Stein & David Aron, *Negative Basis Trade Basics*, *DERIVATIVES WEEK*, Nov. 17, 2006, http://www.derivativesweek.com/Article/1252065/Negative_Basis_Trade_Basics_.html (“Credit protection is often secondary [in terms of motivation for purchasing CDSs], given that many negative basis trades reference AAA-rated notes.”); Holm & Westbrook, *supra* note 48 (reporting that “bond insurers sold credit derivatives to banks . . . allowing banks to avoid writing them down as the underlying value of the securities slumped”).

55. See American International Group, Inc., Annual Report (Form 10-K), at 122 (Feb. 28, 2008); *American International Group's Impact on the Global Economy: Before, During, and After Federal Intervention: Hearing Before the House Fin. Svcs. Subcomm. on Capital Mkts., Ins., and Gov't Sponsored Enters.* 111th Cong. 171–86 (2009) (statement of Edward M. Liddy, Chairman and Chief Executive Officer, AIG).
56. See American International Group, Inc., Annual Report (Form 10-K), at 121–22 (Feb. 28, 2008); *American International Group: Examining What Went Wrong, Government Intervention, and Implications for Future Regulation: Hearing Before the S. Comm. on Banking, Housing, and Urban Affairs*, 111th Cong. 5 (2009) (statement of Scott M. Polakoff, Acting Director, Office of Thrift Supervision).
57. American International Group, Inc., Annual Report (Form 10-K), at 89 (Feb. 28, 2008).
58. American International Group, Inc., Annual Report (Form 10-K), at 4 (Mar. 2, 2009).
59. See *Federal Financial Assistance: Preliminary Observations on Assistance Provided to AIG: Hearing Before the Subcomm. on Capital Mkts., Ins., and Gov't Sponsored Enters. of the H. Comm. on Fin. Svcs.*, 111th Cong. 2–3 (2009) (statement of Orice M. Williams, Director, Financial Markets and Community Investment).

COUNTERPARTY REGULATION AND ITS LIMITS

not set aside or managed by either party to the trades to ensure that the CDS sellers were able to meet their obligations. Once the collateral calls began to come in from CDS buyers, the sellers did not have sufficient resources to meet them. Second, the commercial and investment banks that purchased CDS protection from the bond insurers or AIGFP failed to adequately limit their counterparty exposures based upon the creditworthiness of the counterparties.

The incentives for CDS protection buyers to monitor the long-term ability of their counterparties to fulfill their obligations were undermined by four factors. First, the ability to book immediate accounting gains through a negative-basis trade and for employees to be rewarded with a bonus⁶⁰ undermined long-term incentives for banks to care whether their protection sellers could ultimately satisfy their obligations. Second, the ability of European commercial banks to benefit from immediate regulatory capital relief similarly undermined the banks' incentives to take into account long-term risks. Third, the prospective willingness of national governments to bail out banks through a "too big to fail" policy may have undermined banks' incentives to monitor their protection sellers' creditworthiness. Finally, because bankruptcy law gives CDS buyers priority over unsecured creditors in bankruptcy, and thus reduces their exposure to the seller's insolvency, CDS protection buyers had less of an incentive to monitor their protection seller counterparty's excessive risk-taking, whether by selling too much CDS protection or otherwise.⁶¹ Lack of transparency over counterparty creditworthiness likely did not substantially contribute to banks failing to monitor protection sellers. AIG, for example, made substantial disclosures in its public financial statements regarding the nature and extent of its CDS-related risks of which its bank counterparties were likely fully aware.⁶²

Of course, these CDS-related failures were aspects of the much broader economy-wide problem of underpricing the risk associated with mortgage-backed securities. Investors in mortgage-related securities and sellers of CDS protection on such securities each sought returns on securities for which the risk was fundamentally underpriced. Importantly, however, as of year-end 2007, the total value of the systemically troublesome CDSs referencing mortgage-related securities and sold by bond insurers and AIGFP was approximately \$188 billion, or less than one percent of the then-estimated \$58 trillion CDS market.⁶³ Accordingly, the systemically

60. See TAVAKOLI, *supra* note 53, at 349.

61. See Richard Squire, *Shareholder Opportunism in a World of Risky Debt*, 123 HARV. L. REV. (forthcoming 2010) (manuscript at 28, 33, available at <http://ssrn.com/abstract=1394995>).

62. See EUROPEAN CENTRAL BANK, *supra* note 20, at 29 ("The significant net negative exposure of the position held by AIG within this segment was publicly disclosed by AIG and was highlighted by Fitch in its credit derivative survey for 2006, in which AIG was ranked the 20th largest counterpart.").

