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The Dodd-Frank Act and OTC Derivatives: The Impact of Mandatory Central Clearing on the Global OTC Derivatives Market

PAUL M. McBRIDE*

Abstract

The enactment of the Dodd-Frank Wall Street Reform and Consumer Protection Act represents a turning point in the regulation of the OTC derivatives markets. By subjecting OTC derivatives and the global markets in which they are traded to a variety of new requirements, the Act represents the first major attempt to regulate one of the most important components of the international financial system. The rules that regulatory agencies must implement in order to effectuate the intent of the Act, however, will inevitably have consequences on the market's future development and utility that reach far beyond the United States. This article considers how the implementation of just one aspect of the Dodd-Frank Act, mandatory central clearing, may impact commercial end-users who routinely manage risk in the OTC derivatives market. Ultimately, through an analysis of OTC derivatives, risk management, and central clearing, this article warns that the potential negative unintended consequences associated with mandatory central clearing are likely to outweigh the possible benefits.

I. Introduction

The recent financial crisis, which culminated in the collapse of Lehman Brothers and the government “bailout” of American International Group, propelled credit default swaps (CDS) and other derivatives into the public spotlight. Unfortunately, much of the information disseminated to the public regarding derivatives and their connection to financial instability portrayed the transactions in an unreasonably negative light.1 Journal-

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1. See Boyd Erman, Secrecy’s the Real Scoundrel, Not Credit Default Swaps, GLOBE & MAIL (Can.), Mar. 2, 2010, at B2 (“[Credit default swaps] also killed American International Group, if the headlines following its $85-billion bailout by the U.S. government are to be believed. More realistically, AIG tried to kill itself in a
When used responsibly, derivatives serve vital liquidity and price discovery functions and the potential advantages associated with single paragraph, introduced for example, a February 2010 front-page article in the New York Times dedicated just a typically, these articles mentioned the positive attributes of derivatives only briefly, if at all. For instance, a February 2010 front-page article in the New York Times dedicated just a single paragraph, introduced by the statement "[d]erivatives do not have to be sinister," to the potential advantages associated with CDS contracts.

While there undoubtedly was a strong relationship between derivatives markets and the financial crisis, the suggestion that derivatives themselves are per se "sinister" is incorrect. When used responsibly, derivatives serve vital liquidity and price discovery functions and permit market participants to hedge against unwanted risk. Nevertheless, the asserted connection between the financial crisis and derivatives spurred efforts to increase regulatory oversight over derivatives transactions, particularly those executed in the "over-the-counter" (OTC) market. Some individuals even argued in favor of severely restricting the market for OTC derivatives, championing proposals that would have forced all derivatives onto exchanges and completely outlawed CDS contracts. Fortunately, these draconian measures, which ignored the benefits provided by a robust market for OTC derivatives, failed to gain significant support.

In general, the financial reform legislation actually enacted by Congress pursued a more balanced approach to the regulation of the OTC derivatives market. In fact, the proposals that shaped the final bill shared many common provisions, including requirements for central clearing of OTC derivatives contracts and post-trade reporting for non-centrally

spectacular act of self-immolation, owing to brutally bad management." Erman explains that "because we're talking about derivatives ... it's easy to shift the blame from the real bad actors to the tools.


3. See, e.g., Morgenson, supra note 2; but see Erman, supra note 1.


8. Morgenson, supra note 2.


10. Duffie, Li & Lubke, supra note 5, at 9 ("From a naive viewpoint, it would be possible to cure the risks posed by simply mandating that all derivatives trading be conducted on organized exchanges ... The elimination of the OTC market, however, would cause more harm than good.").

cleared contracts.12 Where the various suggestions tended to diverge however, was in the allocation of responsibility between the government and the private sector. While some people argued that too much or the wrong type of government control would unreasonably increase the cost of risk management by limiting the availability of OTC derivatives, others were fearful that without a strong role for government regulators, legislated reforms would not reduce systemic risk or promote financial stability.13

The tension between the role of private sector and the government in the future development of the OTC derivatives market was no more evident than in the debate regarding mandatory central clearing requirements.14 Despite the fact that legislators generally believed that central clearing was fundamental to any financial reform legislation, the appropriate scope of the requirement was subject to significant disagreement.15 Unfortunately, the passage of the Dodd-Frank Act did not end this argument. Instead of establishing clear guidelines, the Dodd-Frank Act gives the Commodity Futures Trading Commission (CFTC) and the Securities and Exchange Commission (SEC) the unenviable task of defining the contours of mandatory central clearing.16 Furthermore, in their implementation of the Dodd-Frank Act’s requirements, the CFTC and SEC must work to ensure that any newly promulgated domestic regulations are compatible with the larger gradually emerging international framework for derivatives regulation and financial reform.17 By leaving the details of central clearing under the Dodd-Frank Act to the discretion of ad-

12. See, e.g., H.R. 4173; Duffie, Li & Lubke, supra note 5, at 20.
14. Compare Press Release, U.S. Dept. of the Treasury Press Room, supra note 13 (arguing in favor of mandatory clearing for OTC derivatives contracts accepted for clearing by a central counterparty and approved by the Commodity Futures Trading Commission or the Securities and Exchange Commission), with Hearing To Review Proposed Legislation By The U.S. Department Of The Treasury Regarding The Regulation Of Over-The-Counter Derivatives Markets Before the H. Comm. on Agriculture, supra note 13 (arguing against mandatory central clearing), and Darrell Duffie, Policy Issues Facing the Market for Credit Derivatives, in THE ROAD AHEAD FOR THE FED 107, 111-12 (John D. Giorciari & John B. Taylor eds., 2009) (noting that central clearing has the potential to reduce net counterparty exposure and would not have prevented the collapse of AIG).
16. See, e.g., Dodd-Frank Act, § 723(a)(3) (to be codified at 7 U.S.C. § 2) (directing the CFTC to continuously “review each swap, or any group, category, type, or class of swaps to make a determination as to whether the swap or group, category, type, or class of swaps should be required to be cleared.”).
ministrative agencies, Congress has ensured that central clearing will remain a contentious topic for the foreseeable future.\textsuperscript{18}

This article evaluates the case for and against mandatory central clearing of OTC derivatives in order to determine the appropriate degree of government intervention. Ultimately, this article concludes that because of the importance and dynamic nature of the OTC derivatives market, the Dodd-Frank Act's imposition of mandatory central clearing requirements is inappropriate for at least two reasons. First, by requiring central clearing, the government will force the creation of new systemically important institutions without ensuring the financial stability of existing systemically important institutions or the financial markets generally. Second, the regulatory uncertainty associated with determining which OTC derivatives will require central clearing and which counterparties will be subject to the Dodd-Frank Act clearing requirements will substantially increase the cost of risk management for commercial end-users of OTC derivative products.

In order to understand the relationship between central clearing and the OTC derivatives market, Part I of this article reviews the fundamentals of derivatives and illustrates how end-users employ OTC derivatives in risk management programs. Part II then introduces the concept of central clearing and discusses the theoretical advantages associated with central clearing of OTC derivatives. Arguing against mandatory central clearing, Part III identifies how central clearing can actually increase systemic risk at the expense of risk management programs implemented by commercial end-users of derivatives. Finally, Part IV provides a brief conclusion and suggests that greater cooperation between government agencies and the private sector, rather than the heavy-handed government regulation possible, and arguably probable, under the Dodd-Frank Act, would more effectively advance the twin goals of reducing systemic risk and promoting effective risk management practices.

II. An Introduction to Derivatives and Their Application in Risk Management

A. What is a Derivative?

While widespread public awareness of the derivatives market is arguably a relatively recent phenomenon, derivatives are nearly as old as recorded history itself. As early as 1700 B.C., merchants and traders employed futures and options contracts in order to mitigate or capitalize on the uncertainty associated with the future.\textsuperscript{19} Given the historical underpinning of derivatives, the sudden urge to impose dramatic regulatory reform begs the question: Why now? One probable answer is that because derivatives "sound arcane and evil" and "are supposedly complicated...it's easy to shift the blame from the real bad


\textsuperscript{19} JOHN PETER CASTAGNINO, DERIVATIVES: THE KEY PRINCIPLES 6 (3d ed. 2009); Dodd, supra note 6, at 288. George Crawford and Bidyut Sen identify a 2,400-year-old work of Aristotle as the earliest reference to derivatives. Aristotle's work told the story of the philosopher Thales who, in anticipation of a bumper olive crop, purchased options to buy the rights to local olive presses during the harvest. When the philosopher's prediction proved correct, he exercised the options and then leased the rights to the presses at a significant profit. GEORGE CRAWFORD & BIDYUT SEN, DERIVATIVES FOR DECISION MAKERS 7-8 (1996).}
actors to the tools." As terms like "derivatives" and "CDS" became synonymous with perceptions of Wall Street excess, the public pressure on legislators to implement sweeping reforms to "fix" the problem increased. Therefore, in order to understand whether specific regulatory changes are appropriate, it is first necessary to demystify what are, in many cases, relatively straightforward financial transactions.

Essentially, a derivative is an agreement between counterparties that creates rights and obligations relative to some underlying asset (the "underlying"). The agreement consequently derives its value from the value of the underlying. When parties originate an OTC derivative contract, they effectively establish the value of the underlying, or the likelihood that an event related to the underlying will (or will not) occur, at some point in the future. As the market subsequently reassesses the value or probability associated with the underlying, the value of the related derivative contract fluctuates. The process of continual reassessment results in a projected balance of payments between the counterparties, along with the possibility that the balance will change over time. Interestingly, the underlying can be nearly anything that the parties agree to use, including "hard" commodities such as gold, "soft" commodities such as orange juice or pork bellies, equity or debt securities, interest rates, currencies, indices, energy commodities, emission credits, and even the weather.

Taxonomically, derivatives fit within one of four fundamental types based on the structure of the transaction and the rights and obligations created. These four types are (1) forwards, (2) futures, (3) swaps, and (4) options. In the parlance of the industry, the term used to describe the most basic derivative structures is "vanilla." Because of the relative simplicity of vanilla derivatives, they tend to be the most commonly traded varieties in the derivatives markets. As the rights and obligations created by the parties become more complex, the resulting derivatives assume the moniker "exotics." Fundamentally, however, a derivative characterized as exotic is simply just a variation on the four basic derivative categories. For example, a "swaption" is nothing more than an option on a swap contract.

20. Erman, supra note 1.
22. Castagnino, supra note 19, at 1-2.
25. See 1 Gooch & Klein, supra note 23.
26. See Castagnino, supra note 19, at 2; 1 Gooch & Klein, supra note 23.
27. Castagnino, supra note 19, at 1-2. A party's payments under a weather derivative are related to the occurrence of weather events "such as temperature or precipitation levels, storms, and even wind speed and sea wave size." 1 Gooch & Klein, supra note 23, at 756-60. For example, electric utilities frequently hedge business risks associated with the amount of energy used for heating and cooling by entering into weather derivatives based on the difference between the average temperature for the day and a reference temperature of 65°F. Id. at 758-60.
29. Id.
30. DCG Glossary, Int'l Swaps and Derivatives Ass'n, http://www.isda.org/c_and_s/oper_commit-dcg-glossary.html (last visited Jan. 19, 2011) (defining "vanilla" as "a derivative transaction which has a very basic structure, likely to be most commonly traded in the relevant market.").
32. Castagnino, supra 19, at 269 (in a swaption, the swap contract is the underlying).
The first two categories, forwards and futures, are closely related forms of derivatives. In a typical forward contract, one party agrees to purchase and another party agrees to sell a quantity of the underlying at a future date. At the origination of the transaction, both parties commit to a forward price, quantity, and delivery date for the underlying. As a result, the forward contract insulates the counterparties from fluctuations in the underlying's spot price that are harmful to their ultimate economic objective, while at the same time denying the counterparties the opportunity to benefit from upside risk. The result is a "zero-sum game"—if the spot price of the commodity on the delivery date is above the forward price, the seller's inability to take advantage of the higher spot price is offset by the buyer's ability to purchase at the lower forward price.

A futures contract is functionally the equivalent of a forward contract with one significant difference: regulatory treatment. Forward contracts are generally unregulated, while futures contracts are subject to the Commodity Exchange Act (CEA). Specifically, unless subject to an exemption granted by statute or the CFTC, it is unlawful to participate in "a contract for the purchase or sale of a commodity for future delivery" except through a designated contract market. This difference in regulatory treatment is largely a product of the difference between how forward and futures contracts are ultimately settled. In a forward contract the counterparties generally contemplate settling through the future physical delivery of the underlying, whereas futures contracts are typically settled financially without ever taking delivery of the underlying. As a practical matter, because many futures trade on organized exchanges like the Chicago Board of Trade, the contracts

33. Id. at 33.
34. ld.
35. ld. at 33-34.
36. Id. at 34-35. The same result occurs in the opposite situation where the spot price on the day of delivery is below the forward price: the buyer's loss is equal to the seller's gain.
37. See 1 PHILIP MCBRIDE JOHNSON & THOMAS LEE HAZEN, DERIVATIVES REGULATION § 1.02[3] (2004); see, e.g., Commodity Futures Trading Comm'n v. Co Petro Mktg. Group, 680 F.2d 573, 579-80 (9th Cir. 1982).
38. 1 JOHNSON & HAZEN, supra note 37.
39. 7 U.S.C. § 6(a) (2006). To determine if a contract is a futures contract, courts will typically evaluate the structure of the transaction. Characteristics such as standardized terms, customers without a business use for the commodity, and an expectation that the customer will not take delivery, suggest the existence of a futures contract. 1 JOHNSON & HAZEN, supra note 37, § 1.02[5]. In addition to specifically enumerated items, the definition of "commodity" for purposes of the CEA includes "all other goods and articles . . . and all services, rights, and interests in which contracts for future delivery are presently or in the future dealt in." 7 U.S.C. § 1a(4). As Johnson and Hazen explain, the definition "illustrates an important principle of commodities regulation: its interest is in a form of economic activity, rather than in the attributes or character of the underlying subject." 1 JOHNSON & HAZEN, supra note 37, § 1.02[1].
typically include standard terms with only the contract price subject to negotiation.41 Additionally, the marketability and liquidity afforded by exchange trading permits parties to cancel their positions at any time by entering into offsetting transactions.42 With the ability to offset, parties can effectively avoid any obligations associated with taking physical delivery of the underlying commodity.43

In a swap transaction, the parties to the contract agree to exchange, or “swap,” future cash flows determined by reference to a notional amount of an underlying.44 Interest rate swaps, which represent over fifty-six percent of all OTC derivatives contracts by notional amount outstanding, are the simplest way to illustrate how swaps work.45 In an interest rate swap, counterparties commit to exchange payments equal to the interest accrued on a notional principle amount of an underlying currency at their respective agreed rates.46 For example, Figure 1 depicts an interest rate swap in which Party A commits to pay a fixed rate of five percent while Party B commits to pay one of the floating London Inter-Bank Offered Rates (LIBOR) on a notional amount equal to $10 million.47 During the duration of the swap agreement, the payments between the parties will reflect the difference in the two rates applied to the notional amount, but the notional amount will never change hands.48 For example, if the relevant LIBOR equals seven percent when a swap payment is due, Party B will make a net “interest” payment of two percent to Party A. Likewise, if LIBOR decreases to four percent for a subsequent settlement period, Party A will make a net “interest” payment of one percent to Party B.49

41. 1 JOHNSON & HAZEN, supra note 37. For example, the contract size for live cattle futures traded on the Chicago Board of Trade is 40,000 pounds and the minimum fluctuation, or “tick size” is $.00025 per pound (ten dollars per contract). Live Cattle Futures, CME GROUP, http://www.cmegroup.com/trading/commodities/livestock/live-cattle_contract_specifications.html (last visited Jan. 19, 2011). Curiously, onions are the only commodity for which futures trading is completely prohibited. 7 U.S.C. § 13-1 (2006).

