

Clearing Credit Default Swaps: A Case Study in Global Legal Convergence

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In the wake of the global financial crisis, American and European regulators quickly converged on a reform intended to help stave off similar crises in the future: central counterparty clearinghouses for credit default swaps. On both sides of the Atlantic, regulators identified credit default swaps (CDS) as a central factor in the crisis that seized Bear Stearns, Lehman Brothers, American International Group (AIG), and ultimately the world.¹ Regulators

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¹ CDS became a central culprit in the popular press as well. See Janet Morrissey, *Credit Default Swaps: The Next Crisis*, Time Magazine (Mar 17, 2008) online at <http://www.time.com/time/business/article/0,8599,1723152,00.html> (visited Dec 1, 2009); Steve Kroft, *The Bet That Blew Up Wall Street*, CBS News (Aug 27, 2009), online at <http://www.cbsnews.com/stories/2008/10/26/60minutes/main4546199.shtml?tag=contentMain;contentBody> (visited Dec 1, 2009) (CDS were “the bet that blew up Wall Street. The TNT was the collapse of the housing market and the failure of complicated mortgage securities that the big investment houses created and sold around the world . . . But the rocket fuel was the trillions of dollars in side bets on those mortgage securities, called ‘credit default swaps.’”) (quoting New York Insurance Superintendent Eric Dinallo); Nicholas Varchaver and Katie Benner, *The \$55 Trillion Question*, Fortune Magazine (Sept 30, 2008), online at http://money.cnn.com/2008/09/29/magazines/fortune/varchaver_derivatives.fortune/index.htm (visited Dec 1, 2009) (“[T]error at the potential for a financial Ebola virus radiating out from a failing institution and infecting dozens or hundreds of other companies—all linked to one another by CDS and other instruments—was a major reason that regulators stepped in to bail out Bear Stearns and buy out AIG, whose calamitous descent itself was triggered by losses on its CDS contracts.”); Gretchen Morgenson, *The Reckoning: How the Thundering Herd Faltered and Fell*, The New York Times (Nov 18, 2008), online at

quickly agreed that improving the conditions under which CDS are traded, specifically, the addition of a central counterparty in clearing, would prove a key reform to the global financial architecture. Introducing a well-capitalized central counterparty between CDS buyers and sellers would, regulators came to believe, help contain financial failures in the future.

How and why did this convergence occur? This Article reviews the American and European responses, concluding that they converged on a similar clearing structure largely because of its compelling logic. The financial crisis revealed the vulnerabilities of a system in which buyers and sellers entered into CDS directly, through bilateral contracts. These bilateral derivatives contracts created a web of interconnected obligations, such that the failure of one firm could bring down a chain of others. The threat of this domino effect led governments to intervene in the financial markets with massive direct and indirect support. Forced to spend public money to bail out private firms, regulators risked an unsustainable moral hazard—firms that were “Too Interconnected to Fail.” Regulators concluded that the introduction of a central counterparty (CCP) would reduce the risk that the bankruptcy of a principal in a credit default swap would precipitate a domino fall through the credit markets.

The immediate focus on CDS as the crisis unfolded was understandable. When the credit crisis struck in the fall of 2008, there were \$57 trillion in outstanding notional amount of CDS.² In each of the preceding three years, the amount of CDS had nearly doubled each year.³ In 2004, positions in CDS stood at \$4.5 trillion.⁴ The market for CDS had grown virtually overnight, largely outside regulatory scrutiny.

Because of the possibility of regulatory arbitrage, there is a case not just for CCP clearing but also for regulatory convergence or harmonization. America’s single most expensive bailout was to AIG—for bad bets placed in London.⁵ As

<http://www.nytimes.com/2008/11/09/business/09magic.html?pagewanted=1> (visited Dec 1, 2009) (arguing that credit default swaps were a major catalyst of the financial crisis).

² Bank for International Settlements, Quarterly Report: International Banking and Financial Market Developments A103 (Dec 2008).

³ Id at 32 (noting, in December 2008, “an average six-month growth rate for outstanding CDS contracts over the last three years of 45%”).

⁴ Bank for International Settlements, *Triennial Central Bank Survey 2007: Foreign Exchange and Derivatives Market Activity in 2007*, 24 (Dec 2007), online at <http://www.bis.org/publ/rpfx07t.pdf> (visited Dec 1, 2009) (“Positions in credit derivatives stood at \$51 trillion at end-June 2007, compared to \$4.5 trillion in the 2004 survey.”).

⁵ *AIG Blames Its London Office*, Forbes (Mar 13, 2009), online at <http://www.forbes.com/2009/03/13/aig-london-losses-markets-equity-insurance.html> (visited Dec 1, 2009) (“AIG Financial Products, run by now-infamous Joe Cassano has been identified as the epicenter of AIG’s problems.”); *Former Head Of AIG’s Financial Products Unit May Be Indicted For Securities Fraud*, Post Online (Sept 11, 2009), online

one account puts it, “Ground zero for AIG’s spectacular implosion, which has soaked up more federal bailout money than any other entity, appears to have been a small London branch office that may have put as much as half a trillion dollars at risk.”⁶ A common regulatory path is likely crucial to the success of the reform. In 2007, some 42 percent of the turnover in all over-the-counter (OTC) derivatives took place in the UK, with only a quarter in the US.⁷ Differential regulation would encourage regulation shopping, thus allowing for the possibility of regulatory evasion.

That transatlantic convergence seems to have emerged is all the more noteworthy because there were other prominent options available to regulators. Regulators faced at least five options: (1) do nothing, or merely increase reporting and monitoring, so as not to interfere with the private financial markets;⁸ (2) ban CDS entirely as too risky; (3) ban only “naked” CDS—where the protection buyer does not hold the underlying security;⁹ (4) regulate CDS as

at <http://www.postonline.co.uk/reinsurance/news/1533252/former-head-aig-financial-products-unit-indicted-securities-fraud> (visited Dec 1, 2009) (“US prosecutors are considering indicting the former head of AIG’s financial products unit for securities fraud, the Wall Street Journal has reported . . .”); Peter Koeing, *AIG Trail Leads To London ‘Casino’*, Telegraph (Oct 18, 2008), online at <http://www.telegraph.co.uk/finance/financetopics/financialcrisis/3225213/AIG-trail-leads-to-London-casino.html> (visited Dec 1, 2009) (“By the end of last year AIG held \$562bn of CDS contracts on its books, and in their October 7 testimony before the House Oversight Committee company executives acknowledged that a cockpit for this business was [the London base of AIG subsidiary AIG Financial Products] . . .”); Richard Northedge, *AIG London Unit Not Regulated By FSA*, The Independent (Mar 15, 2009), online at <http://www.independent.co.uk/news/business/news/aig-london-unit-not-regulated-by-fsa-1645223.html> (visited Dec 1, 2009) (“AIG . . . has admitted that toxic assets bought by its London office caused its problems. While questioning claims that the UK operation lost \$500bn, AIG said: ‘This small unit engaged in trades that nearly brought down the company and its still-sound insurance business.’”).

⁶ Jay Shaylor, Lauren Pearle, and Tina Babarovic, *AIG’s Small London Office May Have Lost Big*, ABC News (Mar 10, 2009), online at <http://abcnews.go.com/Business/story?id=7045889&page=1> (visited Dec 1, 2009).

⁷ Richard Roberts, *The City: A Guide to London’s Global Financial Centre* 89 (Bloomberg 2d ed 2008). Note that these figures include all OTC derivatives, including interest rate and exchange rate derivatives, not just credit default swaps.

⁸ Peter J. Wallison, *Financial Services Outlook: Unnecessary Intervention: The Administration’s Effort to Regulate Credit Default* 1 (American Enterprise Institute 2009) (“[T]here is no sound policy reason to impose the costs of regulation on a derivatives market that cannot create a systemic breakdown and that has functioned effectively without such regulation for over twenty-five years.”).

⁹ US Congressman Collin Peterson sponsored a bill (subsequently withdrawn) that would ban all trading of CDS contracts unless the protection buyer owned the underlying reference asset. See Derivatives Markets Transparency and Accountability Act of 2009, HR 977, 111th Cong 1st Sess § 13 (2009).

insurance;¹⁰ and (5) regulate how CDS are cleared. In the wake of the financial crisis, regulators across Europe and the US quickly focused on the last option—CDS clearing and settlement.

We are hardly the first to observe the emergence of a growing consensus on the need to reform clearing for CDS.¹¹ Our contribution is to trace the process by which the consensus occurred and to attempt to explain why it occurred. A review of developments in the clearing of CDS becomes a case study in global governance. It reveals one process by which countries on both sides of an ocean have moved, in fits and starts, towards a single solution to a shared problem. We focus here on the regulation of CDS in the US and the EU, though there is CDS trading in other jurisdictions as well. In Japan, for example, there is also movement towards central counterparty clearing for CDS.¹²

Our analysis proceeds as follows: Section I introduces credit default swaps and compares bilateral clearing with central counterparty clearing. Section II traces the US regulatory response to CDS clearing in the wake of the credit crisis, and Section III follows with the European regulatory response. Section IV assesses why regulators on both sides of the Atlantic turned to CDS clearing as one key reform in the wake of the financial crisis.

I. CREDIT DEFAULT SWAPS AND CLEARING: AN INTRODUCTION

A credit default swap (CDS) is a contract between a protection buyer and a protection seller. A CDS transfers the risk that an issuer of debt will default on its debt obligations. The protection buyer makes periodic payments to the protection seller in exchange for the protection seller's promise to make the buyer whole on an agreed, or "notional," amount of the reference entity's debt

¹⁰ Leah Campbell and Robin Choi, *State Initiatives To Regulate Credit Default Swaps Deferred Pending Federal Action* (Sept 1, 2009), online at <http://www.metrocorp.counsel.com/current.php?artType=view&EntryNo=10049> (visited Dec 1, 2009).

¹¹ From the Editor, 29(4) *Futures & Derivatives L. Rep.* 3 (Apr 2009) ("Regulation of Credit Default Swaps—A global consensus has emerged among financial market regulators that CDS should be more transparent and centrally cleared . . ."); Gert Wehinger, *Lessons from the Financial Market Turmoil: Challenges Ahead for the Financial Industry and Policy Makers* 1, 17–19 (OECD 2008), online at <http://www.oecd.org/dataoecd/47/25/41942918.pdf> (visited Dec 1, 2009) (relating various reform proposals by the industry as well as official authorities and international standard-setting bodies, which arrive at similar conclusions regarding causes of and remedies for the crisis).

¹² Tokyo Financial Exchange Inc, *Study Committee on Central Counterparty for OTC Derivatives Transactions: Summary* (Apr 2009), online at http://www.tfx.co.jp/en/newsfile/pdf/clearing200904_e.pdf (visited Dec 1, 2009).

in the event of a specified credit event such as a bankruptcy, failure to pay, or debt restructuring by the reference entity.¹³

The buyer may use a CDS to hedge credit risk in a portfolio, both specific to a given issuer (in the case of a “single name” CDS) or more broadly to a grouping of investment grade or high yield issuers (in the case of a “corporate index” CDS). Financial investors are common buyers of protection against credit risks held in a bond portfolio. A corporate buyer might buy protection on a counterparty with which it has a supply contract, to hedge the risk of the default of that counterparty, or on a sector with which it deals, to hedge its exposure to that sector. Alternatively, a CDS buyer need not be hedging risk in an underlying investment; it may simply seek to position itself to profit in case the reference entity or index defaults or is viewed by the market as having an increasing risk of default (since this will increase the value of the protection contract the buyer has entered into).

The seller, on the other hand, may use the CDS to gain credit exposure to an issuer or sector, in exchange for a premium, in a way similar to an investor’s assumption of credit risk in taking bond exposure. Both dealers and non-dealer investors, corporations or other “buy-side” participants may buy and sell CDS protection.

A CDS transaction is structured as a swap. The buyer of protection in the swap makes periodic payments to the seller over the agreed term of the swap (heavily traded tenors tend to be five years, but tenors range from two to thirty years in standardized trading). In return, the seller commits to make the buyer whole on the notional value of the amount protected in the event of a credit event within that term. At the time of inception of the contract, in principle, the present value of the stream of periodic payments equals the default probability-adjusted value of the loss on which the seller would make the buyer whole. For example, an investor’s periodic payment for a CDS on the investment grade debt of a highly rated reference entity might be 100 basis points (bps) annually, or 1.0 percent of the notional. This is the “spread” or “premium.”

If, during the term of the CDS, the reference entity defaults on its investment grade debt, the seller is obligated to make the buyer whole in the amount of the original notional value of debt “insured.” The parties may elect either cash settlement or physical delivery. For cash settlement, the seller will pay the buyer in cash the difference between the notional amount and the current value of the defaulted debt (an industry-standard auction mechanism has evolved to determine this value).¹⁴ For physical settlement, the buyer will deliver

¹³ The “reference entity” is the issuer of the underlying debt.

¹⁴ International Swaps and Derivatives Association, Inc, *Auction Hardwiring* online at <http://www.isda.org/companies/auctionhardwiring/auctionhardwiring.html> (visited Dec 1,

the defaulted debt in return for the payment by the seller of the full notional at par. For example, if the swap notional is \$100 million and the recovery value of the reference entity's defaulted debt is 40 percent, then the seller can cash settle the swap for \$60 million. Alternatively, the seller can pay \$100 million to the buyer in return for the original \$100 million of the debt, which now has a market value of only \$40 million.

CDS are transacted with reference to the following categories of credit risk: corporate single names;¹⁵ corporate indices;¹⁶ mortgage-backed securities (MBS) and collateralized debt obligations (CDOs);¹⁷ and loans.¹⁸ Corporate single names and corporate indices account for nearly 90 percent of the outstanding notional value and 95 percent of the traded CDS volume.¹⁹

The corporate CDS market has matured such that the bulk of corporate CDS on single names and indices are highly standardized. Traders in corporate CDS now principally negotiate on price and quantity. Corporate CDS have standard contract terms for the reference entity, debt seniority and security, credit events, coupon payment dates, coupon premiums as a percent of notional amounts, and maturity dates. This is analogous to centrally cleared equity options where the traded contracts have standard protocols for underlying stock, strike price, expiration date, and option type. This standardization has accompanied and supported the growth of CDS.

The price of a CDS is defined in reference to the premium described above. In the example above, at the time the contract is entered into, the market view of the risk of default of the reference entity leads the parties to agree that 100 bps is the appropriate premium to compensate a seller of protection for its promise to make the buyer whole in the event of a default (indicating a very low, but not zero, probability of default). If after an interval of time the market view is that the risk of default has increased, the cost of that protection will rise,

2009). See also Nishul Saperia, *Credit Event Auction Primer*, online at http://www.creditfixings.com/information/affiliations/fixings/auctions/docs/credit_event_auction_primer.pdf (visited Dec 1, 2009).

