Credit Default Swaps and Insider Trading

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INTRODUCTION

Insider trading law is an anomaly in the world of purchase and sale contracts. The risk created by asymmetric information between contractual parties is a common problem that the law generally leaves to the parties to allocate as they see fit. Indeed, the use of private information to obtain a bargaining advantage is encouraged in most instances rather than discouraged. This creates incentives for the production of information, which in turn leads to more efficient transaction terms. The law regulating trading in equity securities between corporate insiders and outside shareholders takes a different path, one based on the nature of modern public corporations, the structure of the markets in which equity securities trade and the identity of the participants in those markets. In those circumstances, the law prohibits many, although not all, uses of private information.

In recent years, Congress decided to extend the law on insider trading in equity securities to a wide range of derivatives, including credit default swaps. It did so without any consideration of the structure of the credit default swap market or the types of participants in that market or the nature of a credit default swap, or whether or to what extent the reasons for outlawing insider trading in equity securities apply to trading in credit default swaps. This Article attempts to answer the questions that Congress left unasked in its enthusiasm to extend the insider-trading regime.

Part I describes the birth and growth of the credit default swap market, beginning with an explanation of what a credit default swap is and moving on to a description of the market’s structure and its participants. In Part II, I discuss briefly the current legal doctrine on insider trading in equity securities as handed down by the Supreme Court, Congress’s extension of the law regulating insider trading to trading in credit default
swaps, and the application of the current doctrine on insider trading to credit default swaps. In Part III, I review the literature on insider trading of equity securities, not to resolve the still controversial issue of whether such trading should be prohibited, but to determine whether the policies underlying such regulation apply to trading in credit default swaps. I conclude by suggesting that informed trading in credit default swaps generates positive social externalities, specifically by providing accurate information to the market as a whole about a firm’s financial condition which both makes investment decisions better informed and offers a counterweight to the tendency towards managerial over optimism and overvaluation. At the same time, the policy reasons for prohibiting insider trading in the equity securities markets, which are anonymous markets in standardized financial instruments, apply with much less force to trading in credit default swaps, which occurs in face-to-face negotiation and trading of customizable contracts.

I. THE CREDIT DEFAULT SWAP MARKET

In view of the great public opprobrium that has attached to credit default swaps,\(^1\) one might be forgiven for supposing that they are complicated and arcane instruments of corporate finance. On the contrary, credit default swaps are very simple. A credit default swap is an executory contract between two parties in which one party (the “protection seller”) promises the other party (the “protection buyer”) that in return for an upfront

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\(^1\) See René M. Stulz, Credit Default Swaps and the Credit Crisis, 24 J. ECONOMIC PERSPECTIVES 73, 73 (2010) (“in trying to understand the credit crisis, many observers have identified credit default swaps to be a prominent villain”). Perhaps the most notorious of these attacks was Warren Buffet’s labeling of credit derivatives generally as “time bombs” and “financial weapons of mass destruction.” Warren Buffet, Letter to Berkshire Hathaway Shareholders, Berkshire Hathaway Inc. 2002 Annual Report, at 12 & 15 (Feb. 21, 2003), available at http://www.berkshirehathaway.com/2002ar/2002ar.pdf.
payment plus periodic fees, the protection seller will make a payment to the protection buyer upon the occurrence of a default by or bankruptcy of a specified third party (the “referenced issuer” or “referenced entity”). The term of a credit default swap is limited and the obligations of both parties terminate upon its expiration.

The amount of protection purchased under a credit default swap is called the “notional amount.” The notional amount is described in terms of debt issued by the referenced issuer. For example, a credit default swap might provide for protection on $10 million of debt issued by a particular referenced issuer. In that case, the notional amount of the contract would be $10 million. The actual amount that would be paid upon the occurrence of a default would ordinarily be the difference between the notional amount and the fair market value of the referenced debt as of the date of default.\(^2\) The events that would trigger a payment under a credit default swap are called “credit events.” These ordinarily include a default in the referenced debt or a bankruptcy of the referenced issuer but could include other negotiated events.\(^3\)

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\(^2\) Early credit default swaps required the protection buyer to physically deliver a defaulted bond to the protection seller in exchange for a payment equal to the face amount of the bond. Physical settlement has for the most part been replaced by cash settlement in which an auction is held to determine the fair market value of the referenced obligations and the protection seller pays the difference between the notional amount and the fair market value. See The CDS Big Bang: Understanding the Changes to the Global CDS Contract and North American Conventions, at 12-13 (Markit, March 13, 2009), available at http://www.markit.com/cds/announcements/resource/cds_big_bang.pdf.

\(^3\) So-called “restructuring events” are no longer customary credit events in U.S. credit default swaps, see, e.g., Goldman Sachs, Credit Default Swap 101, at 20 (FICC Credit Strategies October 2009), available at http://www.goldmansachs.com/media-relations/comments-and-responses/archive/state-of-the-market-credit-default-swap-101.pdf, although they remain in European credit default swaps, see, e.g., Greek Sovereign Credit Default Swap Credit Event Frequently Asked Questions (FAQ), at 1 (ISDA March 9, 2012), available at http://www2.isda.org/greek-sovereign-cds/.
A. Origins of the Credit Default Swap Market.

Credit default swaps did not spring fully-grown from the head of Jupiter. Rather, the credit default swap market evolved over a number of years out of the interest rate and currency swaps markets. In an interest rate swap, one party promises to pay the second party a stream of interest on a principal amount in exchange for a payment of a separate stream of interest by the second party. Most often, interest rate swaps involve an exchange of a floating rate of interest for a fixed rate of interest. A currency swap entails the exchange of an expected cash flow in one currency for a cash flow in another currency. The interest and currency swap markets grew in the 1980s out of the need for financial institutions and industrial firms to manage and hedge the financial risks inherent in long-term financing and in long-term transactions across borders in multiple currencies.4

The first currency swap took place in 1981, followed by an interest rate swap in 1982.5 The first parties to enter into interest rate or currency swaps were banks trying to manage their own risks and the risk of their clients.6 Wearing both hats they became “dealers” in this new marketplace, either acting for their own account or entering into swap contracts with customers seeking to manage their own risks. As the swap market developed, a small group of banks (or affiliates of banks) become the primary dealers in


5 Bank One Corporation v. Commissioner, 120 T.C. No. 11, 120 T.C. 174, 186-87 (May 2, 2003); but see Kristin N. Johnson, Things Fall Apart: Regulating the Credit Default Swap Commons, 82 U. Colo. L. Rev. 167, 192 n.141 (2010)(“there is some debate regarding the timing of the first modern swap agreement”).

the interest rate and currency swap markets.\(^7\) The existence of a group of dealers prepared to buy or sell swap contracts off the floor of an organized exchange led to the characterization of this marketplace as an “over-the-counter” or “OTC” market,\(^8\) to distinguish it on the one hand from a disaggregated market of buyers and sellers (such as real estate markets) and on the other hand from a market organized around a physical (or electronic) facility “within which trading takes place.”\(^9\)

Initially, transactions were negotiated and executed bilaterally between institutions on the terms of documentation developed on a case-by-case basis for each trade.\(^10\) Customers looking to enter into a swap contract would contact one of the dealers and negotiate both terms and documentation. As the market grew in size and sophistication, the dealers and other participants in the swaps markets formed trade groups. One of the most prominent was the International Swaps and Derivatives Association, Inc. (“ISDA”), which market participants formed to create standardized

\(^7\) See id. at 365-66.


\(^9\) Hans R. Stoll, Market Microstructure, at 3-4 (Financial Markets Research Center Working Paper Nr. 01-16 May 6, 2002), available at http://www.eco.sdu.edu.cn/jrtzx../uploadfile/pdf/books/handbook/15.pdf. Economists distinguish between auction markets, where investors trade directly with each other (either with or without brokers) and dealer markets, where traders buy from and sell to dealers. Id. at 3-4. Both NASDAQ and the New York Stock Exchange are mixed dealer/auction markets, although the former started out as a pure dealer market and the latter as a pure auction market. Id. Bond and foreign currency markets are primarily dealer markets. Id. at 2.

documentation, establish protocols for trading and to promote the interests of market participants with regulators.\textsuperscript{11}

In 1987, ISDA published forms of Master Swap Agreements for interest rate and currency swaps, which were the first widely used standardized forms in the swaps markets.\textsuperscript{12} The basic format of ISDA documentation is simple: the two parties enter into a Master Agreement, which contains the “general legal and credit relationship between the parties.”\textsuperscript{13} The Master Agreement is a printed form and can be amended or modified by means of a typed Schedule, which contains specific terms negotiated by the parties.\textsuperscript{14} The parties are free to change or amend any of these standard forms as they wish. Execution of a Master Agreement does not by itself result in a trade.\textsuperscript{15} It merely sets forth the basic terms of the contractual relationship between the parties. Once the parties agree on the terms of a specific trade, those terms are set forth in a Schedule and a Confirmation which are transmitted either physically or electronically. It is often the case that the parties will also enter into a Credit Support Annex with respect to particular trades to provide for collateral or margin requirements by one or both counterparties to the contract.\textsuperscript{16}

\begin{itemize}
  \item \textsuperscript{11} See Gillant Tett, \textit{Calls For Radical Rethink of Derivatives Body}, \textit{FINANCIAL TIMES}, April 26, 2010, \url{www.ft.com/intl/cms/s/0/f7794d1c-b13d-11df-b899-00144feabdc0.html#axzz1vrR3c2Yw}.
  \item \textsuperscript{12} Feder, \textit{supra} note 8, at 737.
  \item \textsuperscript{13} Allen & Overy, \textit{supra} note 10, at 1.
  \item \textsuperscript{14} \textit{Id.} at 2. ISDA also published standard definitions of terms and provisions (the “Definitions”) for use in derivative transactions. For example, ISDA has published the 1993 Commodity Derivatives Definitions, the 1996 Equity Derivatives Definitions and the 1996 Credit Derivatives Definitions.
  \item \textsuperscript{15} Feder, \textit{supra} note 8, at 746.
\end{itemize}
Starting in the early 1990s, bankers and other market participants began to use the architecture of the interest rate or currency swap for a new type of transaction, one that involved a transfer of credit risk. The first known credit default swaps, as these contracts came to be known, were brought to the market by Bankers Trust and J.P. Morgan in 1994.17 As new forms of derivative transactions were developed, they were documented in long-form Confirmations published by ISDA that contained all the terms and conditions of the new type of transaction.18 As the market for those new forms of transactions became more established, the general terms and conditions for the new type of derivative transaction were moved into the Definitions published by ISDA and the specific terms of the trade were set forth in short-form Confirmations.19 Even as standardized forms have come into more widespread use, however, the terms and conditions of any credit default swap remain subject to negotiated changes to meet the particular needs and desires of the parties.20

**B. Varieties of Credit Default Swap Contracts**

The first credit default swap contracts referenced a single issuer of debt. This type of credit default swap has come to be called a “single-name” credit default swap. In the case of a “single-name” credit default swap, the issuer can be a company or a sovereign nation or a municipality. A more complex type of credit default swap that was

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18 E.g., 1997 Confirmation of OTC Credit Swap Transaction (developed by ISDA to document credit default swaps).

19 Allen & Overy, *supra* note 10, at 3.

developed in 2004 references an index of securities, usually but not necessarily debt securities. These are called “index” credit default swaps. Index credit default swaps are today the most liquid and most common form of credit default swaps. However, this Article will focus on single-name corporate credit default swaps because that is where there is the greatest potential for use of non-public information.

C. Counterparty Risk

In addition to the credit risk presented by the reference entity, a protection buyer incurs the risk that the protection seller may not be able to pay when required to do so. Likewise, the protection seller has the risk that the protection buyer may default on its obligation to pay the credit default swap premiums. These are often referred to as “counterparty risks.” The participants in the credit default swap market have responded to these risks in several ways. The first was to limit the universe of potential participants in the market.

From their earliest days, the over-the-counter credit default swap market has been limited to institutional investors. The primary reason was counterparty risk:

21 Id. at 12.
22 Yet another type of credit default swap refers solely to an obligation and not to an issuer. This is the case with credit default swaps referencing asset-backed securities. See id. at 3. These have become much less common following the collapse of the asset-backed securities market in 2008-09.
23 The credit risk that a protection buyer might not be able to pay its premiums can be substantial. For example, as reported by Markit.com, the price for a five-year credit default swap contract referencing senior unsecured debt of MBIA Insurance Corp. at the close of business on October 6, 2011 was 3826 basis points per annum, or 38.26% of the notional amount per annum. This means that to buy five years of protection on $10,000,000 of MBIA debt, a protection buyer would have to pay annual premiums of $3,826,000; if no credit event were to occur, the protection buyer would be obligated to pay a total of $19,130,000 in premiums over those five years – more than the notional amount of the credit default swap contract.
24 See, e.g., Baker, supra note 5, at 1297.
since swap contracts require future payments, each party has an interest in limiting its exposure to the risk of non-payment by its counterparty at some point in the future. This practical limitation was given legal force in the Commodities Futures Modernization Act of 2000, which generally excluded from regulation by the Securities and Exchange Commission or the Commodity Futures Trading Commission any “security-based swaps” as defined under the Gramm-Leach-Bliley Act of 1999 (“GLBA”). The key part of the definition in the GLBA was the provision that a “security-based swap” must take place between “eligible contract participants” and the parties must have the ability to negotiate the material terms of the swap. An “eligible contract participant” was defined in the GLBA by cross-reference to section 1a of the Commodity Exchange Act. The Commodity Exchange Act in turn defines eligible contract participants as essentially banks, insurance companies and other financial institutions and certain corporations entering into swap contracts to manage business risks. In addition, individuals who have

28 Id.
more than $10 million in total assets or more than $5 million in total assets and who are hedging an owned asset or liability also qualified as “eligible contract participants” under the Commodity Exchange Act.\textsuperscript{29} In practice, credit default swap dealers will only do business with substantial institutions. There is not and has never been a retail component to the credit default swap market\textsuperscript{30} and it is not easy even for small financial institutions to participate.\textsuperscript{31}

To protect protection buyers against the protection seller’s counterparty risk, many credit default swaps include provisions requiring the protection seller to post collateral or other security if the protection seller’s credit rating falls below a certain level.\textsuperscript{32} Since protection sellers are generally highly rated financial institutions, from the protection buyer’s point of view the requirement to maintain the credit rating or post collateral substantially eliminates the counterparty risk of a protection seller default and

\textsuperscript{29} See 7 U.S.C. § 1a(18).

\textsuperscript{30} On March 8, 2011, the Chicago Board of Exchange began trading a retail type of credit derivative called a Credit Event Binary Option. For an initial payment, the purchaser receives the right to $1,000 for each contract in the event a referenced entity defaults or becomes bankrupt. See generally \url{http://www.cboe.com/micro/credit/introduction.aspx}. This Article does not consider the application of the insider trading rules to Credit Event Binary Options or any other retail, exchange-traded credit derivatives.

\textsuperscript{31} \textit{E.g.}, Michael Lewis, \textit{The Big Short} 122-124 (2010)(Goldman Sachs and Deutsche Bank declined to sell credit default swaps to hedge fund with $30 million in assets). Even though the Dodd-Frank bill eliminated the exemption from regulation for credit default swaps sold to eligible institutional investors, it added a requirement that “security-based swaps” sold to a person who is not an “eligible contract participant” must be accompanied by a prospectus. Bloink, \textit{supra} note 26, at (608)(citing the Dodd-Frank Bill, § 768(b), 124 Stat. at 1801). Wholly apart from the need to manage counterparty risk, this requirement seems highly likely to keep the credit default swap market an institutional market.

\textsuperscript{32} H. Shadab, \textit{Counterparty Regulation and Its Limits: The Evolution of the Credit Default Swaps Market}, 54 N.Y. L. SCH. L. REV. 689, 695 (2009-2010) (\textit{“Shadab (2010)”}). In 2009, respondents to an ISDA survey reported that 93% of all credit derivative trades were subject to collateral arrangements. Among big dealers, the percentage was 97%. ISDA \textit{Margin Survey 2010} 12-13 (2010).
makes the credit default swap close to a risk-free investment. In addition to collateral requirements, other practices such as “early settlement in the event of a credit ratings downgrade, [and] netting out offsetting agreements,” can significantly reduce or eliminate protection seller counterparty risk. Even where the protection seller is not required to maintain its credit rating or post collateral, the risk of loss to the protection buyer is limited to circumstances where both the referenced issuer and the protection seller default, and so long as the two are not perfectly correlated the risk is less than the default risk of either by itself.

Historically, credit default swap dealers and market participants have managed counterparty risk through three practices: (1) by limiting their exposure to any one counterparty’s credit, (2) by netting their exposure vis-à-vis each counterparty (that is by cancelling out mutually offsetting positions), and (3) by requiring collateral both initially and periodically depending on changes in the referenced issuer or the counterparty. In the wake of the financial panic that started in 2007 and the concerns that developed over counterparty risk, the credit default swap market also started to evolve towards central clearing.

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33 See discussion regarding pricing of credit default swaps at note 50 infra.
34 Shadab (2010), supra note 32, at 694.
36 Shadab (2010), supra note 32, at 694-695.
37 See Stulz, supra note 1, at 89. As late as 2006, most credit default swaps were cleared and settled bilaterally rather than through central clearing parties. See R. Bliss & R. Steigerwald, Derivatives Clearing and Settlement: A Comparison of Central Counterparties and Alternative Structures, at 24 (Economic Perspectives, Federal Reserve Bank of Chicago 4Q/2006).
In a market with central clearing, trades are executed through a credit-worthy entity that has primary responsibility to each party for the other party’s performance. Mechanically this is accomplished through a novation of the credit default swap with the clearinghouse so that the clearinghouse is contractually liable for each party’s performance. The credit default swap itself is still negotiated by a credit protection seller and a credit protection buyer upon such terms as they choose. Upon the occurrence of an event requiring payment (whether payment of the periodic credit default swap fee or payment upon the occurrence of a credit event), the clearinghouse makes the payment and then seeks reimbursement from the party responsible under the original credit default swap contract. If the party required to make a payment under the original credit default swap is in financial distress and cannot make the payment, then the clearinghouse would first liquidate the collateral posted by that party and then seek financial contribution from all the members of the clearing house.