42. 1 GOOCH & KLEIN, supra note 23, at 3; R. STAFFORD JOHNSON, INTRODUCTION TO DERIVATIVES 324 (2009) (“Most futures contracts are closed prior to expiration. As a result, there are only a small number of contracts that are entered into that lead to actual delivery.”).

43. 1 GOOCH & KLEIN, supra note 23, at 3; JOHNSON, supra note 42.

44. JOHNSON, supra note 42, at 537.

45. CASTAGNINO, supra note 19, at 45. According to the Bank for International Settlements, of the nearly $605 trillion of OTC derivatives in notional amounts outstanding, $437 trillion are based on interest rates (72.3%), $342 trillion of which are interest rate swaps (56.5%). Statistical Annex, BIS Q. REV. Mar. 2010, at A121, tbl.19, available at http://www.bis.org/publ/qrtpdf/r_qa1003.pdf. The significance of the notional amount outstanding is discussed infra at notes 137 through 142 and accompanying text.

46. 1 GOOCH & KLEIN, supra note 23, at 421. Plain vanilla swaps typically provide for semiannual payments and have maturities between three and ten years. JOHNSON, supra note 42, at 537.

47. See 1 GOOCH & KLEIN, supra note 23, at 421.

48. On swap payment dates, the obligations of the parties are cancelled and replaced by an obligation of the party that owed the larger amount to pay the difference to the party that owed the smaller amount. In other words, the payments between Party A and Party B are “netted” when they come due. CASTAGNINO, supra note 19, at 58.

49. See INT'L SWAPS AND DERIVATIVES ASS'N, 1992 ISDA MASTER AGREEMENT (MULTICURRENCY-CROSS BORDER) § 2(c) (1992), CASTAGNINO, supra note 19, at 56-57. Through the process of “netting," the obligations of the parties arising under the same transaction and in the same currency are, on the settlement date, “automatically satisfied and discharged and . . . replaced by an obligation upon the party by whom the larger aggregate amount would have been payable to pay to the other party the excess of the larger aggregate amount over the smaller aggregate amount.” INT'L SWAPS AND DERIVATIVES ASS'N, supra.
An option contract, unlike a forward, future, or swap, imposes an obligation on only one of the contracting parties—the writer of the option. The party holding the option has the right, but not an obligation, to exercise the option at the agreed “strike price.” If the holder elects to exercise the option, then both parties become committed to perform under the contract. Two common forms of options are “call” and “put” options. A call option gives the option holder the right to purchase from the option writer a specified amount of the underlying at the strike price. Conversely, a put option gives the option holder the right to sell a specified quantity of the underlying to the option writer at the strike price. By purchasing an option, the holder minimizes the risk associated with any possible adverse change in the price of the underlying without eliminating the opportunity to benefit from favorable price movements. In other words, the holder will exercise the option only when it is profitable to do so.

By understanding the structure of the four basic derivative contracts, the transactions themselves no longer seem per se sinister. Furthermore, by knowing how derivative contracts work, it becomes possible to appreciate how commercial end-users can creatively employ derivatives strategies as part of an effective risk management program. In order to maximize the advantages of derivatives as a risk management tool however, end-users must have the flexibility to tailor the contracts to suit their specific business needs. While existing exchange-traded derivatives provide some opportunities for mitigating generic risks, without the ability to achieve customization through private bilateral negotiations, end-users would be unable to protect themselves against risks particular to their business. It is in response to this demand for custom derivative instruments that the OTC derivatives market emerged.

50. See 1 Gooch & Klein, supra note 23, at 524.
51. Id.
52. Castagnino, supra note 19, at 40-41.
53. Id.
54. See 1 Gooch & Klein, supra note 23, at 524.
55. Castagnino, supra note 19, at 45.
56. See Duffie, Li & Lubke, supra note 5, at 9.
57. Id.
58. Hearing To Review Proposed Legislation By The U.S. Department Of The Treasury Regarding The Regulation Of Over-The-Counter Derivatives Markets Before the H. Comm. on Agriculture, 111th Cong. 74 (2009) (statement and written testimony of Robert Pickel, Chief Executive Officer, International Swaps and Derivatives Association) (“Customized products exist only because end-users find them useful, and indeed necessary, in their day-to-day operations. In fact, the privately negotiated derivatives business has grown because standardized contracts are only of limited use in hedging.”).
B. DISTINGUISHING BETWEEN THE OTC AND EXCHANGE-TRADED DERIVATIVE MARKETS

Despite the long history and relative simplicity of most derivatives, it was only within the last thirty years that a significant OTC derivatives market emerged.59 Perhaps surprisingly, the OTC market’s rapid explosion was in large part fueled by legal rather than economic considerations.60 While financial institutions and commercial end-users were undoubtedly aware of the theoretical benefits associated with employing OTC derivatives, legal uncertainty historically inhibited the growth of privately negotiated agreements.61 As the legal impediments to the development of OTC derivatives diminished though, the market expanded into its current position as a major component of modern finance.62 To appreciate the significance of this development and growth within the OTC derivatives market, however, it is necessary to understand how the OTC market is different from the exchange traded markets.63

Fundamentally, exchange trading is a rules-based endeavor. In order to trade on an exchange, market participants must either become members of the exchange or trade through a member of the exchange.64 In both situations, the membership requirement subjects the market’s participants to the exchange’s rules. Specifically, in addition to other rules, the exchange may impose capital requirements on its members, limit a member’s ability to take speculative positions, impose loss-sharing obligations in the event of a member default, and subject the members to reporting obligations.65 In turn, many of the market’s rules both directly and indirectly trickle down to the member’s clients (the end-users). For example, an exchange’s rules may limit the size of the positions that a member can maintain with a client, impose higher margin requirements to cover the positions of a member’s client, or subject a member trading on a client’s behalf to additional capital requirements.66 Perhaps the most significant implication of the rules-base system, however, is the fact that the exchanges determine which derivatives products to offer.67 Therefore, exchange trading limits the availability of derivative contracts to only those with enough trading volume to cover the cost of establishing and managing the product.68

In contrast to the exchanges, decentralization is the hallmark of the OTC derivatives market.69 In the OTC market, counterparties trade with one another directly using indi-

60. See Schinasi et al., supra note 59, at 36.
62. See Schinasi et al., supra note 59, at 1.
63. Id. at 18.
64. CASTAGNINO, supra note 19, at 13-14.
65. Schinasi et al., supra note 59, at 18.
66. Id.
67. CASTAGNINO, supra note 19, at 12-13.
68. Duffie, Li & Lubke, supra note 5, at 9 ("Exchange trading relies on a relatively high order flow, due in part to the cost of setting up exchange trading for each new type of derivative. Without enough trading, these setup costs cannot be recovered from exchange and brokerage fees.").
69. Schinasi et al., supra note 59, at 19.
vidually negotiated agreements.\textsuperscript{70} Whereas exchanges provide for inflexible rules regarding membership and trading activities, the participants in the OTC market are free to make their own assessments regarding which parties to trade with, what types of margin requirements to impose, and how to structure a particular transaction.\textsuperscript{71}

The increased flexibility of the OTC market though, is not without costs. In return for the greater latitude to structure transactions that meet individual needs, the parties forgo some of the benefits that exchange trading offers.\textsuperscript{72} In particular, the lack of standardization between OTC derivatives decreases their marketability, thereby making it more difficult to close out a position merely by purchasing an offsetting contract.\textsuperscript{73} Additionally, because the parties to the transaction individually negotiate each contract, they must ensure that the final agreement is both legally enforceable and an accurate reflection of what they expect to accomplish through the derivative.\textsuperscript{74}

The need for individual negotiation in the OTC market, however, does not necessarily mean that counterparties start each OTC derivative transaction from scratch. In fact, trade organizations like the International Swaps and Derivatives Association (ISDA) assist contracting parties by establishing standardized documents and protocols, such as the 1992 ISDA Master Agreement and the various ISDA Definitions.\textsuperscript{75} By employing the derivatives documentation provided by ISDA and other similar organizations, counterparties to OTC derivatives transactions are able to minimize the expense associated with participation in the OTC market and, concurrently, benefit from the wealth of legal precedent regarding how various courts and attorneys have interpreted the agreements. For example, ISDA regularly collects and updates legal opinions regarding the international enforceability of netting and collateral provisions included in its derivatives documentation.\textsuperscript{76} ISDA members, by relying on such opinions, will gain some comfort regarding how a foreign court may interpret and enforce the OTC derivative contract should its counterparty become subject to an insolvency proceeding under the laws of another country.\textsuperscript{77}

The emergence of the OTC derivatives market as an alternative to the exchange trading of derivatives was a significant development during the thirty years that preceded the financial collapse of 2008. Without the advances in legal certainty for individually negotiated derivatives transactions that occurred during that time, however, the OTC market would probably not be as robust as it presently is. Subsequent to 1974, the most significant legal barrier to the use and development of OTC derivatives was the uncertainty

\textsuperscript{70} 1 Gooch & Klein, supra note 23, at 3-4.
\textsuperscript{71} Id.; see infra text accompanying notes 313-317.
\textsuperscript{73} 1 Gooch & Klein, supra note 23, at 3.
\textsuperscript{74} Id. at 4-5.
\textsuperscript{77} Allen & Overy LLP, supra note 75, at 5-6.
associated with the scope of the CEA. According to a 1999 report on OTC derivatives published by the President's Working Group on Financial Markets, "uncertainty arises from concerns under current law as to whether some of these contracts could be construed to be subject to the CEA and whether certain types of mechanisms for executing and clearing OTC derivatives might be construed to alter the legal status of otherwise exempted or excluded instruments."9

As Transnor (Bermuda) Limited v. BP North American Petroleum illustrates, the concerns of market participants regarding the legal treatment of OTC derivatives contracts under the CEA during the 1980s and 1990s were not merely theoretical. In Transnor, Shell Oil, Conoco, and Exxon, along with other defendants, argued that certain Brent blend crude oil contracts were exempt from regulation pursuant to the CEA's Forward Contract Exclusion. According to the defendants, the absence of a contractual right to avoid the parties' delivery obligations established their character as forward contracts. The court, however, disagreed and held that because they "were undertaken mainly to assume or shift price risk without transferring the underlying commodity," the contracts were futures even though they "may represent binding commitments to buy or sell the physical oil."

By characterizing the contracts as futures rather than forwards, the court necessarily concluded that the contracts were subject to the CFTC's regulatory authority and the requirements of the CEA.

Along with uncertainty associated with the scope of the CEA, competition between regulatory authorities over the extent of their respective authority also served to stifle the growth of the OTC derivatives market. As previously identified, the CEA grants the CFTC the authority to regulate trading in commodity futures contracts. However, situations arose where it became difficult to determine whether a transaction at issue involved a commodity or a security. These types of definitional challenges placed contracting parties in the middle of conflicts between the CFTC and the SEC concerning the scope of each agency's authority to regulate derivatives. Additionally, beyond merely being required to manage the jurisdictional challenges presented by SEC and CFTC conflicts,

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78. REPORT OF THE PRESIDENT'S WORKING GROUP ON FINANCIAL MARKETS, supra note 61, at 6; see 1 JOHNSON & HAZEN, supra note 37, § 1.02[1] (discussing the implications associated with Congress's decision to expand the definition of commodity through the Commodity Futures Trading Commission Act of 1974).
79. REPORT OF THE PRESIDENT'S WORKING GROUP ON FINANCIAL MARKETS, supra note 61, at 6.
81. Id. at 1489; see 1 JOHNSON & HAZEN, supra note 37, § 1.02[3] (discussing the Forward Contract Exclusion).
82. Transnor (Berm.) Ltd., 738 F. Supp. at 1491.
83. Id. at 1491, 1493.
84. Id. at 1491-93. In 1993, the CFTC used its newly acquired exemptive power to exclude the Brent blend crude oil contracts from regulation as futures contracts. See 7 U.S.C. § 6(c) (2006); Exemption for Certain Contracts Involving Energy Products, 58 Fed. Reg. 21,286, 21,294 (Apr. 20, 1993); REPORT OF THE PRESIDENT'S WORKING GROUP ON FINANCIAL MARKETS, supra note 61, at 9.
86. See supra text accompanying notes 37 through 39.
87. REPORT OF THE PRESIDENT'S WORKING GROUP ON FINANCIAL MARKETS, supra note 61, at 7-8.
88. Id.; Everett, supra note 85. The possibility for conflict between the SEC and CFTC arose from amendments to the CEA enacted in 1974 that (1) gave the CFTC exclusive jurisdiction over commodity futures contracts; (2) expanded the definition of commodity beyond tangible items; and (3) affirmed the existing jurisdiction of the SEC. REPORT OF THE PRESIDENT'S WORKING GROUP ON FINANCIAL MARKETS, supra
banking institutions were also obligated to cooperate with their various prudential regulators, such as the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and the Federal Reserve.\textsuperscript{89}

During the last thirty years, however, Congress, through amendments to the CEA, gradually removed the regulatory roadblocks that impeded the development of the OTC derivatives market. Initially, in 1982 and 1983, Congress enacted amendments designed to clarify the division of authority between the CFTC and the SEC and thereby reduce the tension between the two regulatory bodies.\textsuperscript{90} Subsequently, through the Futures Trading Practices Act of 1992, Congress gave the CFTC the authority to exempt certain transactions from the scope of the CEA.\textsuperscript{91} Pursuant to its new exemptive authority, the CFTC promulgated rules that excluded some swap agreements and energy-related contracts from most of the CEA's requirements.\textsuperscript{92} These CFTC rules provided the additional legal certainty necessary for the continued development of the OTC derivatives market.\textsuperscript{93} However, because the exemptions enacted were administratively rather than statutory, they remained subject to revocation by the CFTC and were therefore less than ideal.\textsuperscript{94} Ultimately, by including sweeping statutory exemptions from the CEA in the Commodity Futures Modernization Act of 2000 (CFMA), Congress removed many of the remaining barriers to the development and use of OTC derivatives.\textsuperscript{95} Following the enactment of the CFMA, "eligible contract participants"\textsuperscript{96} could enter into most derivative transactions involving "excluded commodities"\textsuperscript{97} and "exempt commodities"\textsuperscript{98} and indi-

\textsuperscript{89} Schinasi et al., supra note 59, at 32.

\textsuperscript{90} Report of the President's Working Group on Financial Markets, supra note 61, at 7-8. The amendments essentially codified the "Shad-Johnson Accord" between the SEC and CFTC. The Accord attempted to clarify which financial instruments were subject to which agency's jurisdiction. Eric J. Pan, Single Stock Futures and Cross-Border Access for U.S. Investors, 14 Stan. J.L. Bus. & Fin. 221, 245 (2008). As explained by the Seventh Circuit, however, Congress's allocation of authority between the SEC and CFTC "appears to be a political compromise; no one has suggested an economic rationale for the distinction." Bd. of Trade of Chicago v. SEC, 187 F.3d 713, 716 (7th Cir. 1999).


\textsuperscript{93} 1 Gooch & Klein, supra note 23, at 79-81 ("From the perspective of legal certainty, the Swap Agreement Exemption and the Energy Contracts Exemption represented a significant improvement for the OTC derivatives market.").

\textsuperscript{94} Id. at 81.

\textsuperscript{95} See id. at 67.