¹⁵ Covers debt on corporate debt issuers.

¹⁶ Covers debt on a composite of corporate entities in a single "index" (for example, Markit CDX IG index is comprised of debt on 125 North American investment grade corporate entities).

¹⁷ Covers default on MBS and CDOs (CDS covering MBS are sometimes referred to as Asset Backed Credit Default Swap, or ABCDS).

¹⁸ Covers default on loans.

¹⁹ Depository Trust & Clearing Corporation, *DTIC Deriv/SERV Trade Information Warehouse Reports* (2009), online at <http://www.dtcc.com/products/derivserv/data/index.php> (visited Dec 1, 2009) (reporting Trade Information Warehouse data on gross notional values through May 2009, where the new trade volume reported is annualized).

indicatively to 102 bps.²⁰ The value of the buyer's swap has now increased. If it were to sell the protection it has to a third party, or were to enter into an offsetting contract, it would recognize a profit of 2 bps, over the life of the contract, versus the price it is paying to the original seller of protection. Put another way, if its contract with the first seller were suddenly terminated, and the buyer needed to find replacement protection, it would now need to pay 102 bps instead of 100 bps.

The market value of a CDS is thus different than the notional value. Continuing the illustration above, a buyer buys two years of protection on \$100 million investment grade corporate credit at 100 bps. The contract obliges the buyer then to pay the seller a total premium over the two-year life of the contract of \$2 million (\$100 million x 1.00% x 2 years). If the cost of such protection moves to 102 bps (because the risk of default has increased), that total premium would be \$2.04 million. If the buyer were to trade out of the contract, it would realize a profit of \$40,000. Put another way, if the seller wished to stop providing protection on the \$100 million to the buyer, it would need to pay the buyer \$40,000 because the buyer would need to pay this amount in turn to another seller to secure replacement protection.²¹

A. CDS Versus Bonds

In the span of a decade, the corporate CDS market came to rival the bond markets in size and liquidity. In June 2008, there were \$23.9 trillion in international bonds and notes outstanding and \$60.8 trillion in domestic debt securities outstanding compared to \$57 trillion notional amount outstanding of CDS.²² This growth appears to be in part because CDS are, in many ways, simpler to trade than bonds from both an operational and financing perspective. First, a given bond issuer, or CDS reference entity, will typically issue numerous series of bonds, each with different coupons and other characteristics. Any entity

²⁰ Historically when bilateral counterparties agreed to a CDS, a new premium was set for each trade, depending on the parties' agreement on the discounted cash flows discussed earlier. As of October 8, 2009, this constantly varying coupon was standardized into set coupons of 100bps and 500bps with upfront cash payments exchanged between each party to reflect the difference between those standard coupons and the implied market price at the time of trade. Legacy irregular coupons can be converted into a combination of 100bps and 500bps contracts for the same outstanding notional and same premia. This standardization was a significant step for facilitating central clearing. The standardization terms were reflected in the ISDA "Big Bang" Protocol. See International Swaps and Derivatives Association, *Frequently Asked Questions*, online at <http://www.isda.org/media/> (follow the "Big Bang Protocol, and then the "FAQ" links) (visited Dec 1, 2009).

²¹ For simplicity, this example does not take into account any discount for the time value of money.

²² Bank for International Settlements, *Quarterly Report* at A91, A96, A103 (cited in note 2).

trading these bonds must price them individually in light of these characteristics and must also arrive at a price that isolates and then recombines the interest rate and credit components of the instrument. CDS, by contrast, are not limited to one bond issue but are transacted with reference to the credit of a class of bonds of the reference entity as a whole and are valued exclusively with reference to the credit component. For example, at the moment of writing, IBM has twenty-one different bond issuances outstanding, but there is one IBM CDS actively traded.²³ The focus on the corporation class of debt as a whole rather than upon a single bond issuance is justifiable because cross-default provisions typically bind together classes of debt of a reference entity. Credit default swaps thus offer a market mechanism to price and transact in the pure credit risk of a reference entity.

From a financing perspective, an investor in bonds must finance the entire purchase of the bonds. This typically means first working through the operational steps to settle the purchase of the bonds and then to make a pledge arrangement, either of the bonds themselves or other securities, to collateralize the cash borrowed to pay for the bonds. The financing cost for a purchase of bonds will be the difference between the yield of the bonds (again a composite function of both interest rate and credit risk) and the yield of an equivalent notional in treasuries posted by the investor to collateralize the financing, plus the capital cost of cash for any portion of the bond purchase that is not financed.²⁴ By contrast, the CDS allows an investor to be exposed to effectively the same credit risk or reward (eliminating any interest-rate risk component) but only through the cost of financing the initial margin on the transaction, normally a relatively small percentage of the total notional amount (“initial margin” is discussed further in Section I.B).²⁵ The cost of financing the derivative exposure is therefore typically less than the cost of financing bond exposure, while both carry the same credit risk. This increased leverage has also helped drive growth in the CDS markets. As *The Economist* magazine noted in April 2008, “the

²³ Financial Industry Regulatory Authority, *Corporate Bonds Search Results* (Nov 15, 2009), online at <http://cxa.marketwatch.com/finra/BondCenter/QuickScreener.aspx?ShowResult=true&BondType=Corporate&Symbol=ibm&YieldMin=&YieldMax=&CouponMin=&CouponMax=&MaturityMin=&MaturityMax> (visited Dec 1, 2009).

²⁴ See Kevin Baldwin, *Making Sense of Credit Default Swaps* 11 (May 12, 2009), online at <http://www.futuresindustry.org/downloads/CDS%20Webinar.pdf> (visited Dec 1, 2009).

²⁵ George Soros, *The New Paradigm for Financial Markets* xix (2008) (“To hold ordinary bonds requires a margin of 10 percent; synthetic bonds created by credit default swaps can be traded on a margin of 1.5 percent.”). For more detail on pricing and payment flows of CDS, see Kevin Baldwin, *Making Sense of Credit Default Swaps (CDS)* 5–12 (May 12, 2009), online at <http://www.futuresindustry.org/downloads/CDS%20Webinar.pdf> (visited Dec 1, 2009).

CDS has become the product of choice for those investing in credit as an asset class.²⁶

While there is credit exposure to the reference entity in both a CDS and a bond, there is an additional layer of counterparty risk in a CDS contract. A buyer and a seller of a CDS each bear counterparty risk to each other for the duration of the CDS. The seller of protection depends on the buyer to make the agreed periodic payments during the term of the CDS. The buyer of protection reciprocally depends on the seller to make good on its promise to purchase the defaulted debt at its full face value if the reference entity defaults during the term of the CDS. By contrast, the purchase by an investor of a bond from a bond dealer does not carry long-term counterparty risk between the investor and the bond dealer. The counterparty risk in that bond purchase contract between the investor and bond dealer is limited only to the short interval between the time that the contract is executed and the date of settlement—after that point, the contract is settled with the cash exchanged between the buyers and sellers of the bond.

B. Margin and Regulatory Capital

A counterparty to a CDS, whether a buyer or a seller of protection, assesses the likelihood that the reference entity will default. The price paid for CDS protection reflects the parties' view of that risk. However, because the buyer and seller enter into these contracts bilaterally, each party is also exposed to the risk that its counterparty might default.

There are two primary methods of reserving against losses arising in the event of a counterparty default: regulatory capital and margin.²⁷ Regulatory capital is unimpaired equity that must be held on the balance sheet of regulated entities such as banks and broker dealers. Margin, which is generally cash or cash equivalents and is sometimes referred to as “collateral,” is of two types: “variation margin” and “initial margin.”

Variation margin (also called “mark-to-market margin”) is paid in cash and is exchanged between the parties to reflect current exposure, or ongoing changes in market value of the swap. Variation margin thus allows the parties to account for the fact that the market value of a CDS contract, like that of credit risk implied in the market value of a bond, changes every day depending on the market's assessment of probability of default and a range of other factors. As noted above, this change in value results in a change in the spread or premium

²⁶ *Swap Shop*, *The Economist* 92 (Apr 26, 2008).

²⁷ Counterparty exposure can also be reduced by hedging with CDS (for example, by buying CDS protection on your counterparty).

charged for protection in the marketplace. As the spread moves, the value of a given CDS between two parties changes, calculated as the present value of the change in spread over the remaining term of the swap. The parties to the swap exchange an amount equal to this calculated change in value versus the prior day. This payment of variation margin is intended to provide that in the event a party defaults, the other party is whole up to that time in the market value of the swap it holds. In the example of a CDS given above, the change in value as the premium moved from 100bps to 102bps was \$40,000. This would be the amount of variation margin that would be paid by the party against whom the market had moved to the party in whose favor it moved.

Initial margin is collected at the onset of the swap and held against potential future exposure in the event the depositing party defaults. Initial margin is typically a small fraction of the notional amount, and is intended to protect one party to the CDS from contract price movement for a certain period after a default of the other party, and during which the defaulting party would no longer pay mark-to-market. This period of initial margin coverage is intended to cover this mark-to-market value variation until the non-defaulting party can enter into an offsetting transaction to neutralize its exposure. Initial margin acts effectively as a deposit until the end of the swap, at which time it is returned to the payor if there has been no default of the payor.

Regulatory capital is capital held by a capital-supervised entity on its balance sheet to reserve against losses in that entity's investments. It is not, therefore, exchanged between bilateral counterparties, but serves as a protection for the regulated entity's counterparties. If a counterparty faces a well-capitalized entity, it can expect that losses in that entity's portfolio are cushioned by a reserve of capital that can be drawn on to meet that entity's obligations. Capital-supervised entities are subject to guidelines for calculating capital, the goal of which to ensure that the capital is sufficient, liquid, unimpaired, and not vulnerable to sudden losses. This imposes an opportunity cost on the capital-supervised entity, which is required to hold capital in conservative form—for example, in the form of US Treasuries rather than in riskier or less liquid investments with higher returns.

C. CDS Market Structure

Large commercial banks first developed CDS to transfer the credit risk component of a commercial debt portfolio. The market rapidly adopted CDS as an efficient and now substantially standardized instrument for transferring credit risk. Dealers, typically major Wall Street banks, are in current market practice on at least one side of every trade. In part, this reflects simply the dealers' role in making markets generally—the dealers are professional intermediaries with the infrastructure and business models to offer their counterparties a range of

contracts at prices that are continuously updated to reflect market developments. Investors have also historically preferred to trade with dealers for counterparty credit reasons: In periods of stability, investors viewed regulated institutions as having minimal risk of defaulting; investors disfavored other firms because investors lacked the information to assess the credit risk of such firms. Participants also tend to have negotiated documentation for CDS already in place with dealers, making further transactions with them easier.

A market structure where a dealer is on one side of every trade confers informational advantages to dealers. Dealers see volumes of actual and intended trades from their “buy-side” customers and also make inter-dealer trades to take on or lay off risk according to supply and demand. Therefore, dealers have the best view of current market value in a market where all transactions are private and bilateral with no actual transaction prices published. Customers, on the other hand, must engage in a series of bilateral conversations with dealers to gain pricing information. Given this asymmetry of information in their favor, dealers have an incentive to preserve the status quo in the market structure.

D. OTC Bilateral CDS Trade Flows

As noted, in the current bilateral, privately negotiated OTC CDS market, dealers are on one side of every trade. Because investors have historically viewed dealers (being capital-supervised entities) as secure counterparty credit risks, dealers do not customarily post initial margin. In transactions between customers—buy-side firms such as pension funds, hedge funds, corporations, and other investors—and dealers, the buy-side counterparties typically do post initial margin to the dealer. Dealers may offer an exception for certain corporate “end-users”—dealers may instead take unsecured risk to these end-users, or may accept illiquid collateral, for example, oil and gas reserves, to secure potential CDS exposure. Assuming that no dealer ever defaults, this asymmetry is not problematic in principle. However, the crisis of 2008 revealed significant vulnerabilities in this market structure.

First, AIG and Lehman, both highly regulated, capital-supervised entities, proved insufficiently capitalized to avoid default. While these were large, multi-strategy institutions with potential capital shortfalls with respect to strategies other than derivatives, each institution defaulted not only because of losses on specific derivatives positions, but also because it could not meet its cash mark-to-market (variation margin) obligations to its bilateral counterparties.

Second, in the case of AIG, it became apparent that the bilateral, private, and unregulated character of the market had allowed AIG’s dealer counterparties to relax their margin rules, relying in part on AIG’s overall high credit ratings and perceived balance sheet strength. Indeed, AIG’s counterparties allowed AIG an exemption from both initial margin and variation margin payments. Had AIG

faced this margin discipline, it might not have taken on excess risk, and its counterparties would have suffered far lower losses even if AIG did default, since they would have been current through variation margin and would have had the buffer of initial margin while resolving their open positions.

Third, as became evident in the wake of the Lehman failure, when a buy-side firm posts initial margin to a dealer in the current market structure, that margin is not held in trust or in some other way segregated from the assets of the dealer. It is instead commingled with the dealer's working capital, and thus subject to bankruptcy of the dealer.²⁸ Because of this risk, as word that Lehman might be facing a cash crisis spread, counterparties rushed to try to protect themselves from having their margin trapped, either suddenly closing out positions or demanding margin in turn from Lehman. This exacerbated Lehman's cash shortfall (and the same occurred for a range of financial institutions during the crisis period). There may be billions in initial margin trapped in Lehman's bankruptcy.²⁹ Bilateral counterparties to Lehman that had offsetting trades to their trades to Lehman were left without incoming variation margin to pay their offsetting variation margin obligations. This helped propagate Lehman's default through the markets, with the *counterparties* of Lehman's *counterparties* harmed by Lehman's default. While the authorities allowed Lehman to fail, when, within days, AIG teetered, the authorities feared that the interconnected losses that would ensue would be too systemically damaging. The Federal Reserve therefore bailed out AIG (and newspaper stories

²⁸ President and Chief Executive Officer, Managed Funds Association Richard H. Baker, *Letter to President Geithner, Chairman Cox and Chairman Lukken* (Dec 19, 2008). Here Baker states that:

"The purpose of initial margin is to provide dealers with a cushion against the potential counterparty risk they assume when entering into an OTC derivatives contract with a customer. However, such margin is not typically segregated from the dealers' other unsecured assets, what is supposed to be a credit mitigant for the dealer instead subjects the customer to actual credit risk on the posted amounts. If a dealer becomes insolvent, initial margin posted by customers that is not so segregated is treated in bankruptcy as a general unsecured claim of the customer. As a result, customers who are counterparties to that dealer stand to incur significant losses, regardless of the current value of their derivatives contracts."