63. Holm & Westbrook, *supra* note 48 (reporting that the bond insurance "industry collectively guaranteed \$127 billion of CDOs linked to mortgages"); American International Group, Inc., Annual Report (Form 10-K), at 122 (Feb. 28, 2008) (disclosing \$61.4 billion in exposure to CDOs with mortgage-backed collateral); BANK FOR INTERNATIONAL SETTLEMENTS, MONETARY AND ECONOMIC DEPARTMENT: OTC DERIVATIVES MARKET ACTIVITY IN THE FIRST HALF OF 2008 6 (2008), available at http://www.bis.org/publ/otc_hy0811.pdf?noframes=1.

important losses that arose from a very small corner of the CDS market tied to mortgage-related securities are best viewed as *reflecting* the mispricing of all mortgage-related securities and not inherent or unique weaknesses in the CDS market. In fact, CDSs actually helped to bring some transparency to the mortgage-related security market. CDSs referencing mortgage-backed securities for the first time allowed parties to trade the risk of such securities and thereby reveal that the risk of those instruments was underpriced.⁶⁴ Nonetheless, more robust counterparty risk management practices by CDS market participants likely could have substantially mitigated the losses and financial disruption facilitated by the bond insurers' and AIGFP's overconcentration of CDS risk.

C. CDS Dealer and New York Fed Collaboration

Beginning in the fourth quarter of 2008, regulators and CDS market participants have collaborated to improve practices relating to the transparency, stability, and efficiency of the CDS market infrastructure, much in the same way they had in 2005 with respect to the issue of the growing number of CDS backlogs. The improvements undertaken by CDS dealers and other market participants suggest that broad-scale regulatory changes need not be the result of an acrimonious relationship between the regulators and the regulated.

Under the "Big Bang" Protocol,⁶⁵ over 2000 CDS users agreed to incorporate a cash settlement mechanism into existing CDSs; established a determinations committee to bring greater certainty in determining exactly when certain credit events have occurred; and standardized the effective date of CDSs, interest rates, and the use of upfront payments from the purchaser to the seller.⁶⁶ The increased standardization of CDS terms helped facilitate the establishment of central counterparty clearinghouses for CDSs.⁶⁷ Once a CDS trade is executed, a central counterparty stands in between

64. See Shawn Tully, *How J.P. Morgan Steered Clear of the Credit Crunch*, FORTUNE, Sept. 2, 2008, http://money.cnn.com/2008/08/29/news/companies/tully_jpmorgan.fortune/index.htm (reporting that although "the market seemed to be saying that the bonds were solid . . . [b]y late 2006 the cost of default swaps on subprime CDOs had jumped sharply"); Gary Gorton, *The Subprime Panic* 23 (Yale ICF, Working Paper No. 08-25, 2008) (concluding that "the ABX indices . . . reveal[ed] *hitherto unknown* information, namely, the aggregated view that subprime was worth significantly less" than generally assessed by market participants) (emphasis added).

65. The ISDA implemented both contract and convention changes to the CDS market, and, rather than implement each change separately over time, the organization decided to implement both changes simultaneously in what became known as the "Big Bang" Protocol. See generally MARKIT, *supra* note 21, at 3; Press Release, Int'l Swaps & Derivatives Ass'n, ISDA Announces Successful Implementation of 'Big Bang' CDS Protocol; Determinations Committees and Auction Settlement Changes Take Effect (Apr. 18, 2009), <http://www.isda.org/press/press040809.html>.

66. See MARKIT, *supra* note 21, at 3, 12–16; CADWALADER, WICKERSHAM & TAFT LLP, ISDA AUCTION HARDWIRING AND OTHER MARKET INITIATIVES: STRENGTHENING THE INFRASTRUCTURE FOR CDS TRANSACTIONS (2009); Press Release, Int'l Swaps & Derivatives Ass'n, ISDA Announces Successful Implementation of 'Big Bang' CDS Protocol; Determinations Committees and Auction Settlement Changes Take Effect (Apr. 8, 2009), <http://www.isda.org/press/press040809.html>; ISDA, Big Bang Protocol - FAQs, http://www.isda.org/bigbangprot/bbprot_faq.html.

67. See MARKIT, *supra* note 21, at 8.

COUNTERPARTY REGULATION AND ITS LIMITS

each party by becoming the buyer to the seller and vice versa.⁶⁸ In so doing, a central counterparty can reduce counterparty risk by taking on each party's risk of counterparty default.⁶⁹

Beginning on December 23, 2008, the SEC approved exemptions to enable several private parties to promptly establish clearinghouses for CDSs.⁷⁰ As of November 2009, clearinghouses operated by the Intercontinental Exchange in both the United States and Europe had established themselves as market leaders in clearing over \$2 trillion in CDS indexes.⁷¹ Another functional CDS clearinghouse is operated by Eurex which, in addition to clearing index CDSs, also clears single-name contracts.⁷²

CDS market transparency has also improved. By mid-October 2008, over 1200 parties and all of the major global CDS dealers were registered in the centralized information warehouse established by the Depository Trust Clearing Corporation ("DTCC") in November of 2006.⁷³ On November 4, 2008, the DTCC began to publicly disclose CDS trading activity on a weekly basis and currently stands ready to make the information available in a more detailed fashion to regulators.⁷⁴ On August 3, 2009, the DTCC reported that customized CDS agreements became a part of the trade warehouse, thereby making it a comprehensive store of CDS transaction information. The DTCC will also release information about customized contracts, though not necessarily on a weekly basis.⁷⁵ Operational risks in the CDS market have also substantially decreased due to increased netting. In 2008, the Stockholm-based company TriOptima utilized its compression service to net out offsetting trades and eliminate \$30.2 trillion in CDS notional value.⁷⁶

68. See MARKIT, *supra* note 21, at 7; Bliss & Steigerwald, *supra* note 15, at 25.

69. See, e.g., Bliss & Steigerwald, *supra* note 15, at 24–26; INTERNATIONAL MONETARY FUND, GLOBAL FINANCIAL STABILITY REPORT: RESPONDING TO THE FINANCIAL CRISIS AND MEASURING SYSTEMIC RISK 102–03, 106–07 (2009).