\textsuperscript{96} 7 U.S.C. § 1(a)(12) (2006) (defining "eligible contract participant."). The definition of eligible contract participant is designed to capture individuals and entities that, by virtue of their status, assets, organizational structure, or wealth, are deemed to be sophisticated enough to not require the protection of the CEA. See id.

\textsuperscript{97} Id. § 2(d). The definition of excluded commodity generally includes "financial commodities as well as certain other commodities without a cash market." Edward J. Rosen & Richard T. Kim, OTC Derivatives - The Existing Regulatory Landscape, in ABCs of Swaps & Other Derivatives 2009, at 166-67; see 7 U.S.C. § 1a(13).

\textsuperscript{98} 7 U.S.C. § 2(h) (2006). Exempt commodities are commodities that are not excluded commodities or agricultural commodities. 7 U.S.C. § 1a(14). Exempt commodities would "include such commodities as metals (precious, semiprecious and nonprecious), electricity, nonagricultural energy products, telecommunications bandwidth, telecommunications minutes, and emissions credits." Rosen & Kim, supra note 97, at 167.
ordinarily negotiated transactions not involving agricultural commodities, without worrying that the derivative agreement would be subject to the requirements of the CEA.

As legal certainty regarding the use of bilaterally negotiated derivative products emerged through legislative enactments and CFTC rulemaking, the market for OTC derivatives exploded. According to information compiled by the Bank for International Settlements, between the end of June 1998 and the end of June 2009, the total notional amount outstanding for all OTC derivatives grew from $72 trillion to nearly $605 trillion. By contrast, at the end of 2009, the total notional amount outstanding for exchange-traded derivatives was only $73 trillion. With the rapid development of the OTC derivatives market as an alternative to exchange trading, the scope of derivatives products available to end-users for risk management purposes increased. As the next section explains, this expansion, combined with the ability to create additional custom derivatives in the OTC market, permitted end-users to hedge risks that the traditional exchanges did not reflect.

C. OTC DERIVATIVES AS TOOLS FOR RISK MANAGEMENT

Although legal reform was necessary for the growth of the OTC derivatives market, it was not the only factor that accounted for the market's rapid expansion. Ultimately, without substantial demand for customized derivatives, the OTC market would not have grown to over eight times the size of the exchange-traded derivatives market. As explained by Robert Pickel, ISDA's Chief Executive Officer, "the need for these privately negotiated derivatives products was driven by the needs of end-users. Their growth was a direct function of their utility to end-users. If end-users did not want these products, they would not exist."

For many commercial end-users, the principal utility of OTC derivatives comes from their value as tools for managing risk. To illustrate this point, in testimony before the

99. 7 U.S.C. § 2(g). Significantly, in conjunction with the implementation of central clearing and other financial reforms, the Dodd-Frank Act repeals many of the exemptions established with the CFMA. Agricultural Commodity Definition, 75 Fed. Reg. 65,586 (proposed Oct. 26, 2010) (to be codified at 17 C.F.R. pt. 1).
100. For a more complete discussion of the nuances of the CFMA exemptions, see supra note 23, at 82-101.
104. See supra text accompanying notes 101 through 102.
106. See 1 JOHNSON & HAZEN, supra note 37, § 1.02[12A] (Supp. 2010) ("Nearly all of the over-the-counter derivatives arose out of the desire to moderate risk"); Hu, supra note 72, at 1465-66 ("[P]erhaps most important, derivatives enable end-users to transfer or modulate their market risks."). It would be disingenuous, however, to suggest that end-users only employ OTC derivatives for hedging risks. In fact, many entities also enter into OTC derivatives for speculative purposes. See Bd. of Trade of Chicago, 187 F.3d at 716 ("[A] person
House Agricultural Committee, Cargill's Director of Federal Government Relations identified how Cargill, an "international provider of food, agricultural, and risk management products and services," helped end-users manage risk through customized derivatives:

We offer customized hedges to help bakeries manage the price volatility of their flour so that their retail prices for baked goods can be as stable as possible. We issue critical hedges to help regional New England heating oil distributors manage price spikes and volatility on their purchases so they can offer families stable prices throughout the winter season. And we offer customized hedges to help a restaurant chain maintain stable prices on chicken so the company can offer consistent prices and value to their retail customers when selling chicken sandwiches.107

Essentially, commercial end-users employ derivatives in order to minimize their exposure to undesirable fluctuations in market rates or prices.108 In some situations, an end-user can adequately accomplish its risk management objectives through the application of exchange-traded derivatives alone. However, the effectiveness of exchange-traded derivatives as hedges is limited when the asset hedged does not precisely match the underlying of the contract, the contract's underlying amount is different from the amount that the end-user is attempting to hedge, or the timing of the contract does not match the timing needs of the end user.109 For example, a live cattle futures contract offered on the Chicago Board of Trade is an imperfect hedge for a steakhouse chain that sells "Prime" steaks. An example of "quality risk," the underlying—"55% Choice, 45% Select, Yield Grade 3 live steers"—only serves as a rough proxy for the restaurant's demand for grill-ready prime beef.110 As the quality, quantity, and timing risks associated with the available exchange traded products increase in significance, the utility of the derivative to the end-user breaks down.111

Through customization of the derivative contract, however, the end-user can avoid the quality, quantity, and timing risks presented by exchange-traded products.112 Returning who wants to obtain the returns (and take the risks) of particular market segments . . . could purchase an appropriate combination of futures contracts."; Robert J. Aalberts & Percy S. Poon, Derivatives and the Modern Prudent Investor Rule: Too Risky or Too Necessary, 67 OHIO ST. L.J. 525, 552-556 (2006) (discussing the difference between speculating and hedging with derivatives and noting that a speculator is "a trader who enters the derivatives market with an intention to seek profit by willingly accepting increased risk" while "a hedger is a trader who enters the market with an intention to reduce or eliminate a preexisting risk."; Hu, supra note 72, at 1466 (noting that "end users may be able to arbitrage differences between the price of the derivative and the price of the underlying asset, or between prices in different capital markets").

108. CASTAGNINO, supra note 19, at 2; Hu, supra note 72, at 1465-66. As explained by Professor Hu, "[d]erivatives can insulate end-users from exogenous risks—a derivative that rises in value if oil prices fall could protect a sheikdom, while one that rises along with oil prices will insulate an airline. End-users may prefer a world where their market risks have, in effect, gone away." Hu, supra note 72, at 1466.
109. JOHNSON, supra note 42, at 320-21 (these three hedging risks are known as "quality risk," "quantity risk," and "timing risk").
110. Live Cattle Futures, supra note 41; see JOHNSON, supra note 42, at 320.
111. See JOHNSON, supra note 42, at 319-21.
112. See Henry T.C. Hu, Hedging Expectations: "Derivative Reality" and the Law and Finance of the Corporate Objective, 73 TEX. L. REV. 985, 986 (1995). In a particularly eloquent passage, Professor Hu explains that "with the emergence of the modern derivative, corporations need no longer take the world as it is. . . .
to the steakhouse illustration, with an OTC derivative product the restaurant chain can contract for an underlying (or underlyings) that more accurately reflects the products it purchases, quantities that match its actual demand, and a timing schedule that corresponds to the frequency of its purchases. With the ability to negotiate regarding the provisions of the derivative product, the end-user can implement a near-perfect hedge or, alternatively, selectively expose itself to the amount and type of risk that it is willing to accept.

Interest rate derivatives, which account for roughly seventy-two percent of the OTC market by notional amount outstanding, are one of the most important derivative products available to end-users and are a relatively straightforward vehicle for illustrating the benefits of customization. By employing a derivative tied to interest rates, an end-user can hedge against the risk that an interest rate of concern will move in a direction that is not to its advantage. To understand how the derivative would operate as hedge, assume that XYZ Company plans to borrow $15 million from a bank. Under the terms of the loan agreement, depicted in Figure 2, XYZ Company will be obligated to make annual interest payments to the bank at a floating rate equal to the one year LIBOR plus three percent for a period of ten years.

**Figure 2. XYZ Company Loan**

After completing the borrowing, one of XYZ Company’s major concerns will be its interest rate risk. Specifically, if the one-year LIBOR increases during the life of the loan, XYZ Company’s borrowing cost will grow significantly. To hedge this interest rate risk, the company may elect to enter into an interest rate swap with a derivatives dealer (Dealer). Effectively, the swap will insulate XYZ Company from changes to LIBOR by “converting” its floating rate obligation of LIBOR plus three percent into a fixed rate.
Assuming that XYZ Company would be comfortable paying a fixed rate of five percent on its loan, it will commit to annually exchange payments equal to two percent applied to a notional principal amount of $15 million with Dealer (the swap counterparty) in return for payments equal to one-year LIBOR applied to the $15 million notional amount. Figure 3 illustrates the payment exchanges between the swap counterparties. By negotiating for a notional amount equal to the actual amount of its loan, XYZ Company will fully hedge its interest rate risk.

Figure 3. XYZ Company Interest Rate Swap

If on the first payment date the one-year LIBOR has risen to five percent, then XYZ Company will owe the bank an interest payment of eight percent (LIBOR + three percent) on its $15 million loan. However, when XYZ Company and Dealer net their obligations under the interest rate swap, Dealer will owe XYZ Company three percent of the notional amount of $15 million. As Figure 4 indicates, Dealer's payment of three percent on the notional amount compensates XYZ Company for the interest above five percent that it must pay to the bank pursuant to the terms of its loan agreement. Regardless of whether LIBOR increases or decreases, by evaluating the payments under the loan agreement and the swap together, XYZ Company effectively only ever pays an interest rate of five percent on its $15 million loan.

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118. See Gooch & Klein, supra note 23, at 421.
119. Figure 3 is derived from a similar figure in Gooch & Klein, supra note 23, at 421.
120. This example assumes that the principle amount of the loan remains constant during the life of the loan. If the loan required principle payments prior to maturity, the interest rate swap agreement could provide for a decreasing notional amount so that the principle amount of the loan and the notional amount of the swap remained the same. See Castagnino, supra note 19, at 56.
121. See Int'l. Swaps and Derivatives Ass'n, supra note 49.
122. Figure 4 is derived from a similar figure in Gooch & Klein, supra note 23, at 422.
In a CDS, another common swap transaction, the end-user hedges against the possibility that an entity will default on an obligation identified as the underlying for the CDS contract. In effect, the CDS operates like an insurance contract by transferring the default risk of the “reference entity” from the “protection buyer” to the “protection seller.” In structuring the terms of the CDS, the counterparties will identify a notional amount of an obligation of the reference entity as the underlying and the credit events that the agreement will cover. For example, a party that holds $10 million of a borrower's unsecured debt may hedge against the risk that the borrower will default by purchasing a CDS with an equivalent notional amount of the borrower's unsecured debt as its underlying. During the term of the CDS, the protection buyer agrees to make periodic payments equal to the contract's “CDS rate” multiplied by the notional amount of the underlying.

123. Duffie, supra note 14, at 124. A CDS contract however, is not true insurance. Generally, credit insurance is an indemnity contract that requires the insured to have an insurable interest and only pays out in the event of an actual loss. A CDS, on the other hand, does not include an insurable interest requirement and pays when the credit event occurs regardless of actual loss. See Christopher L. Culp, Credit Risk Management Lessons From Enron, in Corporate Aftershock: The Public Policy Lessons From the Collapse of Enron and Other Major Corporations 211, 218-21 (Christopher L. Culp & William A. Niskanen eds., 2003); Andrea S. Kramer & Alton B. Harris, Credit Derivatives Post-Enron, in Corporate Aftershock: The Public Policy Lessons From the Collapse of Enron and Other Major Corporations 236, 246-47 (Christopher L. Culp & William A. Niskanen eds., 2003).


125. See Duffie, supra note 14, at 124.
In return, the protection seller agrees that if the credit event occurs, it will pay the protection buyer either (1) the difference between the notional amount of the CDS and the market value of the debt or (2) the full notional amount of the CDS in return for equivalent amount of the borrower’s debt.\footnote{Id. For example, a CDS rate of 300 basis points would require that the protection buyer make payments equal to three-percent of the notional obligation.}

As the interest rate swap and CDS contract examples suggest, customizable derivatives provide a vast array of opportunities for the mitigation of different types of risk. Furthermore, the availability of OTC derivatives ensures that decisions regarding the type and quantity of risk to mitigate rest with the end-user of the product.\footnote{Bendernagel et al., supra note 124, at 347.} For example, in the interest rate swap illustration, XYZ Company may accept a portion of the risk that LIBOR will increase by negotiating for a notional amount less than the principal amount of its loan. The difference between the notional and principle amount would reflect the amount of the loan still subject to interest rate risk. Similarly, an entity entering into a CDS may elect to remain exposed to some types of credit risks by excluding them from the credit events covered by the swap.\footnote{Schinasi, supra note 6, at 195-96.}

Ultimately, the importance of the OTC derivatives market stems from its value to end-users attempting to manage the risks associated with their respective lines of business.\footnote{See Lancaster et al., supra note 124, at 76-77.} The expansion of the decentralized OTC derivatives market as an alternative to the formal and rules-based exchange-traded derivatives markets, provided end-users with the ability to structure agreements uniquely tailored to their own requirements and risk tolerances.\footnote{See supra notes 105 to 107.} But, the market would not have been possible without the improvements in regulatory certainty that permitted the development and growth of customizable derivative products.\footnote{See Schinasi, supra note 6, at 211.} While the customized products that emerged were, at their core, fundamentally just variations of the four basic derivative types—fowards, futures, swaps, and options—the growth of OTC market itself resulted in an incredibly complex network of counterparty relationships.\footnote{See Duffie, Li & Lubke, supra note 5, at 1.} As the recent financial crisis demonstrated, without proper controls, the interconnectedness within the OTC market has the potential to produce systemic instability across the financial system.\footnote{It is in response to this systemic instability that central clearing, to which this paper now turns, is offered as a solution.}

III. Central Clearing in the OTC Derivatives Market

A. The Framework of Central Clearing

In conjunction with recognizing the significance of the role that OTC derivatives play in risk management, it is important to understand that the derivative transactions them-
selves do not eliminate risk. Rather, the derivative product at the heart of the transaction merely transfers risks from one party to another. As entities continuously alter the distribution of risk across the market by entering into new derivatives, the total notional amount outstanding necessarily increases. Interestingly, this growth in the notional amount outstanding gives the appearance that the total risk is also increasing. Fortunately, the appearance is incorrect. Entities participating in the OTC derivatives market frequently enter into offsetting transactions in order to net their total exposure. By entering into an offsetting transaction, the entity doubles the notional amount outstanding but does not alter the total amount of risk within the system. To illustrate this point, according to Depository Trust and Clearing Corporation (DTCC) data for the week ending March 5, 2010, 3,524 CDS contracts identified Ford Motor Company as the reference entity—a total notional amount outstanding of $28.3 billion. After accounting for offsetting transactions, however, the net notional amount outstanding for the CDS contracts was under $1.9 billion—less than ten percent of the total.

Although repeatedly transferring risk between parties does not increase the aggregate risk in the system, it certainly does increase the interconnectedness of the market place. Given the highly decentralized nature of the OTC derivatives market, the process of managing risk through customized derivatives has generated a complex network of relationships between entities. As explained by Professor Hu, "the price of contractual freedom is a greater risk of default." By carefully selecting their counterparties however, participants in the OTC derivatives market seek to minimize the hazards associated with becoming part of this web. But individual efforts to minimize such "counterparty risk" are of only limited value if systemically important institutions threaten the stability of the entire system.