²⁹ The Managed Funds Association ("MFA") estimates more than \$50 billion in customer assets held by Lehman's European affiliate, though the MFA does not identify what portion represents margin. See Capital Markets Regulatory Reform: Strengthening Investor Protection, Enhancing Oversight of Private Pools of Capital, and Creating a National Insurance Office, Hearing before the Committee On Financial Services of the US House Of Representatives, 111th Cong, 1st Sess 15 n18 (Oct 6, 2009) (testimony of President and Chief Executive Officer, Managed Funds Association Richard H. Baker) online at <http://www.managedfunds.org/downloads/mfa%20testimony%20october%2006%20final.pdf> (visited Dec 1, 2009) ("We believe that there is in excess of \$50,000,000,000 in customer assets still being held in Lehman Brothers International (Europe) ("LBIE") . . .").

followed, explaining how bailout funds flowed directly to counterparties to meet margin calls on AIG's CDS contracts with them).

As we will see, counterparties to Lehman's centrally cleared futures transactions fared far better. But two other features of bilateral market structure should be noted. First, as the AIG case illustrated, the initial margin to be paid by the customer to the dealer is a matter of contractual negotiation and, in many respects, reflects market power and economics of the trade between the two parties, not just the intrinsic risk properties of the transaction or necessarily even the probability of counterparty default of the customer. In some cases, like AIG, customer reward, unanalyzed assumptions about the customer's balance sheet, or excessive reliance on rating agency findings could lead to assessment of an insufficient initial margin. Alternatively, in times of market stress, dealers could demand excessive margin, knowing that customers may not readily be able to replace counterparties in the bilateral market (and do not want to sacrifice netting benefits when facing the same counterparty with multiple offsetting transactions). Such demands could strain the cash supply for the buy-side, leading to a negative spiral in trading activity that was not necessarily warranted by actual risk levels.

Second, variation margin and, to the extent adjustable, initial margin, are determined based on market pricing. But as noted, there is no source in the current market for actual transaction prices, and so there is variability, based on individual dealer trading desk pricing, in the establishment of prices at which margin is fixed. The lack of price transparency in the bilateral market can thus lead to too much or too little margin being assessed at any given time.

E. Centrally Cleared CDS Trade Flows

By contrast to the bilateral trade flows described above, in a centrally cleared trade, the bilateral trade between a seller of protection and a buyer of protection is replaced with two swaps: one between the seller and the CCP as buyer and an equal and offsetting trade between the buyer and the CCP as seller.³⁰ The two market participants may first enter into a bilateral trade and then elect subsequently to convert it into a cleared trade. Alternatively, the participants may enter into a trade from the outset with the intention that it be cleared. If the trade is promptly accepted for clearing, the parties may have minimal to no bilateral exposure to each other. Once the trade is cleared, if one market participant defaults, the other market participant is not directly affected, since its counterparty is now exclusively the clearinghouse. CCP clearing thus

³⁰ While other clearinghouses may also facilitate processing and netting of trades, a central counterparty clearinghouse also takes on the full obligations of a counterparty, promising to perform the obligations on one side of the CDS, through the duration of the CDS contract.

replaces the “Too Interconnected to Fail” market structure with a hub and spoke where, if one spoke fails, it does not affect the other spokes. These structures are illustrated by the figures below (the circles at the periphery representing CDS buyers and sellers).

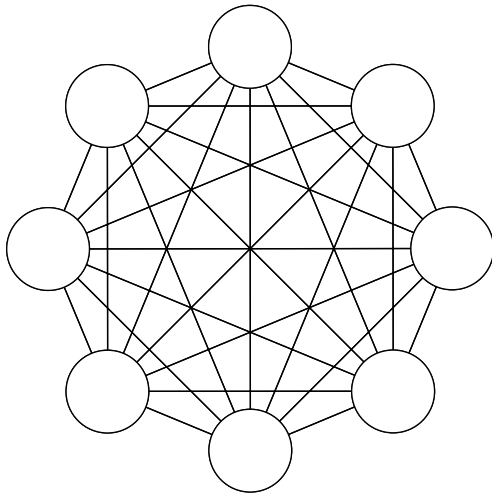


Figure 1: Bilateral Market—Too Interconnected to Fail

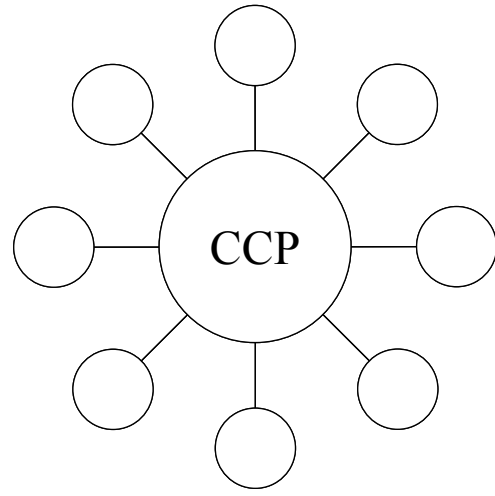


Figure 2: Central Counterparty Clearing

From the CCP’s point of view, so long as the two parties to their precisely offsetting trades perform, the CCP has no market risk. The CCP must however provide for the case where a market participant fails. The CCP’s core function is to act as a risk manager by administering safeguards against this possibility. It does this through a combination of counterparty risk assessment and requirements, margin assessment and position oversight, and default mutualization and management facilities.

First, a CCP transacts with a limited number of clearing members (CMs), typically sophisticated financial firms that act in a principal and usually, but not always, financial intermediary capacity. CMs are typically regulated institutions, but need not be. The CCP establishes minimum capital and operational requirements for CMs. The CCP has procedures in place for ongoing assessment

of a CM's credit strength and has discretion to impose limits on the CM's activity based on that assessment.³¹

Second, for every cleared transaction entered into by CMs, each CM must post both initial margin and variation margin, determined on a neutral basis by the risk management department of the CCP.³² The CCP continuously monitors each CM's positions and has discretion both to increase margin and to impose position limits. Prices used for establishing margin are calculated by the CCP based on actual transaction price data, third party pricing sources, and other sources. The CCP is motivated to mark the transaction as close as possible to the true market price in order to ensure it has adequate margin to cover its risk on both sides of the trade. This process eliminates the pricing inefficiencies in the bilateral market highlighted above for pricing for margin. In addition, CCPs typically make the prices they use to establish margin, known as settlement prices, publicly available, thus significantly enhancing price transparency versus bilateral markets lacking any such central, objective price source.³³ Increased price transparency offers market participants a more precise view of the risk they hold—allowing them to respond more quickly and efficiently to changes and thus reduce the risk that they are unhedged. This, in turn, leads to systemic risk reduction.

Third, each CM must contribute capital to a default mutualization fund in proportion to the risk it has outstanding with the CCP. The CM typically commits to allow further funds to be called, and the CCP also places a certain amount of its own capital at risk. In the event a CM defaults, the CCP immediately takes over the defaulting CM's positions and the initial margin the CCP held against those positions, and it proceeds to close them. The daily

³¹ See ICE Trust, *Clearing Rules* 8, online at https://www.theice.com/publicdocs/clear_us/ICE_Trust_Rules.pdf (visited Dec 1, 2009); for CME, see CME Group, *Financial Safeguards* 11, online at <http://www.cmegroup.com/clearing/files/financialsafeguards.pdf> (visited Dec 1, 2009).

³² See, for example, CME Group, *Financial Safeguards* at 6 (cited in note 31).

³³ Stephen G Cecchetti, Jacob Gyntelberg and Marc Hollanders, *Central Counterparties for Over-the-Counter Derivatives*, BIS Quarterly Review 45, 51 (Sept 2009) ("Introducing CCPs would improve transparency by allowing for easy collection of high-frequency market-wide information on market activity, transaction prices and counterparty exposures for market participants who rely on them."). The CME's application to the CFTC for Section 4(d) account approval for CDS describes CME's daily mark-to-market process and commitment to make publicly available open interest and settlement price information for each cleared contract. See Lisa A. Dunsky, *Petition to Commingle Customer Funds Used to Margin Credit Default Swaps Cleared by CME with Other Funds Held in Segregated Accounts* CME Submission 6, 8, online at <http://www.cftc.gov/ucm/groups/public/@requestsandactions/documents/ifdocs/cme4drequerstdcs.pdf> (visited Dec 1, 2009).

variation margin discipline imposed by the CCP seeks to ensure that the contracts are current at the time of default. The initial margin is intended to cover losses during the period the CCP is closing out the contracts. In the event the initial margin is insufficient for this purpose, losses on the contracts will be made whole by drawing from the CCP's own capital at risk, and the mutualization fund, which functions like an insurance pool, spreading the risk of default among all CMs.

The CCP assesses a transaction fee for each trade cleared. The bulk of collateral held by the CCP remains on the balance sheet of the posting participants, with interest earned on such collateral paid to those participants.

A market participant need not be a CM to benefit from the CCP. If the CCP framework allows, non-CMs may contract with CMs to clear contracts on their behalf. The CM will establish credit limits and appropriate operational and account arrangements to manage the non-CM's positions and ongoing trade lifecycle obligations as a customer. The CCP will establish the initial margin for the transaction, and will then assess ongoing variation margin (and adjustments in initial margin). The CCP will make these assessments to the CM, who in turn will require its customers to make the same payment. The CM will guarantee to the CCP the obligations of its customer for its cleared trades. The CM will charge a fee for this guarantee role to the non-CM and may also assess margin from the customer in excess of the CCP-required level, particularly if the CM views the customer as a higher credit risk. From the customer's perspective, unlike in the bilateral market, the customer's positions and the initial margin posted by the customer to its CM are segregated from the assets of the CM. This arrangement means that, if the CM were to default due to its own positions, the customer's positions and posted margin are immediately portable, allowing the CCP to place the customer's positions and posted margin with another, solvent CM.³⁴ Thus, the CCP isolates the customer's margin from the bankruptcy of the CM.

³⁴ Under certain clearing arrangements, in the event a customer's default leads to its CM's default, deposits of other non-defaulting customers may potentially be called on to fill any losses on liquidation of the defaulting customer's positions. See *Report to the Supervisors of the Major OTC Derivatives Dealers on the Proposals of Centralized CDS Clearing Solutions for the Segregation and Portability of Customer CDS Positions and Related Margin* 29 (June 30, 2009) online at <http://www.managedfunds.org/Default.asp> (visited Dec 1, 2009) ("If the CM has commingled a particular CDS customer's margin, not with proprietary assets of the CM, but instead with either (i) other CDS customers' margin or (ii) the custodial property of the CM's other custodial claimants (e.g., trust claimants holding property for safekeeping at the CM), such commingling is not likely to affect the analysis of whether CDS customers have proprietary or contractual rights to the margin—i.e., even if margin is commingled with other custodial property, CDS customers should still have rights to such property superior to those of unsecured creditors of the insolvent

The dealer CMs thus play essential capitalization and guarantee roles in the CCP structure. The integrity of the CCP depends on the CCP continuously monitoring the credit and capital strength of its CMs, and having robust legal and security arrangements with them. For this reason, the CCP limits clearing membership to firms that meet its capital and credit criteria. Nonetheless, the benefits of clearing are available to all market participants through the agency of the CMs. CMs each contribute their allocable portion of the security deposit fund, which is the mutualization fund that underpins the CCP's risk default management framework. CMs also guarantee the obligations of their customers to the CCP. Finally, for clearing of any OTC product like CDS that is not traded on an exchange, the CCP must establish market pricing through analyzing a range of pricing sources. While the CCP will register actual prices at which CDS trade through the course of a trading day, and these prices will be effective for determining settlement prices, for less frequently transacted CDS CCPs may require dealers to provide prices at which they would be willing to transact such CDS. Especially in the early stages of clearing a certain product, the CCPs are reliant on dealer CMs to support the daily pricing process. Finally, dealer CMs typically commit to participate in the default management processes of the CCP in the event a CM defaults, including facilitating the transfer of the defaulting CM's customer portfolios to solvent CMs and participating in an auction of the defaulting CM's proprietary positions.

F. Lehman Futures: A CCP Success Story

At the time Lehman defaulted, Lehman was a major participant in both the cleared futures markets, where it acted as principal and as CM for customers, and in the bilateral OTC derivatives markets, where it faced dealer and customer counterparties.³⁵ The two market structures handled the default of a major participant in strikingly contrasting ways. The rapid resolution of Lehman's futures portfolios offered regulators an important example of the stability of CCP clearing in a crisis.

When Lehman collapsed, its futures portfolios fared comparatively well in the following ways:

- The positions and margin of investors who cleared their futures through the Lehman CM were, under CFTC rules applicable to the

CM. However, it may affect the class of custodial claimants with whom the CDS customer may be required to share in the event of a shortfall in custodial property.”).

³⁵ See Dan Freed, *Lehman Creditors Face Complex Unwind*, TheStreet.com (Sept 16, 2008), online at <http://www.thestreet.com/story/10437520/2/lehman-creditors-face-complex-unwind.html> (visited Dec 1, 2009).

CMs of the CCP,³⁶ held isolated from Lehman's bankruptcy, and were moved within days to solvent CMs.³⁷

- Because of this segregation and portability based on CCP rules, Lehman's customers suffered no loss in these portfolios nor was there market liquidity impairment.
- The CCP immediately took over Lehman's proprietary futures book and auctioned it to other market participants.
- Lehman's centrally cleared products had a high level of liquidity and price transparency because they were standardized and because auction participants were not exposed to bilateral counterparty credit risk when bidding on these centrally cleared products.
- Through the auction the CCP was able to sell off the Lehman portfolio it had taken over. The margin reserves against the Lehman portfolio were sufficient to cover the CCP's offsetting obligations, such that there was no loss to the clearinghouse or the mutualization fund (and thus by definition no loss to the CMs other than Lehman whose deposits were part of the mutualization fund), and there was also no disruption of the futures market.³⁸ There was also no need for subsidy or bailout by a government agency.

By contrast, the resolution of Lehman's bilateral OTC derivatives portfolios, such as its CDS portfolio, has proved far more difficult:

³⁶ Commodity Exchange Act § 4(d), 7 USC § 6(d) (2000); Commodity Futures Trading Commission, Securities Representing Investment of Customer Funds Held in Segregated Accounts by Futures Commission Merchants, 62 Fed Reg 42398–42399 (Sept 8, 1997) (amending CFTC rules “to allow futures commission merchants to make direct transfers into segregated accounts of permissible, unencumbered securities”).

