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A Regulatory Approach to Derivative Markets: The Benefits of Private Sector Oversight

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Abstract

Beginning in the 1980's over-the-counter (OTC) derivatives began trading in large amounts. Their trading volume grew rapidly, to a total notional value of $88.2tn by the end of 1999; their gross market value was about $2.8tn.[1] However, since such large amounts of money are at stake in the OTC derivatives market, gaps in the regulatory framework and standards have the potential to cause large financial losses, which have that ability to undermine confidence in the financial system. As a result, there has been an ongoing debate in the United States about the proper role for regulation in the market for derivatives. In order to properly asses a regulatory approach, legislators and market participants must have thorough knowledge in derivatives and understand the market effectively. The derivatives market is vast with different derivative instruments that are traded on exchanges and over OTC markets. The large amounts of derivatives trading, and their potential threat to the stability of the global financial system, needs to be monitored by an effective regulatory framework that promotes growth and innovation and prevents risks and market failures. The successful role of the private sector in creating standardization and stability within the OTC derivatives market suggests that this type of framework could be successful in monitoring the market.

[1] John O. Matthews and Cathy A. Rusinko, "Regulation in the US OTC derivatives market: Towards a more collaborative framework," Derivatives Use, Trading & Regulation 7.4 (2002): 337.

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INTRODUCTION

Derivates are "financial contracts whose value is linked to the price of an underlying commodity, asset, rate, index or the occurrence or magnitude of an event."[2] These instruments can be used for hedging, speculating, arbitraging price differences, and adjusting portfolios. Derivatives allow end-users the ability to manage their risks associated with holding increasingly larger portfolios of diverse financial assets because there is no underlying ownership of assets.[3]

Derivatives include different financial instruments such as futures, forwards, options and swaps. They are categorized according to whether they are standardized or customized to meet specific end users' needs. Standardized derivatives are traded through organized exchanges and called exchange-traded derivatives.[4] These types of derivatives involve "varying degrees of order exposure, trade transparency, audit trails, clearinghouses and other attributes."[5] Derivatives can also be traded in over-the-counter markets (OTC). These OTC derivatives are privately negotiated by the parties involved. The developers and traders of OTC derivatives are large banks and securities firms, and the end-users are financial institutions, corporations, and some high net worth individuals.[6]

Derivatives vary in size, duration, complexity and purpose. Some are referred to as "plain vanilla" instruments, such as simple currency swaps.[7] Others are highly

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[2] Randall Dodd, "The Structure of OTC Derivatives Markets," The Financier 9 (2002): 41.
[3] Matthews and Rusinko 337.
[4] Matthews and Rusinko 338.
[5] Dodd 44.
[6] Matthews and Rusinko 338.
[7] Dodd 42.

complicated allocations of cash flows, and can span periods of 20 years or more. Some complex derivatives are attached to or imbedded in other financial instruments.

In June 2005, the gross market value of outstanding OTC derivatives was $10.7 trillion, as measured by the Bank of International Settlements, a Switzerland-based clearinghouse for central banks.[8] This represented an 83% increase from the year before. Also, the notional amount from these derivatives "jumped to $270.1 trillion, nearly 23% ahead of the prior year" and another $57.8 trillion came from "exchange listed futures and options [transactions]…a 24% jump from the year earlier."[9] The continuously growing derivative market has the potential to generate a lot of profit and risk. Economists and government regulators are concerned about the future development of this market and are interested in creating a proper regulatory approach that will be able to react to changes and prevent market failures. One solution to the regulatory debate is the reliance on the private sector to monitor and oversee the market. Private regulation through standard setting agencies and policy groups is successful in responding to changes within derivative markets and in creating standardization. Greater choice and flexibility is important for users of derivatives and such an environment is fostered under private legislation. In comparison to public regulation of derivatives, which stifles innovation and growth, and complete deregulation, which doesn't protect against risks, oversight by the private sector is a successful tool for monitoring OTC markets.

Derivatives Market

The overall market in derivative instruments, particularly OTC derivatives, has grown enormously in recent years and continues to do so. Derivatives are useful

[8] Ben Mattlin, "Derived Value," Global Finance 20.6 (2000): 33.
[9] Mattlin 33.

structures that provide a lot of benefits to market participants. Besides that large profits that can be made, derivative transactions pay out when certain events occur, such as when an underlying stock reaches a particular price. Derivatives can be structured in many different ways and are therefore a way of transferring market risk.[10]

The derivatives market does not create risk but instead shifts risk that already exists. Whether derivatives enhance a company's safety or increase its risks depends on how the instruments are used, and on what happens in the market during the term of the contract.[11] By allowing a corporation to control its financial risk exposure, derivatives help many companies operate more efficiently and safely. Hedging some market risk can be an inexpensive way to enhance long-term shareholder values.[12] However, derivatives can be used in a manner that increases risks for an end-user. Companies need to pay more attention to internal corporate practices by their management and board members to make sure that risks are not being increased through unwise derivatives usage.[13] Directors and managers have a responsibility to know and control the degree to which the shareholders' net worth is being put at risk. Many corporations lack the systems for risk modeling and control. One way to reduce the risk of exposure to derivatives is to understand the background and function of these products.

What are Credit Derivatives?

Credit derivatives have revolutionized the way in which banks and other financial institutions manage their credit risk.[14] A credit derivative is a type of derivative that is designed to transfer credit risk from the person exposed to that risk, a protection buyer, to

[10] Mattlin 33.
[11] Richard C. Breeden, "Regulating the derivatives market," Corporate Board 15.88 (1994): 1.
[12] Breeden 1.
[13] Matthews and Rusinko 339.
[14] Antulio N. Bomfim, "Understanding Credit Derivatives and their Potential to Synthesize Riskless Assets," Board of Governors of the Federal Reserve System (2001):50.

a person willing to take on that risk, a protection seller.[15] A credit derivative derives its price from the credit quality of a bond, loan, or group of financial obligations of an underlying reference entity.

Credit risk is the risk that the borrower of a loan or the issuer of securities will default in the performance of its obligations or become insolvent.[16] Credit derivatives can be used to reduce a lender's or investor's exposure to the default or insolvency of borrowers and issuers. As Ali and Robbe explain, "in contrast to traditional methods of credit risk management, credit derivatives disaggregate the credit risk from loans and securities, thus enabling lenders and investors to transfer the credit risk independently while retaining the economic benefit of their loans and investments."[17]

A market participant who is exposed to the credit risk of a given corporation can hedge such an exposure by buying protection in the credit derivatives market.[18] There are many types of credit derivatives products with their own legal form and specific risk profile. These instruments can be OTC transactions as well as exchange traded products. OTC transactions are bilateral contracts designed to meet the specific requirements of the parties. Their main benefit, compared to exchange traded transactions, is flexibility. There are four common types of credit derivatives: credit default swaps, asset swap, total return swaps, and credit linked notes.

The most common credit derivative is a credit default swap. A credit default swap (CDS) is similar to an insurance policy. One counterparty sells insurance and the other counterparty buys insurance against the default of the third party. A protection buyer

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[15] Breeden 3.
[16] Bomfim 52.
[17] Paul U. Ali and Jan Job de Vries Robbe, "New Frontiers in Credit Derivatives," Journal of Banking Regulation 6.2 (2005): 177.
[18] Bomfim 58.

purchases protection against default risk of assets. The protection buyer pays a periodic fee, and receives payment from the protection seller in the event of a default.[19] If a default occurs, the buyer of the insurance has the right to sell the bonds or other assets issued by the company for their face value, and the seller of the insurance agrees to buy the bonds for their face value.[20] The buyer of the CDS makes periodic payments to the seller until the end of the life of the CDS or until a default occurs.