To address the hazards stemming from the concentration of large derivative positions in systemically important institutions, many commentators suggested that Con-

135. See JOHNSON & HAZEN, supra note 37, § 1.02(3) (describing how a hedging transaction produces opposite results for the transaction’s counterparties).
136. Dodd, supra note 6.
138. Id.
139. Id.
140. Id.
141. Trade Information Warehouse Data, Top 1,000 Reference Entities (Gross and Net Notional) for Week Ending 2010-03-05, DEPOSITORY TRUST AND CLEARING CORPORATION (on file with author).
142. Id.
143. See SCHINASI, supra note 6, at 187.
144. Id.
145. Hu, supra note 72.
146. See CASTAGNINO, supra note 19, at 183.
147. See Implementing OTC Derivatives Market Reform, FIN. STABILITY BD., Oct. 25, 2010, at 9, available at http://wwwfinancialstabilityboard.org/publications/r_101025.pdf (noting that a dealer’s default and the corresponding losses to such dealer’s counterparties “may lead to a situation in which other market participants become unable to perform on their own obligations to other counterparties[,]” which, in turn, “could trigger a chain of credit-related losses . . . and, in the worst scenarios, potentially cause a chain of defaults.”).
gress enact legislation making central clearing mandatory in the OTC derivatives market.148

Central clearing in the OTC derivatives market involves inserting a central counterparty (CCP) between the original parties to the derivative transaction through the process of novation.149 Essentially, by becoming "a buyer to every seller and a seller to every buyer," a CCP assumes the financial responsibility for the transaction.150 As Figure 5 illustrates,151 central clearing has the potential to simplify the interconnectedness of the OTC derivatives market by converting it into a "hub-and-spoke" system.152 Once the original counterparties clear the derivative through the CCP, they no longer face the risk that the other may default before settlement.153 Further, because the novation creates offsetting positions for the CCP—assuming that both parties satisfy their obligations to the CCP—the CCP does not incur any risk of losses or gains from fluctuations in the underlying.154 The CCP's principal concern is that by accepting the novation of multiple derivatives contracts, it concentrates the counterparty risk associated with the transactions in itself; i.e., the CCP bears the burden of either counterparty's default in every transaction it clears.155

149. See CASTAGNINO, supra note 19, at 15 (addressing central clearing in the context of exchange trading).
150. Philipp Haene & Andy Sturm, Optimal Central Counterparty Risk Management 3 (Swiss National Bank, Working Paper No. 2009-7, 2009), available at http://www.snb.ch/n/mmref/reference/working_paper_2009_07/source. Although often used interchangeably, there is a conceptual difference between a central counterparty and a clearinghouse. A clearinghouse can provide clearing services as an agent of the counterparties rather than as a principal to the transaction while a CCP by definition assumes the financial responsibility for the transaction through novation. TINA P. HASENFUSCH, CLEARING SERVICES FOR GLOBAL MARKETS § 2.1.3 (2009).
151. CASTAGNINO, supra note 19, at 15; Richard Heffner, The Regulation of Multilateral Clearing in the United Kingdom and United States, in EXCHANGES AND ALTERNATIVE TRADING SYSTEMS 97, 98 (Dick Frase & Helen Parry eds., 2002) (noting that the counterparty risk shifts to the CCP only when the transactions become binding).
152. Id.
153. Id.
154. Duffie, Li & Lubke, supra note 5, at 7. That is, each novation generates an equivalent a long position and short position for the CCP.
155. Haene & Sturm, supra note 150.
Figure 5. Counterparty Relationships Without and With a CCP

To handle the increase in concentration of counterparty risk, a CCP will implement procedures intended to ensure its own stability in the event that any other entity with which it interacts defaults. A CCP accomplishes this counterparty risk management through the application of three related devices: membership, margin requirements, and guarantee funds. First, any party that desires to clear its OTC derivatives directly must become a clearing member (CM) of the CCP. By limiting membership to only the most creditworthy market participants, the CCP minimizes the risk that any counterparty will default on the obligations that it establishes with the CCP. For a market participant that is not a member of the CCP, central clearing requires finding a CM willing to interact with and clear trades through the CCP on such market participant’s behalf.

While the purpose of the membership requirement is to minimize the chance that a CM will default, the objective of the margin requirements is to limit a CCP’s loss in the event that a CM does default. The margining requirements of CCPs are premised on the “defaulter-pays” principle: losses incurred by the CCP while unwinding the defaulting CM’s positions should be borne by the CM. When CMs submit a trade to a CCP for clearing, the CCP will require that the original parties provide two types of margin: initial margin and variation margin. The purpose of the initial margin is to facilitate the CCP’s efforts to unwind the position following a default by covering any losses sustained by the CCP during the unwinding process. Thus, the amount of initial margin that CMs must provide when they first submit a trade to the CCP for clearing depends on the

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156. Duffie, Li & Lubke, supra note 5, at 6.
157. Id.
158. Hasenpusch, supra note 150, § 2.3.1.
159. Id.
160. Id.
161. Id. § 2.1.2.1.3.
162. Haene & Sturm, supra note 150.
163. Duffie, Li & Lubke, supra note 5, at 7.
164. Id. at 7-8. Initial margin reflects the possibility that a defaulting CM may not post the variation margin necessary to cover the fluctuations in market value of the CM’s positions while the CCP liquidates such
type of derivative and the size of the position. Ideally, the amount “should exceed, in most extreme scenarios, the change in [the position’s] market value” over the time that it would take the CCP to conduct the liquidation. In contrast to the initial margin, which the CCP calculates only once, the parties reassess their variation margin requirements on a daily basis. Effectively, the variation margin reflects the CM’s unrealized profit or loss with the CCP as the market value of the position changes.

In contrast to the margin obligations, a CCP’s guarantee fund requirements reflect a “survivor-pays” principle. By requiring each CM to contribute to a collective guarantee fund, the CCP is able to distribute any losses that exceed the defaulting CM’s margin across all of the non-defaulting CMs. Guarantee funds essentially give CCPs an additional layer of resources with which to protect their financial stability while managing the consequences of a CM’s default. In theory, the margining requirements will be sufficient to allow the CCP to unwind a CM’s positions under normal market conditions while the guarantee fund stands ready to cover defaults that occur during more extreme situations.

By creating a rigorous system for managing risk and successfully unwinding positions when necessary, CCPs establish themselves as stable and important components of the OTC derivatives market. Assuming that CCPs remain capable of managing their counterparty’s positions during the liquidation process, the hub and spoke system may insulate the remainder of the market from the collapse of any individual systemically important firm. As the next section explains, by simplifying the interconnectedness of the OTC derivatives market, financially secure CCPs may help reduce the systemic risk presented by institutions that maintain large OTC derivatives positions.

positions. In such a situation, the losses incurred by the CCP during the liquidation will be absorbed by the initial margin of the CM. Id.

165. Id. For example, positions that are less liquid, larger in size, subject to greater daily variability, or likely to become illiquid in the event of a default will require larger initial margins than those that are small, capable of being liquidated quickly, and only experience minimal variations in market value. Id.

166. Id.

167. HASENPUSCH, supra note 150, § 2.1.2.2.1.3.

168. Id.

169. Haene & Sturm, supra note 150.

170. Id.

171. See Financial Resources Requirements for Derivatives Clearing Organizations, 75 Fed. Reg. 63,113 (proposed Oct. 14, 2010) (to be codified at 17 C.F.R. pts. 39 and 140). Under the rules proposed by the CFTC, a CCP would absorb any losses it sustains beyond the margin posted by the defaulting CM first through its own first-loss capital and then subsequently with guarantee funds submitted by non-defaulting CMs. Id.

172. HASENPUSCH, supra note 150, § 2.1.2.2.1.3.

173. See Financial Resources Requirements for Derivatives Clearing Organizations, 75 Fed. Reg. 63,113 (proposed Oct. 14, 2010) (to be codified at 17 C.F.R. pts. 39 and 140). The rule proposed by the CFTC would require a CCP to have financial resources sufficient “to meet its financial obligations to its clearing members notwithstanding a default by the clearing member creating the largest financial exposure for the [CCP] in extreme but plausible market conditions.” Id.

174. See Robert R. Bliss & Robert S. Steigerwald, Derivatives Clearing and Settlement: A Comparison of Central Counterparties and Alternative Structures, 30 ECON. PERSPECTIVES 22, 25-26 (2006) (explaining that “[s]ince the CCP is the only direct counterparty of a clearing member, it effectively acts on behalf of the other, nondefaulting clearing members in pursuing legal remedies against any clearing member that defaults.”).
B. POTENTIAL ADVANTAGES OF CENTRAL CLEARING

Proponents of central clearing argue that requiring central clearing for certain OTC derivatives contracts will promote the stability of the entire financial system. Specifically, by introducing a CCP between the original counterparties to derivative contracts, the parties no longer face the counterparty risk of the other. Instead, the counterparty risk shifts to the CCP—an entity designed to be more stable than either of the individual counterparties alone. Further, as additional market participants submit their trades to the CCP for clearing, the CCP’s ability to facilitate the reduction of counterparty exposures through the process of multilateral netting increases. To appreciate the benefits that these two aspects of central clearing provide though, it is first necessary to understand how reliance on bilateral clearing can promote instability in the financial system.

In the OTC derivatives markets, derivatives dealers attempt to maintain neutral positions with respect to the market risk of the derivative contracts they sell. To accomplish this goal, dealers frequently enter into offsetting transactions with end-users or other derivatives dealers. For example, if a dealer is the floating rate payer in an interest rate swap with an end-user, it may attempt to offset its own exposure to the interest rate by positioning itself as the fixed rate payer in a similar transaction with a different end-user or another dealer. By maintaining the offsetting positions, the dealer reduces its exposure to the change in the market for the underlying. However, because the dealer is now exposed to two counterparties rather than one, the decreased market risk came at the cost of increased counterparty risk.

The process whereby dealers continuously enter into offsetting transactions to mitigate market risk results in a precarious balance. To maintain market neutral positions, derivative dealers inevitably acquire large portfolios of offsetting derivatives. In return for the relatively neutral positions they achieve, however, each accumulates potentially significant exposures to other dealers. In such a market, the failure of a major participant can result in substantial losses for the counterparties of such market participant. This ag-

176. See supra text accompanying notes 156 through 172.
180. Cf CASTAGNINO, supra note 19, at 11-12.
181. See Bliss & Steigerwald, supra note 174, at 26.
182. Bliss & Kaufman, supra note 178, at 9-10; see Duffie, Li & Lubke, supra note 5, at 4 (noting that prior to 2007, “active market participants typically held large simultaneous long and short CDS positions referencing the same underlying borrower.”).
184. See Duffie, Li & Lubke, supra note 5, at 5.

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Aggregation of counterparty credit risk becomes a systemic risk issue when the losses counterparties may suffer because of a market participant's failure would be sufficient to threaten their own stability.\textsuperscript{185} In fact, even the widespread belief that a counterparty will fail can generate conditions in the bilateral OTC derivatives market that contribute to such counterparty's actual failure.\textsuperscript{186} Specifically, if parties believe that their counterparty will default, they may attempt to avoid losses by reducing their exposure to the failing firm.\textsuperscript{187} The sudden movement away from the counterparty can exacerbate the firm's already threatened position and hasten its collapse.\textsuperscript{188}

Central clearing of OTC derivatives promises to decrease the systemic risk that stems from the aggregation of counterparty risk in large institutions.\textsuperscript{189} By inserting the CCP as the "buyer to every seller and seller to every buyer," the parties to a transaction no longer face the credit risk of their original counterparty.\textsuperscript{190} Rather, the parties become subject to the credit risk of the CCP alone.\textsuperscript{191} Effectively, the parties substitute the higher quality and homogenous credit risk of the CCP for the variable credit risk of the individual counterparties.\textsuperscript{192} In the event that an original counterparty defaults, the novation to the CCP protects the other counterparty from the consequences of the default.\textsuperscript{193} Furthermore, because the original counterparties rely on the CCP for performance, central clearing eliminates the need for market participants to avoid losses by distancing themselves from CMs that are apparently failing.\textsuperscript{194} If the CCP's risk management practices are sufficient to ensure its own stability while it conducts an orderly resolution of a defaulting CM's positions, other CMs will remain confident that any such default will not seriously threaten the creditworthiness of the CCP itself.\textsuperscript{195}

Along with reducing the systemic risk presented by the aggregation of credit risk, proponents of central clearing also argue that the process will decrease the overall amount of outstanding obligations for the types of derivatives subject to central clearing.\textsuperscript{196} In a bilateral clearing market, counterparties managing their positions occasionally create sets of trades where the total obligations between multiple parties are offsetting.\textsuperscript{197} For example, if Dealer A has a $10 million exposure to Dealer B, Dealer B has a $10 million exposure to Dealer C, and Dealer C has a $10 million exposure to Dealer A through similar derivative transactions, the net of the obligations between the parties is $0. However, because these transactions involve three different counterparties, the redundant positions

\begin{footnotesize}
\textsuperscript{185} See id.; GASTINEAU & KRITZMAN, supra note 124, at 307. Systemic risk is the "[r]isk associated with the general health or structure of the financial system" and is "[a]lmost invariably discussed in terms of the system's inability to handle large quantities of market, credit, or (most likely) settlement risk." Id.
\textsuperscript{186} See Duffie, Li & Lubke, supra note 5, at 5.
\textsuperscript{187} See id.
\textsuperscript{188} See id. at 11; Bliss & Kaufman, supra note 178, at 10.
\textsuperscript{189} See Duffie, supra note 14, at 126.
\textsuperscript{190} Haene & Sturm, supra note 150; HASENPUSCH, supra note 150, § 2.2.2.1.
\textsuperscript{191} Duffie, supra note 14, at 126.
\textsuperscript{192} HASENPUSCH, supra note 150, § 2.2.2.1; Bliss & Steigerwald, supra note 174, at 26; Heffner, supra note 153, at 101.
\textsuperscript{193} Haene & Sturm, supra note 150.
\textsuperscript{194} See Duffie, Li & Lubke, supra note 5, at 11-12.
\textsuperscript{195} Id. at 12.
\textsuperscript{196} Bliss & Steigerwald, supra note 174, at 26.
\textsuperscript{197} See Duffie, Li & Lubke, supra note 5, at 19-20.
\end{footnotesize}
are difficult to identify and cancel. As a result, the payment obligations frequently remain active and contribute to the complexity of the marketplace while each participant remains subject to the counterparty risk of the others.

Under a central clearing regime, the CCP is able to identify and address the opportunities for multilateral netting between the CMs. By netting transactions on a multilateral rather than bilateral basis, the CCP can reduce the total payment obligations of the derivatives while simultaneously reducing the counterparty risk from the trades. As Dealer A, Dealer B, and Dealer C submit their offsetting trades to the CCP for clearing, the obligations created between the CCP and each dealer through the novation of the trades cancel one another. Thus, the multilateral netting conducted by the CCP between the CMs eliminates both the payment obligations and the counterparty risk between the various dealers.

Although significant, the reduction of systemic risk through effective counterparty credit risk management and multilateral netting are not the only benefits associated with central clearing. For example, proponents of central clearing often identify increased transparency and economies of scale as additional advantages of central clearing of OTC derivatives. But the alleged benefits of central clearing of OTC derivatives are, in large part, theoretical rather than proven. As the next part of this article will explain, in implementing the mandatory central clearing requirements of the Dodd-Frank Act, regulators must assess how the predicted benefits associated with central clearing will measure up against the potential costs.

IV. The Hazards of Central Clearing

A. Structure of Dodd-Frank Act Provisions for Central Clearing

In response to the financial collapse that occurred in late 2008, members of Congress introduced a myriad of bills designed to overhaul the financial services industry. Ultimately, the information needed to accomplish multilateral netting may include proprietary information that the traders involved may not wish to share with outsiders. That concern may inhibit the cooperation and disclosure needed in the bilateral markets to accomplish multilateral netting.