³⁷ Will Acworth, *The Lessons of Lehman: Reassessing Customer Protections*, Futures Industry (Jan–Feb 2009), online at <http://www.futuresindustry.org/fi-magazine-home.asp?a=1297> (visited Dec 1, 2009) (noting that “virtually all the futures and options contracts held by Lehman on behalf of its customers were safely transferred out of the company within a single week of the bankruptcy filing and the futures markets continued to function normally”).

³⁸ LCH.Clearnet, an Anglo-French clearinghouse, reportedly handled Lehman's \$9 trillion interest rate swap portfolio without a loss to the CCP. See LCH.Clearnet, *SwapClear 6* (July 9, 2009), online at http://www.ecb.int/events/pdf/conferences/ccp_cds2/SwapClear.pdf?c3bc965de2993a1dfb6eb8285752087 (visited Dec 1, 2009); LCH.Clearnet, *LCH.Clearnet Successfully Manages Lehman Default* (Sept 23, 2008), online at http://www.lchclearnet.com/images/2008-09-23%20lehman%20default_tcm6-44143.pdf (visited Dec 1, 2009); Acworth, *The Lessons of Lehman* at 36 (“LCH.Clearnet has stated publicly that it was able to wind down more than 66,000 Lehman swap transactions in less than month with the help of its SwapClear participants and with no loss to the clearinghouse.”).

- The positions and margin of counterparties, particularly investor counterparties, were trapped in the Lehman bankruptcy estate, particularly since it was normal for margin to be taken into working capital of the dealers. Industry estimates suggest that there are in excess of \$50 billion in customer assets still held in the estate and that it may take “over a decade” for recovery on those assets to be paid.³⁹
- The fear of losses and the entrapment of collateral just described caused an effective “run” on Lehman to close out contracts and recover margin in the days before it declared failure.
- Lehman defaulted on the web of interconnected contracts to which it was a bilateral counterparty, sending shock waves through the global financial system as counterparties sought to close offsetting positions or otherwise limit their risk and losses. The credit markets suffered significant volatility and uncertainty.⁴⁰
- In the run up before the default and in the confusion that followed, regulators could not ascertain the extent of exposure and potential loss associated with Lehman’s bilateral OTC derivatives contracts.⁴¹ By contrast, the Lehman futures exposure was known precisely because it was registered, in real time, with the CCP.

Regulators agree that higher capital levels must be imposed on non-cleared products, but the challenge remains to establish what the right levels would have been for Lehman and how they should be calibrated for the marketplace as a whole. Regardless of Lehman’s capitalization, the centrally cleared futures markets demonstrated that a CCP’s maintenance of initial and variation margin discipline could help prevent a significant dealer participant’s counterparties and

³⁹ Lindsay Fortado and Tom Cahill, *Lehman Ruling Delays Return of Funds by a ‘Decade’*, Bloomberg (Aug 21, 2009) online at <http://www.bloomberg.com/apps/news?pid=20601208&sid=aYMWyc3eend0> (visited Dec 1, 2009).

⁴⁰ Mathew Goldstein and David Henry, *Lehman: One Big Derivatives Mess*, BusinessWeek (Oct 8, 2008), online at http://www.businessweek.com/magazine/content/08_42/b4104000160047.htm (visited Dec 1, 2009) (“Lehman’s bankruptcy threw into jeopardy derivative deals with a staggering 8,000 different firms that had paid Lehman billions of dollars in collateral . . . [and] push[ed] global short-term lending markets into a deep freeze”); see also Shannon Harrington, *Lehman Collapse Spurs Call for Credit Clearinghouse*, Bloomberg (Sept 16, 2008), online at <http://www.bloomberg.com/apps/news?pid=20601110&sid=aKRxRwPBVCUg> (visited Dec 1, 2009).

⁴¹ Harrington, *Lehman Collapse Spurs Call for Credit Clearinghouse*, Bloomberg (cited in note 40) (Lehman, the first major market-maker to go bankrupt in the decade-long history of the privately negotiated, unregulated business [of credit-default swaps] may leave behind billions of dollars in potential losses for trading partners according to Barclays PLC of London. No one knows exactly how much because there’s no central exchange or system for recording trades.”).

the CCP from suffering losses on clearable positions. In addition, for Lehman's futures portfolio, the CCP eliminated in two critical ways the "Too Interconnected to Fail" problem. First, because Lehman's positions were centrally cleared, Lehman's original transaction counterparties, such as, for example, other dealers in dealer-to-dealer trades, were no longer its counterparties at the time of default—they all faced the CCP, supported by the CCP's margin regime and further aided, in the event that margin fell short, by the CCP's mutualization funds. Second, Lehman's customers were isolated from Lehman's insolvency—their positions and margin were portable and their margin was not commingled with Lehman's working capital but immediately available to continue to be held in reserve against each customer's transactions. The fact that they had this security of isolation from Lehman's bankruptcy meant that there was no "rush" on Lehman to close out futures positions or seek additional margin as it showed credit difficulty—again the CCP mechanisms served to remove an "interconnectedness" factor that exacerbated credit stress in the bilateral markets.

In light of experiences with Lehman and earlier defaults of major market participants, and the stability of CCPs through major market dislocations, regulators have observed that regulated CCPs have been successful in providing stability and ameliorating the "Too Interconnected to Fail" problem.⁴² As consensus has grown regarding these benefits, including, especially, the dispensation of the need for a governmental backstop to absorb default losses, regulators have come to regard CCPs as critical to the future stability of the derivatives markets. How and why regulators have come to this conclusion is the subject of the next three parts.

II. THE EVOLUTION OF UNITED STATES DERIVATIVES REGULATION

The convergence on CCP clearing for CDS represents an about-face from the earlier American regulatory stance. Less than a decade earlier, Congress had acted to largely deregulate CDS, explicitly exempting them from the Commodity

⁴² In 2006, Federal Reserve Governor Randall Kroszner lauded derivatives CCPs' track record with respect to counterparty risk. See Randall S. Kroszner, *Central Counterparty Clearing: History, Innovation, and Regulation* (Speech at the European Central Bank and Federal Reserve Bank of Chicago Joint Conference on Issues Related to Central Counterparty Clearing, Apr 3, 2006), online at <http://www.federalreserve.gov/newsevents/speech/Kroszner20060403a.htm> (visited Dec 1, 2009) ("[I]t is hard to find fault with the track record of derivatives CCPs, many of which have managed counterparty risk so effectively that they have never suffered a counterparty default").

Exchange Act (CEA), which generally governs derivatives.⁴³ The CEA requires that derivatives be traded through an exchange regulated by the Commodity Futures Trading Commission (CFTC).⁴⁴ In 2000, Congress passed the Commodities Futures Modernization Act (CFMA), amending the CEA to exclude OTC derivatives traded between certain eligible persons.⁴⁵ As one commentator describes, “In sum, in 2000 as a society we chose not to regulate credit default swaps.”⁴⁶

Why did we choose not to regulate CDS in 2000 and why in 2009 did we do an about-face? The decision to forgo regulation was due to a belief that regulation might stifle an important new American market in derivatives. This did not mean that a market in derivatives would fail to develop, but that it would develop *overseas*. Even if the US outlawed derivatives, a US company could still purchase a derivative, even one referencing an American asset, by entering into the transaction abroad. Deregulating these instruments would help the market flourish *within* the US.

The CFMA largely enacted the recommendations of the President’s Working Group on Financial Markets (PWG). Led by the Treasury Secretary, and including the chairmen of the SEC, the Federal Reserve, and the CFTC, the PWG’s views hold considerable sway in Washington. In 1999, the PWG recommended that derivatives entered into bilaterally between “sophisticated counterparties” should be exempt from regulation⁴⁷—either as securities or as futures. The deregulatory move was prompted in part by the desire to avoid losing the derivatives market to foreign shores: “Creating an exclusion from the CEA for swaps agreements that are bilateral agreements between eligible parties on a principal-to-principal basis” would, the PWG concluded, help make “the U.S. a more attractive derivatives market.”⁴⁸ While the CFTC had proposed a concept release in 1998 that would have asserted its authority over the OTC

⁴³ For a comprehensive history of pre-CFMA derivatives regulation in the US, noting the overlapping jurisdiction granted to various regulatory agencies, consider Roberta Romano, *The Political Dynamics Of Derivative Securities Regulation*, 14 Yale J Reg 279 (1997); see also Frank Partnoy, *The Shifting Contours of Global Derivatives Regulation*, 22 U Pa J Intl Econ L 421, 435–42 (2001).

⁴⁴ Commodity Exchange Act (“CEA”), 7 USC §6.

⁴⁵ CFMA at § 103.

⁴⁶ Review the Role of Credit Derivatives in the U.S. Economy, Hearing before the House Committee on Agriculture, (Nov 20, 2008) (testimony of New York State Insurance Department Superintendent Eric Dinallo).

⁴⁷ US Department of the Treasury, *From the Office of Public Affairs: President’s Working Group on Financial Markets Releases Over-the-Counter Derivatives Report* (Nov 9, 1999), online at <http://www.ustreas.gov/press/releases/ls224.htm> (visited Dec 1, 2009).

⁴⁸ Id.

derivatives market,⁴⁹ it had previously treated these instruments as exempt. Both this concept release and the possibility that the CEA might be read to apply to OTC derivatives were potentially destabilizing to an OTC derivatives market that had prospered outside regulatory oversight. The letter forwarding the PWG report worried that “a cloud of legal uncertainty” hanging over the OTC derivatives market in the US would, *inter alia*, “damage U.S. leadership in these arenas by driving transactions off-shore.”⁵⁰ The letter was signed by Treasury Secretary Lawrence H. Summers, SEC Chairman Arthur Levitt, Federal Reserve Chairman Alan Greenspan, and CFTC Chairman William J. Rainer.

When Congress considered the PWG’s proposals in 2000, the threat of foreign competition was very much on the mind of Congress. The bill’s principal exponent, Senator Phil Gramm, clearly stated the worry that strong regulation would drive the derivatives markets offshore: “We have competition from all over the world that would very much like to see this goose that lays the golden egg, these financial markets, roosting in their coop. They are trying to do things to attract it. They are unifying markets. They are reducing regulatory burden.”⁵¹ Senator Richard Lugar echoed this concern: “We face competition in the world. There are other people who are doing all sorts of things.”⁵² The ease of moving derivatives transactions offshore was demonstrated to the Senate committees considering the CFMA. Senator Lugar noted that “[i]n the course of our hearings we had an electronic demonstration and transacted a trade right in front of us on his computer on a European market”⁵³ The Clinton Administration argued that failing to pass the bill “could result in the movement of these markets to overseas locations with more updated regulatory regimes.”⁵⁴ An ad-hoc coalition of investment banks including Morgan Stanley, Goldman Sachs, Merrill Lynch, Citigroup, Credit Suisse and Chase Manhattan argued that the bill would “prevent the flight of our domestic financial derivatives business

⁴⁹ Commodities Futures Trading Commission, *Over-the-Counter Derivatives* (1998), online at <http://www.cftc.gov/opa/press98/opamntn.htm> (visited Dec 1, 2009).

⁵⁰ Over-the Counter Derivatives Markets and the Commodity Exchange Act: Report of the President’s Working Group on Financial Markets, US Department of the Treasury (Nov 9, 1999), online at <http://www.ustreas.gov/press/releases/docs/otcact.pdf> (visited Dec 1, 2009) (Letter to Dennis Hastert, Speaker of the House, US Representatives).

⁵¹ The Commodity Futures Modernization Act of 2000, Joint Hearing on S 2697 Before the Committee on Agriculture, Nutrition, and Forestry and the Committee on Banking, Housing, and Urban Affairs 106 Cong 922, 4–5 (June 21, 2000).

⁵² *Id.*

⁵³ *Id.*

⁵⁴ Executive Office of the President & Office of Management and Budget, Statement of Administrative Policy (Oct 19, 2000) (reprinted in 146 Cong Rec E1939-02 (2000)).

abroad.”⁵⁵ The Chicago Board of Trade and Chicago Mercantile Exchange put it most directly in a joint letter: “A vote against the bill is a vote for London and other foreign markets.”⁵⁶ The Act itself declared American financial competitiveness to be a key aim: “to enhance the competitive position of US financial institutions and financial markets.”⁵⁷

It is useful to consider the concurrent regulatory landscape in the principal alternative derivative jurisdiction, the UK. There, the Financial Services Act of 1986 and the Financial Services and Markets Act of 2000 had largely exempted most derivatives transactions from regulatory purview. Rather than regulating individual OTC derivative transactions, the UK imposed restrictions on which parties were allowed to transact in OTC derivatives.⁵⁸ Furthermore, the parties were required to comply with the general regulatory requirements, including maintaining capital and risk controls and disclosure of all OTC derivatives positions to regulators.⁵⁹ Also, parties transacting in OTC derivatives on behalf of clients were required to ensure that client recommendations were suitable and that appropriate risk warnings had been provided.⁶⁰

In 2007, the Bank for International Settlements (BIS) studied the possibility of expanding CCP clearing for OTC derivatives. The BIS report fell short of strongly endorsing CCPs for credit derivatives, suggesting only that central banks and supervisors consider whether “CCPs should be applied to providers of clearing and settlement services for OTC derivatives that are not already subject to those standards.”⁶¹ The report noted the possibility of a trade information warehouse instead of a full-fledged CCP clearing structure:

Through a trade information warehouse or otherwise, market participants may seek to achieve the operational benefits of CCP clearing while preserving decentralised counterparty credit risk management. CCP clearing may also expand over time to encompass additional instruments, especially

⁵⁵ Morgan Stanley Dean Winter, Goldman Sachs & Co. Inc., Citigroup Inc., The Chase Manhattan Bank, Credit Suisse First Boston Inc., Chicago Mercantile Exchange & Chicago Board of Trade, Letter to Rep. Larry Combest, Chairman, House Agriculture Committee, and Rep Tom Ewing, Chairman, Agriculture Subcommittee on Risk Management (Oct. 18, 2000) (reprinted in 146 Cong Rec E1939-02, at E1939 (2000)).

⁵⁶ Letter from Chicago Board of Trade, Chicago Mercantile Exchange and Sullivan & Cromwell, to Congress (Oct. 19, 2000), (reprinted in 146 Cong. Rec. E1939-02, at E1940 (2000)).

⁵⁷ CFMA at § 2(8).