39 Craig Pirrong, The Clearinghouse Cure, Regulation, Winter 2008-2009, at 46 (“Pirrong 2009”). The primary function of central clearing is to mitigate counterparty risk. Clearing houses do this by requiring members to meet certain credit standards, by requiring the initial posting of collateral upon the posting of a trade, by requiring additional collateral as determined by daily mark-to-market of the credit default swap position and by netting counterparty exposure multilaterally. Id. at 46-47. The loss mutualization function also serves to mitigate counterparty risk. Central clearing is also intended to alleviate systemic risk. One source of systemic risk is that the failure of a market participant with a large derivatives portfolio might cause the failure of numerous counterparties. Darrell Duffie, Ada Li & Theo Lubke, Policy Perspectives on OTC Derivatives Market Infrastructure, at 5 (Federal Reserve Bank of New York Staff Reports Staff Report No. 424, January 2010)(“Duffie 2010”). Another is the risk that fear of the failure of a substantial market participant could lead to a “run” on the market participant, which could “accelerate the failure of that market participant.” Id. However, it cannot be said that central clearing necessarily mitigates systemic risk since the central
One function of central clearing is to improve transparency in the credit default swap market. Cleared trades can readily be aggregated and reported to regulators whereas bilateral trades have not until recently been aggregated for reporting purposes. Currently, a very high percentage of worldwide credit default swap trades are reported to The Depository Trust and Clearing Corporation, which in turn provides aggregated information about trades to market participants and regulators. Several other institutions also now provide intraday pricing and consensus end-of-day pricing on a subscription basis.


In addition, moving only credit default swap contracts that can be standardized to central clearing houses could have an adverse systemic effect by undoing the netting that market participants would otherwise do to reduce their credit default swap exposure. Singh, supra.

\(^{40}\) Aggregate credit default swap trade information is provided online through the DTCC Deriv/Serve Trade Information Warehouse Reports. [http://www.dtcc.com/products/derivserv/data/index.php](http://www.dtcc.com/products/derivserv/data/index.php)


\(^{42}\) P.L. 111-203, 124 Stat. 1376-2223.

been finalized, several clearing organizations have now come into existence to fill these needs. At the current time, substantially less than a majority of credit default swaps are centrally cleared\textsuperscript{44} and some observers are skeptical that central clearing of credit default swaps will ever become predominant.\textsuperscript{45}

**D. Growth of the Credit Default Swap Market**

Starting from nothing a decade earlier, the notional amount outstanding of credit default swaps at the end of 2004\textsuperscript{46} had grown to $6.395 trillion.\textsuperscript{47} By the end of 2006, the outstanding notional amount was $28.650 trillion.\textsuperscript{48} Measured by outstanding notional

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\textsuperscript{44} A 2011 study by the New York Federal Reserve Bank found that 19\% of single name corporate credit default swap trades were eligible for central clearing. Kathryn Chen, Michael Fleming, John Jackson, Ada Li, and Asani Sarkar, *An Analysis of CDS Transactions: Implications for Public Reporting*, at 15 (Federal Reserve Bank of New York Staff Reports, no. 517, September 2011), available at www.Newyorkfed.org/research/staff_reports/sr517.pdf ("NYFed Report").

\textsuperscript{45} See, e.g., Pirrong 2009, supra note 39, at 51; Glass, supra note 43, at S79 & S97-98.

\textsuperscript{46} The Bank for International Settlements did not begin collecting and reporting information on credit default swap contracts until the end of 2004. See BANK FOR INTERNATIONAL SETTLEMENTS, MONETARY AND ECONOMIC DEPARTMENT, OTC DERIVATIVE MARKETS IN THE SECOND HALF OF 2004 3 (May 2005), available at www.bis.org/publ/otc_hy505.pdf ("BIS 2004 REPORT").

\textsuperscript{47} BANK FOR INTERNATIONAL SETTLEMENTS, TIME SERIES, DETAILED TABLES ON SEMIANNUAL OTC DERIVATIVES STATISTICS AT END-DECEMBER 2010, available at www.bis.org/statistics/otcder/dt21.csv ("BIS TIME SERIES"). Notional amounts are not an accurate indication of exposure since credit default swap contracts are settled on a net basis, but they provide a relatively reliable indicator of the growth of the credit default swap market. See OFFICE OF THE COMPTROLLER OF THE CURRENCY, QUARTERLY REPORT ON BANK TRADING AND DERIVATIVES ACTIVITIES, FOURTH QUARTER 2010 10, available at www.occ.gov/topics/capital-markets/trading/derivatives/dq410.pdf ("OCC QUARTERLY REPORT").

\textsuperscript{48} BIS TIME SERIES, supra note 47. The Office of the Comptroller of the Currency reports that with respect to the banks and other financial institutions under its jurisdiction, “From year-end 2003 to 2008, credit derivative contracts grew at a 100\% compounded annual growth rate.” OCC QUARTERLY REPORT, supra note 47, at 9. The introduction of
amount, the credit default swap market peaked at the end of 2007, when the notional amount outstanding was $58.243 trillion. By comparison, at that time, the notional value of all debt securities worldwide was approximately $80 trillion.\(^{49}\) The market has continued downward although it remains large: the total notional amount of credit default swap contracts at year-end 2009 was $32.693 trillion, and at the end of 2010, the notional amount outstanding of credit default swaps was $29.897 trillion.\(^{50}\) Although part of the decline in notional amount was due to the recession and the decline in the popularity of certain kinds of credit default swap contracts,\(^{51}\) a considerable part was due to the industry’s efforts to encourage market participants to enter into binding, bilateral netting agreements.\(^{52}\)

E. Credit Default Swap Pricing

Credit default swap prices are stated as an annual percentage (expressed in basis points\(^{53}\)) of the notional amount of the swap. This price is commonly referred to as the credit default swap’s “spread.” While credit default swap pricing in practice can be very complex, in theory the price for a new credit default swap is a simple function of the risk free rate of return and the risk premium on the referenced bond. Making certain

\(^{49}\) DB Report, supra note 35, at 5.
\(^{50}\) BIS Time Series, supra note 47. The “gross market value” of credit default swap contracts, meaning their replacement value, declined from $1.801 trillion at year-end 2009 to $1.351 trillion at year-end 2010. See Bank for International Settlements, Monetary and Economic Department, OTC Derivative Markets in the Second Half of 2010 11&Table 4 (May 2011), available at www.bis.org/publ/otc_hy1105.pdf.
\(^{51}\) Following the collapse of the market for structured credits in 2007-08, demand for credit default swaps for use in structured credits such as collateralized debt obligations also fell dramatically. DB Report, supra note 35, at 5.
\(^{52}\) Id.
\(^{53}\) One hundred basis points equals one percent.
simplifying assumptions, the price for a new credit default swap should be the excess of the rate of return on the referenced bond over the risk free rate.\textsuperscript{54} In practice, credit default pricing differs from the theoretical result because of the “imperfect match” between credit default swap contracts and bond debentures and for other reasons.\textsuperscript{55}

\textsuperscript{54} Consider a case where a party buys both a bond and a credit default swap on that bond. Assume that the credit default swap is a five-year contract and that the bond has five years to maturity and is trading at par. Assuming further that the credit default swap issuer is highly rated and that the credit default swap contract is either centrally cleared or has other forms of counterparty protection, the buyer is now perfectly hedged: if the bond defaults and there is no recovery from the bond issuer, the protection buyer collects the deficiency from the clearing house or the protection seller; and if the bond pays principal and interest in full, the credit default swap expires undrawn. The net return the protection buyer achieves is the excess of the referenced bond interest payments it receives over the fees it pays to the protection seller. Applying the no-arbitrage principle, this should be the risk-free rate of return since the protection buyer’s investment is now substantially risk-free; and as a corollary, the protection seller’s return should be equal to the spread of the referenced bond interest rate over the risk-free rate, or put another way, the risk premium. See J. Hull, M. Predescu & A. White, The Relationship Between Credit Default Swap Spread, Bond Yields, and Credit Rating Announcements, 28 J. BANKING & FINANCE 2789, 2794-2795 (2004); Roberto Blanco, Simon Brennan, & Ian W. Marsh, An Empirical Analysis of the Dynamic Relationship between Investment-Grade Bonds and Credit Default Swaps, 60 J. FIN. 2255, 2258-59 (2005); Darell Duffie, Credit Swap Valuation, 55 FINANCIAL ANALYSTS J. 73 (1999) (“Duffie 1999”); S.E.C. v. Rorech, 720 F. Supp.2d 367, 402 (S.D.N.Y. 2010). To see why the protection seller should expect the excess of the referenced bond rate over the risk-free rate of return, consider the following. Suppose the seller sells a credit default swap on a referenced entity and buys a risk free bond of the same tenor and notional amount. The protection seller is now earning an income equal to the risk free rate of return plus the credit default swap payments. If a credit event occurs and the recovery on the referenced bond is zero, the protection seller will have to pay the notional amount of the referenced bond, which it can do by selling the risk free bond and using those proceeds to pay the protection buyer. The protection seller is now in the same position as if it had purchased the referenced bond. Accordingly, it should expect the same return. Since it is already receiving the risk free rate of return on the risk free bond, it only needs to receive the risk premium through the credit default swap sale to put it in the same position as if it had purchased the referenced bond.

At origination, a credit default swap contract has no financial value to either party.\textsuperscript{56} That is, no third party would pay any amount to either party to take over its position on the credit default swap contract. As the credit risk of the referenced issuer (or of either counterparty) or the expected recovery rate in the event of a default subsequently changes, the market value of the contract can change. Mark-to-market value is the value of the contract to a third party at any point in time subsequent to its initiation.\textsuperscript{57}

The calculation of mark-to-market value is beyond the scope of this Article, but the essential point is that the market value of a credit default swap contract at any point in time can theoretically be computed as the cost (which could be positive or negative) of replacing the credit default swap with a new one.

\textit{F. Market Structure}

One thing that has not changed over the life of the credit default swap market is its dominance by a handful of dealers. While there is conflicting evidence over the precise degree to which the dealers dominate the credit default swap market, there is no dispute that they are responsible for the majority of credit default trades. The lowest estimates of dealer participation are from the Bank of International Settlements. At the end of 2004, according to the Bank for International Settlements, reporting dealers had entered into 60\% of the outstanding credit default swap contracts; other financial

\textsuperscript{56} Stulz, \textit{supra} note 1, at 79; Duffie 1999, \textit{supra} note 54, at 74. This follows from the no-arbitrage principle.

\textsuperscript{57} For an explanation of mark-to-market valuation, see \textit{generally} Dominic O’Kane & Stuart Turnbull, \textit{Valuation of Credit Default Swaps}, (Lehman Brothers Fixed Income Quantitative Credit Research, QCR Quarterly 3, Vol. 2003-Q1/Q2), \textit{available at} http://iscte.pt/~jpsp/Teaching/Credit_MMF/Handouts/Okane%2520and%2520Turnbull,%2520Lehman%2520Brothers%25202003,%2520Valuation%2520CREDIT\_DEFAULT\_SWAP.pdf and Duffie 1999, \textit{supra} note 54, \textit{passim}. 
institutions accounted for 34% and non-financial institutions for the remaining 6%.\footnote{BIS 2004 \textsc{Report}, \textit{supra} note 46, at Table 4.} By year-end 2010, the Bank for International Settlements reported the percentages as follows: reporting dealers, 51%; other financial institutions, 48%; and non-financial institutions, 1%. Of the “other financial institutions,” banks and security firms accounted for 25%, central clearing parties accounted for 15%, and the remainder was accounted for by insurance and financial guaranty firms, special purpose vehicles\footnote{Special purpose vehicles are trusts or other legal entities formed for securitization purposes. Such entities typically hold mortgages or other financial assets the purchase of which they finance through the issuance of debt securities.}, hedge funds and other financial customers.\footnote{\textsc{Bank for International Settlements}, \textsc{Credit Default Swaps Market, Notional Amounts Outstanding at End December 2010}, \textit{available at} \url{www.bis.org/statistics/otcder/dt21.pdf}.}

Other sources provide much higher estimates of dealer participation. This may be because there is no clear difference between dealers and non-dealers in the credit default swap market (and standards may differ between the U.S. market and overseas markets) and because sampling methods differ.\footnote{DB \textsc{Report}, \textit{supra} note 35, at 6 n.5.} For example, The Depository Trust and Clearing Corporation, which provides a warehouse service for the credit default swap market, reports that for the week ending September 23, 2011, dealers accounted for 80% of the gross notional amount of credit default swap contracts and non-dealers and customers for the remainder.\footnote{DTCC \textsc{Deriv/Serv Trade Information Warehouse Data} (Section 1), \textit{www.dtcc.com/products/derivserv/data_table_i.php}, retrieved on 10/5/11.} For the year prior (the week ending October 1, 2010) the dealer percentage was 84%.\footnote{\textit{Id.}} ISDA likewise reports that according to its Mid-Year 2010 Market Survey, the 14 largest derivatives dealers worldwide hold 90% of all credit

\footnote{\textit{Id.}}
default swap contracts.\textsuperscript{64} Five American-based banks alone account for 46\% in notional amount of all credit derivatives entered into worldwide.\textsuperscript{65}

The highest estimates for dealer participation come from a study by the New York Federal Reserve Bank of three months of trading in 2011, which concluded that dealers were on at least one side of all credit default swap trades.\textsuperscript{66} However, dealers were more likely to be protection sellers (85\%) than protection buyers (78\%).\textsuperscript{67}

Although the 14 dealers collectively dominate the worldwide credit default swap market, no one of them has a dominant market position. One source reports that none of the 14 dealers has a market share greater than 11\%\textsuperscript{68} and that the dealers, although they may be based in five different countries, compete against each other in all the major international markets.\textsuperscript{69} According to another study, trades by the top four dealers account for almost half of the market.\textsuperscript{70} That same study indicated that interdealer trades accounted for 63\% of the credit default swap market and trades between dealers and non-dealers for 37\% -- with no trades between non-dealers.\textsuperscript{71}


\textsuperscript{65} \textit{Id.} at 2.

\textsuperscript{66} NYFed Report, \textit{supra} note 44, at 9.

\textsuperscript{67} \textit{Id.} at 9.

\textsuperscript{68} Mengle (2010), \textit{supra} note 64, at 3.

\textsuperscript{69} \textit{Id.} at 5.

\textsuperscript{70} According to the New York Federal Reserve study, the top four dealers accounted for 45\% of all credit default swap trades measured by number of contracts and 50\% measured by notional amount. NYFed Report, \textit{supra} note 44, at 9.

\textsuperscript{71} NYFed Report, \textit{supra} note 44, at 6.
Where dealers are on both sides of the trade, many trades are arranged through interdealer brokers. Interdealer brokers use both voice (telephonic) brokerage and electronic brokerage to solicit prices. Intermediation through brokers seems to be used particularly where “complex trades need special handling.” Such trades are likely to be negotiated verbally rather than by means of posting and matching electronically. Voice brokering gives the broker the opportunity to learn “if there is more size behind the order than revealed and learn more about a dealer’s trading incentives and true preferences,” which can result in faster trades at better prices. In conditions where “the [credit default swap] market is exposed to asymmetric information,” voice brokering is preferred by dealers since it avoids exposing them to the market as a whole as might result from electronic quotation; similarly, uninformed traders benefit by voice brokering through interdealer brokers who can vouch for their lack of inside knowledge. Once a trade is successfully negotiated through an interdealer broker, the identities of the trade counterparties are revealed to each other and the trade is finalized with trade confirmations.

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72 Yalin Gündüz, Torsten Lüdicke, & Marliese Uhrig-Homburg, Trading Credit Swaps via Interdealer Brokers, 32 J. FINAN. SERV. RES. 142, 142 (2007) (“Gündüz”). In 2004, ISDA reported that 34% of credit default swap trades were arranged through interdealer brokers. Id. at 145. See also Marco Avellaneda & Rama Cont, Transparency in Credit Default Swap Markets 10 (ISDA Finance Concepts July 2010), available at http://www.isda.org/c_and_a/pdf/CDSMarketTransparency.pdf.

73 Gündüz, Lüdicke, & Uhrig-Homburg, supra note 72, at 157.

74 Id. at 148.

75 Id. at 145-46.

76 Id. at 148. It appears that informed traders avoid placing electronic quotes since that platform results in the faster and wider dispersion of the information contained in their trades, which would reduce the opportunities for further arbitrage.

77 Id. at 147. Some evidence indicates that quoted bid-ask spreads are higher in the interdealer market than in trades negotiated directly with or between dealers. The reasons for this are not clear. One possibility is that the interdealer brokers provide additional
Trading in the credit default swap market is comprised of both primary and secondary trades. Entering into new credit default swap contracts creates primary trades. New credit default swap contracts are for the most part initiated by telephone calls to a dealer.\(^7\) If the counter-parties have not already entered into an ISDA Master Agreement, they must do that before they can conclude the trade. Once the economic terms of a particular credit default swap contract are agreed to, the additional documentation – which could include a Schedule, Confirmation and Credit Support Annex – must be executed and delivered. The confirmation of the transaction is often done electronically.\(^8\) According to a 2011 study by the New York Federal Reserve, 87% of credit default swap trades during the three-month period studied were new contracts.\(^9\)

Unlike the early days of the credit default swap market, there are now some publicly available sources for credit default swap pricing, at least to paid subscribers. For example, Markit.com publishes end-of-the day consensus pricing for many single name and index CDS contracts.\(^10\) However, the prices published are for new five-year credit default swap contracts, which are the market standard, not for shorter or longer credit

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\(^7\) NYFed Report, supra note 44, at 6. This includes calls to an interdealer broker acting on behalf of one or more dealers.

\(^8\) Id.