An example of a credit default swap can be when two counterparties, counterparty A and an investor, enter into a two-year credit default swap. They specify a reference asset, which is a credit risky bond issued by a third-party corporation. This bond has two years remaining maturity and is trading at par value. Counterparty A agrees to make regular fixed payments for two years to the investor. If the third party defaults within those two years, counterparty A makes his regular fixed payment to the investor and sells the bond to the investor in exchange for the bond's par value plus interest.

Moorad Choudhry and Frank J. Fabozzi state that "credit default swaps are important and useful because the absence of ownership and the economic risk of the underlying assets provide significant additional flexibility in bank balance sheet management, as well as for hedging and arbitrage transactions."[21] The value of this flexibility can be seen in the growth of the credit derivatives market.

In the event of default, CDSs can be settled physically or in cash, with the settlement choice determined when entering the contract. In a physically settled swap, the

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[19] Douglas Lucas, Laurie Goodman, and Frank J. Fabozzi, "A Closer Look at Default Rates on Structured Finance Securities." Journal of Fixed Income 14.2 (2004): 46.
[20] Lucas, Goodman, and Fabozzi 46.
[21] Moorad Choudhry and Frank J. Fabozzi, "Originating Collateralized Debt Obligations for Balance Sheet Management," Journal of Structured and Project Finance (2003): 41.

protection buyer has the right to sell the defaulted assets to the protection seller for their face value. In a cash settled swap, the counterparty determines the recovery value of the defaulted assets, and the protection seller is responsible for the difference between face and recovery values. These transactions are based on standardized contracts incorporating International Swaps and Derivatives Association (ISDA) standard definitions. Standardization of documentation helps create liquidity in the credit risk that is being traded.[22] The use of master agreements by the ISDA is now a common market practice, reducing legal risk and setup and negotiation costs. However, some ambiguity still exists in the standardized documentation as to what constitutes the legal definition of a default event.

An asset swap is another example of a credit derivative. Asset swaps allow investors to take credit positions regarding a particular issuer. In an asset swap, an investor can buy a fixed-rate liability issued by a reference entity and simultaneously enter an interest rate swap where the fixed-rate and payment dates exactly match those of the fixed-rate liability.[23] The floating rate in such a swap is the spread over short-term LIBOR. The end result of an asset swap is "a synthetic floating-rate liability issued by the reference entity, which means that the investor transferred the interest rate risk of the fixed-rate liability to its asset swap counterparty, retaining only the credit risk component."[24]

Another type of credit derivatives is a total return swap. In a total return swap, an investor enters into a derivatives contract where he will receive all the cash flows

[22] Breeden 8.
[23] Bomfim 59.
[24] Bomfim 59.

associated with a given reference asset without ever owning the asset.[25] In exchange for cash flows, the investor makes periodic payments to its derivatives counterparty. If the issuer of the reference asset defaults during the term of the total return swap, the investor sustains the associated loss. At maturity of the total return swap, the total return payer pays the difference between the price of the reference asset and its price at the start date of the contract.

Credit-linked notes (CLNs) are debt obligations with an embedded credit derivative. They can be issued either directly by bank or by highly rated special purpose vehicles created by dealers. The coupon payments made by CLNs transfers the cash flow of a credit derivatives contract to individual investors. [26]

The credit derivatives market that has grown in recent years is small compared to the overall derivatives market, and it has not yet reached the liquidity, transparency, standardization, and widespread market participation of more mature markets.[27] The credit derivatives market's prospect of continued growth, greater standardization of market practices, and improvements in counterparty credit risk, point to their significant benefits for financial markets in the future. In addition to efficiency gains in the pricing and distribution of credit risk, the credit derivatives market may eventually become sufficiently developed to allow for the large scale creation of synthetic assets that are free from default risk.[28]

TRADING ENVIRONMENTS

Exchange Markets

[25] Bomfim 60.
[26] Bomfim 60.
[27] Bomfim 66.
[28] Bomfim 66.

In an exchange market, trading is conducted through open outcry and carried out through brokers and not dealers. Because of recent advances in technology, exchanges began using electronic trading platforms that automatically match the bids and offers from market participants to execute trades in a multilateral environment.[29]

One of the main features of derivatives traded by exchanges is standardization. Standardization makes sure that every contract is the same in terms of what, how much, when, and where a commodity is to be delivered. It is also an important feature because it allows a trader, for example, who has sold a contract to deliver a stock, to get out of the market by buying a contract to deliver that stock. If he sells the stock for more than he bought it, he profits. Otherwise he loses money.

In addition, exchanges also offer a trading platform and a clearing system. The trading platform is the mechanism by which buyers and sellers are brought together and orders are matched.[30] The difference between open outcry and electronic trading is the method by which trades are matched. In open outcry, trades are matched by the ability of traders on the floor to locate other traders who have an opposite trading interest. In electronic trading, a computer takes the place of traders and matches bids and offers on the other side of the market.

Clearinghouses also play a role in exchanges by becoming the buyer to each seller and the seller to each buyer of every futures and options contract traded on the exchange.[31] The clearinghouse is usually a division of a commodity exchange. Once a trade has occurred on the exchange floor or electronic trading system, the information

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[29] Dodd 43.
[30] Gregory Kuserk et al., "Derivatives and Risk Management in the Petroleum, Natural Gas, and Electricity Industries," Energy Information Administration October 2002, 3 December 2206 < http://www.eia.doe.gov/oiaf/servicerpt/derivative/index.html>.
[31] Kuserk et al.

from the trade is sent to the clearinghouse for confirmation.[32] The clearinghouse checks that the information provided by the two parties matches exactly. If it does, the clearinghouse takes the opposite side of each counterparty that entered into the trade on the exchange.

The main purpose of a clearinghouse is to create liquidity by taking the other side of each contract, which makes it easy for parties to enter and exit contracts.[33] Without this structure, counterparties would have had to negotiate with the original counterparty any early terminations of the contracts or would have needed to ask permission to substitute a different party to take on the contract.[34] Since the clearinghouse gets rid of these concerns, counterparties on exchanges can freely enter and exit the market.

Over-the-Counter Markets

The OTC markets are organized different from exchange markets. There are three types of markets: a traditional dealer market, an electronically brokered market, and a proprietary trading platform market.[35] The OTC markets are organized around one or more dealers who "make a market" by maintaining bid and offer quotes to market participants.[36] In this type of market, the end users of derivatives look for companies that create customized contracts to fit their needs. The dealers then offset the risk of the contracts by entering into exchange-traded futures and option contracts or other OTC derivative contracts that have an opposite risk profile.[37] The dealer market is made up of mostly large investment banks and some commercial banks. However, as the market has

[32] Kuserk et al.
[33] Kuserk et al.
[34] Kuserk et al.
[35] Dodd 44.
[36] Dodd 44.
[37] Kuserk et al.

matured, specialized companies have moved into niches where they may have an informational or operational advantage over the banks.

In OTC markets, counterparties are able to negotiate on contract terms such as the price, maturity, and size of the contract in order to customize the contract to meet their economic needs. Also, because OTC contracts are entered into on a principal-to-principal basis, each counterparty is exposed to the credit risk of the opposite party. The negotiation of execution prices are generally conducted over the telephone or through the use of electronic bulletin boards by the dealers for posting their quotes.[38]

New technologies have been adapted to create an electronic brokering platform that allows for a multilateral trading environment.[39] In an OTC market organized through an electronic brokering platform, the firm operating the platform acts only as a broker and does not take a position through the system. However, if the electronic brokering platform uses a clearinghouse then it can act as a counterparty and takes on positions. This occurs because the clearinghouse assumes all the credit risk of trades that are made through the electronic brokering platform and reported to the clearinghouse.[40]

Another type of trading environment is a derivatives dealer who sets up his own proprietary electronic trading platform. In this arrangement, the bids and offers are posted exclusively by the dealer and other market participants observe these quotes. This is a one-way multilateral environment because only the dealer's quotes are seen. Because the dealer is the counterparty to every trade, the dealer assumes the credit risk in the market. According to the Commodity Exchange Act, this type of trading environment is not

[38] Dodd 46.
[39] Dodd 48.
[40] Dodd 48.

considered a trading facility because "the bids and offers can not be posted by all the participants and thus not all participants can trade within this system."[41]

OTC derivatives and exchange-traded futures can be used as substitutes for each other because they serve similar economic functions and may compete in the marketplace. They are not perfect substitutes because of differences in their contract terms, transaction costs, regulations, and other factors. OTC derivatives and exchange-traded futures can also complement each other. For example, swaps dealers use exchange-traded futures to hedge the residual risk from unmatched positions in their swaps portfolios.[42] Similarly, commercial firms can use exchange-traded futures to hedge their forward positions.