See Bliss & Steigerwald, supra note 174, at 26 ("The information needed to accomplish multilateral netting may include proprietary information that the traders involved may not wish to share with outsiders. That concern may inhibit the cooperation and disclosure needed in the bilateral markets to accomplish multilateral netting.").

Id.; see I Johnson & Hazen, supra note 37, § 1.02 [12A] (supp. 2010) (noting that "any interruption in the orderly flow of funds between the parties can result in actual or technical breaches.").

Duffie, supra note 14, at 126.

HASENPUSCH, supra note 150, § 2.2.2.1.


See id.; Heffner, supra note 153, at 101.

See id.; Everett, supra note 85, at 486-87 (noting that communication between the CCP and regulators will allow regulators "to exercise full effectiveness in protecting the integrity of the markets.").

Cf. Duffie, supra note 14, at 130-31 (noting that recent research suggests that central clearing can actually increase systemic risk).

mately, many of these bills stood little chance of reaching a vote by the full Senate or House of Representatives. Other proposals, however, were eventually reconciled and merged into the enacted Dodd-Frank Act. To provide context necessary to evaluate the potential hazards of mandatory central clearing, this section will briefly outline the central clearing requirements of the Dodd-Frank Act. Considering the importance of the OTC derivatives, the Dodd-Frank Act provisions mandating central clearing have the potential to generate far-reaching consequences for financial stability and risk management strategies.

Understanding the Dodd-Frank Act's defined terms is the necessary starting point of any effort to determine the scope and application of the mandatory central clearing requirements. In particular, the applicability of the clearing provisions essentially turn on whether (1) the counterparties to the transaction are "Swap Dealer[s]" or "Major Swap Participant[s]" and (2) the transaction meets the definition of a "Swap." Significantly, the Dodd-Frank Act (1) distinguishes between "Swaps" and "Security-Based Swaps" and (2) assigns regulatory authority over clearing requirements for each to the CFTC and SEC respectively. Thus, although the Dodd-Frank Act's requirements are substantively identical, it addresses Swaps clearing through amendments to the CEA but introduces the provisions regarding Security-Based Swaps as amendments to Securities Exchange Act of 1934. By expansively defining the terms Swap and Security-Based Swap to include most options and swap transactions, along with any agreement that subsequently becomes commonly known as a swap, the Dodd-Frank Act ensures that the clearing requirements are broadly applicable and capture the different types of derivative products that currently exist or that may arise in the future.

For derivative products that are a Swap—as the Dodd-Frank Act defines the term—the applicability of the clearing requirements first depends on whether the counterparties to the transactions are a "Swap Dealer" or "Major Swap Participant." In general, the Act specifies that parties who, "as an ordinary course of business," enter into swaps for such
party's own account are Swap Dealers. Further, any party that makes a market in swaps, holds itself out as a swap dealer, or otherwise becomes commonly known as a dealer or market maker, is also included within the definition of a Swap Dealer. The Dodd-Frank Act, however, provides that the CFTC can exempt a party that engages in only a "de minimis quantity of swap dealing in connection with transactions with or on the behalf of its customers."

Even if a party is not a Swap Dealer, the Dodd-Frank Act's provisions for mandatory central clearing may still apply if the party fits within the definition of a Major Swap Participant. A party is a Major Swap Participant if it is not a Swap Dealer and either (1) "maintains a substantial position in swaps for any of the major swap categories . . . excluding positions held for hedging or mitigating commercial risk" or (2) is an entity "whose outstanding swaps create substantial counterparty exposure that could have serious adverse effects on . . . financial stability." Importantly, Congress declined to specify what constitutes a "substantial position" in swaps; instead, it assigned the task to the CFTC and directed it to establish the threshold at a level that is "prudent for the effective monitoring, management, and oversight of the entities that are systemically important or can significantly impact the financial stability of the United States."

With respect to when central clearing requirements would actually apply to market participants, the House and Senate adopted significantly different approaches in their initial versions of financial reform legislation. The Senate's bill—which demonstrated a stronger preference in favor of clearing than the House's bill—mandated that all parties must clear all Swaps unless an exception to the clearing requirement applied. In contrast, under the House bill clearing was mandatory only "if a clearing organization . . . will accept the swap for clearing, and the [CFTC] has determined . . . that the swap is required to be cleared." Rather than presuming that clearing should always apply, the House's bill directed the CFTC first to evaluate the various types of swaps in order to determine if mandatory clearing is appropriate.

In the final Dodd-Frank Act, Congress elected to enact clearing requirements more closely aligned with the initial House proposal. Under the enacted legislation, central clearing will be mandatory for all swaps that the CFTC determines are required to be cleared. In support of this system, Congress instructed the CFTC to review swaps "on an ongoing basis" in order to determine if the "swap or group, category, type, or class of

214. Id. The term specifically excludes a party that enters into swaps for its own account "but not as a part of a regular business." Id.
215. Id.
216. Id.
217. Id. § 721(a)(16) (to be codified at 7 U.S.C. § 1a).
218. Id. Significantly, the "substantial counterparty exposure" prong does not exclude swaps used for risk management purposes. This suggests that it is possible for an entity to be a Major Swap Participant even though it never trades derivatives for speculative purposes. See id.
219. Id.
222. Id.
223. Compare id., with Dodd-Frank Act § 723(a)(3) (to be codified at 7 U.S.C. § 2(h)).
224. Dodd-Frank Act § 723(a)(3) (to be codified at 7 U.S.C. § 2(h)(2)).
swaps should be required to be cleared."\textsuperscript{225} When assessing whether mandatory central clearing is appropriate, Congress directed that the CFTC consider a variety of factors including: notional exposures, liquidity, pricing data, clearing infrastructure, and effect on systemic risk.\textsuperscript{226} Additionally, the Dodd-Frank Act provides for a thirty-day public comment period to aid the CFTC in its determination.\textsuperscript{227} Finally, for those swaps that become subject to mandatory central clearing, the Dodd-Frank Act provides for a mechanism by which the CFTC can (1) stay the clearing requirement and (2) conduct an additional review in order to determine if clearing is truly appropriate for the Swap in question.\textsuperscript{228}

Because Congress cast the general central clearing requirement of the Dodd-Frank Act in terms that are both broad and mandatory, the available exceptions to the requirements are very important. Most importantly, for swaps that are subject to mandatory clearing, the Dodd-Frank Act bases the applicability of an end-user exception on the status of the counterparties to the transaction.\textsuperscript{229} Specifically, the exemption applies only if one of the counterparties is (1) not a “financial entity,” (2) “is using the swaps to hedge or mitigate commercial risk,” and (3) informs the CFTC regarding how it satisfies its financial obligations for non-cleared swaps.\textsuperscript{230} The conjunctive nature of the exemption suggests that for swaps subject to mandatory central clearing, central clearing is always required for (1) Swap Dealers or Major Swap Participants, both of which are considered a “financial entity” for purposes of the exemption; or (2) parties that use the swap for purposes other than hedging or mitigating commercial risk.\textsuperscript{231}

Ultimately, assuming that the exception applies in a given situation, the decision regarding whether to clear the swap otherwise subject to mandatory clearing rests with the end-user. Under the Dodd-Frank Act, the end-user counterparty eligible to take advantage of the exemption is granted sole discretion regarding whether to clear the swap and, if so, which CCP to clear through.\textsuperscript{232} For any swap that remains bilaterally cleared however, Congress gave the CFTC the ability to set capital and initial and variation margin requirements applicable to the counterparties to the swap.\textsuperscript{233} While it is apparent that the authority of the CFTC with respect to capital and margin requirements extends to counterparties that are Swap Dealers and Major Swap Participants, it is unclear how the CFTC’s newly granted authority might impact the end-user counterparties of Swap Dealers or Major Swap Participants.\textsuperscript{234} Furthermore, by allowing an entity to be a Swap

\textsuperscript{225} Id.
\textsuperscript{226} Id. (to be codified at 7 U.S.C. § 2(h)(2)(D)(ii)).
\textsuperscript{227} Id. (to be codified at 7 U.S.C. § 2(h)(2)(B)(ii)).
\textsuperscript{228} Id. (to be codified at 7 U.S.C. § 2(h)(3)).
\textsuperscript{229} See id. (to be codified at 7 U.S.C. § 2(h)(7)(A)).
\textsuperscript{230} Id. (to be codified at 7 U.S.C. § 2(h)(7)(A)).
\textsuperscript{231} Id. (to be codified at 7 U.S.C. § 2(b)(7)). The term “Financial Entity” includes swap dealers and major swap participants, in addition to entities such as private funds and banking institutions. Id.
\textsuperscript{232} Id. (to be codified at 7 U.S.C. § 2(h)(7)(B), (E)).
\textsuperscript{233} Id. (to be codified at 7 U.S.C. § 4(e)).
Dealer or Major Swap Participant with respect to some types of Swaps but not others, Congress created a situation where entities may be subject to substantially different regulatory requirements depending on the transaction at issue.235

Although the Dodd-Frank Act establishes the basic framework for mandatory central clearing, the precise contours of the regulations necessary for the full implementation of the framework are still unknown. In particular, the legislation specifically directs the CFTC and the SEC, along with other federal agencies, to engage in a myriad of rulemaking activities and studies.236 According to the CFTC, there are thirty areas related to swaps where the CFTC is required to promulgate rules.237 Undoubtedly, the exact scope of the requirements will turn on how the various regulatory agencies define vague phrases such as "substantial position," what entities they include within the "de minimis" exception for Swap Dealers, and which swaps the CFTC determines are subject to mandatory central clearing.238 As explained by Senators Dodd and Lincoln however, "clearing is at the heart of reform."239 Congress expects that "[i]ncreasing the use of central clearing-houses, exchanges, appropriate margining, capital requirements, and reporting will provide safeguards for American taxpayers and the financial system as a whole."240 But, as the next two sections will explain, despite the opinions of Congress and central clearing supporters, central clearing is not necessarily a panacea for the challenges in the OTC derivatives market. Instead, mandatory central clearing for OTC derivatives and the rules promulgated to impose such requirements may increase systemic risk while reducing opportunities for prudent risk management by end-users.

B. INCREASED SYSTEMIC RISK THROUGH MANDATORY CENTRAL CLEARING

As previously discussed in Part II, by substituting a hub-and-spoke system in place of the existing web of bilateral transactions, central clearing through a CCP may reduce the risk associated with the interconnectedness of the OTC derivatives market.241 The concentration of counterparty risk in the CCP—if coupled with effective risk management practices—can promote the stability of the financial system by reducing the probability

however, the conference committee removed the exemption. Despite efforts by Sen. Chambliss, the committee declined to reinsert the provision before the passage of the Act. See Wall Street Reform and Consumer Protection Act of 2009, H.R. 4173, 111th Cong., § 731 (adding 7 U.S.C. § 4s(e)(8)) (conference base text).
236. DAVIS POLK, SUMMARY OF THE DODD-FRANK WALL STREET REFORM AND CONSUMER PROTECTION ACT, ENACTED INTO LAW ON JULY 21, 2010 i (2010), http://www.davispolk.com/files/Publication/70849fe-6580-413b-b870-b7c025ed2eef/Presentation/PublicationAttachment/1d4495c7-0be0-4e9a-ba77-f786f090464a/070910_FinancialReform_Summary.pdf. Davis Polk estimated that the full implementation of the Dodd-Frank Act would require a total of 243 rulemakings, 67 one-time studies or reports, and 22 new periodic reports. Id.
241. See generally supra Section II.

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that, like dominos, the failure of one major market participant will bring about the failure of other major market participants and end-user counterparties.242 Through legislation mandating the use of CCPs in the OTC derivatives market, Congress seeks to take advantage of central clearing as a method of reducing systemic risk. But, because central clearing promotes the creation of new systemically important institutions and eliminates some opportunities for cross-product bilateral netting while only partially reducing the interconnectedness of the market, systemic risk may actually increase, rather than decrease, under mandatory central clearing.

To effectively implement central clearing for any given derivative type, two conditions must be present: standard terms and high trading volume.243 These attributes are essential because each is necessary for the success of the CCP's risk management policies.244 First, the derivative contracts cleared must have standard terms in order for the CCP to develop a valuation model for the derivative product.245 As standardization decreases and complexity increases, the derivative becomes more difficult and expensive for the CCP to model.246 Unless the CCP can develop an acceptable model for valuation, it will be unable to accurately manage its risk through margining requirements imposed on CMs.247 In addition to standardization, the derivative must have a sufficient volume of trading activity in order to support central clearing.248 Without a large trading volume, accepting the derivative for central clearing is unlikely to be cost effective for the CCP or the CM.249 Furthermore, without significant volume, the CCP cannot accurately plan for the liquidation of a defaulting CM's position in the derivative.250 Because the CCP may only be able to liquidate a position in a lightly traded derivative at a significant discount, agreeing to clear the derivative may cause the CCP to suffer major losses if a CM defaults.251

Because central clearing is not a reasonable option for all derivatives, the requirements of the Dodd-Frank Act will force market participants to divide their OTC derivatives portfolios into bilateral and centrally cleared components.252 Central clearing can only eliminate the web of bilateral transactions for those derivatives amenable to central clearing. For any derivatives that continue to be bilaterally cleared by the counterparties rather than submitted to a CCP, potentially because of a lack of standard terms or insufficient volume, the interconnectivity of the market participants will remain. In other words, a

242. See generally supra Section II(B).
245. Id.
246. Id.; see Duffie, Li & Lubke, supra note 5, at 8.
247. New Developments, supra note 244.
249. Duffie, Li & Lubke, supra note 5, at 8.
250. Id.; New Developments, supra note 244.
252. New Developments, supra note 244; supra Section III(A).
properly implemented central clearing regime cannot itself eliminate the counterparty risk between trading partners. Furthermore, any counterparty risk that remains after market participants submit their eligible OTC derivatives to the CCP may still be systemically significant. According to one commentator, because the credit derivatives issued by AIG “would not have met any reasonable test of standardization,” central clearing “would not have prevented the AIG fiasco.”

Depending on the circumstances, dividing derivatives portfolios into centrally cleared and bilaterally cleared components can have either positive or negative consequences. On the one hand, central clearing provides additional opportunities for multilateral netting between market participants. On the other hand, central clearing may reduce the opportunities for cross-product bilateral netting that exist between the parties to OTC derivatives transactions. For example, suppose that Dealer A and Dealer B are counterparties in two different types of derivative transactions. If Dealer A’s exposure to Dealer B under the first OTC derivative transaction is $10 million and Dealer B’s exposure to Dealer A under the second OTC derivative transaction is $20 million, the mutual obligations result in a net counterparty exposure of only $10 million. If the first OTC derivative is of a type subject to mandatory central clearing requirements though, the exposure between the counterparties doubles to $20 million. In other words, if central clearing is mandatory for some types of derivatives but not others, counterparties will lose opportunities to conduct bilateral netting across the different products.

The repercussions from lost opportunities for bilateral netting, however, ultimately depend on the role that central clearing assumes in the OTC derivatives market. As explained in a report from the Financial Stability Board, “[t]o fully achieve the benefits of central clearing, a critical mass of OTC derivatives products must move to [the] CCPs.”

Employing a CCP to clear a category of derivative is only effective if the gained opportunities for multilateral netting are substantially greater than the lost opportunities for bilateral netting across other categories of derivatives. If this condition is not satisfied, then clearing through the CCP may actually increase net counterparty exposure and thereby promote financial instability. Although the Dodd-Frank Act directs the CFTC and SEC to consider the impact on systemic risk in its determination of whether to require central clearing for a particular type of swap, it is uncertain whether the rules promulgated by the agencies will adequately address the relationship between multilateral and bilateral netting opportunities and its possible impact on net counterparty exposures.