\(^9\) Id. at 6. However, it is not possible to determine what percentages of those new credit default swap contracts were entered into to offset or close out prior positions. See discussion of synthetic secondary trades at notes 83-89 infra.

default swaps. Markit.com competes with other services in offering pricing services, including intraday pricing, to participants in the credit default swap market.\footnote{82 Other sources of pricing on credit default swaps are \url{www.CMAvision.com} and Bloomberg.}

The secondary market has also grown substantially in recent years although what constitutes a secondary trade in the credit default swap market is different than in the securities markets. In the securities markets, a secondary trade is the resale of a security following an initial private or public offering.\footnote{83 \textit{A.A. Groppelli \& Ehsan Nikbakht, Finance 400} (Barron’s 5th ed. 2006).} Each such resale entails the transfer of ownership of the security. Credit default swap contracts, by contrast, “trade ‘synthetically’ by three different means, each of which involves payment by one party to the other of a transaction’s mark-to-market value.”\footnote{84 Mengle 2007, \textit{supra} note 22, at 18-19.} The three forms of secondary trades in the credit default swap market are terminations, offsetting new trades and assignments.\footnote{85 \textit{Cf. Eternity Global Master Fund Limited v. Morgan Guaranty Trust Company of New York}, 375 F. 3d 168, 186-190 (2d Cir. 2004) (claim that protection seller misrepresented the existence of a secondary market).} While data on the secondary credit default swap market is limited, in its 2011 study the New York Federal Reserve found that terminations constituted 7\% and assignments 6\% of the credit default swap market.\footnote{86 NYFed Report, \textit{supra} note 44, at 6.}

Terminating a credit default swap contract requires an agreement by the parties. Credit default swap contracts do not customarily contain provisions entitling either party to terminate. However, dealers will often agree to terminate a credit default swap contract for its mark-to-market value.\footnote{87 \textit{See} discussion at notes 56-57 \textit{supra} for an explanation of mark-to-market value.} If it would be more expensive to replace the swap – that is, if the cost of insuring the same risk has gone up – then the credit default
swap would have a value to the protection buyer and the protection seller would have to make a payment to be released from its obligations under the contract. If it would be less expensive to replace the swap – that is, if the cost of insuring the same risk has gone down – then the credit default swap would have a value to the protection seller and the protection buyer would have to make a payment to be released from its obligations to keep paying the premiums under the contract.

The second form of secondary trading in the credit default swap market is for the protection buyer or seller to enter into a new contract with an offsetting position. In economic terms, this has the same value as the mark-to-market value determined above. However, in legal and accounting terms there are different consequences. For example, in the case of termination of a credit default swap contract requiring a payment by the protection seller, the protection buyer would receive a cash payment at that time which it could take into income with no further risk. If the protection buyer instead entered into an offsetting transaction in which it sold protection, the income from the premiums could only be realized over the life of the offsetting credit default swap, and the net cash received could be more or less than the mark-to-market value depending on whether and when a credit event occurs and the recovery in that case.

The third form of secondary market trading is via assignment and novation. The assignment of a credit default swap contract is most comparable to the sale of a security. The key difference is that assignment and novation of a credit default requires consent of the counterparty. While it is theoretically possible that a credit default swap contract

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88 Mengle 2007, supra note 20, at 19.
89 See O’Kane & Turnbull, supra note 57, at 3-4.
90 Duffie 2010, supra note 39, at 3.
could permit assignment and novation without consent, the presence of significant counterparty risk in every case makes such a provision economically untenable. As with a termination or purchase of an offsetting credit default swap contract, the price for an assignment is the mark-to-market price.

There do not appear to be any publicly available prices for secondary trades in the credit default swap market. The practice is that the holder of a credit default swap contract contacts the dealer from which it purchased the contract and often another handful of dealers to solicit quotes for a mark-to-market price. The small number of dealers and the presence of interdealer brokers reduce search costs and make it economical to solicit quotes from a wide segment of the market. For a dealer to determine the mark-to-market price for a seasoned credit default swap, it must first compute the price for a new credit default swap for the remaining life of the seasoned credit default swap, then estimate the risk and timing of default and the expected recovery rate, and then apply whichever formula it is using to calculate the mark-to-market price. The ability to solicit quotes from multiple dealers helps to mitigate the lack of transparency that otherwise characterizes the secondary market in credit default swaps.

A distinguishing characteristic of the credit default swap market is the large size and low frequency of most trades. In the three-month study conducted by the New York Federal Reserve Bank, credit default swap contracts for the majority of the single-name

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91 If credit default swap contracts were ever to become exchange traded, presumably prices in both the primary and secondary markets would be publicly known.
92 Avellaneda & Cont, supra note 72, at 10.
corporate reference entities traded less often than once per day. A few traded over 20 times per day, but the identity of the reference entities that traded most frequently changed over time, presumably in response to entity-specific events. An average of 2,550 corporate credit default swap contracts traded every day over the three-month period. The most common credit default swap contract for single-name corporate reference entities was for a notional amount of $5 million, and the mean size was approximately $7 million.

The combination of low frequency with large size of the trades amplifies the importance of the dealers. To make markets in credit default swap contracts, they have to be “willing to take on a position in a rarely traded asset and hold the risk for some time.” Despite the small number of dealers, it does not appear that they have market power over pricing: “Nearly all users of OTC derivatives have relationships with multiple dealers and two or more dealers are typically put into competition for each deal. Pricing is very competitive for standard transactions for creditworthy companies.” The sophistication of most market participants ensures that they are capable of making any necessary tradeoffs between best price and liquidity.

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93 Information on the size and frequency of credit default swap trades comes from the three-month study conducted by the New York Federal Reserve Bank in 2011. NYFed Report, supra note 44, at 9-11.
94 NYFed Report, supra note 44, at 3. ISDA reports similar results: only 13 out of 3,000 single-name credit default swap contracts trade 20 or more times per day. ISDA BROCHURE 2011, at 7 (2011).
95 NYFed Report, supra note 44, at 10.
96 Id. at 11.
97 NYFed Report, supra note 44, at 10. However, dealers generally try to hedge these risks rather than hold them.
99 Id.
On the other side from the dealers are the hedge funds, banks, investment companies, insurance companies and other financial institutions that participate in the credit default swap market. The New York Federal Reserve Bank study found 933 unique market participants, of whom 110 traded corporate credit default swaps at least once a day, 330 traded at least once a week and another 500 made at least one trade each month.\(^{100}\)

One result of a market characterized by a very small number of dealers and a somewhat larger but limited number of other investors is that the participants have access to different kinds of information. In particular, the dealer banks have different information than their customers. “Dealers observe the order flow (pre-trade) and transaction information (post-trade) for their own customers.”\(^{101}\) However, dealers do not generally have access to the pre-trade order flow from other customers.\(^{102}\) On the other hand, buy-side customers can solicit quotes from several or even all dealers but do not “observe the order flow of other customers.”\(^{103}\) Both dealers and their customers can take advantage of the intra-day quotes that are made available by subscription to market participants. End-of-the-day pricing allows all market participants to see, even if on a delayed basis, both changes in prior pricing and new or enlarged or diminished interest in particular reference issuers.


\(^{101}\) Avellaneda & Cont, *supra* note 72, at 10.

\(^{102}\) *Id.*

\(^{103}\) *Id.*
G. Motives for Market Participants

Many purchasers of credit protection are hedging a credit exposure. Indeed, hedging provided the initial motivation for the banks that created the first credit default swap contracts. For example, a commercial bank may wish to accommodate a client by extending credit, but at the same time for risk management or other reasons might want to lay off part of the credit risk. Entering into a credit default swap contract is an attractive alternative to selling a loan or a bond, because, among other reasons, keeping the credit on the bank’s books has benefits for managing the bank’s overall relationship with the client. In addition, entering into a credit default swap contract avoids any necessity to obtain the borrower’s consent to the assignment of a loan. Finally, purchasing a credit default swap is attractive to some banks because it frees up regulatory

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105 See, e.g., Nicholas Dunbar, The Devil’s Derivatives 16-17 (2011).

106 Mengle 2007, supra note 20, at 16; Stulz, supra note 1, at 76. On the other hand, some scholars believe that allowing a lender to hedge by transferring part of its credit risk may give the lender “diminished incentives to assist the issuer of the debt” and indeed might even create an incentive for the lender to force the borrower into bankruptcy rather than cooperate in a workout or restructuring. Johnson, supra note 5, at 209.

107 All other things being equal, many borrowers would prefer that their relationship bankers not transfer loans to parties with which the borrower does not have a relationship. See Bernadette A. Minton, René Stulz, & Rohan Williamson, How Much Do Banks Use Credit Derivatives to Hedge Loans?, 35 J. FINANCIAL SERV. RES. 1, 11 (2009). One reason for this is the expectation that relationship bankers will be more forthcoming if the borrower seeks consents or waivers in the event the borrower enters a period of financial distress. Thus, it is not unusual for loan agreements to contain restrictions on the lender’s right to transfer its loan.
capital. However, some evidence suggests that banks are more likely to take positions in credit default swaps for purposes of market making rather than hedging.

Much has been made of the similarity that credit default swap contracts bear to insurance contracts. The similarity only goes so far. To simplify, if the protection buyer is holding a debt obligation of the referenced entity, then the credit default swap functions somewhat like an insurance policy on or a guarantee of the referenced entity’s debt by the protection seller. However, there is no requirement that the protection buyer must own any debt obligation of the referenced entity or indeed, have any credit exposure at all to the referenced entity. In such cases, the insurance quality of a credit default swap disappears and the protection buyer instead holds the credit default swap as a financial investment for taking a short position on a debt issuer or debt obligation. While shorting bonds can be quite difficult for a variety of reasons, it is comparatively simple to buy a

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108 See Janis Sarra, Credit Derivatives, Market Design, Creating Fairness and Sustainability 5 (Network for Sustainable Financial Markets: Consultation Paper No. 1, January 2009), available at http://www.sustainablefinancialmarkets.net/wp-content/uploads/2009/02/sarra-credit-derivatives_20jan091.pdf; Stulz, supra note 38, at 80. This regulatory arbitrage is not without social cost: as some of the literature discusses, moral hazard can be engendered when control of loan covenants is separated from credit risk. See, e.g., Arthur Kimball-Stanley, Insurance and Credit Default Swaps: Should Like Things Be Treated Alike, 15 CONN. INS. L.J. 241, 253 (2008)(“a lender with a credit derivative position may have an incentive to force a default, regardless of costs or the impact on the value of underlying assets”); Frank Partnoy & David A. Skeel, Jr., The Promise and Perils of Credit Derivatives, 75 U. CINN. L. REV. 1019, 1034-35 (2007).

109 See Minton, Stulz, & Williamson, supra note 107, at 21.

110 See, e.g., M. Todd Henderson, Credit Derivatives Are Not “Insurance,” 16 CONN. INS. L. J. 1, 2-3 (2009); D. ANDREW AUSTIN & RENA S. MILLER, CONG. RESEARCH SERV., R41932, TREASURY SECURITIES AND THE U.S. SOVEREIGN CREDIT DEFAULT SWAP MARKET, at 3 (2011)(“Some observers find it helpful to think of a [credit default swap] as a tradable form of insurance, while others find it more analogous to a put option on a debt instrument”), available at www.fas.org/sgp/crs/misc/R41932.pdf.
credit default swap that pays off if the referenced entity defaults.\textsuperscript{111} Holding a credit default swap without also holding the referenced bond is sometimes disparagingly referred to as a “naked” credit default swap position. The practice of purchasing naked credit default swaps has been condemned by some as unproductive speculation that adds systemic risk to the financial system,\textsuperscript{112} but has been praised by others for the

\textsuperscript{111} Francis A. Longstaff, Sanjay Mithal & Eric Neis, \textit{Corporate Yield Spreads: Default Risk or Liquidity? New Evidence From the Credit Default Swap Market.}, 60 J. Fin. 2213, 2219-2220 (2005); see, e.g., Michael Lewis, \textit{The Big Short} 48-53 (2010).

\textsuperscript{112} E.g., Eric A. Posner & E. Glen Weyl, \textit{An FDA for Financial Innovation: Applying the Insurable Interest Doctrine to Twenty-First-Century Financial Markets}, at 21-23 (John M. Olin Law & Economics Working Paper No. 589 (2d Series), February 2012), available at http://ssrn.com/abstract=2010606; Stout 2011, supra note 28, at 31; Lynn A. Stout, \textit{Regulate OTC Derivatives by Deregulating Them}, \textit{REGULATION}, Fall 2009, at 32-33; Lynn A. Stout, \textit{Response}, \textit{REGULATION}, Fall 2009, at 41; Partnoy & Skeel, supra note 108, at 1021 & 1040 (a credit default swap is a speculative “bet” on a third party’s bankruptcy; credit default swaps are “highly leveraged bets” which “raise systemic concerns”); \textit{Why Credit Default Swaps Are a Source of Systemic Risk}, \textit{IDIOSYNCRACIES} (Dec. 22, 2008), http://idiosyncracies.blogspot.com/2008/12/why-credit-default-swaps-are-source-of.html; cf. Baker, supra note 45, at 1292 (additional regulation of over-the-counter derivatives will help protect against “systemic risk”). One concern is that credit default swaps can be used to multiply the amount of leverage in the financial system without any corresponding increase in real assets. On the other hand, others argue that the problems that credit default swaps presented in the financial panic of 2007-08 arose principally from the failures of certain sellers of credit protection (namely, American International Group and the monoline insurers) properly to evaluate the credit risks entailed in writing credit default swaps and to hold adequate capital for those risks. \textit{See} Houman B. Shadab, \textit{Guilty By Association? Regulating Credit Default Swaps}, 4 \textit{ENTREPRENEURIAL BUS. L. J.} 407, 416-418, 444-452 (2010). Moreover, according to some authors, the overall losses attributable to credit default swaps in the crash were dwarfed by the principal losses on junk mortgages and mortgage-backed securities. Peter J. Wallison, \textit{Systemic Risk and the Financial Crisis} (AEI Online, Financial Services Outlook, October 2008)(“There is much more to learn about the role of [credit default swaps] in the financial crisis, but it is altogether clear, even now, that whatever role they played, it was a tiny one when compared to the contribution of imprudent investments in junk mortgages and [mortgage-backed securities]”), available at http://www.aei.org/article/economics/financial-services/systemic-risk-and-the-financial-crisis/.
contribution that such speculation makes to liquidity and price discovery in the market.\textsuperscript{113}

The social value of credit default swaps has been further supported by recent research suggesting that credit default swap pricing may, in combination with bond pricing, provide valuable information about systemic financial risk that cannot be observed through bond pricing alone.\textsuperscript{114}

A naked credit default swap can be held as part of a complex arbitrage strategy or just as a bet that the referenced entity will default. However, a credit default swap purchaser might be hedging an economic risk if it holds or its otherwise subject to credit risk on other debt that is correlated (even if it is not perfectly correlated) with the obligations referenced by the credit default swap.\textsuperscript{115} Index credit default swaps in particular are designed to permit market participants to take a long or short view of an area of economic activity and not necessarily to hedge a particular exposure to a particular credit, although they are also used for hedging purposes.\textsuperscript{116}

Protection sellers, on the other hand, receive fee income for taking a credit exposure similar to that of a loan to the referenced entity of the notional amount, but


\textsuperscript{115} Johnson, supra note 5, at 203 n.191; \textit{see} Feder, supra note 8, at 707 & 719 (it can be difficult to tell where hedging ends and speculation begins).

\textsuperscript{116} Mengle 2007, supra note 20, at 15 (“trading desks also can use index [credit default swaps] to hedge their single-name [credit default swaps]”).
without having to finance, a loan. This creates a position like that of a very highly leveraged loan. Protection sellers expect to receive compensation for taking the credit risk of the referenced issuer but not for the time value of the notional amount of the credit default swap since they are not actually financing a loan. An additional benefit of selling a credit default swap for a financial institution is that it allows the seller to diversify its portfolio which reduces risk so long as the assets in the portfolio are uncorrelated.117

To protect against the risk of a default by the protection buyer in its obligation to pay the credit default swap fees, protection sellers employ the same kinds of protective devices as protection buyers, such as requirements to maintain a credit rating, to post collateral on a downgrade, and to net out redundant positions. Indeed, credit default swaps that are cleared, as well as many other credit default swaps, are required to be marked to market regularly and the party that is under water is obligated to post collateral to secure its net obligation.118 Collateral requirements and other forms of counterparty regulation make credit default swaps into relatively pure measures of the credit risk of the referenced bond and the referenced bond issuer, without noise introduced by such problems as liquidity issues.119

118 See generally Shadab , supra note 31, at 693-695.
While protection sellers at one time included insurance companies\(^{120}\) and other financial institutions, by 2011 most credit default swaps were sold by the dealer banks.\(^{121}\) The dealer banks have several motivations in selling credit protection. One is to promote their relationships with clients by writing credit protection on their client in order to facilitate bond sales for those clients. Another is to diversify the banks’ portfolios. However, it seems that the predominant reason is to engage in the business of making markets in credit default swaps. In their role as dealers, the banks make a return on the spread between the price at which they sell credit protection and the price at which they buy credit protection.\(^{122}\) By 2007, the business in which the dealer banks were engaged had “evolved into a ‘flow’ business: that is traders tend to remain ‘flat’ by buying and selling continually instead of taking large open long or short positions.”\(^{123}\) As a consequence, “dealers generally run a ‘matched book,’ meaning that they sell as many

[credit default swaps] as they buy….”124 The most recent evidence is that that the dealer banks hold most of their positions (as both protection sellers and protection buyers) for “dealer activities and not for risk management.”125

II. EVOLUTION OF THE LEGAL DOCTRINE OF INSIDER TRADING

In this part I will describe how the law currently applies to the trading of credit default swaps. I will start with the development of the legal doctrine on insider trading as it has been applied to the trading of equity securities and proceed from there to the legislation enacted by Congress with respect to Rule 10b-5 and credit default swaps and its probable interpretation.