Contracts traded on exchanges offer high liquidity and low credit risk, but are standardized and inflexible, causing users to face large basis risk when hedging. Dodd explains that "by being able to negotiate contract terms, users can reduce basis risk by assuring that the terms of derivative contracts more closely match the characteristics of their physical market positions; however, the advantage of customization generally comes at the expense of liquidity and credit assurances."[43] There are advantages and disadvantages to both types of markets for derivatives trading.

CURRENT DERIVATIVES REGULATION IN THE US

Regulation of Exchange-Traded Derivatives

The regulation of derivative trading in the United States depends on whether trading is done on an exchange and whether the trader is a bank, an insurance company, or another regulated entity. Regulation of the futures and options markets is

[41] Dodd 48.
[42] Kuserk et al.
[43] Dodd 49.

accomplished through self-regulation by the exchanges and oversight by the Federal Government through the Commodity Futures Trading Commission (CFTC).[44] In the legislation establishing the CFTC, Kuserk et al. explains that Congress sought to assure orderly futures markets, operating fairly, with prices free of distortion.[45]

The CFTC oversees the enforcement of exchange rules and conducts its own surveillance of trading in futures and related cash markets as part of its mission to prevent market abuse and to enhance market operations). The Commission oversees the regulations and rules of the futures exchanges and requires exchanges to enforce them. The CFTC also relies on its economists and trading experts to monitor contracts and trading in the public interest, to assure that markets provide a means for managing and assuming price risks, discovering prices, or distributing pricing information through trading in liquid, fair, and financially secure trading facilities.[46]

In addition to regulation by the Federal Government, futures trading is overseen by the National Futures Association (NFA), a "registered futures association" under the Commodity Exchange Act (CEA) that has been authorized by the Commission to register all categories of persons and firms dealing with customers.[47] Before registering a new person or firm, the NFA conducts a thorough background check of the applicant to determine whether they should be allowed to conduct commodity business. Commodity exchanges follow Federal regulation along with their own rules for the conduct of their markets. These rules can include: covering clearance of trades, trade orders and records, position limits, price limits, disciplinary actions, floor trading

[44] Kuserk et al.
[45] Kuserk et al.
[46] Kuserk et al.
[47] Kuserk et al.

practices, and standards of business conduct.[48] A new or amended exchange rule must be reported to the CFTC, which may also direct an exchange to change its rules and practices.

Under the CEA, trading of futures and options on CFTC-approved exchanges is the exclusive form of permissible trading, without a specific exemption or exclusion. The CFTC, in 1993, granted several exemptions for OTC derivative contracts. The first exemptions were granted for swaps and other OTC derivative contracts and for hybrid instruments.[49] While the CFTC and the exemptions created under it allowed the OTC markets in derivatives to continue to develop, it did not address whether or not any particular type of transaction, such as a swap agreement, is a futures or an option.[50] As a result of this omission concerns about legal uncertainty remain.

On December 21, 2000, Congress passed the Commodity Futures Modernization Act of 2000 (CFMA), excluding hybrid instruments, swap transactions, transactions in exempt commodities, and the exemption for commercial markets.[51] Each of these exemptions and exclusions are determined by issuers of the contracts, depending on the nature of the counterparties and the means by which the contracts are entered into. The guidelines for OTC derivatives that are exempt from CFTC regulation are based on the party that is offering or entering into the contract. The contract or transaction itself, however, is not regulated. Also, the SEC has the authority only to regulate the activities of broker-dealers. These firms are required to register with the SEC and comply with its

[48] Kuserk et al.
[49] Thomas Lee Hazen, "Disparate Regulatory Schemes for Parallel Activities: Securities Regulation, Derivatives Regulation, Gambling, and Insurance," Annual Review of Banking and Financial Law 24 (2005): 16.
[50] Hazen 16.
[51] Hazen 17.

requirements for regulatory reporting, minimum capital, and examination. However, U.S. securities laws do not apply to a broker-dealer's entire organizational structure, which may also include a holding company and other affiliates.[52] The SEC has limited authority, because its jurisdiction extends only to to the activity of broker-dealers that engage in both securities and derivatives activities.

Regulation of OTC Derivatives

Current regulation of the OTC derivatives market consists of government regulators and non-government regulators. Non-government regulators include industry standards setting organizations like the International Swaps and Derivatives Association (ISDA), and the Counterparty Risk Management Policy Group (CRMPG).[53]. In the financial sector, government regulators include the Federal Reserve (Fed), the Securities and Exchange Commission (SEC), and the Commodities and Futures Trading Commission (CFTC). Although, the OTC derivatives market is not directly regulated by government agencies, the primary participants like large banks and securities firms, are directly regulated. Therefore, they have an obligation to make sure banks and securities firms are operating in a safe environment.

Regulation of Derivate Markets	
Public Regulation	**Private Regulation**
The Federal Reserve	ISDA
The SEC	Group of Thirty
The CFTC	Derivative Policy Group
The NFA	DPC
	Counterparty Risk Management Group
	FASB
	Credit Rating Agencies

[52] Kuserk et al.
[53] Matthews and Rusinko 342.

Industry setters like ISDA and CRMPG, play a significant role in derivatives regulation. These groups evolved as a result of gaps in OTC standards and regulation, and from complaints by end users. Matthews and Rusinko agree that "a feature of the OTC derivatives market is its lack of formal regulators and almost total reliance on these industry standard setters."[54] However, these standard-setting organizations alone are not always adequate to solve all problems that arise in the OTC derivatives market. For example, one of the most recent problems is the excessive leverage and lack of transparency, and can occur in the collapse of a hedge fund.[55] Such a collapse and loss could pose a threat to the international financial system.

The OTC derivatives market includes a large variety of transactions and customized products, which lack the unifying characteristics of conventional markets. The market exists to meet the needs of customers who are interested in particular commodities that are not available on exchanges. The variety of OTC contracts reflects the variety of individual situations, and unlike the market for exchange contracts the OTC market tends to adapt and change quickly.[56] In addition, the Commodity Futures Modernization Act of 2000 established a number of exemptions and exclusions that apply to a variety of transactions and contracts involving various counterparties, commodities, and trading arrangements.[57]

Growth of Private Oversight

[54] Matthews and Rusinko 342.
[55] Matthews and Rusinko 342.
[56] Kuserk et al.
[57] Kuserk et al.

Trading on exchanges has been facing increasing competition from the OTC markets. In order to sustain the rapid growth of OTC derivative markets, market participants have developed innovative ways to try to reproduce the benefits of exchanges, but at lower costs and in a decentralized way.[58] The recent trend has been toward increased privatization of derivatives regulation, with trading volumes shifting from exchanges to OTC transactions. Private regulators have grown in strength through the acquisition of policy-making functions and legitimacy, and through economic strength.[59] Industry self-regulation and market-based supervision are widely accepted. This is significant because by influencing standards and practices, the private for profit sector is affecting public policy as well.[60]

Competition exists in OTC markets among public regulators and private regulators.[61] By choosing where and how to structure a contract, participants weigh the costs and benefits of different regulatory and legal enforcement systems. Various types of public and private regulation produce the benefit of confidence and stability in financial institutions and markets. As a result, the private sector has a large demand for regulation and enforcement.