70. See Press Release, U.S. Sec. & Exch. Comm'n, SEC Approves Exemptions to Allow Central Counterparty for Credit Default Swaps (Dec. 23, 2008), <http://sec.gov/news/press/2008/2008-303.htm>.

71. Peter Madigan, *SEC, CFTC to Decide which OTC Derivatives Will Be Centrally Cleared*, RISK.NET, Nov. 5, 2009, available at <http://www.risk.net/risk-magazine/news/1561160/sec-cftc-decide-otc-derivatives-centrally-cleared>.

72. *Eurex Credit Clear Starts CDS Clearing*, HEDGEWEEK, Aug. 4, 2009, <http://www.hedgeweek.com/2009/08/03/eurex-credit-clear-starts-cds-clearing>.

73. Press Release, Depository Trust & Clearing Corporation, DTCC Addresses Misconceptions About the Credit Default Swap Market (Oct. 11, 2008), http://www.dtcc.com/news/press/releases/2008/tiw.php?lpos=hp_slot2&lid=oct08_cds_misconceptions; Heather Landy, *A New Peek at Credit Default Swaps Market*, WASH. POST, Oct. 31, 2008, http://voices.washingtonpost.com/economy-watch/2008/10/a_new_peek_of_credit_default_s.html.

74. Press Release, Depository Trust & Clearing Corporation, DTCC to Provide CDS Data from Trade Information Warehouse (Oct. 31, 2008), http://www.dtcc.com/news/press/releases/2008/warehouse_data_values.php.

75. See *id.*

76. Karen Brettell, *CDS Dealers Compress \$30 Trln in Trades in 2008*, REUTERS, Jan. 12, 2009, <http://www.reuters.com/article/idUSN1233717720090112>.

IV. CONCLUSION

Despite the rapid growth and proliferation of CDSs during the post-turn-of-the-century credit boom and the subprime-mortgage-initiated financial crisis, the risk management practices of CDS counterparties were generally adequate, and the broader infrastructure of the CDS market remained generally stable. CDS risk management practices also improved over time in response to recognized deficiencies and cooperative efforts undertaken by CDS market participants and regulators. The weaknesses underlying some CDS transactions became manifest only in the very small portion of the market whereby an unregulated subsidiary or affiliate of an insurance company sold too much CDS protection referencing certain banking institutions' mortgage-backed CDOs. These weaknesses were atypical of the CDS market and reflected the more fundamental, economy-wide mispricing of mortgage-related securities. Driving these largely positive outcomes for CDSs was counterparty regulation, which arises from the incentives of both parties to exercise appropriate risk management for the life of the contract and to collaborate with regulatory authorities when insufficient incentives exist to act collectively.

Continued market developments and federal regulatory reform applicable to CDSs may undermine counterparty regulation or strengthen it where deficient. The increasing reliance on central counterparties to clear CDSs may undermine the incentives for each party to manage risk bilaterally since a clearinghouse takes on the counterparty risk of each side of the trade once the trade is executed.⁷⁷ Federal regulation mandating that certain CDSs be centrally cleared would likely exacerbate this dynamic. On the other hand, mandating that regulated institutions hold more capital against CDSs too customized or illiquid to be suitable for central clearing could decrease the risks that regulated depository institutions and insurance companies, for example, pose to the financial system through their misuse of CDSs. This would require, however, that an offsetting negative impact on market discipline also does not take place.

More generally, federal mandates may undermine improvements to the CDS market that have already taken place under the supervision of the New York Fed to the extent the mandates fail to take into account the complexity of the CDS market and the necessity of relying upon counterparty regulation as the primary form of CDS governance. Counterparty regulation can be improved by eliminating or modifying legal rules and practices that undermine reliance on counterparty monitoring. These rules and practices include accounting rules that permit the execution of negative basis trades and the willingness of governmental authorities to rescue or subsidize banks and other financial intermediaries that fail to manage their CDS-related exposures. Ongoing reforms being undertaken by CDS market participants under the supervision of the New York Fed call into question the extent to which comprehensive federal regulation of CDSs and other OTC derivatives is necessary to achieve greater transparency and financial stability.

77. See Bob Hills et al., *Central Counterparty Clearing Houses and Financial Stability*, FIN. STABILITY REV., June 1999, at 128, available at <http://www.jssc.co.jp/en/ccp12/materials/docs/11.pdf>.