A. The Emergence of the Legal Doctrine

_Caveat emptor_, arising out of the classical model of contract as based on free exchange between willing participants, has been the general rule applicable in contract cases since the earliest days of the Republic. In 1804, a New York appeals court refused to find an implied warranty in a contract for the sale of a superior grade of wood that turned out to be an inferior grade of wood, holding that liability could only be based on either express warranty or fraud.126 The court relied on the doctrine of _caveat emptor_, holding that such a rule would be “best calculated to excite that caution and attention

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124 Shadab, _supra_ note 113, at 414.
125 See Minton, Stulz & Williamson, _supra_ note 107, at 3. However, some anecdotal evidence also suggests that that some dealer banks may hold credit default swaps in which they are the protection seller for speculative or trading purposes. _See, e.g._, Azam Ahmed, _The Hunch, the Pounce and the Kill_, _The NEW YORK TIMES_, May 27, 2012, at BU-1 (describing index credit default swap contracts sold by J.P. Morgan Chase Bank that resulted in trading loss of over $2 billion; however, the bank claimed that the positions were taken for hedging purposes by its investment office and were not sold by its dealer desk).
which all prudent men ought to observe in making their contracts.”  

This became the prevailing rule in American courts. The same rule also prevailed in the English courts, where the House of Lords held in 1912 that an underwriter of stock could only be held liable for express warranty or fraud and not on any theory of innocent misrepresentation or implied warranty.

In the 20th century, the doctrine of *caveat emptor* came under sustained attack. In response, legislators adopted statutes imposing standard contractual terms in certain categories of cases, such as implied warranties of fitness and suitability for the sale of goods. With the encouragement of the legal academy, both courts and legislators created implied warranties of habitability for the sale of residential real estate. In these cases, the classical model of contract law was thought insufficient to cope with the emerging problems of mass, industrial society. The development of insider-trading rules for equity securities can thus be seen as part of a broader disillusionment with the classical model of contract law and a growing belief that state intercession in certain circumstances is needed to promote vital social ends. That disillusionment resulted in the imposition of laws prohibiting the purchase or sale by corporate insiders of equity securities of public companies on the basis of confidential corporation information.

127 Id. (Thompson, J.).
While no body of law is perfectly consistent, the legal doctrine on insider trading as it has developed in the United States is, as many others have noted, perhaps unusually incoherent and internally inconsistent. I will not here belabor the development of the law, which has been analyzed in dozens if not hundreds of law review articles over the decades, but will merely summarize the current state of the law as a preliminary step to discussing the legal and economic theories that have been proffered as justifications for the prohibition on insider trading.

The modern prohibition on insider trading is a creation of the federal courts. As has been recognized for a long time, the relevant statute and rule say nothing at all about insider trading. As enacted, the statute did not by itself define what type of trading is unlawful. Instead, it made it unlawful “to use or employ, in connection with the purchase or sale of any security … any manipulative or deceptive device or contrivance in contravention of such rules as regulations as the Securities and Exchange Commission


may prescribe….” Acting pursuant to the mandate in the statute to create a rule regarding manipulative or deceptive devices, the Securities and Exchange Commission adopted Rule 10b-5, which makes it unlawful “to omit to state a material fact necessary in order to make the statements made … not misleading” or “[t]o engage in any act, practice, or course of business which operates or would operate as a fraud or deceit upon any person, in connection with the purchase or sale of any security.” Nothing in the rule or the adopting release mentioned insiders or addressed insider trading.

A couple of decades after it adopted Rule 10b-5, the Securities and Exchange Commission in the Cady Roberts case interpreted the rule for the first time to prohibit the purchase or sale of stock by a corporate insider on the basis of material nonpublic information. The government’s interpretation had at least the benefits of brevity and clarity: corporate insiders who by virtue of their positions learn of material information about an issuer not available to the public may not trade on that information. The application of Rule 10b-5 to insider trading was subsequently upheld and expanded by the Second Circuit in S.E.C. v. Texas Gulf Sulfur. Texas Gulf Sulfur established a more general rule prohibiting anyone, whether an insider or not, from trading on the basis of material nonpublic information, regardless of the source of the information and whether or not the information was about the issuer or about some factor external to the issuer but

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136 Securities Exchange Act of 1934, Section 10(b).
139 Id.
which affected the price of the issuer’s securities.\footnote{See Frank H. Easterbrook, *Insider Trading, Secret Agents, Evidentiary Privileges, and the Production of Information*, 1981 THE SUP. CT. REV. 309, 318 (1981).} This rule, too, had the virtues of brevity and clarity: if the information is material and nonpublic, trading is forbidden. However, this rule was ultimately rejected by the Supreme Court and is not the law today.

The *Texas Gulf Sulfur* rule triggered liability on the presence of information asymmetries. The Supreme Court rejected that rule for both policy reasons and because it went beyond the statutory language. Specifically, the language of the statute only prohibits the use of a “manipulative or deceptive device” and the language of Rule 10b-5 only talks about practices that operate as a “fraud or deceit,” and the mere fact that one party to a transaction has more information than the other does not necessarily constitute a manipulative or fraudulent practice.\footnote{See Donald C. Langevoort, *Setting the Agenda for Legislative Reform: Some Fallacies, Anomalies, and Other Curiosities in the Prevailing Law of Insider Trading*, 39 ALA. L. REV. 399, 402 (1988)(“insider trading may be many bad things, but it is unlikely that deception is one of them”).} The Court’s efforts over the years to fit the insider trading doctrine onto the Procrustean bed of fraud have followed.\footnote{See generally Donna M. Nagy, *Insider Trading and the Gradual Demise of Fiduciary Principles*, 94 IOWA L. REV. 1315, 1322-1336 (2009).}

Liability for insider trading under Rule 10b-5 today is premised on two different doctrines.\footnote{Restatement (Second) Torts § 525 (1977).} The first is based on an attempt to square insider-trading doctrine with the traditional law of fraud. At common law, fraud is an action for damages caused by inducing another to enter into a transaction based on reliance on an intentionally false statement.\footnote{E.g., *United States v. Chiarella*, 588 F.2d 1358 (2d Cir. 1978), reversed, 445 U.S. 222 (1980).} A branch of that doctrine extends to cases where the injured party relies on
the silence of the other party in circumstances where the other party has an affirmative
duty to disclose the truth. The source of that duty lies elsewhere – not in the mere fact
that one party has more information than the other. For example, one source of such duty
is the obligation that partners owe to each other to be candid and forthright in their
dealings with each other, a duty which is sometimes labeled as “fiduciary” in nature. For
example, the failure affirmatively to disclose material facts prior to a purchase by one
partner of a partnership interest from another partner constitutes a breach of this
“fiduciary” duty. If the failure to disclose material facts is made in a sale transaction
between partners, the other party can seek redress either in an action for deceit or for
breach of fiduciary duty. In trying to fashion Rule 10b-5 into a cause of action
sounding in fraud, the Supreme Court looked to the fiduciary duty cases to hold that
absent some kind of “fiduciary” duty to the unknown persons with whom they are
trading, stock traders are not liable for failure to disclose non-public information prior to
the trade. Put in the affirmative, liability is based on the feeling that it is unfair for an

146 Restatement (Second) Torts § 551 (1977).
148 See, e.g., Johnson v. Peckham, 132 Tex. 148, 120 S.W.2d 786 (1938). The duties that
partners owe each other or that corporate directors owe to stockholders are relatively
limited compared to the kinds of fiduciary duties that trustees owe to trust beneficiaries.
Trustees must place the interests of the beneficiaries ahead of their own interests, see
Restatement (Second) Trusts § 2, comment b (1959), and are often forbidden to engage in
dealings with trust property even with full disclosure to the trust beneficiaries, e.g., In
re Gleeson, 124 N.Ed.2d 624 (Ill. App. 1954). In incorporating the law of fiduciaries into
the regulation of securities trading, the courts have not discussed these finer details of
fiduciary duty law or indeed the reasons that the common law imposes such obligations
on those entrusted with caring with property for the benefit of another.
149 Restatement (Second) Torts § 551 (1977).
150 E.g., Johnson v. Peckham, supra; see Restatement (Second) Torts § 874 (1977).
151 Chiarella v. United States, 445 U.S. 222 (1980). This branch of the insider trading
rules is often called the “disclose or abstain” rule because the trader theoretically has a
agent (the corporate insider) to use confidential corporate information gained in his agency capacity to trade against his principals (the shareholders). Thus, the first problem in determining whether a trader is subject to Rule 10b-5 is in determining whether the trader has such a fiduciary duty.

In referring to fiduciary duties, the Supreme Court seemed to be referencing obligations created under state law. That impression was given further force in the *Santa Fe* case, which held that Section 10(b) and Rule 10b-5 did not create a body of federal fiduciary law.\(^\text{152}\) One problem with this line of reasoning is that the majority of states do not recognize a fiduciary obligation of corporate insiders to shareholders requiring disclosure of material inside information prior to stock trading.\(^\text{153}\) Notwithstanding the general absence of any such obligation under state law, federal courts have repeatedly upheld the imposition of liability under Rule 10b-5 without attempting to clarify the source or scope of the relevant fiduciary duty in question. Professor Bainbridge’s conclusion is that the only possible source of this fiduciary duty is federal law,\(^\text{154}\) *i.e.*, Rule 10b-5 itself. The Court has never seemed troubled by the circularity of its reasoning.\(^\text{155}\) On the contrary, the Court has referred to the “relationship of trust and choice either to disclose the material information or not trade; in practice, it’s an abstention rule since the disclosure is usually also prohibited.


\(^{154}\) Bainbridge, supra note 133, at 61.

\(^{155}\) Prof. Easterbrook made this point in 1981, Easterbrook, supra note 143, at 322 (“The Court’s treatment of the ‘duty’ requirement is perfectly circular”), and nothing has changed since then.
“confidence” between corporate insiders and shareholders as if the legal basis for such relationship were so obvious as to require no explanation.\textsuperscript{156}

The search for a fiduciary duty owed by corporate insiders becomes much more difficult once the field changes to debt securities. In most states, directors and officers do not owe fiduciary duties to bondholders.\textsuperscript{157} Most courts have applied that principle even to convertible bondholders.\textsuperscript{158} Few cases have discussed whether insider trading rules apply to insiders trading in debt securities,\textsuperscript{159} but at least two courts have held that the absence of state-law fiduciary duties to the holders of debt securities means that an issuer did not violate Rule 10b-5 when it repurchased bonds from bondholders without disclosing information material to their true market value.\textsuperscript{160} By contrast, a number of courts have held that issuers violate Rule 10b-5 when they repurchase stock without full disclosure.\textsuperscript{161} However, the Supreme Court has never addressed the application of Rule 10b-5 to debt securities and it is far from clear how it would rule.

\textsuperscript{157} See, e.g., Lorenz v. CSX Corp., 1 F.3d 1406, 1417 (3rd Cir. 1993).
\textsuperscript{159} Even fewer legal authors have discussed the application of the insider-trading regime of Rule 10b-5 to debt securities. Notable for acknowledging the problem are: Harvey L. Pitt & Karl A. Groskaufmanis, \textit{A Tale of Two Instruments: Insider Trading in Non-Equity Securities}, 49 BUS. LAW. 187 (1993); BAINBRIDGE, supra note 133, at 94-98; and Note, \textit{Insider Trading, Debt Securities, and Rule 10b-5: Evaluating the Fiduciary Relationship}, 67 N.Y.U.L. REV. 1354 (1992).
To fill some of the gaps left by the fiduciary-duty based rule, the government propounded and the courts accepted the so-called “misappropriation” theory, which is the second branch of the current doctrine under Rule 10b-5. Simply stated, this theory makes unlawful under Rule 10b-5 any purchases or sales of securities on the basis of non-public information that the trader stole or otherwise used in violation of the legal rights of another. To the extent that Rule 10b-5 applies at all to transactions in debt securities, under current law it seems to be on the basis of the misappropriation doctrine.\footnote{Cf. Pitt & Grosskaufmanis, supra note 159, at 242-45 (discussing then pending cases involving trading in debt securities based on the misappropriation theory). The anomalies created by the misappropriation doctrine do not seem to have troubled the courts: no court has ever explained how it can be unlawful for an outsider to trade in bonds on the basis of “misappropriated” confidential information that an insider or the issuer itself could use to buy or sell bonds without liability under Rule 10b-5.}

\begin{enumerate}
\item \textbf{B. The Commodity Futures Modernization Act and the Dodd-Frank Bill}
\end{enumerate}

The next question is whether Rule 10b-5, which covers trading in publicly traded securities, applies at all to trading in credit default swaps. In hindsight, that question seems to have been answered by Congress when it passed the Commodity Futures Modernization Act of 2000 (the “CFMA”).\footnote{Pub. L. No. 106554, 144 Stat. 2763 (2000).} However, ambiguities in the statute created doubts about its application that were not resolved until recently.\footnote{As late as 2010 at least some observers did not believe that insider trading regulations applied to the credit default swap market, probably because of the opaqueness of the relevant legislation combined with the absence of enforcement proceedings. Writing in 2010, two prominent business school professors wrote, “[T]here are few (if any) laws against such trading in any jurisdiction.” Viral V. Acharya & Timothy C. Johnson, \textit{More Insiders, More Inside Trading: Evidence from Private Equity Buyouts}, 98 J. Fin. Ec. 500, ___ (2010), also available at \url{http://ssrn.com/abstracts=1072703} (page 15 at the SSRN version). The former Acting Chairman of the Commodity Futures Trading Commission expressed similar concerns in 2007. Sharon Brown-Hruska & Robert S. Zwirb, \textit{Legal Clarity and Regulatory Discretion—Exploring the Law and Economics of Insider Trading in Derivatives Markets}, 2 \textit{CAP. MARKETS L.J.} 245, 255-256 (2007)(discussing in}
In what seems to have been part of a compromise that resulted in the exclusion of financial derivatives generally from regulation by the Securities Exchange Commission or the Commodities Futures Trading Commission, the CFMA attempted to make all of the financial derivatives markets, including the credit default swap markets, subject to Rule 10b-5. The CFMA did this by amending Section 10(b) of the Exchange Act to extend, along with the implementing rules promulgated by the Securities and Exchange Commission, to various types of financial derivatives, including “security-based swap agreements (as defined in section 206B of the Gramm-Leach-Bliley Act)…."\textsuperscript{165} The relevant section of the Gramm-Leach-Bliley Act, in turn, defined a “security-based swap agreement” as a “swap agreement (as defined in section 206A…) of which a material term is based on the price, yield, value, or volatility of any security or any group or index of securities, or any interest therein.”\textsuperscript{166} The only court to construe the “based on” language concluded in 2010 that it meant that Rule 10b-5 applies to purchases and sales of credit default swaps, overruling the defendant’s claim that a credit default swap is not “based on” the price, yield, value or volatility of the referenced bond because the swap spread is quoted as a standalone payment independent of any reference to the bond.\textsuperscript{167}

The legislative history of the CFMA sheds little light on Congress’s motivations in connection with the extension of the anti-fraud rules to financial swaps. The Chairman of the House Committee on Banking and Financial Services, Cong. James A. Leach, spoke in favor of the exclusion from regulation of financial swaps in the CFMA but said

\textsuperscript{165} Section 303 of the CFMA, Pub.L. 106-554, 114 Stat. 2763A—452.
nothing about the extension of anti-fraud laws to such derivatives. Cong. Markey expressed his support for the exclusion so long as swaps were not made exempt from “the anti-fraud or market manipulation provisions of the securities laws,” but he did not offer any explanation of why he thought such provisions were necessary. In the Senate, Sen. Sarbanes spoke in favor of the extension of the anti-fraud rules to securities-based swap agreements but the only reason he offered for this was his conclusory belief that such rules would “enhance protection for investors and for the financial markets…."

Congress subsequently eliminated any ambiguity about its intent in the Dodd-Frank Wall Street Reform and Consumer Protection Act, which provided a new definition of “security-based swap” to be included as Section 3(a)(68) of to the Exchange Act. The new definition states that a security-based swap includes any contract based on the “occurrence, nonoccurrence, or extent of the occurrence of any event relating to a single issuer of a security …., provided that such event directly affects the financial statements, financial condition, or financial obligations of the issuer.” This amendment eliminates the “based on” language that created some ambiguity about the application of the antifraud rules to credit default swaps, and makes it clear that Congress intended that Rule 10b-5 be applied to trades in credit default swaps.