An important factor behind the growth of the OTC markets has been the development of private standard-setting bodies, like the International Swap and Derivatives Association (ISDA).[62] This organization has developed a master agreement

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[58] Randall S. Kroszner, "The Supply of and Demand for Financial Regulation: Public and Private Competition Around the Globe," *Federal Reserve Bank of Kansas City Symposium on Global Economic Integration: Opportunities and Challenges*, 25 August 2000 (Wyoming).
[59] Kroszner 2000.
[60] Eleni Tsingou, "Transnational Policy Communities and Financial Governance: The Role of Private Actors in Derivatives Regulation," Centre for the Study of Globalisation and Regionalisation *CSGR Working Paper* (2003): 4.
[61] Kroszner 2000.
[62] Kroszner 2000.

which provides standard definitions of terms used in OTC derivatives and guidelines for the formulation of contracts.[63] Contracting parties in these markets agree to follow the definitions even though the contracts are individually-tailored. In this way, standardization is achieved but specific contracts can be more flexible than those traded on an exchange.

Another form of private regulatory structure is an "innovative firm structure," which has played a significant role in the evolution of the OTC markets. The Derivatives Product Company (DPC) was invented so that participants in the OTC markets can limit counterparty risk.[64] DPCs are separately capitalized special purpose vehicles with high credit ratings. Their purpose is to ensure that banks with a relatively low rating can still take part in the OTC market through these special purpose vehicles.[65]

In the OTC markets, the rating agencies have an important certification role. These rating agencies are not guarantors like a clearinghouse, but instead they are effective regulators in setting standards for capital, collateral, and conduct, like clearinghouses and government regulators, but do not have a direct financial stake in the transactions.

Additionally other organizations and agencies play a role in regulating and monitoring derivative markets. One such organization is The Group of Thirty, which was formed in 1978. It is an international association of bankers and former government officials which develops supervisory practices and capital requirements for banks.[66] In

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[63] Kroszner 2000.
[64] Kroszner 2000.
[65] Jen Nystedt, "Derivative market competition: OTC markets versus organized derivative exchanges", Policy Development and Review Department *IMF Working Paper* (2004).
[66] John O. Matthews and Cathy A. Rusinko, "Sarbanes–Oxley, dynamic standard setting and the management of over-the-counter derivatives," Derivatives Use,Trading & Regulation 11.1 (2005): 80.

July 1993, the Group published 'Derivatives: Principles and Practices'. The study was the first comprehensive effort to explain what the industry has learned and to broaden awareness of the more successful management practices.[67] It provided 20 recommendations for both dealers and end users. Some of the recommendations reflected practices that were already in widespread use, others represented choices between alternative practices, while still others represented emerging practices followed by some participants.

The Derivatives Policy Group was organized in 1994 by the leading investment banks on Wall Street to respond to the public policy issues raised by the OTC derivatives activities of unregulated affiliates of SEC registered broker dealers and the CFTC's registered futures commission merchants.[68] The group worked with the SEC and the CFTC to issue a report in March 1995, to establish a framework for voluntary oversight of the OTC derivatives activities of securities firms. The framework consisted of four interrelated components: management controls; enhanced reporting; evaluation of risk in relation to capital; and counterparty relationships

The Counterparty Risk Management Group was established in 1998 by a group of 12 major commercial banks to address issues related to the near collapse of the Long Term Capital Management hedge fund. The firm's derivatives strategies played an important role in the firm's difficulties. The group provided recommendations to promote strong practices in counterparty credit and market risk management.[69] The objectives of the group were endorsed by the Federal Reserve, the SEC and the Treasury Department.

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[67] Mattews and Rusinko 80.
[68] Mattews and Rusinko 81.
[69] Mattews and Rusinko 83.

The groups' recommendations were a response to market disruptions and provided improvements in market-wide practices and conventions in a collective manner.[70]

The Financial Accounting Standards Board (FASB) is a private sector organization which functions as the accounting standard-setting organization. The SEC has formal oversight responsibilities for the FASB and consults closely with the FASB in the accounting standards-setting process.[71] In 1998, the FASB issued Statement of Financial Accounting Standards No. 133 (SFAS 133), "Accounting for Derivatives Instruments and Hedging Activities". Statement 133 requires that parties report all of their derivatives as either assets or liabilities in financial statements and measure those instruments at their fair market value.[72] The statement requires that any change in the fair value of derivatives be reported in the earnings in the period charged.

Formation of ISDA

Historically, derivatives markets have been subject to the same types of public regulation as securities markets. However, there has been a shift in recent years from derivatives transactions subject to public regulation to those subject to private regulation.[73] The OTC derivatives markets are dominated by private legal rules, specified in one or more form documents incorporated into derivatives contracts. The most common source of private regulation is the documentation of transactions by ISDA.[74] ISDA is a global trade association representing the leading market participants in the OTC derivatives industry.

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[70] Mattews and Rusinko 83.
[71] Mattews and Rusinko 84.
[72] Mattews and Rusinko 84.
[73] Frank Partnoy, "ISDA, NASD, CFMA, and SDNY: the four horsemen of derivatives regulation?" University of San Diego School of Law *Public Law and Legal Theory Working Paper* (2002): 6.
[74] Partnoy 6.

Founded in 1985, ISDA was initially set up to help the young industry establish a legal groundwork for over-the-counter swaps. ISDA's early initiatives were limited to creating the legal backdrop necessary for the swaps business.[75] Later on, ISDA created the master trust agreement for swaps that is still in use today; it also pushed for laws to protect the practice of netting in case of bankruptcy.[76] ISDA has produced several generations of standardized language and master forms used by most market participants. ISDA has continually revised its forms to reflect changing products, market practices, and laws. Although ISDA is a trade association, not an independent research institution, it has performed a valuable social function by increasing each market participant's understanding of legal risks.[77] ISDA has also gone further by actually reducing risks. The agency was the major force behind explicit international acceptance of netting. Hu explains that "netting occurs when two parties who have entered into multiple derivative transactions with each other aggregate all such transactions in the event of bankruptcy, thereby reducing credit risk."[78] ISDA obtained legal opinions on the netting issue from lawyers in most industrialized nations, drafted contractual provisions applying netting, and facilitated consistent statutory changes.

The central document used by most derivatives market participants is the ISDA Master Agreement (the current version is the amended 2002 ISDA Master Agreement). ISDA created this form document in 1987 and over time has added provisions and

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[75] Henry T.C. Hu, "Misunderstood derivatives: The causes of informational failure and the promise of regulatory incrementalism," The Yale Law Journal 102.6 (1993): 1460.
[76] Hu 1460.
[77] Hu 1461.
[78] Hu 1462.

created supporting documents.[79] The ISDA Master Agreement is singed before any parties enter into any derivatives transactions. These documents specify the obligations and representations of each party, and the relevant events of default and termination.[80] They also define the market conventions to be followed in derivatives transactions. Then, once the Master Agreement is executed, parties enter into derivatives transactions after reaching an oral agreement based on a written term sheet. After this agreement, the parties sign a confirmation of the terms of the specific transaction. This confirmation, together with the ISDA Master Agreement and Schedule, form the body of private law governing the derivatives transaction.[81] These form documents have adjusted rapidly to reflect changes in practices among market participants, and ISDA quickly has developed form documents to be used with new transactions. For example, in 2002 ISDA published a list of credit derivatives definitions, including a detailed description of six credit events, a draft confirmation, and commentary.