⁵⁸ US Commodity Futures Trading Commission, *Regulation of Over-The-Counter Derivative Transactions* 7 (1999).

⁵⁹ Id at xi.

⁶⁰ Id at 23–24.

⁶¹ Bank for International Settlements, *Committee on Payment and Settlement Systems: New Developments in Clearing and Settlement Arrangements for OTC Derivatives* 6 (Mar 2007), online at <http://www.bis.org/publ/cps77.htm> (visited Dec 1, 2009).

relatively non-complex instruments, or to include tiered clearing arrangements that would allow clearing to extend beyond the inter-dealer market.⁶²

The chair of the committee that authored the BIS report was Timothy F. Geithner, then President of the New York Federal Reserve.

A decade after their earlier deregulatory intervention,⁶³ the PWG and Congress returned to OTC derivatives regulation. In a report issued on March 13, 2008, just days before Bear Stearns collapsed, the PWG issued a policy statement recommending improvements in the financial infrastructure. Its recommendation with respect to trading of OTC derivatives was, like the 2007 BIS report, relatively mild: “Supervisors should ask the industry to develop a longer-term plan for an integrated operational infrastructure supporting OTC derivatives that,” *inter alia*, “enhances participants’ ability to manage counterparty risk through netting and collateral agreements by promoting standardization and interoperability of infrastructure components.”⁶⁴ The recommendations were framed for the entire OTC derivative market, without distinguishing CDS. In fact, neither the words “credit default swap” nor “credit derivative” appeared in the document. The following month, the Financial Stability Forum (since expanded and renamed as the Financial Stability Board) echoed the PWG’s conclusions with respect to OTC derivatives, almost verbatim.⁶⁵ Neither the PWG nor the Financial Stability Forum recommended a CCP clearinghouse.

⁶² Id.

⁶³ During the intervening decade, a few noted the risks emerging in the system. A paper by McKinsey consultants, for example, worried that “the growing use of credit derivatives is transferring risks on an increasingly large scale in ways that are mostly opaque to investors and regulators.” Arno Gerken and Hugh Karseras, *The Real Risks of Credit Derivatives*, 4 McKinsey Q 128 (2004); Frank Partnoy and David A. Skeel, Jr., *Debt as a Lever of Control: The Promise And Perils Of Credit Derivatives*, 75 U Cin L Rev 1019 (2007) (“Because many investors . . . place highly leveraged bets on credit default swaps, even a relatively small market change could trigger a crisis of the sort that Long Term Capital Management threatened to unleash when it collapsed in 1998. The rush to unwind a vast array of interconnected contracts could create serious liquidity problems in the financial markets. Given the size of the market, a crisis involving credit derivatives would cause convulsions throughout the international financial markets. Thus, although credit default swaps can diminish systemic risk . . . the market also has the potential to cause precisely the opposite effect.”).

⁶⁴ The President’s Working Group on Financial Markets, *Policy Statement on Financial Market Developments* 19 (Mar 2008), online at http://www.treas.gov/press/releases/reports/pwgpolicystatemktturmoil_03122008.pdf (visited Dec 1, 2009).

⁶⁵ Financial Stability Forum, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience* 21 (Apr 7, 2008) (“The financial industry should develop a longer-term plan for a reliable operational infrastructure supporting OTC derivatives Such an infrastructure should . . . enhance participants’ ability to manage counterparty risk through netting and collateral agreements by promoting portfolio reconciliation and accurate valuation of trades”).

However, any hesitancy among regulators would disappear with the dramatic meltdowns at Bear Stearns, Lehman, and AIG.

After the Federal Reserve's intervention to support Bear Stearns by guaranteeing billions in losses upon J.P. Morgan's acquisition of the failing enterprise in March 2008, attention turned to CDS. Many had purchased CDS against the risk of Bear Stearns failure; if Bear Stearns failed, those who had written these CDS contracts would have to make good on them. Furthermore, Bear Stearns had itself written many CDS contracts, selling protection to others. If Bear Stearns failed, these CDS would be worthless. Adding to the alarm, Bear Stearns was "a giant in the over-the-counter derivatives market, and number one by a long way in credit-default swaps."⁶⁶ The possibility of a ripple effect from Bear Stearns' failure prompted the federal rescue:

One of the reasons why the risk of Bear Stearns imploding scared market participants and regulators so much was that it would have led to hundreds of thousands of CDS defaulting—both those that had Bear as a reference credit and contracts in which it was a counterparty. This is thought to be one of the main reasons why the Fed intervened to save Bear.⁶⁷

Federal Reserve Chairman Ben Bernanke noted that "the sudden failure of Bear Stearns likely would have led to a chaotic unwinding of positions" in a range of critical markets.⁶⁸ The aftershock of the failure of a big dealer could be worse than the failure itself.

The authorities turned to CCP clearing as one remedy to the problem they had encountered with Bear Stearns. The New York Federal Reserve, led by Timothy Geithner, began urging financial institutions to move to CCP clearing: "Since the near-collapse of Bear Stearns 10 weeks ago, the focus of the New York Fed in its efforts to reform the CDS market has changed from urging banks to improve trade confirmation to creating a central clearing house."⁶⁹ Pressure for reform was growing outside government. In April, international financier George Soros declared "an urgent need for a clearing house or exchange where these trades are registered and settled according to well-established rules."⁷⁰ Describing the ripple effect of counterparty default as "a Damocles sword that is bound to fall," Soros called for "the establishment of a

⁶⁶ *Bear Stearns: No Picnic*, *The Economist* 40 (Mar 29, 2008).

⁶⁷ Simon Boughey, *After Bear Stearns Scare, Fed Pushes Banks to Form Central Clearing House for CDS Market*, *Euroweek* 64 (June 13, 2008).

⁶⁸ Yalman Onaran, *Fed Aided Bear Stearns as Firm Faced Chapter 11, Bernanke Says*, *Bloomberg* (Apr 2, 2008), <http://www.bloomberg.com/apps/news?pid=20601087&sid=a7coicThgaEE&refer=home> at <http://www.bloomberg.com/apps/news?pid=20601087&sid=a7coicThgaEE&refer=home> (visited Dec 1, 2009).

⁶⁹ *Id.*

⁷⁰ Gordon Platt, *Soros Seeks to Tame Counterparty Risk*, *Global Finance* 4 (May 1, 2008).

clearing house or exchange for credit default swaps” in a book published in May 2008.⁷¹

In a report issued in August 2008, a consortium of leading dealers also observed the virtues of CCP clearing for credit derivatives:

A robust CCP can significantly benefit the stability of the credit derivatives market by creating a shock absorber to lessen the impact of a default by a major participant in the market. A CCP will also fit well into the existing market infrastructure and add to the overall efficiency of risk-reducing efforts within the industry.⁷²

The House Agriculture Committee held hearings on derivatives in September 2008, followed by Senate Agriculture Committee derivatives the following month. Because clearinghouses began approaching various US regulators for authorization to begin clearing CDS, the principal regulators (the Federal Reserve, the SEC, and the CFTC) entered into a Memorandum of Understanding regarding CDS central counterparties.⁷³

The first legislative proposal appeared in late 2008. In November, Senator Tom Harkin unveiled the “Derivatives Trading Integrity Act,” which would force all OTC derivatives, including CDS, onto exchanges.⁷⁴ Other legislative proposals followed in 2009. Congressman Collin Peterson introduced the Derivatives Markets Transparency and Accountability Act of 2009 on February 11, 2009.⁷⁵ Congressman Mike Castle introduced the Financial System Stabilization and Reform Act of 2009 on March 26, 2009.⁷⁶ On May 4, 2009, Senators Carl Levin and Susan Collins introduced the “Authorizing the Regulation of Swaps Act.”⁷⁷ In introducing the bill, Senators Levin and Collins

⁷¹ Soros, *New Paradigm for Financial Markets* at 145 (cited in note 25).

⁷² Counterparty Risk Management Policy Group, *Containing Systemic Risk: The Road to Reform* 125–26 (Aug 6, 2008), online at <http://www.crmpolicygroup.org/index.html> (visited Dec 1, 2009).

⁷³ US Commodity Futures Trading Commission, Memorandum of Understanding Between the Board Of Governors of the Federal Reserve System, the U.S. Commodity Futures Trading Commission and the U.S. Securities and Exchange Commission Regarding Central Counterparties for Credit Default Swaps (Nov 14, 2008); Heather Landy, Credit Default Swaps Oversight Nears, *Washington Post* D3 (Nov 15, 2008).

⁷⁴ Sarah N. Lynch, *Harkin Seeks to Force All Derivatives Onto Exchanges*, *Wall Street Journal* (Nov 20, 2008), online at <http://online.wsj.com/article/SB122721812727545583.html> (visited Dec 1, 2009); Derivatives Trading Integrity Act of 2009, S 272, 111th Cong. (2009).

⁷⁵ HR 977 § 13 (cited in note 9).

⁷⁶ Financial System Stabilization and Reform Act of 2009, HR 1754, 111th Cong 1st Sess §§ 118, 120 (2009).

⁷⁷ Authorizing the Regulation of Swaps Act, S 961, 111th Cong 1st Sess (2009).

explained that the statutory and regulatory exemptions granted to derivatives had proven to be a mistake.⁷⁸

On March 26, 2009, Secretary Timothy Geithner introduced the Administration's framework for comprehensive regulatory reform of the financial regulatory system, and the Administration followed on June 17 with a white paper on the subject.⁷⁹ With respect to CDS, the Administration recommended extensive CCP clearing: To contain systemic risks, the Commodities Exchange Act (CEA) and the securities laws should be amended to require clearing of all standardized OTC derivatives through regulated CCPs. To make these measures effective, regulators will need to require that CCPs impose robust margin requirements as well as other necessary risk controls and that customized OTC derivatives are not used solely as a means to avoid using a CCP.⁸⁰ These recommendations were embodied in the Administration's draft OTC Derivatives Reform legislation, introduced August 11, 2009.⁸¹

Senator Jack Reed introduced the Comprehensive Derivatives Regulation Act of 2009 on September 22, 2009.⁸² On October 2, 2009, Congressman Barney Frank introduced the Over-the-Counter Derivatives Markets Act of 2009.⁸³ On November 10, 2009 Senator Dodd introduced the comprehensive Restoring American Financial Stability Act of 2009, which sought to "push most derivatives trading onto exchanges, in an effort to improve transparency and market stability."⁸⁴ All of these bills sought to move CDS to central clearing, with broader or narrower exceptions.

⁷⁸ 155 Cong Rec S961, S5067-S5085 (statement of Sen Levin) ("[The] prohibition [on the regulation of swap transactions] has never made any sense; it helped cause the financial crisis that is engulfing the American economy . . .").

⁷⁹ US Department of the Treasury, *Treasury Outlines Framework for Regulatory Reform: Provides New Rules of the Road, Focuses First on Containing Systemic Risk* (Mar 26, 2009), online at <http://www.ustreas.gov/press/releases/tg72.htm> (visited Dec 1, 2009); US Department of the Treasury, *Financial Regulatory Reform: A New Foundation* (2009), online at http://www.financialstability.gov/docs/regs/FinalReport_web.pdf (visited Dec 1, 2009).

⁸⁰ US Department of the Treasury, *Administration's Regulatory Reform Agenda Reaches New Milestone: Final Piece of Legislative Language Delivered to Capitol Hill* (Aug 11, 2009) online at <http://www.treas.gov/press/releases/tg261.htm> (visited Dec 1, 2009).

⁸¹ US Department of the Treasury, *Title VII – Improvements to Regulation of Over-the-Counter Derivatives Markets* (Aug 11, 2009) online at <http://www.financialstability.gov/docs/regulatoryreform/titleVII.pdf> (visited Dec 1, 2009).

⁸² Comprehensive Derivatives Regulation Act of 2009 § 103, S 1691, 111th Cong 1st Sess (2009).

⁸³ Over-the-Counter Derivatives Markets Act of 2009 § 115, HR 3795, 111th Cong 1st Sess (2009).

⁸⁴ Theo Francis, *Senator Dodd Unveils Bank-Reform Bill*, Business Week (Nov 10, 2009) online at http://www.businessweek.com/bwdaily/dnflash/content/nov2009/db20091110_145267.htm (visited Dec 1, 2009); Restoring American Financial Stability Act of 2009: Hearing before S Committee on Banking, 111th Cong 390 (2009) ("Except as provided . . ., any person who is a

On December 23, 2008, the SEC granted LCH.Clearnet a temporary exemption to allow it to operate as a CCP for CDS.⁸⁵ The SEC granted ICE Trust a similar exemption on March 6, 2009,⁸⁶ and granted one to the Chicago Mercantile Exchange Inc (CME) and Citadel Investment Group, LLC on March 13, 2009 to operate a combined clearing and electronic trading facility for CDS.⁸⁷ ICE Trust began clearing CDS on Markit CDX indices on March 9, 2009, thus becoming the first CCP to do so in the US.⁸⁸ On June 2, 2009, major financial market participants committed to provide their standardized CDS clients with access to a CCP no later than December 15, 2009.⁸⁹ Both ICE and CME announced intentions to begin clearing customer transactions on or before this deadline.⁹⁰

party to a swap shall submit such swap for clearing to a derivatives clearing organization that is registered under this Act”).

⁸⁵ Securities and Exchange Commission, *SEC Approves Exemptions to Allow Central Counterparty for Credit Default Swaps* (Dec 23, 2008), online at <http://www.sec.gov/news/press/2008/2008-303.htm> (visited Dec 1, 2009).

⁸⁶ Securities and Exchange Commission, Order Granting Temporary Exemptions Under the Securities Exchange Act of 1934 in Connection with Request on Behalf of ICE US Trust LLC Related to Central Clearing of Credit Default Swaps, and Request for Comments, Release No 34-59527 File No S7-05-09 (Mar 6, 2009), online at <http://www.sec.gov/rules/exorders/2009/34-59527.pdf> (visited Dec 1, 2009).

⁸⁷ Securities and Exchange Commission, *SEC Approves Exemptions Allowing Chicago Mercantile Exchange to Operate as Central Counterparty for Credit Default Swaps* (Mar 13, 2009), online at <http://www.sec.gov/news/press/2009/2009-58.htm> (visited Dec 1, 2009). CME and Citadel announced September 18, 2009 that their joint venture had been dissolved, and that CME was focusing efforts on a clearing-only solution for CDS. CME Group, *CME Group Opens Credit Default Swaps Initiative to Additional Partners and Focuses Solution on Clearing Services* (Sept 18, 2009) online at <http://cmegroup.mediaroom.com/index.php?s=43&item=2931> (visited Dec 1, 2009).