The potential application of Rule 10b-5 to trades in credit default swaps is only the start of the inquiry. The statute and the legislative history both make clear that Rule

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169 Id. at E1878 (remarks of Cong. Markey).
173 Id.
10b-5 only applies to credit default swaps to the same extent that it would apply to trades in securities. The amended Section 10(b) specifically says that such rules only apply “to the same extent as they apply to securities. Judicial precedents … shall apply to security-based swap agreements … to the same extent as they apply to securities.”\textsuperscript{174} The legislative history is to the same effect: Speaking in support of the legislation, Sen. Sarbanes stated, “current and future anti-fraud rules will apply to swap agreements to the same extent as they do to securities.”\textsuperscript{175} Returning to the doctrine laid out above, it seems that in order to determine whether liability attaches to trading in credit default swaps, it would be necessary to determine either (a) that the trader violated some fiduciary-like duty to its trade counterparty by not disclosing information material to the trade, or (b) that the trader “misappropriated” the information in some way from its owner and either used the information for its own benefit or improperly conveyed the information to a third party who traded on it.\textsuperscript{176}

It is difficult to imagine any circumstance or any theory under which a credit protection buyer or seller could be held to have a fiduciary duty to a trade counterparty. Simplifying greatly, there are two theories of fiduciary obligation. One theory is that the hallmark of a fiduciary relationship is the entrustment of the management or care of

\textsuperscript{175} Cong. Rec.–Senate S11947 January 2, 2001), [Cong. Rec.—Senate 27310].
\textsuperscript{176} The SEC has proposed a new Exchange Act Rule 9j-1, which would prohibit manipulative conduct “in connection with the ‘exercise of any right or performance’ under a security-based swap.” Prohibition Against Fraud, Manipulation, and Deception in Connection with Security-Based Swaps, Release No. 63236, Release No. 34-63236, 17 C.F.R. Part 240, 2010 WL 4356441 (Nov. 3, 2010). This purpose of this rule would apparently be to prohibit misconduct that “affects the market value of the security-based swap for purposes of posting collateral or making payments or deliveries under such security-based swap.” \textit{Id.} at 7. The proposed rule would not expand the liability for insider trading in credit default swaps.
property by a principal to an agent. In such circumstances, fiduciary duties are contractual devices that serve to control agency costs and accordingly, such duties cannot exist absent agreement to assume them.\textsuperscript{177} The other theory is that fiduciary duties may be imposed by the law, even absent specific agreement, to protect the weaker, dependent party in an agency relationship.\textsuperscript{178} Neither theory would support the imposition of a fiduciary duty between credit default swap counterparties. Both the bank entering in a credit default swap contract with an institutional buyer, and the institutional buyer entering into a credit default swap with a bank or other financial institution, are archetypical arms-length contractual counterparties. Neither is entrusting the management or care of its property to the other.\textsuperscript{179} Neither is relying on the other to protect its interests. Each is a large financial institution with professional management. Accordingly, there is no basis under any theory of fiduciary law to find a fiduciary relationship between them, and thus no basis under the existing case law for holding either a protection buyer or a protection seller liable under Rule 10b-5 solely for entering into the contract on the basis of material undisclosed information.

The only possible basis for liability under Rule 10b-5 would be seem to be under the “misappropriation” branch of the doctrine. Indeed, that was the basis for the only


\textsuperscript{179} It is theoretically possible that a fiduciary relationship could exist in cases where a bank with discretionary authority over a client’s funds exercises that authority to sell or buy a credit default swap to or from that client. In such cases, if the bank used nonpublic information to the customer’s disadvantage it would be in breach of its fiduciary obligation to place the customer’s interests first. However, since the customer would not be making any investment decisions, it is difficult to see how the anti-fraud rules would have any application to the trade.
reported case brought by the Securities and Exchange Commission for insider trading in credit default swaps. The facts of that case illustrate some of the problems with applying the current insider trading doctrine to credit default swap trades.

In the S.E.C. v. Rorech case, a bond salesman for an affiliate of Deutsche Bank was accused of providing information to a potential purchaser from Deutsche Bank of both (a) bonds issued by an underwriting client of Deutsche Bank and (b) credit default swaps on those bonds. The information was that Deutsche Bank intended to advise the bond issuer to modify the offering in a way that would increase the value of credit default swaps on the bond issuer. The Securities and Exchange Commission did not allege that there was any violation of any fiduciary obligation by anyone to any credit default swap counterparty. Instead, its theory of the case was that the salesman had “misappropriated” Deutsche Bank’s confidential information about Deutsche Bank’s intentions (even though Deutsche Bank apparently did not view the information as confidential) and passed that information on to the customer, who, on the basis of that “inside information” then bought credit default swaps from Deutsche Bank and from another bank (on the same terms as the Deutsche Bank credit default swap). After the bond offering took place, all the credit default swaps were terminated or assigned, yielding a profit to Deutsche Bank’s customer. Both the salesman and customer were charged with violating Rule 10b-5. The court did not dispute the government’s theory of the case, but it found for the defendants, holding that the information was not confidential and not material.

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180 See S.E.C. v. Rorech, supra.
181 S.E.C. v. Rorech, 720 F. Supp.2d at 373 & 413.
Consider how the insider trading doctrine has morphed in this case into something quite unrecognizable. The courts started out with cases where company directors and officers buy shares of common stock from unsuspecting shareholders on the basis of material, undisclosed information about the company’s prospects. In those cases, the selling shareholders are aggrieved. They feel cheated because they entered into a transaction with an agent who took advantage of their ignorance. Here, though, no one has been cheated. On the contrary, the bank salesman disclosed to the bank’s customer the information in the bank’s possession prior to the bank selling credit protection to the customer. How could this possibly be a violation of the federal securities laws?

It is possible to imagine other situations that might more readily fall afoul of the current doctrine on Rule 10b-5. Suppose a dealer bank that is part of a lending syndicate uses material, non-public information it has received from the borrower to buy credit protection on the borrower from another financial institution. Under the current doctrine, the dealer’s liability under Rule 10b-5 would depend entirely on whether its confidentiality agreement with the borrower prohibits it from using the confidential credit information it receives from the borrower to hedge its loans to the borrower by buying credit protection. This result seems arbitrary and irrelevant from the protection seller’s point of view. In Part III of this article I will consider whether there might be a more sensible way to determine whether to regulate insider trading in credit default swaps.

III. WHY REGULATE INSIDER TRADING IN CREDIT DEFAULT SWAPS?

I have to this point outlined the contours of the current insider-trading doctrine with only limited references to the reasons for regulating insider trading or for adopting

\[\text{184} \ E.g., \ Texas \ Gulf \ Sulfur.\]
the particular doctrines described above. I will turn next to a review of the policies that have been put forward in the past 60 years both for and against such regulation not to resolve the ongoing debate about insider trading in equity securities, but with a view to the application of those policies to credit default swaps. I will start with one of the economic efficiency claims made by Henry Manne in his famous book arguing in favor of deregulation of insider trading, namely that insider trading causes stock markets to be more allocationally efficient.

A. Allocational Efficiency

The primary goal of a stock market is to allocate capital to its most profitable, risk-weighted uses. Stock markets accomplish this through price signals: “[S]ecurities prices act as signals helping to route capital to its most productive uses…” The theory is that so “long as stock prices reflect the company’s future earnings, investment capital ‘will migrate to those companies and projects that seem most likely to succeed,’” with

185 For more complete summaries of that debate, see, e.g., Thomas A. Lambert, Overvalued Equity and the Case for an Asymmetric Insider Trading Regime, 41 WAKE FOREST L. REV. 1045, 1050-1056 & nn. 9-39 (2006); BAINBRIDGE, supra note 133, at 133-181; see generally WILLIAM K.S. WANG & MARC I. STEINBERG, INSIDER TRADING (1999 & Supp. 2002).


188 Freeman v. Decio, 584 F.2d 186, 190 (7th Cir. 1978).

189 Lynn A. Stout, The Unimportance of Being Efficient: An Economic Analysis of Stock Market Pricing and Securities Regulation, 87 MICH. L. REV. 613, 643 (1988); see Jeffrey
the result being equilibrium between securities prices and the prices of the physical
capital represented by those securities.\textsuperscript{190} A stock market that accomplishes this is said to
be “allocationally efficient.”\textsuperscript{191}

Allocational efficiency is not the same thing as, but is dependent on,
informational efficiency.\textsuperscript{192} A widely accepted definition of informational efficiency is
that a “market in which prices always ‘fully reflect’ available information is called
‘efficient.’”\textsuperscript{193} Put another way, a market is informationally efficient if prices reach the
same level that they would if every trader had the same information at the same time.\textsuperscript{194}
Thus, equilibrium prices are determined by the information set, that is, the information
that is available to traders: “What makes markets more or less efficient is the speed with
which they adjust to changes in the information set. If the market is efficient, prices must
adjust quickly (instantly) to new information when it becomes available.”\textsuperscript{195} Henry
Manne’s contribution was to claim that inside trading introduces new information to the
information set, \textit{i.e.}, nonpublic information, leading to a new equilibrium price that more

\begin{footnotesize}
\textsuperscript{191} See Stout, supra note 189, at 642-43; see also Klock, supra note 190, at 303 (“long-run differences between true prices and market prices will affect allocational efficiency”).
\textsuperscript{192} But see Ronald J. Gilson & Renier Kraakman, \textit{The Mechanisms of Market Efficiency Twenty Years Later: The Hindsight Bias}, 28 J. CORP. L. 715, 716 n.4 (2003) (authors are skeptical of “the distinction between informational efficiency and fundamental efficiency”).
\textsuperscript{194} Ronald J. Gilson & Reinier H. Kraakman, \textit{The Mechanisms of Market Efficiency}, 70 VA. L. REV. 549, 557 (“[T]he requirement that prices ‘fully reflect’ information means
that prices must behave ‘as if everyone knows’ the relevant information”).
\textsuperscript{195} Klock, supra note 190, at 301; see also Stephen Clark, \textit{Insider Trading and Financial Economics: Where Do We Go From Here?}, 16 STAN. J. L. BUS. & FIN. 43, 53-54 (2010); Goshen & Parchomovsky, supra note 187, at 1244-45.
\end{footnotesize}
accurately reflects the value of the underlying firm. The more accurate pricing in turns leads to greater allocational efficiency.

Manne did not explain the mechanism by which insider trading produces price changes. That challenge was taken up by Profs. Gilson and Kraakman, who argued that market professionals are able to discern from the activity of certain traders or from volume, pricing and other market signals whether an informed trader is in the market and the trading of the market professionals then begins to move the security’s price. This they called “derivatively-informed trading,” which they claimed “functions slowly and sometimes only sporadically.” As a result, their view was that deregulating insider trading would be “unlikely to have much effect on the efficiency of securities markets.”

Concurring generally with Gilson and Kraakman’s cramped view of the effect of insider trading, Prof. Carney argued that “volume by itself is not a reliable indicator of the presence of valuable information,” although a “sudden increase in volume” might signal the presence of informed trading to insiders. Moreover, he claimed that even market professionals might not be able to decode valuable information from insider

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196 A complementary argument is that “inside trading improves the functioning of the stock market because information, as a public good, will be underproduced unless those who acquire it profit through insider trading.” Ronald A. Dye, *Inside Trading and Incentives*, THE J. OF BUS. 295, 295 (1984) (citation omitted).
198 *Gilson & Kraakman, supra* note 194.
199 *Id.*
201 *Id.* at 890.
trading: “Even specialists and market-makers cannot generally discern which trades are based on inside information … Even dealers in over-the-counter stocks cannot readily determine if a stock price change is a consequence of insider trading or not.”202

However, he agreed that though it may be difficult for market professionals or other investors to observe insider trading, to the extent they can do so, such trading “generally moves stock prices in the correct direction.”203

After Manne wrote, some critics claimed that insider trading does not affect prices at all.204 A variation on this theme claimed that insider trading is too “noisy” to “be an efficient substitute for a clarion corporate announcement.”205 One theoretical study even claimed that under certain circumstances, the presence of informed traders may make the stock market less informationally efficient.206 However, various empirical studies have shown that “the stock market detects informed trading and impounds a large proportion of the information in the stock price before it becomes public.”207 At this point, Manne’s

202 Id. at 888.
203 Id. at 890.
205 Cox, supra note 134, at 646.
206 Michael J. Fishman & Katheleen M. Hagerty, Insider Trading and the Efficiency of Stock Prices, 23 Rand J. Ec. 106 (1992); see also Goshen & Parchomovsky, supra note 187, at 1237-42 (insider trading makes stock markets less efficient by discouraging stock analysts); but see James Dow & Rohit Rahi, Informed Trading, Investment and Welfare, 76 J. Bus. 439, 450 (2003) (“From the point of view of investment efficiency, more informed trading is always beneficial, even though it entails higher volatility of the share price and of investment”).
207 Meulbroek, supra note 197, at 1663. Many economists agree that as a theoretical matter, insider trading should have an impact on stock prices. For example, a number of
claim that insider pricing pushes prices in a more accurate direction is now widely accepted, supported by both laboratory and empirical studies.

Conceding that insider trading might make stock pricing more “accurate,” other critics attempt to diminish its impact on allocative efficiency. The argument is that the inside information will be released to the market eventually, often within a few weeks of the time of the insider trading, and that the inaccuracy in stock pricing over that short period of time is unlikely to have any substantial effect on the allocation of capital in the physical, real world. Yet another critical response to Manne is the claim that the effect of insider trading on stock prices is irrelevant, on the theory that stock market prices are not important for purposes of raising capital. This latter position has not been well received.

years ago one economist proposed a theoretical equilibrium model of insider trading that demonstrated “[s]tock prices will more fully reflect information when insider trading is permitted. Average stock price will rise….” Hayne E. Leland, Insider Trading: Should It Be Prohibited? 100 J. POLITICAL ECONOMY, 859, 862 (1992).


Michale Monove, The Harm from Insider Trading and Informed Speculation, 104 Q. J. ECON. 823, 826-827 (1989); Klock, supra note 190, at 303.

Stout, supra note 189, at 645-46.
In sum, the consensus view support’s Manne’s argument that insider trading improves the allocative efficiency of stock markets, although there remains some dispute over the size of the effect, and considerable dispute over whether this is enough to justify deregulating insider trading. The question presented here is whether considerations of allocative efficiency have any bearing on the regulation of trading in the credit default swap market on the basis of nonpublic information about the referenced issuer. I begin the analysis with a review of the literature on price discovery in the credit default swap market versus the bond and equity markets.

The first point is that price discovery in the credit markets does not reveal exactly the same information as price discovery in the equity markets. While changes in credit default swap prices can be “expected to provide a ‘pure’ measure of credit risk … information regarding credit risk is reflected only implicitly through stock prices.” This is because not all adverse credit events are adverse for the equity holders. For example, the news that a company is planning a leveraged buyout would probably have an adverse effect on the credit of the company but a favorable effect on the value of the equity. However, in many if not most cases news that is positive or negative from a credit perspective will also be positive or negative, respectively, from an equity perspective and vice versa.

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214 Forte & Lovreta, supra note 120, at 3(footnote omitted).
The evidence of price innovation in the credit default market versus the bond and equity markets is mixed. The earliest econometric studies showed that credit default swap pricing leads the bond market in price discovery. One study found that “the CDS market contributes on average around 80% of price discovery” versus the bond market.\footnote{Blanco, Brennan & Marsh, supra note 54, at 2279.} The authors argued the credit default swap market’s superiority in price discovery arises from the structure of that market. For one thing, the limited supply of cash bonds makes shorting bonds very difficult compared to purchasing a synthetic instrument like a credit default swap. For another, the credit default swap market is more liquid because there are more participants engaged for different reasons: bond buyers tend to buy and hold, whereas credit default swap investors are engaged in investing, hedging and speculating.\footnote{Id. at 2278.}

A subsequent study found that the superiority of credit default swap pricing to bond pricing in signaling new information about the referenced issuer is especially pronounced in times of financial distress.\footnote{Manhohan Singh & Carolyne Spackman, The Use (and Abuse) of CDS Spreads During Distress 4 (IMF Working Paper, March 2009).} A more recent study concluded that during the financial crisis that began in 2007, the price leadership of the credit default swap market over the bond market was “enhanced.”\footnote{Coudert & Gex, supra note 55, at 16. Coudert & Cox’s conclusion about the price leadership in the credit default swap market is only versus the corporate bond market; for sovereign debt, the results vary between the low-yield countries (e.g., the EU and the US) and emerging countries with high-yield sovereign debt. Id. at 17. Another study by one of the market participants, CMA, found that the number of quotes provided by credit default swap dealers was a leading indicator of the problems in the sub-prime market that arose in 2007. Michael Koblas, Liquidity Signals in the CDS Markets: Enhancing CDS Market Monitoring Using OTC Market Specific Quoting Patterns 4-6 (CMA White Paper), available at}
during times of financial distress, bond investors sell bonds and withdraw from the market, whereas in the credit default swap market participants either continue to buy protection for existing debt positions or take positions (either long or short) for speculative purposes.\footnote{220}

On the other hand, another group of researchers has recently concluded that bond markets led the credit default swap market in price discovery during the recent financial crisis.\footnote{221} This study found that the credit default swap market led the bond market in price discovery during normal periods and continued to do so during the crisis, but in the latter case the contributions of both markets to price innovation were relatively close.\footnote{222}

The evidence is also mixed with respect to price innovation and the equity markets. One early team of researchers found that equity prices lead credit default swap

\footnote{220}Coudert & Gex, \textit{supra} note 55, at 16. In 2007, the Vice Chairman of the Federal Reserve Board of Governors said that credit default swap pricing provides a more accurate measure of credit risk compared to bond pricing because credit default swap prices measure pure credit risk, whereas bond prices reflect other factors such as liquidity. Donlad L. Kohn, Vice Chairman, Board of Governors of the Federal Reserve System, Speech, Asset-Pricing Puzzles, Credit Risk and Credit Derivatives, at the Conference on Credit Risk and Credit Derivatives, Washington, D.C. (March 22, 2007), available at \url{http://www.bis.org/review/r070323c.pdf}.