ISDA's definitions and subsequent supplements "have been drafted through inclusive consultation of market participants including dealers and end users."[82] These definitions have helped shape the market. Additionally, the Master Agreement and definitions can be incorporated into confirmations relating to derivatives. This allows parties to a transaction to use a short form confirmation containing only economic and deal-specific terms relating to that transaction, while the standard terms in the Master or definitions remain unchanged.[83] The purpose of this type of structure is to provide market

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[79] Alessandro Cocco, "Credit derivatives 2002: Fundamentals and latest developments in credit derivatives documentation techniques," Derivatives Use, Trading & Regulation 8.3 (2002): 269.
[80] Cocco 270.
[81] Cocco 270.
[82] Cocco 270.
[83] Cocco 271.

participants with a documentation tool that is able to deal with issues occurring from derivative transactions, efficiently and cost-effectively. All ISDA documentation allows parties to add different elections and to make amendment or additions in the confirmation. The definitions also provide for fallbacks which apply in cases where parties did not otherwise specify something. An example would be of election elements, such as minimum amounts of payment required to a failure by the reference entity to make a payment for its obligations.[84]

Derivatives Product Company

Another structure that represents the growth of private regulation is the innovative firm structure. Clearinghouses have been successful in managing and controlling risk for exchange-based trading, however, they have been facing increasing competition from the growth of the OTC market. The benefits of derivatives traded on exchanges are the cost of standardizing contracts to make them more liquid; however recent advances in financial theory and technology have changed this trade-off from the OTC market.[85] Innovations in risk management have increased the ability to monitor credit risk of counterparties and have enhanced the roles or rating agencies to monitor credit quality. Also, new techniques have increased demand for tailored products for hedging firm-specific risk and have allowed for the creation of new sophisticated products.[86]

These forces have led to a rise of a new type of organization, the derivatives product company (DPC). This structure has been developed to provide the benefits of an exchange-clearing system while preserving the flexibility and decentralization of the

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[84] Cocco 271.
[85] Randall S. Kroszner, "Can the Financial Markets Privately Regulate Risk? The Development of Derivatives Clearinghouses and Recent Over-the-Counter Innovations," Journal of Money, Credit, and Banking 31(1999): 609.
[86] Kroszner 609.

OTC market.[87] Credit agencies play an important certification role as third-party monitors in OTC markets. The rating agencies are not guarantors like clearinghouses. Rating agencies are important for setting standard for capital, collateral, and conduct without having a financial stake in the transactions. Because of a large number of bankruptcies in the OTC market in the late 1980's and 1990's, there was increased concern about credit risk.[88] As a result, market participants worked with credit rating agencies to develop a new vehicle to address credit risks. The DPC was created to get a high credit rating while minimizing the amount of capital that is contributed by a sponsor or parent firm. Kroszner explains that Moody's believes a way to structure a DPC is by a "reliance on mirrored transactions to eliminate market risk by pass[ing] it back to the sponsor."[89] Rating agencies give a large degree of flexibility to market participants to develop methods for fulfilling the requirements for a high credit rating.

A DPC's structure involves hedging their market risk, monitoring and measuring credit risk, and prepackaging and privatizing bankruptcy procedures to reduce uncertainty about how counterparties will be affected if the first two procedures fail.[90] The credit agencies and greater sophistication of risk assessment models have set standards and encouraged innovations to reduce costs and the likelihood of failure in the OTC market. The DPC's and the innovations supporting growth of the OTC market have provided an important source of competition for the exchanges and demonstrate the role of private regulation in its ability to set standards and provide progress.

Public Regulation

[87] Kroszner 609.
[88] Kroszner 609.
[89] Kroszner 610.
[90] Kroszner 611.

In contrast to private rules, legal rules generated by public entities have a much different past. Culp and Mackay explain that "financial regulation in the United States comes in two varieties: institutional and functional."[91] Institutional regulation is regulation of the different kinds of enterprises involved in financial markets and intermediation. Functional regulation is regulation of financial instruments and markets according to the underlying economic function they perform. Derivative transactions are regulated within this framework and since they involve many types of institutions and functions, derivatives regulation can be complex. The SEC and the CFTC are viewed as "functional regulators," because they dedicate most of their resources to regulating products and markets rather than the users of those products and markets.[92]

Securities Exchange Commission

Securities trading in the US is regulated by an independent federal authority - the Securities and Exchange Commission (SEC). Established in 1934 in the aftermath of October 1929 financial crisis, the SEC was the first federal agency devoted to the regulation of financial markets.[93] The SEC regulates the issuance of securities broker-dealers and the trading of outstanding securities under the Securities and Exchange Act of 1934.[94] Also, because of the SEC's asset by asset approach, there is no offset for hedges. Under this regulation, it is prohibitive for SEC registered broker-dealers to do a

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[91] Christopher L. Culp and Robert J. Mackay, "Regulating derivatives: the current system and proposed changes" CATO Regulation, (1997), 10 December 2006 < https://cato.org/pubs/regulation/reg17n4b.html>.
[92] Culp and Mackay 1997.
[93] Yuval Millo, "Safety in Numbers: How Exchanges and Regulators Shaped Index-Based Derivatives," *New York Conference on Social Studies of Finance* (2001): New York.

[94] Hans R. Stoll, "Regulation of Financial Markets: A Focused Approach," *Plenary Lecture* Multinational Finance Society Meeting (1998): Finland.

derivatives business, and firms have had to establish subsidiaries outside of SEC jurisdiction[95]

In December, 1997 the SEC proposed to bring unregulated subsidiaries under a modified regulation called broker-dealer-lite.[96] The modified regulations were available for OTC derivative subsidiaries that deal only with large institutional counterparties. The broker-lite proposal has also produced some confrontation from the CFTC, who thinks that they should be regulating these derivatives subsidiaries. Stoll explains that "a focused approach to SEC capital regulation would require the portion of the broker dealer holding insured customer accounts to have solid collateral and to be transparent."[97] The remainder of the broker dealers would be unregulated or subject to broker-dealer "lite" regulation.

The SEC regulates all securities traded on national securities exchanges. Several exchange-traded derivatives fall under the legal classification of securities, including currency options, stock options, and options on stock indexes. The SEC's regulation of these products and exchanges include transparency and price reporting requirements, anti-manipulation regulations, position limits, audit trail requirements, and margin requirements.

Commodity Futures Trading Commission

The Commodity Futures Trading Commission (CFTC) was formed with the passage of the Commodity Futures Trading Act by Congress in 1974. This Act extended regulation to all futures trading and created a federal regulatory agency, CFTC, for

[95] Stoll 1998.
[96] Stoll 1998.
[97] Stoll 1998.

commodities trading that was similar to the SEC.[98] The CFTC has jurisdiction over all commodity futures contracts, including options and futures. Its functional regulations include minimum capital requirements, reporting and transparency requirements, anti-fraud and anti-manipulation regulations, and minimum standards for clearinghouse organizations.[99] Over time, Congress has increased its regulatory power, but CFTC's authority to regulate doesn't include certain financial derivatives. In 2000, Congress passed the Commodity Futures Modernization Act of 2000, which excludes identified banking products, including covered swap agreements, from regulation by the CFTC.[100]

Kaza explains that the Act gives the CFTC authority for "diminishing, eliminating, or preventing action defined as excessive speculation in any commodity subject to the rules of contract markets or derivatives transaction execution facilities that cause sudden or unreasonable fluctuations or unwarranted changes in price."[101] The CFTC has the authority to exempt transactions such as spreads, arbitrage, or from fixing limits to transactions or positions different from limits fixed for other transactions or positions. The CFTC is required to consider the costs and benefits of any proposed regulation. The costs and benefits are evaluated in terms of protection of market participants and the public; the efficiency, competitiveness and financial integrity of futures markets; price discovery; sound risk management practices; and other public interest considerations.[102] Congress also prevented the CFTC from exercising regulatory authority on hybrid instruments. The CFTC is required to "consult with and seek the

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[98] Stoll 1998.
[99] Culp and Mackay 1997.
[100] Greg Kaza, "Derivatives regulation: Regulation of Derivatives in the US Code," Derivatives Use, Trading & Regulation 11.4 (2006): 385.
[101] Kaza 385.
[102] Kaza 386.

concurrence of the Board of Governors of the Federal Reserve System concerning the nature of the hybrid instrument before commencing a rulemaking or making a determination about any identified banking product.[103]"

Approaches to Derivative Regulation

The following section will discuss three different approaches to regulation within the derivatives market. The first approach is a framework of increased government regulation that is focused on creating legislation that will prevent risks, increase internal control measures, and increase corporate disclosures. The next approach calls for deregulation and reliance on market forces to oversee the derivatives market. This framework supports greater control for market participants in managing suitability, risk capitalization, and internal risk management. The final approach discusses the need for the private sector to oversee and regulate the derivatives market. This framework relies on the role of private standard setting agencies that can manage risks by creating choice, standardization, and stability. The reasons why this approach is more effective in the OTC markets is described.