Furthermore, the actual impact of mandating central clearing on counterparty exposures will likely vary from market participant to market participant depending on the na-
ture of the entity in question and the structure of the CCP market as a whole. As the Bank for International Settlements explained in a 2007 report,

the effect that splitting portfolios into centrally cleared and bilateral portions will have on the measurement of the credit exposure of the bilaterally cleared deals is unpredictable and will vary from dealer to dealer depending upon its type of business, the type of contracts cleared and the participants in the clearing house.261

If the CCPs that emerge in response to mandatory central clearing elect to clear only a few classes of derivatives or offer to clear the same classes of derivatives as other CCPs, potential opportunities for multilateral netting will decrease.262 By failing to operate in ways that maximize the availability of multilateral netting, CCPs in the post Dodd-Frank Act OTC derivatives market may inadvertently generate greater financial instability than would exist under a system of only bilaterally cleared transactions.263

Maximizing opportunities for multilateral netting, however, requires mandating widespread participation in the CCPs by the entities in the OTC derivatives market and the central clearing of multiple types of OTC derivatives through a limited number of CCPs.264 Merging central clearing activities into a single CCP, however, presents regulators with an interesting Catch-22 situation. According to a study conducted in 2009, "[c]learing a moderately large fraction of all classes of derivatives in the same CCP reduces average estimated exposures by 37%."265 The reduction of systemic risk possible through the consolidation of central clearing activities into relatively few CCPs inevitably increases the systemic importance of the CCPs that remain.266 Tempering the systemic importance of large CCPs by distributing central clearing functions across a greater number of smaller CCPs though, eliminates the reduction in systemic risk that flows from additional multilateral netting.267

261. New Developments, supra note 244.
262. See Duffie & Zhu, supra note 255, at 22. For example, both the ICE Trust and the CME Group currently clear CDS contracts in the United States. Cleared OTC Credit Default Swaps, CME GROUP, http://www.cmegroup.com/trading/cds/index.html (last visited Jan. 19, 2011). Because each of these CCPs clear only the single class of derivative and split the class between the two, there are lost opportunities for multilateral netting within the CDS market. Clearing: ICE Trust—Credit Default Swap Clearing, INTERCONTINENTAL EXCHANGE, https://www.theice.com/ice_trust.jhtml (last visited Jan. 19, 2011).
263. See Duffie & Zhu, supra note 255, at 18-19. Duffie and Zhu assert that relative to a market without central clearing, "the introduction of a CCP that clears 100% of credit derivatives actually increases market-wide expected exposures by about 5%." Id. If the same CCP cleared only seventy-five percent of CDS contracts, expected exposures would increase by only three percent. Id. However, clearing seventy-five percent of CDS contracts and interest rate swaps together through a single CCP could reduce expected exposures by seventeen percent. Id.
264. Id. at 19-20.
265. Id. at 19.
266. HASENPUSCH, supra note 150, § 2.2.2.1.
267. Cf. id.; Duffie, Li & Luhke, supra note 5, at 9, 14-15. CCP interoperability may eventually mitigate the challenges associated with central clearing through multiple CCPs. However, as the Executive Chairman of the CME Group explained to the House Agricultural Committee, "interoperability among futures clearinghouses was rejected by the industry, the CFTC and Congress because a fair examination of the proposal revealed that forced interoperability was complex, risky and not cost effective." Hearing To Review Proposed Legislation By The U.S. Department Of The Treasury Regarding The Regulation Of Over-The-Counter Derivatives Markets Before the H. Comm. on Agriculture, 111th Cong. 68 (2009) (prepared statement of Terrence Duffy, Executive Chairman, CME Group Inc.).
Undoubtedly, any CCPs established in response to the mandatory central clearing requirements of the Dodd-Frank Act will employ rigorous risk management policies. In fact, the Act directs that every CCP shall ensure that it "possesses the ability to manage the risks associated with discharging the responsibilities of the derivatives clearing organization through the use of appropriate tools and procedures." The risk management policies implemented will inevitably include membership criteria for CMs, initial and variation margin requirements, and guarantee fund contributions. Concentrating counterparty risk in CCPs through mandatory central clearing however, makes it "all the more important that CCPs function flawlessly." In fact, "the centrality of a CCP implies that its failure risk could be more toxic than that of other market participants." Should a large CCP in the OTC derivatives market default on its obligations as a buyer to every seller and a seller to every buyer, the effect on the financial system could be catastrophic.

By requiring central clearing for OTC derivatives, the government is in effect directing the creation of new systemically important institutions. While robust risk management policies and capitalization requirements are likely to reduce the risk that CCPs will fail, they cannot guarantee their stability. Yet, in some situations there is a lack of consensus

268. Dodd-Frank Act, Pub. L. No. 111-203, § 725(c), 124 Stat. 1376, 1687-92 (to be codified at 7 U.S.C. § 7a-1(c)(2)). Whether direct government supervision over CCP risk management policies is appropriate is subject to debate. Arguably, the self-interest of the CCP will provide sufficient incentive for it to respond adequately to the risks associated with central clearing. See The Role of Central Counterparties, EUROPEAN CTR. BANK & FED. RESERVE BANK OF CHICAGO, 16 (2007), available at http://www.ecb.europa.eu/pub/pdf/other/rolecentralcounterparties200707en.pdf (noting that markets respond quickly to mitigate risk not because they are risk averse, "but rather because the inclination to manage risk results from an interest in increasing trading volumes.").

269. See supra text accompanying notes 156 to 172. The Dodd-Frank Act specifically states that CCPs, "through margin requirements and other risk control mechanisms, shall limit the exposure of the [CCP] to potential losses from defaults by its members and participants . . . . to ensure that—(I) the operations of the [CCP] would not be disrupted; and (II) nondefaulting members or participants would not be exposed to losses that nondefaulting members or participants cannot anticipate or control." Dodd-Frank Act, § 725(c) (to be codified at 7 U.S.C. § 7a-1(c)(2)).


272. See Duffie, Li & Lubke, supra note 5, at 5, 9 ("The failure of a CCP could suddenly expose many major market participants to losses."); The Role of Central Counterparties, supra note 268, at 26 ("[T]he effectiveness of a CCP's risk controls and the adequacy of its financial resources are critical aspects of the infrastructure of the market it serves."); HASENPUSCH, supra note 150, § 2.2.2.1 (explaining "One potential threat associated with high risk concentration in markets is that an unsuitable system configuration or weak supervision will have a higher impact on the market than the deficiencies of any one participant. Faulty CCP risk management has the potential to severely disrupt the markets . . . . Consequently, a CCP's ability to monitor and control the credit, liquidity, legal and operational risks it incurs as well as to absorb losses is essential for the sound functioning of the markets it serves.").

273. See 155 CONG. REC. H14712 (daily ed. Dec. 10, 2009) (statement of Rep. Garrett) ("The amendment [concerning regulation of OTC derivatives] could very well exacerbate risk by forcing more derivative transactions . . . . to fewer and to fewer and to fewer clearinghouses, basically concentrating risk and doing the opposite of what the American public wants, to avoid risk burdens and additional bailouts.").

274. New Developments, supra note 244, at 3 ("The key question is whether the risk controls employed by CCPs for exchange traded derivatives would be equally effective when applied to OTC derivatives, which generally are less liquid and more difficult to value accurately than exchange-traded derivatives.").
concerning how regulations related to fundamental risk management practices should be implemented.\footnote{275} For example, given the significant role that CMs will inevitably play in determining which derivatives a CCP clears, commentators have adopted opposing views on the extent to which CCPs should be permitted to limit membership.\footnote{276} Furthermore, considering that the failure of a CCP will likely stem from the default of one or more major CMs, it is probable that any such failure will occur at a time when the markets are already under a significant degree of stress.\footnote{277} Undoubtedly, if mandatory central clearing in the OTC derivatives market results in a significant reduction in net counterparty exposure, the probability of such CCP failure will decrease.\footnote{278} However, if the reduction in net counterparty exposure is negligible (or increases) and existing systemically important participants in the OTC derivatives market remain systemically important, the contagion that could result from the failure of one CM may facilitate the collapse of the CCPs.\footnote{279}

As the forgoing section suggests, the imposition of mandatory central clearing requirements for dealers and other significant participants in the OTC derivatives markets presents two related challenges to financial stability. First, mandatory central clearing itself does not eliminate the interconnectedness of market participants and may actually increase net counterparty risk by reducing opportunities for bilateral netting.\footnote{280} Second, because the CCPs that emerge to provide central clearing services will themselves be systemically important institutions, their failure may have a greater destabilizing effect on the financial markets than would occur in an OTC derivatives market without central clearing.\footnote{281} The resulting threat to financial stability, however, is only one of the concerns associated with the Dodd-Frank Act's mandatory central clearing provisions. As the next section explains, requiring market participants to clear certain OTC derivative transactions is likely to damage the ability of end-users to employ OTC derivatives products in their risk management programs.

\section*{C. Reduced Options for Risk Management Through Central Clearing}

From the perspective of an end-user, OTC derivatives provide an invaluable tool with which to manage risk. As discussed above, end-users can employ OTC derivatives to mitigate risks ranging from changes in interest rates and probability of default on an obli-

\footnote{275. CCP defaults are unusual, they are not unheard of. Examples of clearing house failures include those of Caisse de Liquidation, Paris (1974), the Kuala Lumpur Commodity Clearing House (1983), and the Hong Kong Futures Guarantee Corporation (1987). Duffie & Zhu, supra note 255, at 10, n.6.}
\footnote{276. Id. The fact that the CMs, through margin and guarantee fund obligations, are ultimately responsible for the financial stability of the CCP suggests that limiting membership is appropriate from a risk management perspective. Some commentators are concerned, however, that unless CCPs have relaxed membership criteria, the CMs, which are likely to be major participants in the OTC derivatives market, will have both the ability and the incentive to prevent central clearing for derivatives that should otherwise be centrally cleared. Id.}
\footnote{277. Duffie, Li & Lubke, supra note 5, at 9.}
\footnote{278. See HASENPUSCH, supra note 150, § 2.2.2.1.}
\footnote{279. Cf. Duffie, Li & Lubke, supra note 5, at 9; HASENPUSCH, supra note 150, § 2.2.2.1; Duffie & Zhu, supra note 255, at 9.}
\footnote{280. See supra text accompanying notes 252 through 263.}
\footnote{281. See supra text accompanying notes 264 through 279.}
gation to the price of product inputs such as flour and chicken. These derivative transactions, which may include any combination of the four basic derivative types, enable companies to avoid unexpected losses and reduce the volatility of the prices they charge for their products and services. At least one court has even gone so far as to hold corporate directors liable for losses incurred as a result of their failure to implement and supervise an adequate hedging program.

As the market for OTC derivatives grows, their role in risk management and importance to end-users increases in significance. Shortly after the Indiana Court of Appeals released its opinion in Brane v. Roth, former CFTC Chairman Philip McBride Johnson questioned whether "there might evolve a concept of per se, or automatic, liability whenever unwanted risks that can be avoided are not properly hedged." Considering that nearly all of the Fortune 500 companies based in the United States and roughly sixty-five percent of all non-financial firms employ OTC derivatives in their risk management programs, it is not unreasonable to believe that Mr. Johnson's assessment may eventually prove true. Nevertheless, the Dodd-Frank Act's mandatory central clearing provisions may restrict the utility and availability of OTC derivatives by increasing the regulatory uncertainty and cost associated with their use, and thereby make it more difficult for corporate end-users to satisfy their hedging responsibilities.

Just as the growth of a robust market for OTC derivatives was a byproduct of the increased regulatory certainty that emerged during the 1980s and 1990s, the imposition of new sources of legal uncertainty though the Dodd-Frank Act's central clearing requirements may constrict the market's future development.

In particular, questions will undoubtedly arise concerning which counterparties and derivatives will be subject to mandatory central clearing and how capital and margin requirements will apply to uncleared transactions. If in addressing these questions, the CFTC and SEC produce
rules that are overly broad or fail to adequately consider the potential for negative unintended consequences, their effect may be to limit the availability of existing OTC derivatives, discourage their use by end-users, and hinder the development of new derivatives products.289

The potential for increased legal uncertainty is evident in comments submitted in response to the CFTC and SEC's Advance Notice of Proposed Rulemaking related to the definitions included in Title VII of the Dodd-Frank Act.290 For example, the Working Group of Commercial Energy Firms (the “Working Group”) suggested that CFTC and SEC rules should place the burden of identifying Major Swap Participants on the regulatory agencies rather than on the entities in the marketplace.291 As the comment explains, “in the absence of notification [by the SEC or CFTC], market participants will have the certainty necessary to operate with confidence that they are not . . . Major Swap Participants.”292 By suggesting such a rule, the Working Group is attempting to avoid the situation in which end-users, such as large energy companies or agricultural co-ops, are forced to either operate in the OTC derivatives market without knowing their classification or else “seek legal certainty that they are not a Major Swap Participant” through no-action requests.293 Submissions from other entities and associations suggest that there is support for the Working Group’s approach. A comment submitted by the Coalition for Derivatives End-Users stated that “there should not be a quota for end-users, nor a numerical threshold based on size or notional value alone over which end-users mechanically fall into the [Major Swap Participant] definition. . . . Moreover, there should be a presumption against imposing the panoply of bank-like regulations on end-users.”294

Considering that a party’s ability to rely on the end-user exception from central clearing first depends on it not being a Swap Dealer or Major Swap Participant, it is understandable that companies are focused on how the CFTC and SEC will structure rules related to

289. See Phillips, supra note 18.
291. Letter from the Working Group of Commercial Energy Firms to David A. Stawick, Sec’y, U.S. CFTC 3 (Oct. 22, 2010), available at http://www.cftc.gov/ucm/groups/public/@swaps/documents/dfsubmission/di submission1_102210-emai1.pdf. The Working Group of Commercial Energy Firms “is a diverse group of commercial firms in the energy industry whose primary business activity is the physical delivery of one or more energy commodities to others, including industrial, commercial and residential consumers. Members of the working group are energy producers, marketers and utilities.” Id. at 1.
292. Id. at 3.
293. Id. at 6.
294. Letter from the Coalition for Derivatives End-Users to David A. Stawick, Sec’y, U.S. CFTC, & Elizabeth Murphy, Sec’y, U.S. Sec. & Exch. Comm’n 5 (Sept. 20, 2010), available at http://www.nam.org/-/media/378B12D365024F60FBD6BC07284251/Coalition_for_Derivatives_End-Users_Comments_to_CFTC_and_SEC.pdf. An alternative approach would insulate end-users from Major Swap Participant status by defining “substantial position” at a sufficiently high threshold. See Letter from Excelon to David A. Stawick, Sec’y, U.S. CFTC, and Elizabeth Murphy, U.S. Sec’y, & Exch. Comm’n 7 (Sept. 20, 2010) available at http://www.sec.gov/comments/s7-16-10/s71610-41.pdf [hereinafter Letter from Excelon]. For example, Excelon, one of the country’s largest electric companies, suggested that the “substantial position” component of the Major Swap Participant definition “should not be set such that the amount of [Exelon’s] net uncleared swaps would be at or above the level associated with prudent monitoring, as required by the statute to constitute a ‘substantial’ position. Exelon suspects that the same is true of many similarly-situated entities in the markets in which it participates.” Id.
the Dodd-Frank Act definitions.295 It appears, however, that the CFTC and SEC are poised to reject the flexible approaches suggested by the Coalition for Derivatives End-Users and the Working Group.296 In their proposed rules governing the definitions for Swap Dealer and Major Swap Participation, the agencies instead expressed a preference for thresholds and other objective criteria.297 For example, under the proposed rule, any entity that entered into more than twenty swaps or swaps with an aggregate notional amount in excess of $100 million as a dealer during the previous twelve months would automatically be ineligible for the de minimis exception from the definition of Swap Dealer.298 As explained by the CFTC and SEC, the $100 million threshold, which reflects the aggregate notional amount of twenty small swaps, represents a level of activity that “would be sufficient to warrant dealer registration and bring about the benefits of such registration.”299 The CFTC and SEC understand, however, that such thresholds for Swap Dealers will inevitably capture certain end-users that rely on the OTC derivatives market, and as such, the end-user would become subject to the Act’s mandatory central clearing requirements.300

Along with the domestic implications of the regulations that they implement, the CFTC and SEC must also evaluate the international ramifications of any new rules. Specifically, considering the international nature of the OTC derivatives market, situations will inevitably arise in which non-U.S. entities engage in derivatives transactions with domestic entities. At present, such foreign entities are faced with uncertainty concerning when their derivatives activities with entities based in the United States will subject them to regulation under the Dodd-Frank Act.301 Already, the CFTC and SEC are aware of and are considering this issue. The CFTC’s proposed rule concerning Swap Dealer and Major Swap Participant registration indicate that a foreign swap dealer that “regularly enters into swaps with U.S. persons would likely be required to register as a Swap Dealer,” id. at 80,174, 80,188 (Dec. 21, 2010) (to be codified at 17 C.F.R. pt. 1 and 17 C.F.R. pt. 240).