⁸⁸ Gordon Platt, ICE Begins Clearing Credit Default Swaps as Counterparty Risk Hits Record High, 23(4) *Global Finance* 64 (Apr 2009).

⁸⁹ Federal Reserve Bank of New York, *New York Fed Welcomes Further Industry Commitments on Over-the-Counter Derivatives* (June 2, 2009), online at <http://www.newyorkfed.org/newsevents/news/markets/2009/ma090602.html> (visited Dec 1, 2009).

⁹⁰ Press Release, Intercontinental Exchange, *ICE Crosses \$3 Trillion Mark I Cleared CDS Transactions* (Oct 5, 2009) online at <http://ir.theice.com/releasedetail.cfm?ReleaseID=413610> (visited Dec 1, 2009); Jonathan Spicer & Karen Brettel, *Update 2-CME Group may start clearing CDS in Dec-CEO*, Reuters (Oct 21, 2009), online at <http://www.reuters.com/article/bondsNews/idUSN2137041620091021> (visited Dec 1, 2009). *CME Group Announces Dealer Founding Members for CDS Initiative; Clearing for Credit Default Swaps Scheduled to Launch by December 15th* (Dec 3, 2009), online at <http://cmegroup.mediaroom.com/index.php?s=43&item=2968> (visited Dec 3, 2009).

III. THE EUROPEAN REGULATORY RESPONSE

Even though CDS were pioneered by Americans in the 1990s,⁹¹ they quickly became popular in Europe. A European Central Bank (ECB) study suggests that 41 percent of CDS index products in January 2009 were based on European reference entities (namely, iTraxx Europe), 37 percent of CDS contracts were written on European corporations or sovereigns in March 2009, and that 39 percent of CDS were denominated in Euros in 2007.⁹² While high profile CDS-related failures had occurred in the US, the European authorities recognized the risks associated with CDS as their own.

In Europe, CCPs were hardly a novel idea first conceived post-Lehman. They had long been employed in a variety of transactions.⁹³ In 2001, the ECB's Governing Council concluded, with respect to both securities and derivatives, that "[o]wing to the potential systemic importance of securities clearing and settlement systems, the Eurosystem has an interest in CCP clearing and considers that it is essential to establish, in co-operation with the other relevant authorities, effective risk management standards."⁹⁴ The recommendation was far from definitive, however. There was uncertainty about the appropriate infrastructure, with some proposing a single CCP covering equities, bonds, derivatives and commodities.⁹⁵ Even if the ECB was not certain about the details, it clearly declared its preference for a CCP established *within* the Eurozone, a preference that would be repeated post-Lehman.⁹⁶

⁹¹ For an account of the origins of the CDS in its current form, see Gillian Tett, *Fool's Gold: How the Bold Dream of a Small Tribe at J.P. Morgan Was Corrupted by Wall Street Greed and Unleashed A Catastrophe* (Free 2009). George Soros suggests that the CDS was "invented in Europe in the early 1990s." Soros, *New Paradigm for Financial Markets* at xviii (cited in note 25).

⁹² Corinna Freund, *The Role of Europe in the Global CDS Market* 3–5 (European Central Bank 2009); European Commission, *Commission Staff Working Paper Accompanying the Commission Communication: Ensuring Efficient, Safe and Sound Derivatives Markets* § 3.1.2 (July 3, 2009), online at http://ec.europa.eu/internal_market/financial-markets/docs/derivatives/report_en.pdf (visited Dec 1, 2009).

⁹³ Bank for International Settlements, *Recommendations for Central Counterparties* (Nov 2004) (joint report of the Committee on Payment and Settlement Systems ("CPSS") of the central banks of the Group of Ten countries and the Technical Committee of the International Organization of Securities Commissions ("IOSCO")).

⁹⁴ European Central Bank, *Press Release: The Eurosystem's Policy Line with Regard to Consolidation in Central Counterparty Clearing* (Sept 27, 2001), online at http://www.ecb.int/press/pr/date/2001/html/pr010927_2.en.html (visited Dec 1, 2009) (with accompanying explanatory note).

⁹⁵ *Id.*

⁹⁶ *Id.* ("The natural geographical scope for any 'domestic' market infrastructure (including central counterparty clearing) for securities and derivatives denominated in euro is the euro area.")

In April 2008, on the heels of the Bear Stearns debacle and following a longer period of financial market turmoil, the Financial Stability Forum, a working group of financial regulators from leading economies, offered its report for “enhancing market and institutional resilience.”⁹⁷ While the report suggested standardization of credit derivatives and promoted managing “counterparty risk through netting and collateral agreements,” it did not call for a CCP clearinghouse for credit derivatives.⁹⁸

In the wake of the financial crisis, Europe quickly embraced the notion of a CCP clearinghouse for CDS—with the additional caveat that it be located in Europe. As we shall see, the European authorities, ranging from the ECB, the European Commissioner for Internal Market and Services, the European Council, to the UK’s Financial Services Authority (FSA), and even the European Parliament, declared their support for a European clearinghouse for CDS.

After Lehman’s demise in September 2008, the urgency and specificity of support for a CCP for CDS grew. In the multilateral setting of the Financial Stability Forum, based in Basel, there was agreement in October 2008 on the need for CCP-based clearing: “In view of market developments, it is important that market participants press ahead with their commitments to improve the OTC credit derivatives markets, including putting in place CCP clearing arrangement in the near future.”⁹⁹ The language urged voluntary efforts, though the thought of a possible mandate could not have been far away.

In October 2008, the European Commissioner for Internal Market and Services, Charles McCreevy, called a meeting with industry and European regulators to spur “concrete proposals as to how the risks from credit derivatives can be mitigated.”¹⁰⁰ Commissioner McCreevy embraced CCPs for CDS, saying that while CDS standardization was important, “there is a far more pressing need and that is to have a central clearing counterparty for these derivatives.”¹⁰¹

The ECB position became more insistent as to the need for a CCP over the next few months. In November, the Governing Council of the ECB declared:

The Eurosystem shares the views of the Financial Stability Forum and of the European Commission on the importance of reducing counterparty risk

⁹⁷ Financial Stability Forum (cited in note 65).

⁹⁸ Id.

⁹⁹ Financial Stability Forum, Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience: Follow-up on Implementation 15 (Oct 10, 2008).

¹⁰⁰ Charles McCreevy, *Time for Regulators to Get a Better View of Derivatives* (Oct 17, 2008), online at <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/08/538&format=HTML&aged=0&language=EN&guiLanguage=fr> (visited Dec 1, 2009).

¹⁰¹ Id.

and of enhancing transparency in OTC derivatives markets, especially in those parts of the market that are of systemic importance (e.g. credit derivatives, including credit default swaps). There are a number of initiatives aiming to achieve these goals through the introduction of centralised clearing solutions for OTC derivatives.¹⁰²

By December, the Governing Council of the ECB concluded that “there was a need for at least one European CCP for credit derivatives and that, given the potential systemic importance of securities clearing and settlement systems, this infrastructure should be located within the euro area.”¹⁰³

That same month, the Economic and Financial Affairs Council of the EU declared its support for one or more European CCPs for OTC derivatives markets and went further to encourage global coordination on the reforms. The Council declared that it:

SUPPORTS the declaration made by the European Commission on the financial stability challenge posed by the growing scale of OTC derivatives exposure and in particular credit derivatives and the need to support appropriate initiatives to reduce those risks, notably by developing, as a first step and as a matter of urgency, the creation of one or more European CCP clearing capacities in OTC derivatives markets, and ENCOURAGES coherence with parallel initiatives at global level.¹⁰⁴

The leading domestic British regulator, the FSA, added to the regulatory approach by declaring in November 2008 that the UK’s market abuse regulatory regime applied to CDS.¹⁰⁵ This signaled its willingness to assert its regulatory authority more generally over the market. Also in 2008, the FSA began the process of approving applications by private parties to provide CCP clearing services for OTC derivatives. By March 2009, the FSA publicly declared its support for CCP clearing in the CDS market. The FSA’s review of the financial

¹⁰² European Central Bank, *ECB Hosts Meeting on Establishing Central Counterparties for Credit Default Swap* (Nov 3, 2008), online at <http://www.ecb.int/press/pr/date/2008/html/pr081103.en.html> (visited Dec 1, 2009).

¹⁰³ European Central Bank, *Decisions Taken by the Governing Council of the ECB (in Addition to Decisions Setting Interest Rates)* (Dec 2008), online at <http://www.ecb.int/press/govcdec/otherdec/2008/html/gc081219.en.html> (visited Dec 1, 2009).

¹⁰⁴ Council of the European Union, *Council Conclusions on Clearing and Settlement: 2911th Economic and Financial Affairs 2* (Dec 2, 2008), online at http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ecofin/104451.pdf (visited Dec 1, 2009).

¹⁰⁵ In August 2009, the FSA launched an inquiry into trading in CDS in the French drinks company, Pernod. Reports suggest that the FSA “had been asked by an unnamed bank to investigate the market over suspicions an unusually large number of trades were made in the run-up to the announcement” of a huge restructuring in April 2009. *FSA Launches Probe into Pernod Swaps*, London Evening Standard (Aug 24, 2009), online at <http://www.thisislondon.co.uk/standard-business/article-23735873-fsa-launches-probe-into-pernod-swaps.do> (visited Dec 1, 2009).

crisis, led by head Adair Turner, included one recommendation pointing directly to CDS trading: “Clearing and CCP systems should be developed to cover the standardised contracts which account for the majority of CDS trading.”¹⁰⁶

The European Commission has taken the lead role in crafting a European response. A staff report for the European Commission, titled “Ensuring Efficient, Safe and Sound Derivatives Markets,” made perhaps the most systematic official case for a CCP clearinghouse for CDS to date.¹⁰⁷ The report enumerated the reasons for a CCP clearing structure for derivatives and declared such a structure especially urgent for CDS. “Most other derivatives,” the staff concluded, “appear less risky” than CDS.¹⁰⁸ Shortly after the publication of the staff report, the European Commission began a public consultation on “possible initiatives to enhance the resilience of OTC derivatives markets.”¹⁰⁹ It received 111 responses, ranging from private individuals to the World Bank.¹¹⁰ The great bulk of the responses embraced the idea of a CCP clearinghouse, though many differed over the details, including how to incentivize clearing through CCPs rather than bilaterally.

By 2009, the initial enthusiasm for CCP clearing for CDS had only become stronger. The embrace of CCP clearing encompassed not only CDS regulators but also CDS dealers. While existing clearinghouses for other securities and derivatives were busy building new clearinghouses for CDS, it remained less than certain what percentage of CDS clearing these houses would attract. Pressure from EU authorities, especially the European Commission, helped push the clearing solution. From October 2008 onwards, Commissioner McCreevy repeatedly demanded that the industry move towards CCP clearing. The following January, he was apparently dissatisfied with the progress, causing him to issue a “terse comment” through a spokesman: “We haven’t got a commitment to move to central clearing . . . so now we feel that since there isn’t

¹⁰⁶ Financial Services Authority, *The Turner Review: A Regulatory Response to the Global Banking Crisis* 8 (Mar 2009).

¹⁰⁷ European Commission, *Ensuring Efficient, Safe and Sound Derivatives Markets* (cited in note 92).

¹⁰⁸ *Id.* at 3.

¹⁰⁹ Commission of the European Communities, *Commission Staff Working Paper, Consultation Document: Possible Initiatives to Enhance the Resilience of OTC Derivatives Markets* 1 (July 3, 2009), online at http://ec.europa.eu/internal_market/consultations/docs/2009/derivatives/derivatives_consultation.pdf (visited Dec 1, 2009).

¹¹⁰ World Bank Group, *Possible Initiatives to Enhance the Resilience of OTC Derivatives Markets: Feedback from the World Bank Group* (Aug 31, 2009), online at http://circa.europa.eu/Public/irc/market/market_consultations/library?l=/financial_services/derivatives_derivatives/individual_respondents/worldbank_enpdf/_EN_1.0_&a=d (visited Dec 1, 2009). The World Bank noted that it uses derivatives to, among other things, “[h]edge[e] complex, customized/structured borrowings.” *Id.*

the engagement by the industry, the project as such has failed and, therefore, the Commission has to consider the appropriate next steps.”¹¹¹ In February 2009, nine dealers sent a letter to European Commissioner McCreevy committing to the use of a European CCP for European CDS by July 31, 2009.¹¹²

The threat of regulation was the tactic used to spur private action. “Regulators brandish weapons,” a headline in a major European financial markets newspaper declared in March 2009.¹¹³ The Commission set a deadline of July 31, 2009 for clearing eligible European CDS through a CCP. On July 3, 2009, with some uncertainty about whether the deadline would be met, the Commission reiterated its warning:

Overall, as of today [document dated July 3, 2009], it is too early to judge whether the dealers’ efforts will be enough to respect the commitment to clear eligible European CDS by 31 July 2009. Given the threat to financial stability, *if it was not respected, other ways to reach the same objective would have to be found.*¹¹⁴

By July 31, two CCPs, ICE Clear Europe and Eurex Credit Clear, had obtained the necessary regulatory approvals for clearing European CDS. These two CCPs launched in July, days before the Commission deadline:

ICE Clear Europe, operated by Atlanta-based Intercontinental Exchange (Ice), has so far outstripped rival Eurex Credit Clear, owned by Frankfurt-based derivatives exchange Eurex. By August 21, Ice Clear Europe had cleared 2,422 transactions, totalling EUR146.4 billion of notional, and had 11 dealers as direct clearing members. By contrast, Eurex Credit Clear had attracted only two members, Nomura and UniCredit, and by August 21 had cleared just three transactions, totalling EUR85 million.¹¹⁵

ICE Clear Europe’s success was due in part to the fact that it was dealer supported and had a prior precedent in CDS clearing—its ICE Trust US clearing platform, which had launched on March 9, 2009.¹¹⁶ On July 31, Commissioner McCreevy heralded the CCP developments: “Clearing through central counterparties (CCPs) is key to improving risk management and to increasing the stability of the financial system. I am pleased the extraordinary efforts by the

¹¹¹ Louise Bowman, *Credit Derivatives: CDS Clearing Hits a Territorial Bump*, 40 *Euromoney* 38 (Jan 2009).

¹¹² International Swaps and Derivatives Association, Inc., *Major Firms Commit to EU Central Counterparty for CDS* (Feb 19, 2009), online at <http://www.isda.org/press/press021909.html> (visited Dec 1, 2009).

¹¹³ Big Bang for CDS On Way As Regulators Brandish Weapons, 1097 *Euroweek* (Mar 27, 2009).