Argument for Greater Regulation

Regulation of financial markets protects public interest by protecting investors and guarding against systemic risk. Stoll believes that "regulation is justified because it protects investors who are uninformed and unskilled."[104] A second basis for financial regulation is systemic risk. Systemic risk is "the risk of widespread default in any set of financial contracts that can be linked to a default in derivatives."[105] This means that the

[103] Kaza 386.
[104] Stoll 1998.
[105] Ludger Hentschel and Cliffor W. Smith Jr., "Risk and Regulation in Derivatives Markets," Journal of Applied Corporate Finance 7.3 (1994): 9.

failure of one financial institution will cause failures to other institutions and precipitate system wide failure. Systemic risk is an externality because the system wide effects are not costs for the firm that fails, and therefore have to be corrected by regulation.[106]

Regulation of derivatives is important because it prevents systemic risk with minimal costs. Henstchel and Smith Jr. explain that "establishing effective public policy requires an accurate assessment of not only the risks associated with derivatives, but also the benefits offered by the instruments and the potential costs of regulatory interference."[107] They believe that regulation is essential because the benefits are substantial. These benefits exist because derivative markets have provided corporations with financial tools that can be used to manage their exposure to financial prices and risks. Henstchel and Smith Jr. support more productive regulatory laws that are "designed to limit risks while preserving the efficiency of domestic and international capital markets."[108] One regulatory initiative they propose is new and better disclosure requirements; another is greater risk-based capital requirements.

Federal banking regulators also help reduce systemic risks in the markets. They oversee all bank activities, including derivatives activities. A primary purpose of Federal banking regulation is to ensure the safety and soundness of individual banks and the U.S. financial system.[109] Bank regulators are authorized to regulate affiliates of banks or bank holding companies, regardless of the activities in which they are engaged. Bank regulators rely on three primary means to oversee bank activities: reviewing required reports; requiring adherence to minimum capital standards; and conducting periodic

[106] Stoll 1998.
[107] Hentschel and Smith Jr. 12.
[108] Hentschel and Smith Jr. 12.
[109] Kuserk et al.

examinations to verify compliance with reporting, capital, and other regulatory requirements.[110] Banking regulation help protect the markets from risk.

Dealer risks and controls are an important area of derivatives for both dealers and end-users. Federal banking agencies and the SEC have created programs to evaluate the risk management systems of firms under their supervision. By testing and evaluating a firm's risk management and controls system, regulators develop an understanding of the firm's ability to control overall risk patterns in any given situation. Breeden believes that "in the area of financial institutions' risk management systems; it is important for regulators to establish standards for minimum practices, but not to codify a particular form or approach."[111] Although large investment firms can create models to structure their risk profiles, new market entrants, second or third tier dealers, and small companies may have failed to make the investment in people, analytics and data systems required to manage risk effectively. For derivatives dealers, a critical area is internal controls along with their risk management system. In order to avoid scandals and financial losses, regulators need to create better policies designed to control internal risk and to insure compliance with the law.

The greatest need for improvement in risk management systems is with the end-users of derivatives, including corporations, government entities, mutual funds, pension funds and other institutional investors. Breeden explains that this can be seen by many companies that took losses when interest rates reversed their long decline because these companies didn't have adequate systems for understanding and managing risk.[112] When a small company decides to enter into derivatives trading that company enters a new area

[110] Kuserk et al.
[111] Breeden 8.
[112] Breeden 9.

of managing its exposure. Such a company goes into the business of proprietary trading and becomes a de facto dealer in derivative instruments.[113] However, such a company lacks the systems for risk modeling and control that would be present in a major dealer, and does not have as many inputs of market information. Therefore, government regulators need to closely monitor and have controls in place before making decisions that affect the business in such risky ways.

The inadequacy of internal controls at many end-users of derivatives is another problem. Many companies have invested in internal audit departments, and management has devoted attention to the development and use of an effective and efficient system of internal controls. However, there is much variation in the quality of these programs in different companies. Board members are responsible to shareholders for protecting against risk. Breeden suggests that effective internal control is accomplished through internal action by the directors or senior management, and is tied to the individual company's operating structure, and through proper legislation.[114] Directors must be certain that a company is able to control unacceptable risks of financial statement fraud, and unethical or illegal business practices. Breenen believes that this is achieved by companies setting high standards for management, established by informed and active boards of directors, with government disclosure laws to shareholders and the market."[115] Disclosure should include the company's exposure and also its policies and practices regarding risk management and internal controls

Improved transparency of parties for corporate disclosures on derivatives is another area of improvement. The nature and level of a company's derivatives activity,

[113] Breeden 9.
[114] Breeden 11.
[115] Breeden 11.

and the exposure of both its earnings and net worth, are very important disclosure issues. For firms with significant levels of exposure, management's discussion and analysis should also include comments on the company's practices, controls and strategies.[116] The right legislation on disclosure will prevent losses to occur without previous disclosure that such risks are happening.

Breenen states that "the growing importance and size of the OTC derivatives market makes it vital for Congress to continue to regulate this marketplace."[117] The market is global, and new types of transactions continue to evolve in derivatives. As a result, regulation should be continuously updated to reflect changes in the market. One area for concern is whether the SEC has done enough to allow shareholders and potential investors to understand a corporation's derivatives exposure. The issue is whether corporate net worth and earnings offers adequate disclosure. Greater legislation may help prevent the development of abuses.

Argument for Greater Deregulation

The use of technology has accelerated the process of innovation and brought about changes in financial markets and institutions that have challenged the effectiveness of regulatory frameworks in place in many nations. According to D'arista "a lot of the changes in financial structure and regulation that have taken place, have been driven by market forces rather than shaped through the deliberative processes of law and regulation."[118] The largest, most active and globally integrated markets are the OTC

[116] Breeden 11.
[117] Breeden 11.
[118] Jane D'Arista, "Financial Regulation in a liberalized Global Environment" Center for Economic Policy Analysis *CEPA Working Paper Series* (1998).

markets. Some researchers and economists support the deregulation of public agencies and the rise of market forces in overseeing international markets.

Flannery supports this view and believes that government regulators should minimize their role of regulatory oversight, and transfer more responsibility for financial firms' governance to the market arrangements that control other types of public firms.[119] Unlike the government, market forces could apply flexible and firm specific standards, which would be more effective than regulation. Growth of the derivatives market has shifted combination of government and private oversight. Government regulation tends to be less flexible than market oversight, and flexibility is highly valued. The best approach is "to rely more on market governance to monitor and control the risks of financial failures."[120]

Regulation restricts innovation and shifts valuable resources away from market-driven risk management, because it is not driven by market forces. Culp and Mackay believe that there is no "empirical support has been offered for the notion that current regulation, with incremental improvements and enhanced coordination, is inadequate to address the risks of derivatives."[121] They explain that over-regulating markets could be costly because it might drive derivatives business overseas. Without government agencies, the market is a powerful regulator of economic activity and can handle issues of suitability, capitalization, and proper risk management.