297. Id. (“Objective criteria should permit regulators, market participants and entities that may be subject to the regulations to readily evaluate whether swap or security-based swap positions meet the thresholds, and should promote the predictable application and enforcement of the requirements governing major participants.”).

298. Id. at 80,180.

299. Id. at 80,180 n.37. Significantly, an entity can exceed the de minimis amount under one test without exceeding it for the other. In other words, a market participant would exceed the de minimis standard and likely require registration as a Swap Dealer if it entered into twenty swaps with a notional amount of $1 million or entered into one swap with a notional amount over $100 million. Id. at 75 Fed. Reg. 80,180 n.42.

300. 75 Fed. Reg. 80,178. While recognizing the importance and complexity of swaps in electricity generation and transmission operations, the CFTC and SEC note that “[n]evertheless, some participants [in the electricity market] engage in swap dealing activities . . . that are above the de minimis threshold set forth in the proposed rule.” Id. at 80,183.

301. See Dodd-Frank Act, Pub. L. No. 111-203, § 722(d), 124 Stat. 1376, 1673 (2010) (to be codified at 7 U.S.C. § 2(i)). The Act directs that the regulations pertaining to OTC derivatives only apply to activities outside the United States that “have a direct and significant connection with activities in, or effect on, commerce of the United States.” Id.
speculation, investing or trading, on the one hand, and hedging, on the other, can at times when one of the participants is not a "financial entity" and is using the derivative "to

users. Specifically, under the Dodd-Frank Act, the end-user exemption is available only when one of the participants is not a “financial entity” and is using the derivative “to hedge or mitigate commercial risk.” Unfortunately for end-users, “the line between speculation, investing or trading, on the one hand, and hedging, on the other, can at times be difficult to discern;” however, as the CFTC stated, “the statute nonetheless requires such determinations.”

In addition to the challenges regarding entity classification standards, the end-user exemption from central clearing itself provides a potential source of uncertainty for end-users. Specifically, under the Dodd-Frank Act, the end-user exemption is available only when one of the participants is not a “financial entity” and is using the derivative “to hedge or mitigate commercial risk.” Unfortunately for end-users, “the line between speculation, investing or trading, on the one hand, and hedging, on the other, can at times be difficult to discern;” however, as the CFTC stated, “the statute nonetheless requires such determinations.” Considering that the determination with respect to which side of the line a particular transaction falls on can fundamentally change the requirements associated with OTC derivative at issue, any ambiguity associated with rules promulgated to address this issue has the potential to significantly impact the hedging activities of commercial end-users. Likewise, without a clear understanding of what constitutes “commercial risk,” end-users otherwise eligible for the exception will potentially encounter situations in which they are unable to determine whether the exception is available.

In addition to the requirements related to the status of the entity and the purpose of the swap, a market participant relying on the end-user exception must also notify the CFTC of how it generally meets its financial obligations for non-centrally cleared transactions. With respect to the notification requirement, the Dodd-Frank Act allows the CFTC to

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303. Id. at 71,382.
304. Dodd-Frank Act § 723(a)(3) (to be codified at 7 U.S.C. § 2(h)(7)).
305. 75 Fed. Reg. 80,174, 80,195. In the proposed rule, the CFTC and SEC indicate their intent to interpret the requirements related to hedging or mitigating commercial risk found in the Major Swap Participant definition and the end-user exception consistently. Id. at n.124. To help sharpen the line, the CFTC and SEC specifically requested that commenters provide comments regarding whether rules addressing “hedging or mitigating commercial risk” should include “swaps facilitating asset optimization” and “dynamic hedging.” Id. at 80,195.
306. See id. at 80,194. Rather than providing clarification, the proposed definition of “hedging or mitigating commercial risk” offered in connection with the Major Swap Participant definition, simply changes the focus of the inquiry in situations where the swap does not clearly fall on either side of the line between speculation and hedging. See id. Under the proposed definition, instead of wondering when a swap hedges or mitigates commercial risk, entities will wonder when the swap is “[n]ot held for a purpose that is in the nature of speculation, investing or trading.” Id. at 80,195.
307. See Dodd-Frank Act § 723(a)(3) (to be codified at 7 U.S.C. § 2(h)(7)). Many comments addressing the Major Swap Participant definition have stressed the importance of establishing a broad definition of the term “commercial risk” in order to ensure all of the risks for which the end-user may elect to employ derivatives are included. A proposal offered by Excelon would define commercial risk to include: [A]ny economic risk arising from financial, physical or any other attribute of a commercial enterprise including, but not limited to, commodity price volatility risk, commodity price basis risk, commodity supply volatility risk, commodity demand volatility risk, risk of failure of production, risk of loss of markets, weather risk, balance sheet risk, credit risk and currency exchange rate risk. Letter from Excelon, supra note 294. In the context of Major Swap Participant, the CFTC and SEC declined to separately define “commercial risk” and instead incorporated many of the ideas included in the suggestion offered by Excelon directly into the definition of “hedging or mitigating commercial risk.” Compare id. with 75 Fed. Reg. 80,214-15.
308. Dodd-Frank Act § 723(a)(3) (to be codified at 7 U.S.C. § 2(h)(7)).
establish the manner of the submission, but does not address whether the CFTC can evaluate the adequacy of the end-user’s plan for meeting its financial obligations. 309 Furthermore, entities have already expressed concern over the costs and benefits associated with how the CFTC and SEC implement the notification requirement. 310 According to the Electric Power Supply Association, the “notification process could create an immense administrative burden on both end users and the [CFTC] if not structured appropriately.” 311 Undoubtedly, end-users will either pass the costs associated with notification requirements on to consumers in the form of higher prices or, if the costs are substantial, may elect to accept the risk and not hedge at all. 312

Ultimately, the impact of the uncertainty associated with the Dodd-Frank Act’s defined terms and end-user exception will depend on the rules implemented by the SEC and CFTC. If the rules written by the agencies are overly broad in scope and application, then many OTC derivatives transactions used for risk management purposes will become subject to mandatory central clearing requirements, either because the end-user is deemed a Swap Dealer or Major Swap Participant or because the hedging transaction itself does not clearly fit within the scope of the end-user exception. 313 Likewise, should the rules promulgated fail to resolve the uncertainty present in the Act itself, some end-users may elect to avoid such uncertainty by either submitting swaps for central clearing “voluntarily” or by declining to participate in the OTC market at all. 314

Regardless of whether the OTC derivatives employed by commercial end-users are more frequently submitted for central clearing as a result of the mandatory application of the Dodd-Frank Act requirements or voluntary submission in the face of uncertainty, the end result will be an increase in the cost managing risk through OTC derivatives. In the bilateral transactions that occur in the OTC derivatives market, counterparties must make determinations regarding credit support on an individualized basis based on their perception of the counterparty risk presented by the other party. 315 While there was a growing trend towards the collateralization of these transactions even before the enactment of the

309. See id.
311. Id. The Electric Power Supply Association (“EPSA”) explained in its comment that “[i]t is both not feasible and not beneficial for such a notification process to occur on a transaction-by-transaction basis, but rather the Commission should take a holistic approach to the financial wherewithal of an end user.” Id. EPSA proposed that the CFTC should rely on an “annual self-certification process through which an end-user’s board or governing body certifies that the end-user has the resources to ‘generally meet its financial obligations.’” Id.
314. Cf. Duffie, Li & Lubke, supra note 5, at 3-4 (noting that pressure from regulators related to trade confirmation backlogs and compression trades intended to reduce aggregate notional amounts outstanding was sufficient to produce a response from participants in the OTC derivatives market).
315. 2 Anthony C. Gooch & Linda B. Klein, DOCUMENTATION FOR DERIVATIVES 1057-58 (2002). ISDA identifies five methods counterparties can use to manage credit risk: (1) do not enter into the transaction; (2) possess sufficient financial strength to accept the risk of non-payment; (3) minimize the size of the risk through netting; (4) obtain protection against the risk from a third-party; and (5) collateralization. ISDA COLLATERAL STEERING COMM., MARKET REVIEW OF OTC DERIVATIVE BILATERAL COLLATERALIZATION
Dodd-Frank Act, requiring corporate end-users to post collateral was still a relatively un-
common practice. Lending institutions, which typically function as dealers in the OTC
derivatives market, generally "view the extension of credit through OTC transactions
without collateral arrangements as another facet of their overall lending activities. . . ."
Even in OTC derivatives transactions that are collateralized, counterparties often estab-
lish "Thresholds" that represent the amount of credit exposure one party is willing to
accept to the other on an uncollateralized basis. As a result, many OTC derivatives
transactions involving end-users, at least at inception, do not require any transfer of collat-
eral between the parties.

In contrast to the collateralization practices common in the bilateral market, CCPs rou-
tinely require counterparties to post initial and variation margin based on the size and
volatility of the transaction cleared. For end-users subject to mandatory central clear-
ing under the Dodd-Frank Act, the obligation to post collateral in order to satisfy margin
requirements will represent a significant increase in the cost of using derivatives to man-
ger risk. To illustrate the significance of the cost increase, an initial margin require-
ment equal to ten percent of the notional amount would force an entity to post $100,000
worth of collateral to cover a contract with a $1,000,000 notional amount. As Cargill
explained in its testimony before the House Committee on Agriculture, a $100,000 initial

Market Review].

Survey-2009.pdf; Market Review, supra note 315, at 33-34. ISDA’s margin survey indicated that between 2003
and 2009, collateralization increased from thirty to sixty-five percent of all trades. ISDA MARGIN SURVEY
2009, supra at 7. Despite the increase in collateralization of OTC derivatives, however, the percentage of trans-
actions with corporate counterparties that include collateral agreements remains relatively small. Id. at 8, chart 4.2.

317. Market Review, supra note 315, at 33. Parties may also elect not to implement collateral agreements
because of (1) the “operational complexity associated with collateralization;” (2) the inability of a counterparty
to post adequate forms of collateral due to liquidity constraints; (3) external constraints such as negative
pledge provisions in other credit agreements, and (4) cost. Id. at 33-34. As explained by the European Associa-
tion of Corporate Treasurers, non-financial companies using derivatives to hedge business risks “account
for only a small portion of derivative[s] outstanding[ ] . Individually or collectively, they do not represent a
systemic risk. Taking corporate credit is usually part of a bank’s business.” Corporate Concerns About OTC
system/files/otccorporateconcerns0909.pdf.

318. 2 GOOCH & KLEIN, supra note 315, at 1069.

319. See Hearing To Review Proposed Legislation By The U.S. Department Of The Treasury Regarding The Regulation
Of Over-The-Counter Derivatives Markets Before the H. Comm. on Agriculture, 111th Cong. 27 (2009) (testi-
mony of Mr. Richard B. Hirst, Senior Vice President and General Counsel, Delta Air Lines, on behalf of Air
Transport Association). Mr. Hirst noted that “most fuel hedging that airlines do is done on the swaps market
in nonstandardized ways under conditions in which it is not necessary to post initial margin.” Id. ISDA
explains that a Threshold is “similar to the idea of extending a loan—both are forms of unsecured credit
exposure.” Market Review, supra note 315, at 43.

320. See Market Review, supra note 315, at 43 (contrasting Threshold with Independent Amount); supra text
accompanying notes 162 through 166.

321. See HASENPUSCH, supra note 150, § 2.1.2.2.1.3, n.83 (noting that “the challenge faced by CCPs is to set
the initial margin at a level sufficient to provide protection against all but the most extreme and predictable
price moves, but not so high as to damage market liquidity or discourage the use of the CCP.”).

322. Hearing To Review Proposed Legislation By The U.S. Department of the Treasury Regarding the Regulation of
Over-The-Counter Derivatives Markets Before the H. Comm. on Agriculture, 111th Cong. 30 (2009) (testimony of
Jon Hixson, Director of Federal Government Relations, Cargill, Inc.).
margin requirement is “major change for a small player.”\textsuperscript{323} In addition to initial margin, commercial end-users subject to central clearing will also need to anticipate and be capable of satisfying any amount of variation margin that the CCP may demand.\textsuperscript{324} To accomplish this, it will be necessary for the end-user to either maintain lines of credit or hold large amounts of capital in reserve—both of which are costly propositions.\textsuperscript{325}

Further exacerbating the potential impacts of the Dodd-Frank Act’s definitional provisions and the uncertain application of the end-user exception on the OTC derivatives market, are the costs associated with the Act’s capital and margin requirements for uncleared swaps.\textsuperscript{326} The possible negative consequences of the margin requirements on OTC derivatives and risk management are two-fold. First, the provisions will impose additional burdens on end-users captured by the Swap Dealer and Major Swap Participant definitions even when the derivative type is not subject to mandatory central clearing.\textsuperscript{327} Second, because the margining requirements, as enacted, apply to all uncleared swaps, end-users are likely to incur significant additional costs in all their OTC derivative transactions even when the end-user exemption from mandatory central clearing applies.\textsuperscript{328}

Concerns related to the application of the Dodd-Frank Act’s margin provisions to end-users stem from the Conference Committee’s decision to eliminate the requirement’s express end-user exception from the final act.\textsuperscript{329} Had the provision remained in the enacted version of the legislation, initial and variation margin requirements established by the CFTC and applicable to Swap Dealers and Major Swap Participants would not have applied when one of the counterparties was not a Swap Dealer or Major Swap Participant.\textsuperscript{330} The legislative history that accompanied the passage of the Dodd-Frank Act explains that despite the absence of the exception, CFTC and SEC “rules may not be set in a way that requires the imposition of margin requirements on the end user side of a lawful transaction.”\textsuperscript{331} As enacted, however, the CFTC and SEC are free to impose initial and variation