¹¹⁴ European Commission, *Ensuring Efficient, Safe and Sound Derivatives Markets* at 4.1 (cited in note 92) (emphasis added).

¹¹⁵ Joel Clark, *European Credit Default Swap Clearing Off to a Steady Start*, *Risk* (Sept 4, 2009).

¹¹⁶ *Id.*

industry and service providers have made it possible that two European CCPs are starting to clear these products.”¹¹⁷

IV. WHY CONVERGENCE?

Why did regulators on both side of the Atlantic come to see CCP clearing for CDS as a key to reforming the global financial architecture? Henry Hansmann and Reinier Kraakman describe a number of mechanisms by which convergence on a regulatory model might occur: “There are, broadly speaking, three ways in which a model of corporate law can come to be recognized as superior: by force of logic, by force of example, and by force of competition.”¹¹⁸ While Hansmann and Kraakman speak of corporate law, these mechanisms can also have effect in other areas of law. The force of example drove a search for a new regulatory regime: with the advent of the credit crisis, the principal alternative model to CCP clearing—favoring deregulation because of presumed market sophistication—was now seen as a failure, inadequate to the task of assuring well-capitalized CDS counterparties with adequate risk management. It was then the force of logic that served as the principal mechanism driving convergence in the regulation of credit derivatives. Indeed, the survey of the regulatory response to CDS-associated failures above suggests that regulators in Brussels and Washington came to see CCP clearing as a crucial bulwark against a future derivatives implosion. Regulators saw the potential value of a CCP in helping to contain the risks of credit derivatives without suffocating the enormous market in such derivatives.

Anne-Marie Slaughter and Harold Koh have also identified transnational networks and other norm proponents as key to national convergence upon a global legal norm.¹¹⁹ Indeed, we see these transnational forces at work with

¹¹⁷ Id.

¹¹⁸ Henry Hansmann and Reinier Kraakman, *The End of History for Corporate Law*, 89 *Georgetown L J* 439, 448 (2001).

¹¹⁹ Anne-Marie Slaughter, *Governing the Global Economy Through Government Networks*, in Michael Byers, ed, *The Role of Law in International Politics: Essays in International Relations and International Law* 177 (Oxford 2000); Anne-Marie Slaughter, *The Accountability of Government Networks*, 8 *Ind J Global Legal Stud* 347, 354–55 (2001) (“transgovernmental networks play an important role in several recent and still actively debated theories of compliance with international rules. Abram and Antonia Chayes and Harold Koh have emphasized the importance of regular interaction, dialogue, and ‘jawboning’ among networks of government officials at both the international and transnational levels”); Harold Hongju Koh, *Is There a “New” New Haven School of International Law?*, 32 *Yale J Intl L* 559, 567 (2007) (“key agents in promoting this process of internalization include transnational norm entrepreneurs, governmental norm sponsors, transnational issue networks, and interpretive communities”); Harold Hongju Koh, *Why Do Nations Obey International Law?*, 106 *Yale L J* 2599, 2647–48 (1997) (illustrating how norm-entrepreneurs induced the US to comply with international law and adhere to the Anti-

respect to CDS clearing. Transnational networks of regulators and transnational institutions, both public and private, have played a key role in supporting and elaborating the reform. The European response was formulated primarily at the supranational regional level in Brussels, rather than in national capitals.

We find alternative explanations less compelling. Hansmann and Kraakman identify two other potential forces that might lead towards convergence: “explicit efforts at cross-border harmonization, and competition among jurisdictions for corporate charters.”¹²⁰ Convergence did *not* arise through competitive pressures to match a foreign regulatory regime, or through coercive pressures applied by one country upon foreign regulators.

Why did regulators embrace CCP clearing for CDS? What role did transnational networks play in this process? The sections below explain the logic of CCP clearing and the crucial role of transnational networks in the process of regulatory convergence. We also offer some preliminary observations about similarities and differences in the regulatory process leading to convergence in the US and Europe. We conclude by noting the need for coordination in promulgating some of the details in the regulation to prevent regulatory leakage.

A. The Compelling Logic of CCP Clearing

The collapse of AIG and Lehman revealed that OTC derivatives, a sector of the financial markets that was largely unregulated and had grown to dizzying heights, could be a leading factor in the failure of a major market participant and cause the failure of one market participant to drag many others down. The bailout of AIG burdened taxpayers with enormous costs for the actions of a few, and the decision by the government not to bail out Lehman sent shockwaves through global credit markets. The fact that OTC derivatives were unregulated meant the government had few tools to predict the collapse of these institutions, to intervene to prevent such collapses, or even to recognize fully the dimensions of the fallout from their failure. The crisis made it clear that the unregulated market alone, grown to the size it had, did not have sufficient internal safeguards to prevent further collapses. Contrary to the deregulatory

ballistic Missile Treaty by provoking interactions within US government and society, and elevating compliance with international law above US strategic interests); Harold Hongju Koh, *Bringing International Law Home*, 35 *Houston L Rev* 623, 646, 647 (1998) (defining transnational norm entrepreneurs and describing mechanisms by which they help effect domestic legal internalization of international norm); Kal Raustiala, *The Architecture of International Cooperation: Transgovernmental Networks and the Future of International Law*, 43 *Va J Intl L* 1, 5 (2002) (characterizing transnational networks as having “loosely-structured, peer-to-peer ties developed through frequent interaction rather than formal negotiation”).

¹²⁰ Hansmann and Kraakman, 89 *Georgetown L J* at 453 (cited in note 118).

moves of the prior decade, regulators now concluded that the credit derivatives market did not have sufficient mechanisms to discipline itself.¹²¹

At the same time, regulators did not feel it prudent to regulate so strictly as to cripple a financial instrument that many private parties (and even the World Bank¹²²) found valuable. Thus, in seeking to eliminate the conditions that led to the fall of AIG and Lehman, regulators faced the challenge of calibrating those burdens to be adequate to avoid another financial crisis or another public rescue, but not so heavy as to create undue disruption themselves.

We believe that the convergence of the US and European regulatory approaches to OTC derivatives regulation reflects parallel efforts to strike this balance. While both the US and Europe considered a wide range of regulatory options, a consensus view emerged. Regardless of the diversity of factors and decisions that ultimately brought AIG and Lehman down, had there been adequate capital or protected margin associated with these two firms' OTC derivatives transactions, either they would not have defaulted or the consequences of their defaults would not have risen to a systemic level. In the eyes of the regulators, AIG and Lehman, and arguably many other market participants, had externalized some portion of the risk they had absorbed by holding inadequate "reserves" against their potential ongoing obligations, either in the form of capital or posted margin, held separate from other working capital. An obligation to hold higher "reserves" would have reduced profits, but it might also have imposed capital constraints that would have led them to reduce their exposure. Furthermore, the "reserves" might have increased the possibility that they could meet their obligations to counterparties, instead of passing the losses to taxpayers (in the case of AIG) and counterparties (in the case of Lehman). In this manner, imposing capital and margin requirements can help to internalize the full risks of derivatives contracts across their duration.

Governmental efforts to ensure sufficient "reserves" involve two components: (1) specific capital and margin rules on OTC derivatives transactions, and (2) mandates to clear the greatest possible proportion of OTC derivatives exposure through regulated central counterparties where such capital and margin rules are operationalized. Imposition of capital and margin levels is a tool well known to the regulators, but it has its drawbacks. How will regulators know they have set appropriate levels and adjusted them properly over time to reflect market conditions and market innovation? If too high, they threaten to damage market efficiency; if too low, they will not have their intended

¹²¹ This is apparent, for example, in the evolution of the views among American and British financial regulators between 1999 and 2009, characterized above in Sections II and III.

¹²² World Bank Group, Possible Initiatives to Enhance the Resilience of OTC Derivatives Markets: Feedback from the World Bank Group at 2 (cited in note 110).

preventive effect. In addition, there is a huge volume of derivatives trading done with non-regulated entities. How can regulators capture this flow, without claiming jurisdiction over market participants who otherwise would fall outside financial regulatory oversight?

CCPs offer a market-based framework for administering capital and margin discipline. Through CCPs, capital rules, and margin rules, regulators can seek to find compromise among the wide range of constituencies and market participant interests. A CCP serves as a neutral counterparty with expertise in market risk management and primary business incentives to prevent default and to ensure that, if there is default, all transactions are adequately collateralized.

For regulators, a CCP offers a number of advantages:

1. *Customer segregation and portability.* The isolation of customer positions and margin from the insolvency of a CM could eliminate the Lehman risk.
2. *Netting.* Offsetting positions in standardized cleared contracts are immediately netted, as compared to bilateral offsetting positions with different counterparties which cannot be collapsed. Netting of positions would lead to commensurate reduction of overall exposure, which in turn would lead to commensurate reduction of both counterparty exposures and financing and capital requirements for holding the same risk. This benefits not only participants, but the system as a whole.
3. *Margining/ risk management independence and consistency.* The CCP maintains a continuous pricing and mark-to-market discipline. As noted in the Lehman example, a CCP establishes margin based on the inherent risk of the instrument, and is not engaged as a trading entity with trading relationships that might influence credit decisions. The CCP constantly and neutrally assesses the counterparty risk of CMs, as well as customers across multiple CMs. It has the ability to assess additional margin from such CMs and customers, and to impose clearing limits. It also has the ability to assess concentration risk, for one customer across multiple CMs or across the systems as a whole, and take preventive measures. The CCP not only ensures that variation margin is conducted using best available market pricing, but it continuously recalibrates and requires participants to adjust the initial margin amount to reflect changes in price and risk, an adjustment that is typically not conducted in the bilateral market.
4. *Mutualization fund.* In a well-managed CCP, default by one party does not reverberate through the system, bringing down counterparties, and then their counterparties, in a domino effect. This is because such losses will be absorbed through a pre-funded mutualization structure, into which the CCP may require CMs to contribute additional capital

over time to adjust for increases in risk. This minimizes the risk of government bailouts in default, and provides for an orderly workout with minimal market disruption. The successful workouts of Lehman futures and interest rate swaps described above offers a recent example of successful default management.¹²³

5. *Transparency.* CCPs provide data capture, data reporting, and end of day settlement prices—useful for both regulators and market participants in anticipating and managing risk.
6. *Capital benefits.* Because CCPs have better credit quality than individual market participants, dealer CMs transacting with such counterparties may see capital adequacy benefits.
7. *A locus for regulation.* A CCP provides a locus for regulation. If most trades occur through a limited number of platforms, regulators will find it easier to monitor compliance with regulation. By contrast, it is more difficult to monitor the collection and sufficiency of margin requirements on bilateral trades that could occur anywhere, anytime.

An overarching goal achieved by a CCP is the internalization of risk. The Lehman failure demonstrated that the bilateral system, if inadequately capitalized or collateralized, exposes the investor to the credit risk of its counterparty, and similarly exposes the entire financial system to that risk, with the potential for a domino effect through interconnected obligations. The CCP, on the other hand, creates a hub-and-spoke structure out of the bilateral web that isolates both the investor and the system from this risk and ensures sufficient collateralization.

CCPs offer a framework to help ensure that each trade is sufficiently collateralized through margin and regulatory capital. Where there is sufficient margin held in a regulated central clearinghouse, regulatory capital burdens could be eased to reflect the reduction in counterparty and systemic risk. Conversely, where a trade is not cleared and thus not assured of being collateralized within a regulated structure, regulators have widely sought to increase regulatory capital or bilateral margin in order to offer similar levels of protection to the financial system. Sufficiently high levels of regulatory capital set against bilateral trades should help ensure that dealers have enough in “reserve” to absorb losses, thereby mitigating the risk of default in the first place. If a dealer default were to occur, the “reserve” would help reduce counterparty losses.

Critics of CCPs argue that CCPs concentrate risk, creating a singular point of failure. While the risk of CCP failure cannot be discounted, there is reason to think that the risk will be better managed than in a bilateral market. The risk that a CCP faces can be decomposed into two risks: the market risk that any trade that it has entered into will become a bad bet; and the counterparty risk that the

¹²³ See notes 37–38 and accompanying text.

counterparty to any trade will prove unable to meet its obligations. A CCP is perfectly hedged on every market risk, as it has an equal and opposite trade for every exposure it holds. The CCP's primary focus is therefore on managing counterparty risk, for which it imposes margin requirements, which it adjusts constantly. Furthermore, the CCP accepts only liquid contracts for clearing to ensure that in the event of a default the CCP can rapidly dispose of its positions. Finally, the CCP has a mutualization fund and default management procedures. In effect, a CCP can turn to its CMs for a bail out, rather than to the taxpayer. It is important to recognize that Bear, Lehman, and AIG also each concentrated risk—they served as *de facto* unregulated central clearing counterparties, without the disciplines of a regulated CCP.

There will be risks that remain outside the scope of the central counterparty clearing. For example, AIG's CDS portfolio was concentrated on mortgage-related products, like collateralized debt obligations, for which no clearing facilities yet exist. Only a stricter capital and margin discipline would have helped. However, standardized and highly liquid corporate CDS represents the vast bulk of risk in the market, and these could be cleared.¹²⁴

If CCPs provide such numerous benefits, why have the private derivatives markets not moved to them absent government pressure? As already indicated, dealers have incentives to prefer the status quo. First, CCPs publish actual transaction prices at least once per day, reducing the informational advantage the dealers hold in the bilateral market. Further, because parties transact through a CCP knowing that they will not face bilateral counterparty risk because their counterparty from the onset will be the CCP, they will be indifferent to the identity of underlying transaction counterparty, creating the foundation for anonymous electronic trading, such as an exchange that further increases price transparency. The reduction of dealer banks' informational, "balance sheet" and informational advantages enables new entrants to compete for market share and also reduces per trade revenue through tighter bid-offer spreads. In addition, in the bilateral markets dealers typically do not post initial margin to their buy-side counterparties because, as capital supervised and rated entities, they were before the crisis of 2008 viewed as having a minimal risk of default. They do, however, collect initial margin from the bulk of their buy-side counterparties, monies that they may redeploy to finance their own activities. In a centrally cleared system, dealers must post initial margin on each of their trades and can no longer use their customers' initial margin, which instead is held in segregated accounts.

Certain corporate end-users of derivatives, while supportive of having the option to clear, have separately argued against mandatory clearing for fear that their costs of utilization of derivatives contracts may increase. They express

¹²⁴ See note 19 and accompanying text.

concern that dealers may seek to pass on a share of higher capital costs in a CCP to them. Some end-users have not historically been required to post either initial or variation margin. While the choice to waive margin represents an extension of credit by the dealers, the cost of which may be included in the transaction costs for the CDS, end-users may still view the need to post margin as a less favorable deployment of capital.