One area that has a need for less regulation is suitability. Suitability relates to a dealer's responsibility for determining the extent to which its counterparty understands

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[119] Mark J Flannery, "Modernizing financial regulation: The relation between interbank transactions and supervisory reform," Journal of Financial Services Research 16.2 (1999): 102.
[120] Flannery 102.
[121] Culp and Mackay 1997.

the risks of the transactions into which it enters.[122] A joint statement by the CFTC and the SEC in the U.S., and the Securities and Investments Board (SIB) in the United Kingdom suggests that dealers transacting with non-dealers should be required to obtain information about customers to help ensure suitability. A majority of OTC derivatives contracts are done between sophisticated counterparties that are capable of determining appropriate contracts. Since these transactions create continuing credit exposures, which last the duration of the transaction, participants have a strong incentive to ensure counterparty suitability, even in the absence of regulation. Also, Culp and Mackay believe that improved accounting and disclosure standards in the industry will make it easier for institutions to evaluate suitability without the burden of costly regulations.[123] Culp and Mackay suggest that "legislation imposing a suitability standard would unnecessarily restrict derivatives users."[124] Smaller and less sophisticated end users would find it more difficult to use derivatives to hedge their risk exposures. Increased compliance costs will make some dealers avoid users who are complex and costly to document. Less sophisticated institutions will be forced to use more expensive risk management methods, creating costs for shareholder and creditors.

Another area of possible deregulation is risk capitalization. Adequate capitalization is important for participation in the OTC market because of the credit-intensive nature of derivatives. Participants that do not have good capitalization and high credit risks will not be active in a competitive derivatives market. There is no need for regulation because derivatives dealers have developed internal models for measuring and allocating risk in order to maintain adequate capitalization. Culp and Mackay believe that

[122] Culp and Mackay 1997.
[123] Culp and Mackay 1997.
[124] Culp and Mackay 1997.

regulation of capital adequacy can best be addressed by allowing institutions to use their own risk management models for determining capital adequacy for credit and market risks, subject to oversight by supervisors.[125] This policy will promote innovation, safer and sounder financial institutions, and more efficient allocation of capital.

Risk management practices are also an important aspect of derivative activities. Shareholders, senior management, and outside auditors have strong incentives to ensure adequate managerial oversight of risk-taking activities in order to protect and enhance the profitability of their institutions. Management of major U.S. dealers has conducted internal reviews of risk management procedures and practices. White believes that federal regulations requiring a particular level of involvement by management in the oversight process is difficult to implement and enforce.[126] This is because each institution faces its own unique risk exposures and has its own specific risk management processes and internal controls. Regulation cannot substitute for effective management oversight.

The derivatives industry, through its individual members and trade associations, has worked to promote information sharing and greater coordination amongst participants in derivatives activities to address risks to the industry. As part of standard operating procedures, market participants exchange information, coordinate examinations, and create policies jointly. Additional coordination of domestic regulators is accomplished through the Presidential Working Group and other policy groups. As a result, White explains that regulation is not necessary because market participants police themselves.[127]

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[125] Culp and Mackay 1997.

[126] Lawrence J. White, "Technological change, financial innovation, and financial regulation in the U.S.: The challenges for public policy," Stern School of Business *Working Paper* (1996).

[127] White 1996.

Less restrictive regulatory changes have reinforced technological improvements and have led to lower transaction costs for users entering these markets. Market participants are better able to monitor derivative markets with efficient internal controls and more flexible firm specific standards. Deregulation creates more incentives for firms to be more aware of the risks that they undertake, promoting more surveillance of the markets.

Argument for a Private Oversight Approach to Regulation

A successful regulatory approach needed to oversee the OTC derivative markets should consider the benefits and risks that investors and market participants encounter. However, for such an approach to work effectively for the derivatives market, the benefits associated with implementing it must outweigh the risks. Based on previous research, I believe that a private oversight approach to derivates will work most effectively. Although, public regulation is important to monitor the national derivatives market, the growth of derivatives on an international scale has limited the benefits of such regulation. As a result, the private sector is more successful in maintaining order and stability of derivative markets. Private oversight of derivatives markets has created choice, standardization, minimization of counterparty risk, and stability. Along with these benefits, there have also been costs associated with private regulation such as difficulty of enforceability, and operational backlogs. Despite these risks, the advantages of the private sector have had significant effects on international markets.

The private sector is highly needed because a vast and complex public regulatory framework stifles innovation and progress. Matthews and Rusinko suggest that there does not appear to be a strong demand for additional regulation of the OTC derivatives market

in the US.[128] They believe that many of the problems that appear in the OTC derivatives market can be solved through the analytical, problem-solving and private community that produces and trades derivatives. The private sector has an active role in establishing standards and guidance for OTC derivatives and risk management, and is more effective than regulation. One problem with the regulatory approach is that "regulation by government alone is less effective since government regulation is often slow to respond, less informed than experts, and obtrusive."[129] This can be seen in the effectiveness of rating agencies in dealing with credit risk. Rating agencies are independent entities and quickly respond by reporting credit changes within institutions. However, government agencies are more reluctant to report this information because they are directly involved. Regulation also slows down innovation because flexibility is lost among market participants. With the private sector overseeing the markets, flexibility and technological growth is more supported and enhanced.

Complete deregulation also tends to be a less effective form of market regulation. Lack of enforceability and sanctions is a disadvantage of relying on the market to police changes in derivative markets. Without some form of oversight, the market will be unable to deal with credit defaults and risks. As a result, the private sector is needed to help avoid systemic risks and market failure, which might affect the whole derivative market.

Benefits of Private Oversight

As the growth of the OTC derivatives market has continued to proliferate, the adaptation and innovation of the private regulatory sector has magnified. However, such

[128] Matthews and Rusinko 339.
[129] Matthews and Rusinko 339.

growth has provided many benefits and costs to market participants involved in derivatives markets.

One contribution of the private regulatory sector to the OTC market has been choice. The growth of different regulatory agencies and private groups has enhanced shareholder choice through enlarging the set of alternative regulatory practices available to shareholders and by facilitating shareholders' ability to make such choices. Investors and financial firms have alternatives as to whether to be regulated by a federal regulator or a private organization. The ability of firms to choose their regulator has created a market for regulation.[130]

OTC transactions are not done on exchanges and are therefore not subject to exchange rules by public regulatory bodies such as the SEC and the CFTC. This provides a lot of freedom and flexibility for investors and end users who utilize OTC derivatives. There are no capital requirements and participants have the flexibility to structure these transactions in many different ways. This flexibility is important to private regulators because they do not put heavy restrictions on OTC transactions. Instead, private regulators have created a standardized structure for legal documentation of derivative transactions. This standardization does not limit the types of contracts that can be made and it doesn't make rules for what kinds of transactions are acceptable. In contrast, private regulation provides legal documentation to prevent against counterparty risk and to provide a clear framework for entering into OTC transactions.

A large part of this contribution has been made by ISDA. The creation of a Master Agreement and a set of definitions for derivative contracts have helped create standardization. Parties that enter into OTC transactions know ahead of time the types of

[130] Stoll 1998.

legal language and concepts they will include and negotiate on. As derivative innovations have been introduced into the market, ISDA has been able to adapt and innovate as well. The organization has made changes to confirmations and definitions to accommodate the changing and growing market. An important benefit of standard documentation is that disputes can be handled faster and more efficiently because of standards put in place on contracts. Without ISDA documentation, creating binding contracts between counterparties would be difficult. For example, two parties conduct an OTC credit default swap without clearly stating legal terms in their contract. When one party defaults and is unable to make payments to the other party, they may claim that they are not bound to a contract and my terminate it. The other party has not benefited and has not received payments. However, with the inclusion of ISDA's Master Agreement and definitions, a default of a party would be clearly explained and the contract would not be disputed.