\textsuperscript{323} Id.
\textsuperscript{324} Corporate Concerns About OTC Derivative Regulation, supra note 317, at 2; see A Trillion Unintended Consequences, WALL ST. J., July 6, 2010. ISDA notes that that an initial margin requirement equal to one percent of the notional amount of the contract is “a typical level.” Press Release, Int’l Swaps & Derivatives Ass’n, supra note 234. Although the percentage suggested by ISDA figure is substantially smaller than the initial margin figure stated by Mr. Hixon, the aggregate effect is still dramatic. According to ISDA, if a one percent initial margin requirement were applied to all derivatives contracts entered into by end-users, “US companies would face a $213 billion collateral requirement.” Id.
\textsuperscript{326} See Peterson, supra note 312.
\textsuperscript{327} See Dodd-Frank Act, Pub. L. No. 111-203, § 731, 124 Stat. 1376, 1704-06 (to be codified at 7 U.S.C. § 4s(e)(1)).
\textsuperscript{328} See id.; Press Release, Int’l Swaps & Derivatives Ass’n, supra note 234.
\textsuperscript{329} A Trillion Unintended Consequences, supra note 324.
\textsuperscript{331} 156 CONG. REC. HS248 (June 30, 2010) (letter from Sen. Dodd & Sen. Lincoln to Rep. Frank & Rep. Peterson). Discussing the value of the legislative history, an article published in the Wall Street Journal stated: “So various Democrats have offered to write letters explaining to regulators that they never intended for these onerous rules to apply to commercial end users. As if a note on Congressional letterhead would
margin requirements that apply to the Swap Dealers and Major Swap Participants even when their counterparty is an end-user.\textsuperscript{332}

Effectively, the margin requirements of the Dodd-Frank Act may eliminate the ability of market participants to make independent determinations regarding when to require collateral for a transaction. Instead, just as if the counterparties submitted the contract for central clearing, each end-user may find itself subject to posting initial and variation margin to cover the OTC derivatives that it enters into.\textsuperscript{333} According to ISDA, these margining requirements could cost corporate end-users as much as $1 trillion.\textsuperscript{334} Even if the margin requirements do not apply directly to the end-users, imposing the requirements on Swap Dealers and Major Swap Participants even when the counterparty is an end-user will still increase the cost of the derivative for the end-user.\textsuperscript{335} As the Electric Power Supply Association (EPSA) explained in a letter to the CFTC, “[i]f the [CFTC] imposes a margin requirement on financial entities when they are counterparties to end user swap transactions, it would simply be a back-door way of imposing this cost on the end user.”\textsuperscript{336}

Considering the importance of OTC derivatives in risk management programs, the increased uncertainty and cost that will result from mandatory central clearing and margining requirements will have significant negative repercussions on end-users, their customers, and the economy. Specifically, as the cost and uncertainty associated with entering into OTC derivatives transactions increases, it will become more expensive for end-users to manage risk. The increase in expense may “lead to higher costs for consumers and lead some end-users to question the value or benefit of these important risk management tools going forward.”\textsuperscript{337} If end-users elect not to hedge however, they will remain subject to the risks that they would otherwise avoid through OTC derivatives.\textsuperscript{338} Ultimately, a statute passed by Congress and signed by the President. Expect lawsuits galore.” A Trillion Unintended Consequences, supra note 324.

\begin{footnotesize}
\textsuperscript{332} See Dodd-Frank Act § 731(to be codified at 7 U.S.C. § 44(h)(2)).
\textsuperscript{333} Press Release, Int'l Swaps & Derivatives Ass'n, supra note 234; see supra text accompanying notes 161 through 168.
\textsuperscript{334} Press Release, Int'l Swaps & Derivatives Ass'n, supra note 234. According to ISDA, domestic companies would be required to post approximately $266 billion in initial margin and $140 billion in variation margin. The remainder of the $1 Trillion comes from the companies’ need to maintain additional liquidity in order to cover potential future exposure with their counterparties. Id. Addressing ISDA’s findings, Rep. Bachus argued that “[i]nstead of allocating precious resources to hire more people or increase wages, commercial companies will have to post capital every time they enter into a derivatives contract to hedge against legitimate business risk.” 156 CONG. REC. H5253 (June 30, 2010).
\textsuperscript{335} See 156 CONG. REC. H5248 (June 30, 2010) (statement of Rep. Peterson). Rep. Peterson noted that “regulators [have] no authority to impose margin requirements on anyone who is not a swap dealer or a major swap participants” and that while they “do have authority over the dealer or MSP side of a transaction, we expect the level of margin required will be minimal.” Id. Rep. Frank, agreeing with Rep. Peterson, stated that the margining requirements “are going to be done, I think, with an appropriate touch.” Id. (statement of Rep. Frank).
\textsuperscript{336} Comment from EPSA to David A. Stanwick, Sec’y, U.S. CFTC 2 (Aug. 23, 2010), available at https://docs.google.com/lea?id=1DaR7t-lpJ3aENs5D0-REIiyH5EGpF14cY0A0s6k3mYfW1FFPlZsh_mLGZ3ITH1&hl=en. The National Council of Farmer Cooperatives echoed the position of the EPSA: “If initial and variable margin requirements are imposed in addition to capital requirements on uncleared swaps with dealers and [Major Swap Participants], higher transaction costs will be passed on to end-users.” Over-the-Counter Derivatives, Nat’l Council of Farmer Cooperatives to the U.S. CFTC 1, available at http://www.cftc.gov/ooc/groups/public/\@swaps/documents/dbsubmission/dbsubmission_091410_8.0.pdf.
\textsuperscript{337} Comment from EPSA to David A. Stanwick, Sec’y, supra note 336.
\textsuperscript{338} Corporate Concerns About OTC Derivative Regulation, supra note 317; Peterson, supra note 312.
\end{footnotesize}
mately, as the utility of OTC derivatives decline because of uncertainty and higher costs, the parties likely to suffer the most are the customers. Companies that absorb the higher cost of risk management through OTC derivatives will pass at least part of the expense to the customer through higher prices for goods and services while covering the remainder by diverting resources away from other productive activities. Alternatively, end-users that decide to operate without hedging risk will subject their customers to greater and more frequent pricing volatility while seeking out other ways of eliminating risk.

V. Conclusion

During the legislative process, stakeholders and legislators largely agreed that regulatory reform in the OTC derivatives market was appropriate, but differed on the manner in which the reform should proceed. Government agencies, such as the Department of Treasury, the CFTC, and the SEC, generally favored proposals that gave government officials significant authority to intervene in the operation of the OTC derivatives market. In the legislation enacted, these administrative agencies largely prevailed—the final Dodd-Frank Act grants the CFTC and the SEC considerable discretion and authority to promulgate rules concerning the details of the mandatory central clearing and margining requirements. Whether the OTC derivatives provisions of the Dodd-Frank Act will achieve the goals of ensuring greater transparency and financial stability, however, is unclear. As Professor Hu explained to the Senate Committee on Banking, Housing and Urban Affairs,

339. See Over-the-Counter Derivatives, supra note 336. ("Furthermore, if the costs are prohibitively high, the ability of farmer cooperatives to provide their producers risk management tools, such as forward pricing, will be diminished."); Phillips, supra note 18 (noting the Dodd-Frank Act may force agricultural cooperatives to stop offering hedging opportunities to customers and that they may be forced to change their operations if they are unable to hedge their own risks).

340. Peterson, supra note 312.

341. Id.; A Trillion Unintended Consequences, supra note 324. As an example, the Wall Street Journal suggests that a company could eliminate the risk associated with foreign exchange rates by moving jobs to the country where the purchases occur so that its revenues and expenses are in the same currency. Id.

342. See generally, e.g., Hearing To Review Proposed Legislation By The U.S. Department Of The Treasury Regarding The Regulation Of Over-The-Counter Derivatives Markets Before the H. Comm. on Agriculture, 111th Cong. (2009) (providing differing views on regulatory reform from members of the House Committee on Agriculture and a variety of market participants, including ISDA, the CME Group, Cargill Inc., the National Rural Electric Cooperatives Association, the Air Transport Association, and the Working Group of Commercial Energy Firms, among others).


[I]n a financial crisis, especially one with deep derivatives roots, it is too easy to focus solely on the dark side of OTC derivatives. Directly encouraging regulated financial institutions to migrate to exchange-traded derivatives has benefits as well as costs. Similarly, the differing regulatory regimes for “standardized” and “customized” OTC derivatives will trigger differing burdens. As to these and other decisions, careful consideration of the net impact of regulatory efforts will be necessary.345

Unfortunately, as this article explains, the inclusion of mandatory central clearing provisions in the Dodd-Frank Act will not guarantee greater stability or transparency. On the contrary, the evidence suggests that the imposition of requirements that force counterparties to clear OTC derivatives transactions through a CCP may actually increase systemic risk and the cost of risk management opportunities for end-users. Arguably, the legislative process focused too heavily on the “Jurassic Park gone awry” vision of the OTC derivatives market without sufficiently considering the benefits that OTC derivatives provide.346 In their letter to Representatives Frank and Peterson, however, Senators Dodd and Lincoln asserted that “a consistent Congressional directive ... has been to protect end users from burdensome costs associated with margin requirements and mandatory clearing.”347 As one analyst speculated though, “because lawmakers did not appreciate that the impact would reach far beyond Wall Street,” some parts of the law “afford[ ] regulators with no choice but to take a heavy-handed approach wherein negative unintended consequences are unavoidable.”348 As such, the ability of the CFTC and SEC to avoid imposing legal uncertainty and increased cost on end-users, and by extension harming the OTC derivatives market, seems doubtful.

Furthermore, the vesting of authority under the Dodd-Frank Act with the CFTC and the SEC creates concerns of international proportion that the regulatory entities may be unable to adequately address. Clearly, as the G-20 nations indicated following the Toronto Summit, there is strong international support for mandatory central clearing of OTC Derivatives.349 In the G-20 Toronto Summit Declaration, the G-20 nations reaffirmed their “commitment to trade all standardized OTC derivatives contracts on exchanges or electronic trading platforms, where appropriate, and clear through central counterparties . . . by end-2012 at the latest.”350


346. See id. Professor Hu indicates that two contrasting visions influence the debate over the regulation of derivatives. The first vision, "a financial Jurassic Park," consists of "financial scientists" developing new derivatives products that "are invented, introduced, and then evolve and mutate." Id. Eventually, the products "destroy their creators in the wholesale capital market" and then "escape and wreak havoc in the retail market and in economies worldwide." Id. The second vision, which conjures images "of the soothing, perfect hedges found in a formal English or Oriental garden," focuses on "order—the sanctuary from an otherwise chaotic universe—made possible by financial science." Id.


348. Peterson, supra note 312.


350. Id.
Act as a component of international financial regulatory reform, however, will require global coordination and consistency that may not be possible.\footnote{351. See Jill Sommers, Commit'r, U.S. CFTC, Address at Georgetown University: Financial Reform, What's Next? A U.S. and Global Perspective Examining the Opportunities and Challenges Ahead (Oct. 26, 2010), available at http://www.cftc.gov/PressRoom/SpeechesTestimony/opsommers-11.html.} As inconsistencies in the implementation of international regulation emerge, particularly with the scope of the entities and transactions subject to regulation, there exists the potential for regulatory arbitrage between the requirements imposed by different jurisdictions.\footnote{352. Implementing OTC Derivatives Market Reform, supra note 147, at 28.}

If a system of mandatory central clearing is not the solution to the problems that the OTC derivatives market faces though, then what is? Even before the recent financial crisis and the ensuing uptick in pressure for legislative reform, industry and regulatory stakeholders were working to improve the stability of the OTC derivatives market.\footnote{353. Duffie, Li & Lubke, supra note 5, at 2. Obviously, changes made before the financial crisis were insufficient to prevent the crisis. However, some changes were instrumental in mitigating the crisis' severity. For example, because of pressure exerted by the Federal Reserve Bank of New York, dealers eliminated the backlog in unconfirmed trades before the failure of Lehman Brothers occurred. As a result, "of the over 900,000 OTC derivative trades on Lehman's books, only one transaction has been challenged due to an open confirmation." Hu, supra note 72, at 1505-07. Ultimately, the trade data repository concept was captured as a component of the Dodd-Frank Act: "Each swap (whether cleared or uncleared) shall be reported to a registered swap data repository." Dodd-Frank Act, Pub. L. No. 111-203, § 727, 124 Stat. 1376, 1697 (2010) (to be codified at 7 U.S.C. § 2(a)(13(G))).}
The changes that regulators and market participants implemented, both before and after the crisis, continue to foster greater stability within the financial system. For example, the DTCC Trade Information Warehouse, a data repository for credit derivative transactions, promotes transparency by permitting regulators, along with the public, to review the details of the CDS market.\footnote{354. Duffie, Li & Lubke, supra note 5, at 2. In a compression trade, groups of counterparties identify and cancel redundant positions, replacing them with individual trades that reflect the net economic result of the original positions. See id. at 27. Between January 2008 and March 2010, compression trades reduced the notional amount outstanding in CDS market from over $60 trillion to around $26 trillion. Id. at 4. By shrinking the total notional amount outstanding, compression trades in the CDS market reduce the benefits that the central clearing of CDS transactions can achieve. Duffie & Zhu, supra note 255, at 3.}

Likewise, the execution of portfolio compression trades dramatically reduces the total notional amount of CDS contracts outstanding and thereby decreases counterparty risk.\footnote{355. Id. The DTCC Trade Information Warehouse is a step toward the "informational clearinghouse" suggested by Professor Hu in a Yale Law Journal article published in 1993. See Over-The-Counter Derivatives: Modernizing Oversight to Increase Transparency and Reduce Risks, Hearing Before the S. Comm. on Securities, Insurance & Investment of the Sen. Comm. on Banking, Housing, & Urban Affairs, 111th Cong. (2009) (statement of Henry Hu, Allan Shivers Chair in the Law of Banking and Finance, University of Texas School of Law). In his article, Professor Hu argued that the establishment of a central, comprehensive, and continually updated trade database of "OTC derivatives, broken down by genus, family, and species," would "contribute to solving both regulator and banker information failures." Hu, supra note 72, at 1505-07. Ultimately, the trade data repository concept was captured as a component of the Dodd-Frank Act: "Each swap (whether cleared or uncleared) shall be reported to a registered swap data repository." Dodd-Frank Act, Pub. L. No. 111-203, § 727, 124 Stat. 1376, 1697 (2010) (to be codified at 7 U.S.C. § 2(a)(13(G))).}

In fact, even in the absence of a legislative mandate, major OTC derivatives dealers were committing to submit a greater portion of their eligible OTC derivatives transactions to CCPs for clearing.\footnote{356. Press Release, Fed. Reserve Bank of N.Y., Market Participants Commit to Expand Central Clearing for OTC Derivatives (Sept. 8, 2009), available at http://www.newyorkfed.org/newsevents/news/markets/2009/ma090908.html. In September 2009, the senior management of fifteen dealers committed to submit ninety percent of new eligible interest rate derivative trades and ninety-five percent of new eligible CDS trades for clearing by December of 2009. The commitment was made by Bank of America-Merrill Lynch; Barclays Capital; BNP Paribas; Citigroup; Commerzbank AG; Deutsche Bank AG; Goldman, Sachs & Co.; HSBC WINTER 2010
compulsory, clearing, market participants maintain the ability to exercise discretion in order to strike the optimal balance between the costs and benefits of clearing. While none of these pre-Dodd-Frank Act changes alone was likely to guarantee stability within the financial system, they do demonstrate the gains that regulators and key market participants could have achieved through collaboration. Perhaps through sustained cooperation—and gentle regulatory pressure when necessary—stakeholders could have found the right combination of tools that promoted financial stability, reduced systemic risk, and ensured the continued development and availability of OTC derivatives.


358. Sommers, supra note 351 (noting that one of the challenges associated with international regulatory reform of the OTC market is that some "jurisdictions seem to feel that this type of market evolution is better suited to incentives rather than prescriptive rules").