Regulators are aware that there is commercial resistance to CCP clearing. The European Commission observed this in July 2009:

Incentives to use CCPs already exist. Market participants have a natural incentive to use CCP clearing, as it reduces their counterparty credit risk and allows regulatory capital savings. However, these incentives have not been sufficient in overcoming commercial incentives favouring bilateral clearing. Therefore, the Commission is considering ways to significantly strengthen the incentives to use CCP clearing so as to dismantle any commercial hesitation to take up CCP clearing wherever possible.¹²⁵

B. The Role of Transnational Networks

Many transnational players proved crucial in the CDS regulation story. Networks of official financial regulators, as well as networks of private financial actors, provided technical know-how and coordinated the restructuring of the global financial markets to accommodate CDS clearing.

Many of the CDS dealers were private financial institutions that operated on both sides of the Atlantic, and thus were themselves transnational players. There were also clearinghouses from London to Chicago keen on expanding the instruments they cleared. Existing clearinghouses for other products such as ICE, CME, and LCH.Clearnet sought to expand their services by creating new clearinghouses for CDS. ICE and CME, based in the US, set out to erect clearinghouse facilities for CDS on both sides of the Atlantic. This effort to expand into CDS clearing began even before the Lehman failure. The clearinghouses represent the supply-driven part of the market. The demand-driven push for CDS CCP clearinghouses has been more muted, even though there is widespread agreement that CCP clearinghouses should reduce risk for CDS buyers and sellers as well as lower dealer margins, in part because of the fragmentation of the “buy-side” relative to the concentrated number of major dealers in the market.

¹²⁵ Commission of the European Communities, *Communication from the Commission: Ensuring Efficient, Safe and Sound Derivatives Markets* 10–11 (July 3, 2009), online at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0332:FIN:EN:PDF> (visited Dec 1, 2009).

The clearinghouses themselves sought approvals from the relevant regulatory authorities, including the Federal Reserve and the FSA.¹²⁶ But building a clearinghouse by itself could not insure that parties would come trade there. In the absence of regulatory compulsion, private dealers have remained a critical force in the realization of clearing operations. Their support for ICE, in which they had a significant stake, permitted it to come to market quickly. As noted above, dealers committed to both European and American regulators to move major portions of their CDS to CCP clearinghouses. The group of dealers who made this commitment included banks from both sides of the Atlantic.

Transnational private networks such as International Swap Dealers Association (ISDA) also proved crucial. ISDA led the effort to standardize CDS, a necessary prerequisite to CCP clearing. These included a “big bang” and a “small bang,” two events in which market participants simultaneously agreed to modify CDS contracts prospectively and retroactively to conform to standardized terms.¹²⁷ The first such standardization was in April 2009, when the CDS market underwent a “big bang” in the form of a retroactively imposed modification to CDS contracts.¹²⁸ This change was undertaken by ISDA with more than 2,000 market participants adhering to the protocol.¹²⁹ The “big bang” globally standardized the dispute resolution process in the event of a claim of default or bankruptcy. ISDA’s “big bang” also “established determinations committees for five geographical areas: the Americas, EMEA [Europe, the Middle East and Africa], Japan, Asia excluding Japan, and Australia and New Zealand.”¹³⁰ These committees are charged with determining whether a default has occurred, thus triggering CDS coverage.

Public transnational institutions played a key role in the reforms as well. Multilateral financial institutions such as the BIS provided important technical advice, as did less formal international networks of regulators such as IOSCO. The BIS itself relied on delegates from national regulators, including, as chair of

¹²⁶ C. Robert Paul, *SEC Exemptive Actions Promote Clearing Credit Default Swaps* (Apr 3, 2009), online at <http://www.dlapiper.com/sec-exemptive-actions-promote-clearing-credit-default-swaps/> (visited Dec 1, 2009); see note 88.

¹²⁷ Otis Casey, *Small Bang for the Buckets*, Markit 61 (Autumn 2009), online at http://www.markit.com/assets/en/docs/markit-magazine/issue-5/MM05_R&D.pdf (visited Dec 1, 2009).

¹²⁸ Otis Casey, *The CDS Big Bang*, Markit 60 (Spring 2009), online at <http://www.markit.com/assets/en/docs/markit-magazine/issue-4/60-cds-big-bang.pdf> (visited Dec 1, 2009).

¹²⁹ European Commission, *Ensuring Efficient, Safe and Sound Derivatives Markets* at 3.1.4.1 (cited in note 107).

¹³⁰ Alastair Marsh, *ISDA Declares First Small Bang Restructuring Credit Event*, Risk (Aug 13, 2009), online at <http://www.risknews.net/public/showPage.html?page=867522> (visited Dec 1, 2009).

its 2007 committee considering derivatives clearing, Timothy Geithner, then of the Federal Reserve Bank of New York.¹³¹ The BIS added CDS to its triennial survey of financial instruments in 2004, increasing information about the growth of these instruments. In November of that year, the BIS Settlements Committee on Payments and Settlement System, working with the Technical Committee of IOSCO, issued a joint report titled *Recommendations for Central Counterparties*.¹³² These fifteen recommendations have proven influential as new CCPs have been formed for credit derivatives.

The ECB and the Committee of European Securities Regulators (CESR) had established a joint working group in 2001 to cooperate in the field of securities clearing and settlement. In light of the financial turmoil of 2007 and early 2008, the European Council's Economic and Financial Affairs Council (Ecofin) in June 2008 invited this ECB/CESR working group to adapt and finalize their earlier draft.¹³³ In May 2009, the working group published *Recommendations for Securities Settlements Systems and Recommendations for Central Counterparties in the European Union*, further developing the BIS recommendations.¹³⁴

C. Process

Converging on a single solution, the European and American approaches shared some important similarities in process, but also some important differences. In both jurisdictions, jawboning by regulators proved a crucial and successful feature of reform. Financial authorities in both jurisdictions called for private movement towards CCP clearing, and dealers consented, moving a portion of their clearing to clearinghouses. Two features of the CDS market made this approach especially effective. First, the industry is marked by significant concentration. There are only a dozen or so major dealers in CDS. Second, financial regulators have substantial authority even outside official regulatory command. Financial regulators exert such authority in part through the regulation of capital adequacy and through their role as lender of last resort. This enabled regulators to move the private markets quickly towards CCP

¹³¹ See Bank for International Settlements Committee on Payment and Settlement Systems, *New Developments in Clearing and Settlement Arrangements for OTC Derivatives* at iv (cited in note 61).

¹³² Bank for International Settlements, *Recommendations* (cited in note 93).

¹³³ European Central Bank, *Press Release: ESCB and CESR Consult on Recommendations for Securities Clearing and Settlement Systems and Central Counterparties in the European Union* (Oct 23, 2008), online at <http://www.ecb.int/press/pr/date/2008/html/pr081023.en.html> (visited Dec 1, 2009).

¹³⁴ European Central Bank, *Recommendations for Securities Settlement Systems and Recommendations for Central Counterparties in the European Union* (May 2009), online at http://www.ecb.int/pub/pdf/other/pr090623_escb-cesr_recommendationsen.pdf (visited Dec 1, 2009).

clearing. In addition, dealers might have cooperated in part to demonstrate the feasibility of a private solution and thereby head off more restrictive legislation.

Some differences in process too are notable. In Europe, the executive branch and independent institutions tasked with regulating the financial markets, not parliamentarians or legislators, led the reforms, with behind-the-scenes input from national financial authorities. The European Commissioner for Internal Markets played a key role, as did the ECB. In the US, by contrast, though the Federal Reserve and the Treasury led initial reform efforts, they were joined by legislators who quickly offered draft legislation.¹³⁵

The Europeans produced a number of studies of the problem, especially at the European Commission and the ECB.¹³⁶ By contrast, the US authorities produced fewer white papers. While the Europeans have yet (at the time of writing) to publish any draft bill or directive, American legislators have produced a number of detailed legislative proposals.¹³⁷ Concerns arose in Europe that the lengthy European deliberation process risked losing the momentum for reform, as the crisis fades farther into the past.

The Europeans were more explicitly concerned about ensuring that a clearinghouse be set up on their soil, while the Americans did not make such a goal explicit, perhaps because they assumed that it would happen in any case.¹³⁸

Perhaps counter-intuitively, the European approach provided a greater opportunity for private input than the American approach. After it published a comprehensive staff paper on OTC derivatives, the European Commission in July 2009 solicited comments from interested stakeholders on ways to strengthen the derivatives market, seeking comments on reforms to standardization, central data repositories, CCP clearing, and public trading venues.¹³⁹ It published those submissions authorized for publication on its website. The hearings in the US congressional committees examining OTC derivatives also produced thoughtful commentary, but allowed the airing of the views of but a few invited speakers.

¹³⁵ See Section II above.

¹³⁶ See studies cited in Section III above.

¹³⁷ See notes 79–80 and accompanying text.

¹³⁸ See note 96.

¹³⁹ The European Commission received 111 submissions from financial institutions, industry associations, European national financial authorities, and private individuals. European Commission, *Enhancing the Resilience of OTC Derivatives Markets* (Oct 16, 2009), online at http://ec.europa.eu/internal_market/consultations/2009/derivatives_en.htm (visited Dec 1, 2009). Contributors ranged from JP Morgan to the City of London and the World Bank.

D. Coordination

Once they embraced central clearing, regulators in Europe and the US saw the need for international coordination as to the details. The international nature of the CDS markets became evident in the AIG crisis: CFTC Chairman Gary Gensler notes, “When the U.S. government first put money into AIG last year, about two thirds of the first approximately \$90 billion flowed through AIG to its counterparties outside of the United States.”¹⁴⁰ Regulators recognized that differential regulation would spur regulatory avoidance through the simple expedient of booking the transaction through a more lax jurisdiction.¹⁴¹ If European law offers more exceptions to CCP clearing—say for corporate end-users—than US law, it is possible that Americans interested in such transactions might shift their transactions to Europe. This concern led the Economic and Financial Affairs Council of the EU to encourage “coherence with parallel initiatives at global level.”¹⁴² Chairman Gensler observed, “International coordination is essential to ensure comprehensive regulation of the OTC derivatives markets. We must not leave gaps in our regulatory structure that allow traders to evade one country’s regulations by taking their business elsewhere.”¹⁴³ The New York Federal Reserve has taken a leading role in facilitating international regulatory coordination relating to the establishment and regulation of CCPs, from hosting meetings commencing in the fall of 2008 of CCPs and industry participants and worldwide regulators, to publishing frameworks for regulatory cooperation to promote consistent standards.¹⁴⁴

¹⁴⁰ Commodity Futures Trading Commission Chairman Gary Gensler, Speech at the European Commission (Sept 25, 2009), online at <http://www.cftc.gov/ucm/groups/public/@newsroom/documents/speechandtestimony/opagenkler-12.pdf> (visited Dec 1, 2009).

¹⁴¹ See, for example, The Role of Credit Derivatives in the US Economy: Hearing before the US House of Representatives Committee on Agriculture, 110th Cong, 2nd Sess (Dec 8, 2008) (John O’Neill, NYSE Euronext) (“From a regulatory perspective, if the U.S. chooses to regulate CDS clearing in a greatly different or more restrictive manner than regulators abroad, a situation may be created that will cause products to move elsewhere. A concerted effort among regulators and market participants is necessary in order to coordinate policies governing the CDS market and strengthen the integrity of that market.”); European Central Bank, *Draft Recommendations for Central Counterparties*, Ref CESR/09-302 (Mar 31, 2009), online at http://www.cesr-eu.org/data/document/09_302.pdf (visited Dec 1, 2009) (“It is also important to recognise that OTC derivatives are globally traded products and that therefore it will be important to develop a consistent international regulatory approach through continued dialogue with CPSS and IOSCO.”).

¹⁴² Council of the European Union, *Council Conclusions on Clearing and Settlement* at 2 (cited in note 104).

¹⁴³ Gensler, Speech at the European Commission (cited in note 120).

¹⁴⁴ See press releases of the Federal Reserve Bank of New York, A Global Framework for Cooperation among CDS CCP Regulators (Feb 19, 2009), Federal Reserve Bank of New York, A

Not only is there the possibility of regulatory leakage through differential regulation, there is the fact that counterparties to CDS transactions can hail from across the world (as the AIG example above demonstrates). A survey of the geographic distribution of counterparties finds that 46 percent of counterparties were located in the US and Canada, 24 percent in Western Europe, 20 percent in the Caribbean, 4 percent in Japan, and 3 percent in Australia.¹⁴⁵ It will be easier to ensure compliance with CDS risk management rules if the home countries of various parties adhere to consistent international standards. Of course, it is easier to urge harmonization than to actually agree. Achieving transatlantic agreement as to the details will undoubtedly prove difficult.

CONCLUSION

Since their introduction in the 1990s, credit default swaps had grown largely outside regulation to rival the global bond markets in size. The financial crisis of 2008 revealed that a few financial institutions with enormous CDS portfolios could bring down counterparties, which would then bring down their counterparties, and so on in a domino-like fall cascading through the financial markets. The economic shock of Lehman's collapse and the costs of bailouts led regulators on both sides of the Atlantic to seek to break this "Too Interconnected to Fail" paradigm.

Regulators saw that trading in CDS would continue occurring within or without their jurisdiction because private parties found them a useful mechanism to manage risk. Regulators thus sought to bring these sectors under control. On both sides of the Atlantic, safety and soundness of the financial sector were the overriding objectives, leading them to converge on reforms to CDS clearing as a mechanism to contain risk. Regulators concluded that erecting well-capitalized central counterparty clearinghouses with sound risk-management would create a buffer to weather financial storms. CCPs provide a pool of capital to manage default, a pool funded not by the government but by market participants.

The examination of the regulation of CDS in multiple jurisdictions allows us to trace the shifting dynamics in the path of the law thus far—from competition, to experience, to logic, and ultimately to coordination. Through a striking process of convergence, regulators in the US and Europe centered their reform efforts on central counterparty clearing. Where convergence will be the

Global Framework for Regulatory Cooperation on OTC Derivative CCPs and Trade Repositories (Sep 24, 2009), both sources and related materials online at http://www.newyorkfed.org/newsevents/otc_derivative.html (visited Dec 1, 2009).

¹⁴⁵ ISDA, *ISDA Margin Survey 2009*, 9 (2009), online at www.isda.org/c_and_a/pdf/ISDA-Margin-Survey-2009.pdf (visited Dec 1, 2009).

most tested is in the extent to which the implementation of central clearing is dependent on legal mandate or market forces.