\footnote{222}Id. at 12-13 (during the financial crisis, 27\% of price discovery came from the bond market and 20\% from the credit default swap market).
prices, which in turn lead bond prices.\textsuperscript{223} The authors attributed the tighter link between the credit default swap and equity markets to the fact that “[i]n the CDS market pure issuer credit risk is traded whereas in the bond market issuer-specific credit risk and market risk are traded in a bundle.”\textsuperscript{224} The leadership of the stock market over the credit default swap market in discovering credit risk has for the most part been confirmed by subsequent studies.\textsuperscript{225} However, at least some studies suggest that this price leadership depends on the nature of the information. An influential study by Professors Acharya and Johnson in 2007 found that price innovation in the credit default swap market leads the equity markets in advance of adverse credit information: “[I]nformation revelation in the CDS market is asymmetric, consisting exclusively of bad news.”\textsuperscript{226} A subsequent study found that there is “a positive relationship between the frequency of severe credit deterioration shocks and the probability of the CDS market leading credit risk discovery.”\textsuperscript{227} The most recent study as of this writing found that equity markets lead the credit default swap market (i) in pricing macro-news that affects the market as a whole, both positive and negative, and (ii) in pricing positive firm-specific news, but that the

\textsuperscript{224}\textit{Id.} at 532.
\textsuperscript{225}E.g., Forte & Lovreta, \textit{supra} note 120, at 2; Jens Hilscher, Joshua M. Pollet, & Mungo Wilson, \textit{Are Credit Default Swaps a Sideshow? Evidence that Information Flows From Equity to CDS Markets} 2 (working draft September 2011), available at \url{http://ssrn.com/abstract=1718653}; Marsh & Wagner, \textit{supra} note 102, at 3.
\textsuperscript{227}Forte & Lovreta, \textit{supra} note 120, at 4.
equity market lead disappears in the presence of firm-specific, adverse credit news.\textsuperscript{228} The authors of this study state that it is “complementary” to the conclusion of Acharya and Johnson that “CDS markets can lead equities when there is bad news about a specific company.”\textsuperscript{229}

The mere fact that credit default swap pricing sometimes leads the equity and bond markets in price discovery does not answer the question of whether informed\textsuperscript{230} trading plays a role in that process. As it turns out, the role that the credit default swap market plays in price discovery is probably enhanced by the prevalence of informed trading in the market. Profs. Acharya and Johnson looked at credit default swap trading data through 2004 and concluded that there was a substantial amount of informed trading in the credit default swap market.\textsuperscript{231} Noting that the trading desks of many relationship banks are active in the credit default swap market as dealers or intermediaries, the authors used the number of banking relationships as a proxy for the number of informed insiders.\textsuperscript{232} Looking at changes in credit default swap prices and equity prices, the authors concluded that “insiders appear to be exploiting information in the CDS market

\textsuperscript{228} Marsh & Wagner, supra note 102, at 3-5; \textit{but see} Hilscher, Pollet & Wilson, supra note 224, at 2 (“Information is reflected first in the equity market and is only subsequently fully reflected in the credit default swap market.”)

\textsuperscript{229} Marsh & Wagner, supra note 102, at 4 n.9.

\textsuperscript{230} “Informed trading” is the term used by economists to describe trading by parties who have non-public, market-sensitive information. It is not the same as, nor necessarily congruent with, the legal term “insider trading.” For an explanation of the differences between informed trading and insider trading, \textit{see} Stanislav Dolgopolov, \textit{Insider Trading, Informed Trading, and Market Making: Liquidity of Securities Markets in the Zero-Sum Game}, 3 WM. & MARY BUS. L. REV. 1, 12-21 (2012).

\textsuperscript{231} \textit{Id.}, supra note 226, at 112.

\textsuperscript{232} \textit{Id.} at 111-12. Relationship banks have access to a wide range of credit information about their borrowers and “an incentive and a responsibility to actively monitor each borrower.” \textit{Id.} at 124. The result is that those banks – whose affiliates are the dealers in the credit default swap marketplace – have a great deal of non-public information about their borrowers.
only when there is significant negative information,”\textsuperscript{233} and that “CDS prices impound information about adverse credit developments before that information is reflected in any stock prices.”\textsuperscript{234}

Profs. Acharya and Johnson further concluded that relationship banks used the information they gained in their role as monitors of borrowers to “uncover credit information about borrowers and then engage in informed hedging when negative information arises.”\textsuperscript{235} They speculated that relationship banks choose to exploit this information in the credit default swap market for several reasons, including: (a) relationship lenders have powerful incentives not to trade or sell off loans to troubled borrowers, and (b) buying credit protection instead of selling a loan makes it easier to conceal “the fact that the trading is informed so as to minimize its price impact.”\textsuperscript{236}

Following up on the work of Profs. Acharya and Johnson and looking at a larger data set from 2001-2008, another group of economists confirmed that information flows from the credit default swap market to the stock market.\textsuperscript{237} This effect is particularly pronounced in advance of adverse credit events.\textsuperscript{238} The authors concluded that this price discovery “is consistent with informed trading taking place in the CDS market before the identified credit events.”\textsuperscript{239}

\begin{thebibliography}{9}
\bibitem{233} Id. at 119.
\bibitem{234} Id. at 122.
\bibitem{235} Id. at 134.
\bibitem{236} Id. at 125.
\bibitem{238} Id. at 5, 16-18.
\bibitem{239} Id. at 18. \textit{See also} Andras Fulop & Laurence Lescourret, \textit{Intra-Daily Variations in Volatility and Transaction Costs in the Credit Default Swap Market} 28 (working draft November 2009)(intra-daily trading patterns are consistent with “a price
In short, the evidence is that informed trading in the credit default swap markets occurs in advance of firm-specific, adverse credit events and as a result the credit default swap market often discovers “more accurate” prices in those circumstances earlier than the equity or bond markets. More accurate pricing in the capital markets, in turn, discovery/informed trading hypothesis”), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1509323%20; but see Hilscher, Pollett & Wilson, supra note 224, at 4-5 (finding that informed traders are primarily active in the equity markets and that credit default swap returns follow equity returns), available at http://www.usc.edu/schools/business/FBE/seminars/papers/F_10-14-11_POLLET.pdf. Note that none of the studies of informed trading in the credit default swap market isolate trading in the United States from trading overseas but apparently look at the worldwide credit default swap market. Credit default swap transactions between purely foreign parties located overseas, with respect to non-United States reference entities, would clearly not be subject to Rule 10b(5). See Morrison v. National Australian Bank Ltd., 558 U.S. __, 130 S. Ct. 2869 (2010)(Rule 10b-5 does not apply extraterritorially). However, it is unclear to what extent Morrison would also bar application of Rule 10b-5 to overseas trading of credit default swaps where there are substantial United States contacts. Suppose, for example, that the foreign parties were affiliates of United States entities, the referenced entity were a United States corporation and the information at issue were provided in the United States by the referenced entity to the United States affiliate of the informed trader. While there is language in the case that would preclude jurisdiction in such case, see Morrison, 558 U.S., at __, 130 S. Ct., at 2884 (“the focus of the Exchange Act is not upon the place where the deception originated, but upon purchases and sales of securities in the United States”), the question has not been decided by any court.

The mechanisms by which price innovations in the credit default swap market spread to the equity and bond markets are not well understood. However, the structure of the credit default swap market suggests the following mechanisms as possibilities: (1) There are only fourteen dealer banks, all known to each other and to the other participants in the market. Their lead banking relationships are often publicly known. It is entirely possible that the fact that one of them is offering to buy or sell credit default swaps on an issuer for which they are a relationship banker would signal to the market that they are trading on the basis of nonpublic information, especially if no other activity is taking place around that issuer. It is even more likely that the refusal of an identified dealer bank to offer a quote on a credit default swap contract for which it normally offers quotes would be viewed as signaling the presence of nonpublic information. This is a variation of what Profs. Gilson and Kraakman labeled “trade” decoding. Gilson & Kraakman, supra note 193, at 571-74. (2) What Profs. Gilson and Kraakman labeled price-decoding, id. at 574-75; see also Jack Hirshleifer & John Riley, The New Economics of Information 13 (Discussion Paper #74 July 1976), available at http://www.econ.ucla.edu/workingpapers/wp074.pdf (“uninformed traders might be able
leads to more efficient allocation of capital. Thus, it appears that Manne’s arguments about allocational efficiency apply to informed trading in the credit default swap market as well as to the equity securities markets.

Indeed, the argument is even stronger in the case of credit default swaps precisely because informed trading in credit default swaps generally signals adverse credit news. Recent scholarship has drawn attention to the asymmetry of corporate disclosure with respect to favorable and unfavorable news. For a number of reasons, corporations are more likely to disclose positive information than negative information. This leads to overvaluation. The first to call attention to the significant social harm of overvalued equity was Prof. Jensen in 2005. He defined overvalued equity as the result where “a firm’s stock price is higher than its underlying value.” In the wake of the collapse of the Internet bubble of the early 2000s and a series of notorious accounting scandals (e.g., Enron and WorldCom), he wrote that “powerful forces leading to value destruction are

to infer the content of the information from the movement of price itself”), as well as what we might call volume decoding, would also be much more likely to occur in the credit market than in the equities markets. The equities markets are much deeper and the trading by informed traders tends to get lost in the volume. By contrast, most single-name corporate credit default swaps trade less than once per day. See discussion at notes 93-96 supra. Any sudden change in volume or price would be instantly noticeable and other traders could draw inferences from such changes. See Avellaneda & Cont, supra note 72, at 6. (3) It also appears that the number of quotes to buy or sell credit default swaps that are offered on a daily basis on any referenced issuer provides valuable information to the market on the arrival of new information about that issuer. Koblas, supra note 219, at 3-8.

For a thorough review of the literature on this topic, see Lambert, supra note 185, at 1061-1074.


Id. at 5.
created by situations in which securities markets substantially overvalue a company’s equity.”

The causes of overvaluation are well known and will not be discussed at length here. To summarize, managers favor overvaluation both for its positive impact on incentive compensation and for its effect in deterring hostile takeovers. Apart from the incentives to sit on bad news, managers also suffer from biases that may make them systematically optimistic and inclined to ignore or downplay negative information. All these problems are exacerbated in “last period” situations – where the corporation is facing insolvency or wholesale changes in management. Drawing on the literature about overvalued corporations, Prof. Lambert and Prof. Grechenig have separately argued that corporate insiders should be free to trade in equity securities on the basis of negative, or price-reducing, nonpublic information.

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244 Id. at 6.
247 Id. at 114; see Jennifer H. Arlen & William J. Carney, Vicarious Liability for Fraud on Securities Markets: Theories and Evidence, 1992 U. Ill. L. Rev. 691, 724-727 (empirical data shows fraudulent omissions most likely in the case of failing companies).
248 Lambert, supra note 185.
249 Grechenig, supra note 213, at 147-48.
250 See also Laura Beny, Insider Trading Laws and Stock Markets Around the World: An Empirical Contribution to the Theoretical Law and Economics Debate, 32 J. Corp. L. 237, 249 (2007)(“The argument for insider trading as an alternative means of disclosure is strongest when the information in question is the kind of information managers have little ability or incentive to disclose”). Not everyone thinks that short sales by insiders are beneficial, even if they help to mitigate the harm caused by overvaluation. Apparently, there was a great deal of public anger over insider short-selling in advance of the 1929 Crash. See Robert A. Prentice & Dain C. Donelson, Insider Trading as a Signaling Device, 47 Am. Bus. L. J. 1,13-13 (2010)(“In the most flagrant insider trading scandal
Informed trading in credit default swaps would in many circumstances help mitigate the problem of overvalued equity. As discussed above, most informed trading in credit default swaps precedes adverse credit events. In those relatively rare cases where adverse credit events would have a positive impact on the equity holders (for example, a proposed leveraged buyout), management would not have an undue incentive to conceal or delay disclosure of the news, and overvaluation is not likely to be a problem. Conversely, in those cases where news that is favorable to the creditors might have an adverse effect on equity valuation (for example, news that a company is suspending its dividend), it appears that there is not a lot of informed credit default swap trading, at least not in advance of informed trading in the equity markets.

In addition, informed trading in the credit default swap market helps to provide regulators and the public with valuable information about the strength of “foundational entities – corporations and governments.” Indeed, credit default swaps “continued to trade even during the crisis” of 2007-08, providing valuable information about credit preceding passage of the 1934 Securities Exchange Act, Albert Wiggin, head of the Chase Bank, used inside information to anticipate the impact of the stock market crash of 1929 on Chase. Wiggin borrowed money from Chase in order to short Chase's own stock, pocketing as much as $11 million in profits. Any damage caused to Chase's chances for survival apparently paled in Wiggin's estimation given that his insider trading profits dwarfed his $275,000 annual salary.”


252 Don H. Kim, Mico Loretan & Eli M. Remolona, Contagion and Risk Premia in the Amplification of Crisis: Evidence From Asian Names in the Global Credit Default Swap Crisis, 21 J. ASIAN ECONOMICS 314, 325 (2010); see also Shadab, supra note 113, at 415 n.25.
quality at a time that the bond markets were frozen.\(^ {253}\) To the extent that informed trading in credit default swap markets improves the accuracy of the signals sent by credit default swap pricing about issuer credit quality, that can only enhance the value of credit default swap pricing as a superior alternative to the credit ratings provided by ratings agencies.\(^ {254}\) In the wake of the disastrous failures of the rating agencies leading up to the financial crisis, there is a substantial public benefit in moving to credit default swap pricing as an alternative method of credit risk evaluation and in assuring the accuracy of such pricing.\(^ {255}\)

**B. Adverse Selection**

The strength of the economic efficiency argument in favor of deregulating insider trading triggered a strong response. Working from Akerlof’s insights about “lemons” and the used car market,\(^ {256}\) economists theorized that market makers would respond to the presence of asymmetric information by increasing their bid-ask spread to cover their anticipated losses on trades with informed traders.\(^ {257}\) These papers in turn spawned

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253 But see Singh & Spackman, supra note 218, at 4-6 (in times of distress, credit default swap spreads might understate default risk because they conflate default probabilities and recovery probabilities).


255 A recent paper urges bankruptcy courts to use credit default swap prices to measure default risk, relying in part on the presence of informed trading in credit default swap markets to assure accurate pricing. Michael Simkovic & Benjamin S. Kaminetzky, Leveraged Buyout Bankruptcies, the Problem of Hindsight Bias, and the Credit default swap Solution, 2011 COLUM. BUS. L. REV. 118, 174-76.


257 The first in this line of analysis was Walter Bagehot (pseudonym for Jack Treynor), The Only Game in Town, 27 FIN. ANALYSTS J. 12 (1971). Important theoretical contributions were subsequently made in Thomas E. Copeland & Dan Galai, Information Effects on the Bid-Ask Spread, 38 J. FIN. 1457 (1983), and Lawrence R. Glosten & Paul
dozens of theoretical and empirical studies trying to determine what affect informed trading has on liquidity and the bid-ask spread in equity securities markets.\textsuperscript{258} The relationships between dealers, specialists, and various types of equity market participants turn out to be more complicated than the simple model based on Akerlof. The results, both theoretical and empirical, are conflicting and at this point in time no widely accepted consensus seems to have emerged.\textsuperscript{259} The few studies available of the effect of informed trading on liquidity and bid-ask spreads in the credit default swap market, however, do not support the claim that informed trading has an adverse effect in that market.

Contrary to what they expected, Profs. Acharya and Johnson did not discover a decrease in liquidity in the credit default swap market as a result of informed trading.\textsuperscript{260} Using the bid-ask spread as the measure of liquidity, they found no adverse change as a result of informed trading. On the contrary, they found that an increase in their proxy for informed trading (the number of relationship banks) actually resulted in “smaller bid-ask spreads, on average.”\textsuperscript{261} Speculating on why that might be the case, they suggested it was possible that the informed dealers were providing liquidity “for strategic reasons,”\textsuperscript{262} or were competing against each other.\textsuperscript{263} This study suggests that restricting informed trading in the credit default swap market would not reduce bid-ask spreads and might even increase them.

\begin{flushleft}
\textsuperscript{258} For an exhaustive review of the literature, see Dolgopolov, \textit{supra} note 230, \textit{passim}.
\textsuperscript{259} \textit{Id}. at 54-57.
\textsuperscript{260} \textit{AJ}, \textit{supra} note 226, at 134-137.
\textsuperscript{261} \textit{Id}. at 113.
\textsuperscript{262} \textit{Id}. at 137.
\textsuperscript{263} \textit{Id}. at 138.
\end{flushleft}
Acharya and Johnson’s conclusion was challenged indirectly by a subsequent study that asked “whether informed trading affects liquidity provision in the CDS market.”264 Using the number of quotes provided by dealer banks as a measure of liquidity, rather than the bid-ask spread, the authors found “evidence that liquidity providers in the CDS market are reluctant to supply liquidity when a significant widening of the CDS spread is imminent.”265 The authors concluded that the dealer banks declined to extend quotes for credit default swap contracts, i.e., refused to sell credit protection, because of their private knowledge of the arrival of adverse credit information.

The possibility, even the likelihood that informed dealers will refuse to offer quotes for credit default swap contracts on the basis of private information does not support the regulation or prohibition of informed trading in the credit default swap markets. The law has never punished the decision not to trade on the basis of non-public or inside information.266 On the contrary, the usual description of the rule is that traders have the choice to abstain from trading or to disclose the nonpublic information. Although this rule can lead to anomalous results,267 it is widely thought impractical to police the failure to trade since any such failure could have many causes. Accordingly, any prohibition of informed trading in the credit default swap markets, even if vigorously

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265 Id. at 27.
267 For example, an insider with knowledge of a pending takeover proposal could decide not to sell any shares that he already owns with no liability under Rule 10b-5 even if he had long planned to do so, although he might be prohibited from buying new ones.
enforced, would have no impact on the impairment to liquidity caused by the withdrawal of informed dealers from the market in advance of adverse credit events and the elimination of that prohibition would have no impact. Put another way, liquidity in the credit default swap market is already negatively affected by dealers withdrawing from the market in advance of adverse credit news and excluding trading in credit default swaps from Rule 10b-5 would not change that.

C. Insider Trading as Management Compensation

Manne’s second argument was that insider trading is an efficient form of management compensation. Despite some support over the years, 268 Manne subsequently recognized the strength of the arguments against this theory and no longer supports it. 269 Accordingly, I will not address this claim. I will instead consider Manne’s new argument that insider trading is an efficient means for senior executives to discover information known to lower level management that is not otherwise being transmitted to the executives. 270 For several reasons, I do not believe that this argument supports the deregulation of informed trading in credit default swaps.

To start with, it is difficult to see how, if inside trading in credit default swaps were legalized, a senior manager could extract from day-to-day changes in either the credit default swap market or the stock market information about a specific project or company-specific event that he did not already know or how he would filter that information out from the noise of the market. 271 In particular, the signal-to-noise ratio in case involving informed trading in the credit default swap markets would be greatly

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268 See, e.g., Carlton & Fischel, supra note 134, at 861-872.
269 See Manne 2005, supra note 208, at 401-407.
270 Id. at 414-418.
271 See Prentice & Donelson, supra note 250, at 18-20.
degraded by the length of the transmission as shown by a review of how information would be transmitted in such a case.