The expansion of the OTC market has created a reliance on trade assignments called novations. A novation is a cancellation of an existing derivative transaction and an assignment of that transaction to a different party. This is beneficial for liquidity and price discovery. However, many of these novations were being transferred to different parties without consent. As a result, in 2005 ISDA published its Novation Protocol to standardize the process of novations and to reduce their backlog.[131] Under the protocol the transferor must: (i) agree to a price with the transferee for a contemplated novation; (ii) make a timely request for consent from the remaining party and provide sufficient detail to identify the trade in question; (iii) ensure that the transferee receives a copy of the remaining party's consent (if acquired); and (iv) remove the novated trade from its

[131] Kenneth Raisler and Lauren Teigland-Hunt, "How Isda took on the confirmations backlog," International Financial Law Review 25.2 (2006): 44.

books[132] (Raisler 11). ISDA's protocol was able to create a standardized method for handling disputes among market participants. This demonstrates the private regulators' ability to resolve issues relating to changes and innovations of the OTC market.

The private regulatory sector aids in creating stability and integrity within the OTC market. Private and independent credit-rating agencies play a significant role in certifying the credit quality of potential market participants. Credit-rating agencies serve as third-party monitors that provide public information about the credit worthiness of counterparties. Just like public regulation of exchanges, rating agencies like S&P and Moody's provide transparency, auditing, and monitoring functions.[133]

Another contribution of private regulation is the Derivative Product Company that helped eliminate counterparty risk for banks. To reduce the risks of entering long-term contracts in the OTC market, parties emphasized high credit ratings. This special purpose vehicle was set up by banks to achieve a high credit rating and allow banks with low credit to participate in the derivative market. A DPC was able to achieve a triple-A rating because its capital could not have been touched by creditors of the parent company if it became bankrupt.[134] The structure ensured that any counterparty risk for a participant conducting trading was with the DPC and the risk with the end-user was with the DPC as well. With the passage of the Commodity Futures Modernization Act of 2000, special purpose vehicles were significantly simplified and their legal costs were reduced. Although, not as abundantly used today, DPC's were an important structure for market participants that wanted to become active in the OTC derivative market but did not have high credit ratings.

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[132] Raisler and Tiegland-Hunt 44.
[133] Kroszner 2000.
[134] Kroszner 2000.

Private Sector Oversight	
Benefits	**Risks**
Shareholder choice and alternatives	Difficulty of enforceability through confirmation backlogs
Flexibility and standardization by ISDA Master Agreements	Inability to prevent systemic risk
Stability and integrity through credit agencies	Formation of private organizations with monopoly power
Reduction of counterparty risk through a DPC	

Risks of Private Oversight

The complex and conflicting regulatory system has the potential to impede the evolution of derivatives, especially the potential for economies of scale and scope to be achieved. If regulation is not clear and concise then it will not be followed by participants. Also, private regulation doesn't hold as much weight as public regulation that is enforced more rigorously. Unless private regulation becomes a standard used by the industry, like ISDA documentation, it will have a hard time being imposed.

One example of the difficulty of enforceability of private regulation can be seen in the ISDA confirmations backlog. With the growth of the OTC market using ISDA confirmations to record and legally bind parties to contracts, there has been a large amount of outstandings. When a trade is done over-the-counter a confirmation is issued by one of the parties, usually a broker/dealer. In T+3 days both parties need to sign the confirmation to legalize the trade. However, with the large volume of trading, double signed confirmations have taken greater than T+30 days to approve. This creates risk for counterparties because if a credit event happens within that time and the confirmation is not signed, one party may claim that they are not legally bound by the contract. In 2005, in an effort reduce such risks the Federal Reserve conducted meetings with 14 primary

dealers to set targets to reduce outstanding confirmations. The goal was to reduce outstanding greater than 30 days by certain targets at appropriate deadlines.

One solution proposed for the industry to maintain progress towards backlog was a greater reliance on post-trade automation. The Depository Trust and Clearing Corporation (DTCC) was developed to help investors and fund managers with derivatives matching and confirmation service. DTCC uses an electronic matching platform called Deriv/SERV to match confirms and trades to reduce operational risk associated with manual processing.[135] This service allows confirmations to be processed within T+3 days and is more efficient than a manual process. Greater reliance on DTCC among broker/dealers and investors would reduce confirmation backlogs as well as risks.

Another aspect that can create risks within the private sector is a monopoly of standard setting organizations. Although ISDA's standard form derivatives documentation can be cost reducing, the organization can create a monopoly on the creation of legal rules. According to Partnoy, "one explanation for ISDA's dominance is that ISDA is simply more efficient than other rule providers, and that the economies of providing standard form contracts naturally will lead to single provider."[136] Another reason is that since ISDA was the first organization to get involved with documentation of derivatives, it has created a barrier to entry for any competing providers. A third possibility is that a few dealer members of ISDA are exercising market power in creating legal rules. However, there might also be cause for concern if ISDA continues to be the sole provider of legal rules for derivatives contracts. One reason might be because a few major dealers control the production of legal rules, and the form agreements they use are

[135] "Best Utility Technology," Operations Management 11.29 (2005): 1.
[136] Partnoy 8.

written to benefit dealers in dealer-to-dealer contracts, or are constructed to advantage dealers in dealer-to-end-user contracts.[137] The leadership of ISDA is dominated by a small number of major dealers. In contrast, end-users of derivatives are much more numerous, and therefore face collective action problems in creating a plausible set of alternative legal rules. End-users are not entitled to vote on ISDA decisions, and do not have any role in formulating legal rules. However, even given ISDA's domination, individual dealers have incentives to compete for derivatives business, and if end-users value particular contract provisions, individual dealers can capture business by amending their forms.[138] If the legal rules were fixed and non-negotiable, dealers and end-users still could negotiate based on price. The trend to privatizing legal rules in the derivatives industry is likely to continue, and ISDA is likely to be the dominant provider of legal rules

As financial markets continue to go global, attempts to impose a single regulatory framework are likely to fail. Institutional regulation along with competition among different legal jurisdictions around the world will continue to expand. The task for regulators is not to form one massive world-wide regulatory approach but rather to enter into agreements under which regulation by private regulators will be acceptable.[139] The regulatory system should broad based with greater emphasis on the private sector and the deregulation of government oversight. The private regulation is able to quickly and effectively respond to changes in the market and it allows innovation to prosper among OTC derivatives.

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[137] Partnoy 8.
[138] Partnoy 8.
[139] Stoll 1998.

Conclusion

Derivative markets have grown tremendously over the past several years and continue to evolve and innovate. The global market for OTC derivatives amounted to $111 trillion in December 2001 up from $72 trillion in June 1998[140]. The increase represents an average yearly rise of 11.4 percent. In order to maintain this growth and to create stability within the markets, proper regulatory approaches need to be implemented. Economists and researchers have proposed several types of frameworks that they believe will be effective in monitoring the derivatives markets. This paper suggested three possible approaches: greater public regulation, deregulation and reliance on market forces, and reliance on the private sector to regulate the markets. I believe that the most effective regulatory approach to derivative markets is private sector oversight. The private sector is efficient in quickly responding to changes and innovations within the market and is able to create stability and standardization through its various agencies. The benefits described above suggest that private regulation is capable of aiding the growth and evolution of the OTC markets into the future. The growth of the private sector in derivatives regulation is likely to continue because of the wide acceptance and use of industry standard organizations and policy groups, which have added liquidity and standardization to the market.

[140] Kuserk et al.

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