Given the institutional requirements for market participants, no individual employee of any company is eligible to buy or sell any credit default swaps, including those that reference his company’s debt. The participants in the credit default swap market are all substantial financial institutions. There are no retail or individual investors. The only way that an individual employee could participate even indirectly in the credit default swap market would be by selling or giving credit-sensitive information about the company to a market participant, which could then trade in the credit default swap market on the basis of that information. Resulting changes in the credit default swap price or volume or availability of dealer quotes might in turn signal the equity and bond markets of the presence of nonpublic information and lead to changes in equity prices. The attenuated link between the information known to the company employee and any subsequent changes in equity prices or volumes makes it unlikely that senior executives could derive any useful information about any specific problem at the company from such changes.

D. Perverse Incentives

One of the arguments for criminalizing insider trading is that such trading creates perverse incentives for management (a) to delay or otherwise manipulate the disclosure of material information\textsuperscript{272} or (b) to cause the corporation to engage in unsuitable high variance projects with the expectation that the manager will profit whether the project

\textsuperscript{272} See, e.g., Schotland, supra note 204, at 1449-1450; see also Robert J. Haft, The Effect of Insider Trading Rules on the Internal Efficiency of the Large Corporation, 80 Mich. L. Rev. 1051, 1054-55 (1982) (“Subordinates would stall the upward flow of critical information to maximize their opportunities for financial gain”).
succeeds or not. In the former case, the theory is that managers might delay disclosure in order to increase the window during which they might profitably trade. In the latter case, the idea is that managers would be tempted to engage in projects against the company’s interests because they could profit so long as the project were either very successful (by trading long) or very unsuccessful (by trading short). In response, other scholars have pointed out that managers work in teams and have long-term reputational interests to protect, and accordingly it is highly unlikely that managers would be able to engage in these kinds of bad behavior. In any event, these concerns about perverse incentives, whether valid or not, are in large part irrelevant to the credit default swap market.

For one thing, the institutional nature of the credit default swap market makes it very unlikely that market participants could cause an issuer to delay disclosure or engage in inappropriate projects. Although the institutional participants in the credit default swap market may have some influence over an issuer through their role, if any, as relationship bankers to or bond holders of that issuer, that type of influence would not extend to control over disclosure issues, nor would it permit them to direct the issuer to engage in high variance projects. On the contrary, it would be far more likely that the loan or bond covenants would contain provisions requiring it to comply with applicable laws, including disclosure laws, and limiting the issuer’s ability to engage in certain types

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274 Carlton & Fischel, supra note 134, at 873-75; Lambert, supra note 185, at 1052.

275 I am not aware of any studies demonstrating that such conduct in fact occurs in any market where insider trading is permitted.
Moreover, creditors risk being held liable under various lender liability theories if they become actively involved in managing a borrower's business, including by directing a borrower to engage in particular types of projects. Thus, there is little or no risk that credit default swap market participants would cause debt issuers to delay disclosure or engage in inappropriately risky projects in order to enable the market participants to profit through credit default swap trading on nonpublic information.

Second, the inability of any individual employee to participate directly in the credit default swap market substantially limits any incentive an executive might have either to manipulate the issuer’s disclosure or to cause the issuer to enter into undesirable, high variance transactions. However, it is theoretically possible that an employee could sell nonpublic information to credit default swap market participants in order to monetize the information that the employee cannot use directly. In such cases the employee might have an incentive to delay disclosure or to force the company to engage in inappropriately high variance projects, although as noted above there are significant institutional barriers in large corporations that make such behavior highly unlikely. The risk of such misbehavior would be the highest in periods of financial distress.

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276 See CHARLES M. FOX, WORKING WITH CONTRACTS 192 & 195-218 (2008). However, negative covenants limiting risky activities or financial covenants requiring maintenance of certain financial ratios or balances are much less likely with investment grade credits.


278 See Prentice & Donelson, supra note 250, at 43 (managers might delay internal disclosure to give them time to sell adverse information to hedge funds).

279 See Lambert, supra note 185, at 1112-14.
Incentives for managers change when firms are in the “last period,” which is commonly defined as a point “when the undisclosed news is so bad it might cause insolvency or some kind of managerial shake-up.” Indeed, this is a time when managers might rationally pick higher variance projects for the firm in a desperate attempt to keep the firm going, and it is not impossible that “last period” managers could decide to throw caution to the winds and risk reputational ruin by combining such projects with the sale of corporate secrets to credit default swap traders. However, criminalizing all informed trading in the credit default swap market would be an overly broad reaction to this attenuated risk, which could be controlled (if such control were thought necessary) either (a) by rules or employment contracts adopted by those companies concerned about the potential for such misbehavior, which would prohibit executives from privately supplying negative credit information to outsiders or, (b) with a legislative prohibition of sales of nonpublic, market-sensitive information by corporate insiders to outsiders.

E. Fairness

The primary objection to insider trading – or at least the reason that seems to best account for the popularity of the laws against it – is the widespread feeling that trading on

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281 Lambert, supra note 185, at 1062.


283 Transfers of information in which the executive derives no financial benefit – i.e., “tips” without monetary consideration – would not create the kind of perverse incentives described here.
the basis of information not known to (or knowable by) the general public is in some
sense “unfair.” This claim underlies the rule enunciated by the SEC in the Cady,
Roberts case and its subsequent extension in the Texas Gulf Sulfur case to a ban on any
trading by anyone on the basis of any material non-public information, regardless of its
source or subject. The unfairness of such trading is usually asserted as a self-evident
truth. For example, in the Texas Gulf Sulfur case, Judge Waterman wrote that Rule 10b-
5’s prohibition on insider trading “is based in policy on the justifiable expectation of the
securities marketplace that all investors trading on impersonal exchanges have relatively
equal access to material information.” His only sources for this “justifiable
expectation” were citations to a few outlier cases with no discussion at all of cases
coming to the opposite conclusion and to law review articles that were equally
superficial.

284 See, e.g., Ferber, The Case Against Insider Trading: A Response to Professor Manne,
23 Vand. L. Rev. 621, 622 (1970); Victor Brudney, Insiders, Outsiders, and
Informational Advantages Under the Federal Securities Laws, 93 Harv. L. Rev. 322,
355 (1979); Loss, supra note 135, at 36-37.
285 SEC v. Texas Gulf Sulfur, 401 F. 2d 833, 848 (2nd Cir. 1968)(en banc)(citations
286 Id. Judge Waterman relied, inter alia on an article by Arthur Fleischer, Jr., which
asserted that the “federal imposition of a duty of disclosure is essentially based on the
expectations of the market place and the purposes and policies of the Exchange
Act.….[A]n essential function of the Exchange Act was to create markets free from
manipulation and from trading based on undisclosed corporate information.” Arthur
Fleischer, Jr., Securities Trading and Corporate Information Practices: The Implications
of the Texas Gulf Sulfur Proceeding, 51 Va. L. Rev. 1271, 1279 (1965)(footnotes
omitted). However, nowhere in the legislative history of the Securities Exchange Act of
1934 is there any support for Fleischer’s conclusion that the Congress had determined
insider trading was unfair and ought therefore to be banned. See Bainbridge, supra note
133, at 26-27. Nor did Fleischer provide any support for his view of the “expectations of
the market place” aside from citations to a smattering of state cases representing the
minority view.
A number of law professors have sallied forth to fill the gaps left by the courts. Prof. Brudney attempted to ground this sense of unfairness in the tendency of investors, in the context of a market requiring continuous disclosure by public companies, to rely on the most recent corporate communication: “[F]ailure to communicate the occurrence of … events may plausibly be taken as a representation – or at least may fairly permit investors to infer – that all previous disclosures remain accurate and complete and furnish an adequate basis for the investment decision of the outsider.” Prof. Brudney emphasized the context in which securities transactions take place: “typically in impersonal markets in which it is costly, if not impossible, for the buyer or seller to seek further information from the corporation when he is transacting with other (unknown) sellers or buyers.” That is, trading on inside information is unfair because it is not possible, or is prohibitively expensive, for the party on the other side of the trade to determine whether the information on which he is trading is up-to-date and accurate. These problems arise from the facts that counterparties on securities markets are unknown to each other – meaning “there is no opportunity for face-to-face disclosure” – and that the disclosure required of issuers is limited.

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287 Many writers and courts, however, do not go much beyond the feelings articulated by the apocryphal law student who responded to a professor’s criticism of insider trading regulation by stamping her foot and saying, “I don’t care; it’s just not right.” MANNE, supra note 186, at 24 & n. 42.
288 Brudney, supra note 284, at 327.
289 Id. at 328.
290 Fleischer, supra note 286, at 1279.
291 See Langevoort & Gulati, supra note 161, at 1640-41 & n.4.
Professor Bainbridge summarizes the fairness objection as comprising three separate grounds. First is that is unfair for an informed agent “to profit by dealing with an uninformed principal … because the agent is already compensated for his efforts.” Second is the argument that it is unfair for one party to a trade to have more information than the other party. A modification of this argument is the claim that “corporate insiders have an unerodable advantage in terms of access,” which offends the sense of fair competition that underlies any competitive, market-based system. Third is the claim that insider trading injures those who trade with insiders. The claim of injury is somewhat more complicated and accordingly I will spend a little time on the question of whether insider trading on equity securities markets causes losses for counterparties or anyone else.

On the one hand, there is an obvious problem with loss-causation in insider trading cases. In most cases, inside trading is not a “but-for” cause of the counterparty’s trade and hence is not, by the conventional standards of the common law, the legal cause of any loss occasioned by that trade. For the most part, those who trade in the equity markets do not know who is on the other side of the trade and have decided to trade for

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293 Id. at 56.
294 Id. at 57.
295 Fisch, *supra* note 133, at 239; *see also* Brudney, *supra* note 284, at 346. Prof. Brudney also argues that corporate insiders are the lowest cost producers of corrective information for misleading information that may be current in the market and that is therefore economically efficient to require them to make such disclosures. *Id.* at 345.
their own reasons having nothing to do with the trades of the insider. Whether or not the insider is in the market trading, the argument is that the other party would have traded anyway and suffered the same loss.\textsuperscript{298}

One response to this argument is the claim that some traders are drawn into the market as a result of price changes caused by the insider trading.\textsuperscript{299} The subsequent changes in price and volume, in turn, could attract traders (including so-called “noise” traders) to the market who would not have otherwise traded and one could argue that their losses would not have occurred “but-for” the insider trading.\textsuperscript{300}

Notwithstanding the problems with establishing legal causation or identifying particular traders who have incurred losses as a result of insider trading, economists claim that informed traders in the aggregate achieve above-normal returns at the expense of uninformed traders.\textsuperscript{301} From a theoretical economic perspective, “trading is a zero-sum game; every dollar an investor gains must be a dollar another investor loses.”\textsuperscript{302} And indeed, there is evidence that informed traders do in fact achieve superior returns at the

\textsuperscript{298} Bainbridge, supra note 133, at 158 & n. 16.

\textsuperscript{299} See, e.g., Schotland, supra note 204, at 1434.

\textsuperscript{300} Schotland, supra note 204, at 1434-35 & 1444; William K.S. Wang, Trading on Material Nonpublic Information on Impersonal Stock Exchanges, 54 So. Cal. L. Rev. 1217, 1235-36 (1981). Once upon a time, some professors argued that insider trading has little or no effect on the market price, see Schotland, supra, at 1443-44, but that view is no longer accepted.

\textsuperscript{301} See Klock, supra note 190, at 307-09; H. Nejat Seyhun, Insiders’ Profits, Cost of Trading, and Market Efficiency, 16 J. Fin. Ec. 189 (1986); see generally Bagehot, supra note 257.

\textsuperscript{302} Klock, supra note 190, at 307; accord, Seyhun, supra note 301, at 190; see also, e.g., Goshen & Parchomovsky, supra note 187, at 1240-41. This claim does not take account of the counter-argument that insider trading may be an efficient form of compensation and as such, might increase the value of the firm. Carlton & Fischel, supra note 134, at 869-72. If true, then insider trading would not be a “zero sum game” from the viewpoint of a longer time frame than a single trade.
expense of uninformed traders.\textsuperscript{303} This transfer of wealth supports the claim that insider trading is unfair.

Regardless of the merits of the fairness arguments, it cannot be gainsaid that popular opinion today is resolutely opposed to insider trading in equity securities on the ground that it is widely viewed as a form of cheating.\textsuperscript{304} Even a cursory review of national newspaper editorials fails to reveal any that contest the wisdom of the insider trading ban, and most are enthusiastic cheerleaders for vigorous enforcement of the rule.\textsuperscript{305}

These fairness arguments do not have the same weight in the context of the credit default swap market. The first argument is the strongly felt belief that corporate insiders are agents of the shareholders, acting on their behalf, and that it is wrong for them to use information gained in that agency capacity to trade against and at the expense of their principals.\textsuperscript{306} This argument is inapplicable to the credit default swap marketplace. The purchasers and sellers of credit protection do not stand in any kind of agency or fiduciary


\textsuperscript{306} Chiarella, 445 U.S. at 230.
relationship. Neither is relying on the other to protect its interests or to provide expertise and discretion. Neither participant has gained any information about the referenced issuer as a result of the relationship between them. They stand at arms length, using whatever resources or skills they have to strike the best deal they can. They each have incentives to expend resources to gather information about the credit risks of the referenced entity. The fact that one side might, by virtue of its various business activities, have more information than the other side, does not violate the trust that a principal places in its agents to act in the principal’s best interests.

Nor is there any evidence of a widespread belief among credit default swap market participants that informed trading in credit default swap contracts is unfair. A few stories appeared in the business press after the managing director of one hedge fund wrote a report in 2002 calling for regulators and industry bodies to investigate and control insider trading in the credit default swap markets. Despite the subsequent academic

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307 See Spicer v. Chicago Board Options Exchange, Inc., 1990 WL 172712, *15 (N.D. Ill. October 30, 1990)(“market makers .... [w]hether they trade or not, ... do not owe fiduciary duties to investors”), aff’d, 977 F.2d 255 (7th Cir. 1992). However, if a dealer bank has discretionary authority over an institutional customer’s accounts, then it might be subject to fiduciary duties in exercising that authority. Spicer, 1990 WL 172712, at *15.

308 For a discussion of whether fiduciary duties attach to market makers, and concluding that they do not, see generally Stanislav Dolgopolov, A Two-Side Loyalty?: Exploring the Boundaries of Fiduciary Duties of Market Makers, 12 U.C. DAVIS BUS. L. J. 31 (2011).

309 Chris Dialynas, then a managing director at one of the largest bond hedge funds in the world, Pacific Investment Management Co. (PIMCO), issued a white paper on this subject in 2002. See, e.g., Hillary Rosenberg, Compromising Positions: Will Credit Derivatives Encourage More Lending, or Will They Harm the Interests of Borrowers, CFO MAGAZINE, September 1, 2003, available at http://www.cfo.com/article.cfm/3010251?f=singlepage (last visited 4/26/12); Commentary: Credit Due, available at http://db.riskwaters.com/public/showPage.html?page=16818 (last visited 4/26/12); Credit-Default Swaps Raise Insider Trading Concerns (Update 2), BLOOMBERG, October
studies showing widespread informed trading in the credit default swap markets, there does not seem to have been any additional outcry or chorus of complaints by market participants.

It is true that industry bodies have issued policy statements that oppose the use of nonpublic information in credit default swap trading. For example, the Joint Markets Forum, which is a collaboration among ISDA, The Bond Market Association, the International Association of Credit Portfolio Managers, and the Loan Syndications and Trading Association, issued in 2003 a statement of “principles and best practices” concerning the use of nonpublic information by financial parties.\footnote{JOINT MARKET PRACTICES FORUM, STATEMENT OF PRINCIPLES AND RECOMMENDATIONS REGARDING THE HANDLING OF MATERIAL NONPUBLIC INFORMATION BY CREDIT MARKET PARTICIPANTS (October 2003) (“JOINT MARKET PRACTICES”).} This statement noted that trading in credit default swap contracts on the basis of nonpublic information “would be subject to the restrictions of Rule 10b-5,”\footnote{Id. at 6.} and recommended that market participants establish appropriate procedures (commonly referred to as a “Chinese Wall”\footnote{NORMAN S. POSER, BROKER-DEALER LAW & REGULATION § 1.02[C] (2nd ed. 1997).} to prevent credit default swap trading desks from obtaining nonpublic information about issuers from those persons in the bank providing credit or capital markets services to issuers.\footnote{JOINT MARKET PRACTICES, supra note 308, at 7-8.} The statement further urged market participants to establish training programs, compliance programs, risk management programs, and so on

10, 2006, available at www.bloomberg.com/apps/news?pid=newsarchive&sid=aRYbToux8KgA&ref=us (last visited 4/26/12). The stories about the PIMCO white paper seem to be what Profs. Acharya and Johnson are relying on to support their claim that market participants are widely concerned about informed trading in the credit default swap market. See AJ, supra note 226, at 112 & 134. The stories about the PIMCO white paper do not mention any other complainants about informed trading in the credit default swap markets.
to ensure that the participants did not violate the law. The statement did not suggest, let alone require, that market participants put into their standard form loan, bond indenture or credit default swap agreements any kind of contractual provision that would create liability to counterparties for trading with them on the basis of nonpublic information. From this absence together with the emphasis on compliance, this statement can be interpreted as reflecting the industry’s response to regulatory pressure and not the needs or beliefs of market participants about the fairness of informed trading.

It is also true that a few academic writers have urged the application of insider trading rules to credit default swaps. One wrote in 2009 that “failure to disclose material adverse risk can affect the credibility of the derivatives market.” However, even that author did not claim that his concerns reflect the beliefs of market participants.

Another fairness concern arises out of the impossibility or expense of achieving information parity when trading with unknown persons on impersonal markets. That is far more of a problem when buying or selling equity securities than when entering into (or terminating or assigning) a credit default swap contract for two reasons. First, unlike buyers or sellers of equity securities, it is always possible for credit default swap market participants to protect themselves contractually. As discussed in Part I above, the credit default swap market is relatively small, consisting of 14 dealer banks and another 1,000 or so financial institutions or other investment firms, who enter buy or sell credit protection on the basis of direct verbal negotiations, or through the services of an interdealer broker. A dealer bank is a party to most trades. Any market participant can

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insist on direct oral contact with its counterparty and can seek whatever oral or written assurances as to the absence of its counterparty’s reliance on nonpublic information that such market participant wants. Credit default swap documentation is based on the ISDA forms, and the parties can modify, amend or supplement those forms as they see fit. Almost all new credit default swap contracts have one of the 14 dealer banks as a counterparty, and if a participant suspects that the dealer bank with which it is dealing has nonpublic information about the referenced issuer, the participant can request that the dealer bank provide a representation and warranty to the effect that the dealer bank is relying solely on publicly available information or has disclosed all material information to its counterparty. The opposite would also be true, if the dealer bank were to suspect that its counterparty had inside information. In the less common cases of credit default swap transactions between non-dealers, such as a novation and assignment of an existing credit default swap contract, it would be equally easy for either party to insist on oral assurances and contractual representations and warranties. That many market participants do not even seek direct contact with their counterparties, but prefer to deal anonymously through interdealer brokers, can only reflect their determination that the price and services available by using a broker in an opaque market outweighs the risk of

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315 It is common in both mergers and acquisition agreements and financing agreements to resolve a similar problem of asymmetrical information by requiring the target/borrower to give a representation to the effect that the information provided to the buyer/lender “does not omit any material fact necessary to prevent such information (taken as a whole) from being misleading in any respect.” Fox, supra note 276, at 186. These are often called “10b-5” representations. Presumably the lawyers for protection buyers or sellers could construct a representation for credit default swap transactions that would protect their clients against the risk that their counterparty is relying on undisclosed information. If enough market participants thought such protection were desirable, such language could be included in the ISDA form documentation.

316 See discussion at notes 72-77 infra.
asymmetrical information. Likewise, the failure of ISDA to adopt standard form representations and warranties protecting participants against informed trading strongly suggests that market participants do not desire or need protection against such risks.

The second and perhaps more important reason that credit default swap market participants do not seem to worry about “unerodable” information asymmetries is that it is in fact possible and practical for market participants to obtain their own sources of nonpublic information. The simplest way to do that is to buy a loan participation. As Prof. Johnson told a reporter in 2006, “If you want to get access to information private banks have, you go and buy a piece of a bank loan.” All of the participants in the credit default swap market are banks or hedge funds or other substantial financial institutions so this may well be a practical and cost-effective solution for many participants. Indeed, “hedge funds are reported to commonly purchase small syndicate stakes precisely to acquire non-public information to aid them in arbitrage trading.” No similar alternative is available for individuals buying or selling equity securities.

The last fairness issue arises out of the potential wealth transfer from uninformed market participants to informed participants. Unlike the equity securities markets, where buyers and sellers are anonymous and unknown to each other, in the credit default swaps

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317 All members of a loan syndicate have the same rights to information gathered by the lead banks. AJ, supra note 226, at 125.
318 Credit-Default Swaps Raise Insider Trading Concerns (Update 2), Bloomberg (October 10, 2006), available at www.bloomberg.com/apps/news?pid=newsarchive&sid=aRYbToux8KgA&ref=us (last visited 4/26/12). However, at least some observers think that the claim that hedge funds acquire inside information for trading purposes by buying loans is an “urban legend.” Brown-Hruska & Zwirb, supra note 165, at 250.
319 AJ, supra note 226, at 126 n.7.
market, participants deal face to face. Accordingly they are in a position *ex ante* to insist on contractual protection and *ex post* to enforce their contractual remedies. Thus, whatever the merits of this argument about wealth transfers in the context of the equities securities markets, it has no application to a market where every uninformed market participant is fully able to protect itself by contract against any such risk.

**F. Investor Confidence**

Tying together popular revulsion against the unfairness of insider trading with broader concerns about the effect on the market is the claim that the insider trading prohibition serves to encourage investors to participate in the equity securities markets. The argument is that if enough people conclude that the markets are unfair and that they are "rigged" against ordinary people, then the public will withdraw from the markets with adverse economic consequences.

Restoring the public’s confidence in the securities market in the wake of the 1929 crash was one of the purposes of the Securities Exchange

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320 Before Rule 10b-5 and the insider-trading regime came into existence, some courts adopted the so-called “special circumstances” rule, which implied a duty of directors to disclose confidential corporate information in face-to-face stock sale transactions but not in anonymous exchange transactions. *See, e.g.*, Strong v. Repide, 213 U.S. 419 (1909) (director both concealed his identity and failed to disclose material information in transaction between undisclosed agent of director and disclosed agent for selling stockholder); *see generally* BAINBRIDGE, *supra* note 134, at 9. To the extent this rule required something less than deception or concealment, it was inconsistent with the principle that free contractual exchange promotes efficiency.

321 Prof. Easterbrook has argued that wealth transfer is not a problem because uninformed equity market participants can protect themselves by changing their reservation prices to account for the risk of trading with informed counterparties. Easterbrook, *supra* note 142, at 326-26.

Act of 1934, and courts and legal commentators have concluded that prohibiting insider trading in the equities markets is necessary to achieve such confidence.

The question whether insider trading restrictions have any actual effect on the willingness of people to participate in equity securities markets seems to be at root an empirical question. Oddly enough, decades after Henry Manne ignited academic debate over the wisdom of insider trading regulations, only a few economists have examined this issue. The result is that although theoretical models have been produced supporting the claims about investor confidence, empirical support for such claims is lacking. Even if investor confidence in equity markets in fact benefits from restrictions on insider trading, however, there is no evidence that the same is true for the credit default swap market. In particular, the credit default swap market has grown enormously notwithstanding the widespread and apparently well-known presence of informed trading. The reduction in credit default swap volume since the financial crisis

324 E.g., United States v. O’Hagan, 521 U.S. at 658-59; Loss, supra note 135, at 86; Brudney, supra note 284, at 356.
325 See Easterbrook, supra note 142, at 338.
326 One law professor has noted that the introduction of insider trading prohibitions in Japan in 1988 was followed within two years by the collapse of the Japanese stock market with a reduction in the number of shares traded by 77%. J. Mark Ramseyer, Insider Trading Regulation in Japan 3 (Harvard John M. Olin Center for Law, Economic, and Business Discussion Paper No. 705, 2011), available at http://ssrn.com/abstract=1915284. His conclusion was that while banning insider trading may have been intended to reassure “investors about the integrity of the securities market,” the ban may have had the “opposite” effect. Id.
328 See Bainbridge, supra note 292, at 63-65; Carlton & Fischel, supra note 134, at 880 n.76; Schotland, supra note 204, at 1441.
of 2007-08 seems to be due to macroeconomic factors, not any public outcry against informed trading.\textsuperscript{329} Nor is there any evidence that credit default swap market participants are insisting on government action to protect them against the possibility that other market participants might be trading with nonpublic information. Thus, the regulation of informed trading in credit default swap contracts cannot be justified on the basis of market participant concerns about fairness.

\textit{G. Property Rights}

A number of scholars have attempted to explain insider-trading laws through the prism of property rights.\textsuperscript{330} Both supporters and opponents of laws against insider trading have used property rights analysis in support of their claims. Scholars on both sides agree that information about the corporation\textsuperscript{331} should be viewed as property, and in theory, should be subject to Coasian\textsuperscript{332} bargaining under which firms and their executives ought to be able to allocate the rights to use this information, whether for stock trading or other purposes, in the way they deem most efficient.\textsuperscript{333} Conceding the theoretical arguments in favor of private rearrangement of rights to use inside information, the supporters of laws prohibiting insider trading go on to argue that even if firms want to prohibit their executives from using inside information to trade, transaction costs make that option unworkable. The difficulty arises principally because firms cannot readily discover employee trades if the employee is either trading stock in secret or is not

\textsuperscript{329} \textit{See, e.g.}, DB Report, \textit{supra} note 35, at 5.
\textsuperscript{330} \textit{E.g.}, Easterbrook, \textit{supra} note 142, at 309-14, 321-23, & 331; Bainbridge, \textit{supra} note 133, at 172-181; Carlton & Fischel, \textit{supra}, note 134, at 861-872.
\textsuperscript{331} A similar analysis applies to market information that affects firm value, such as knowledge about an impending tender offer.
\textsuperscript{333} Carlton & Fischel, \textit{supra} note 134, at 861-866.
required by Section 16(a) of the Securities Exchange Act of 1934\textsuperscript{334} to disclose his trades.\textsuperscript{335} Moreover, the penalties available to private firms – termination of employment and damages for breach of contract or breach of fiduciary duty – are arguably insufficient to deter misconduct in light of the low risk of detection.\textsuperscript{336} Finally, they argue that there may be economies of scale inuring to public enforcement instead of private enforcement of insider trading bans.\textsuperscript{337} Accordingly, they conclude that public enforcement of restrictions against insider trading is likely to be economically efficient.\textsuperscript{338}

In the credit default swap market, we start with the observation that informed trading in the credit default swap markets is done primarily by financial institutions that lead or participate in the referenced issuers’ lending groups. These financial institutions receive confidential credit information from issuers pursuant to contractual arrangements with the issuers.\textsuperscript{339} In addition to credit information provided for underwriting purposes, most bank loans provide for the borrower to supply confidential, nonpublic information on an ongoing basis to the lenders in order to induce those lenders to extend credit.\textsuperscript{340} Indeed, many scholars attribute the existence of debt as a form of corporate finance to the

\textsuperscript{334} 15 U.S.C.A. § 78p(a) (West 2010).
\textsuperscript{335} Among other reasons, private firms lack the enforcement tools available to the Securities Exchange Commission. See BAINBRIDGE, supra note 133, at 180.
\textsuperscript{336} Easterbrook, supra note 142, at 334.
\textsuperscript{337} Id.; BAINBRIDGE, supra note 133, at 179-80.
\textsuperscript{338} Easterbrook, supra note 142, at 334-35; BAINBRIDGE, supra note 133, at 173. These scholars further argue that protection of property rights is the only plausible explanation for the “misappropriation” branch of the legal doctrine. See id. at 172-77.
\textsuperscript{339} See discussion at notes 231-236 infra.
role of lenders as the least-cost monitors of the ongoing performance of borrowers.\textsuperscript{341}

The provision of information is generally subject to a negotiated confidentiality agreement, which specifies the circumstances under which the information can be disclosed or used.\textsuperscript{342} Lenders need ongoing information about the borrower in order to monitor and manage their credit risk. Managing the risk could include selling a loan or a participation in the loan, hedging (\textit{e.g.}, by purchasing a credit default swap or by shorting a borrower bond), declaring or waiving a default or exercising other remedies, or negotiating concessions or a loan restructuring. The extent of restrictions on the lenders’ rights to transfer the debt, or to use or disclose nonpublic information provided by the borrower, is the result of a negotiation in which borrowers trade off their desire for the lowest cost-financing against their interests in keeping nonpublic information confidential and in preventing their debt from falling into the hand of less than friendly creditors. The question is whether there is any public policy basis for the law to prohibit lenders from trading in credit default swaps on the basis of such information if the parties with a particular interest in the matter have not chosen to do so.

Considerations of efficiency could support prohibitions on informed trading in credit default swaps in two circumstances. First, if that would be the choice of most borrowers and lenders, arguably it could be efficient for the law to impose a default rule that most participants would elect for themselves.\textsuperscript{343} Second, if the costs of private


\textsuperscript{342} See, \textit{e.g.}, LSTA STATEMENT, \textit{supra} note 340, at 4.

enforcement of such a prohibition would greatly exceed that of public enforcement of such a ban, public enforcement would be efficient.\(^{344}\) Neither consideration applies here.

For one thing, there are good reasons to believe that borrowers do not care about, and are not generically opposed to, informed trading in credit default swaps by members of their lending groups. On the contrary, facilitating trading in credit default swaps by members of the lender group would reduce the cost of credit by making it easier for those lenders to hedge and thus avoid the need to sell off their loans or otherwise reduce their credit exposure to the issuer. In addition, keeping debt in the hands of relationship banks is valuable to borrowers that might need loan or indenture consents to facilitate a loan restructuring or extension or other revision to the existing arrangements.\(^{345}\) Facilitating the use of borrower-provided credit information to trade in credit default swap markets is likely to encourage the use of credit default swaps as hedges.\(^{346}\)

Another question is whether borrowers might fear that informed trading in credit default swaps by members of their lending group could lead to disclosure of adverse credit information that the borrower has determined to keep confidential.\(^{347}\) If this were


\(^{346}\) By way of contrast, a bank industry group, The Loan Syndications and Trading Association, Inc. has proposed an industry standard that would prevent members from buying or selling loan participations on the basis of nonpublic information unless they had reason to believe the counterparty is sophisticated and has the ability to obtain the information on its own. The Loan Syndications and Trading Association, Inc., Confidential Information Supplement to the Loan Syndicate and Trading Association’s Code of Conduct 3-4 (draft as of October 1, 2008). No such standard has been proposed by ISDA for credit default swap market participants.

\(^{347}\) I am here only concerned with cases where the corporation has a legitimate reason for deferring public disclosure. For example, a firm might have a legitimate interest in
widely thought to be the case, then a universal norm prohibiting such trading might be efficient. However, informed trading in the credit default swap market on adverse credit news is unlikely to lead to the immediate disclosure of the specific information for which the corporate has chosen to defer public disclosure. It is of course true that such trading would be likely to affect prices in the equity and bond markets, but it does not follow that such price changes would lead to disclosure of specific information. As discussed above, the linkage between trading in the credit default swap markets and the trading in the equity markets is so attenuated that identification of specific credit-sensitive information from subsequent price and volume changes in the equity markets is unlikely.\textsuperscript{348} Accordingly, borrowers do not need a ban on informed trading in credit default swaps in order to protect the confidentiality of the information provided to their lending groups.

The next question is whether it would be possible to detect and punish breaches of agreements not to engage in such trading if there were borrowers who desired such restrictions. Detecting such trades would be difficult for either the borrower or the government but would probably be easier for the government. Borrowers would probably only become aware of such trades as the result of complaints from aggrieved traders in the credit default swap market. Regulators presumably would have access to the trade data that is reported daily to The Depository Trust and Clearing Corporation from which they might be able to identify suspicious trades. If there were some reason to think that borrowers generally would prefer to prohibit their lenders from using deferring disclosure of a threatened governmental lawsuit while it tries to negotiate a settlement. On the other hand, a desire to defer disclosure of adverse credit news solely for the purpose of keeping the stock price up would not be a legitimate purpose and indeed is one of the main causes of equity overvaluation.

\textsuperscript{348} See discussion at notes 270-271 infra.
confidential information to engage in hedging transactions such as buying credit protection, the relative efficiency of government enforcement might be important. However, on balance it does not seem that the relative efficiency of public enforcement of what is likely to be a rare contractual provision should tip the scales in favor of a blanket prohibition.

I have so far only discussed property rights between borrowers and their lenders. There is also the question of how the property rights analysis applies to the employees of borrowers. While borrowers might well be indifferent to whether their lenders trade in credit default swaps on the basis of nonpublic corporate information, they might not be so indifferent with respect to their employees. In particular, they might be concerned about whether their employees, who are not themselves eligible to trade in credit default swaps, might sell credit-sensitive, nonpublic information to market participants. Such sales might be difficult to detect.

Ordinarily executives would be constrained by reputational and ongoing employment concerns from selling nonpublic corporate information for private gain, which would violate the terms of employment for most executives. Any such sale would expose the executive to termination, a lawsuit by the corporation and probably irreparable harm to his reputation. For those reasons, executives are no more likely to sell secrets about the company’s financial condition to participants in the credit default swap markets than they would be to sell other firm secrets to other interested parties. And in fact, there is no evidence – not even any reported rumors – of any such sales occurring in the credit default swap market from its beginnings in the 1980s through the

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349 19 WILLISTON ON CONTRACTS § 54:31 (Lawyers Cooperative 4th ed. 1990)
financial crisis of 2007-08 and on to today, even during the periods when it was widely assumed that informed trading in credit default swaps was not illegal.

The greatest risk that employees might breach their obligations to their employers and sell nonpublic information to credit default swap traders would be during the “last period,” in particular during periods of financial distress where bankruptcy is looming. That would be the time when inside information about the company’s financial condition would probably have the most value to market participants and when employees might be most willing to take the chance of termination, loss of reputation and a lawsuit by the company in exchange for a quick profit. On the other hand, most employees would be aware that should the company fall into bankruptcy, the trustee in bankruptcy would have a powerful incentive to recover damages from former executives who committed wrongdoing against the firm, as well as in many cases the financial means to pursue such claims.\(^{350}\)

In any event, it would be overly broad to outlaw all informed trading in credit default swap contracts merely in order to prevent employees from selling nonpublic information to market participants. If this were deemed a serious problem, it would be sufficient to criminalize just the sale by employees of credit-sensitive corporate secrets.\(^{351}\) That would allow lenders and borrowers to allocate rights with respect to the use of


corporate nonpublic information in the credit default swap markets in the most efficient way.

**CONCLUSION**

Credit default swaps play a vital role in the modern economy in providing timely and accurate signals to markets about the credit worthiness of corporate borrowers. They are particularly effective in providing these signals at times when the equity market for a corporate issuer is overvalued. A key reason for the superiority of credit default swaps in signaling overvaluation is the prevalence of informed trading in the credit default swap market in advance of adverse credit events. Congress outlawed such trading in the Commodity Futures Trading Act of 2000 and again in the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, without in either case consideration of the significant differences between equities securities in public companies and the equity securities markets on the one hand and credit default swap contracts and the credit default swap market, on the other. This article has shown that the reasons for prohibiting insider trading in equity securities apply with far less force to credit default swaps and that there are significant social benefits to allowing informed trading in the credit default swap market. Accordingly, the law should be amended to exclude credit default swaps from the ambit of Rule 10b-5.