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The Structure of OTC Derivatives Markets

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In order to better inform the debate over the regulation of OTC derivatives, the Derivatives Study Center has produced this brief Primer that describes the structure of those markets and how they might be viewed under the Commodity Exchange Act. It is the intention of the DSC that a better understanding of how these markets are in fact organized and structured will in turn allow for a more productive discussion of the important public concerns with these markets and how best to address those public concerns through public policy.

I. INTRODUCTION

The purpose of this primer is to clarify some of the key characteristics of the over-the-counter (OTC) derivatives markets. A clearer picture of these markets will help legislators and regulators write better legislation and rules for the prudential regulation of OTC derivatives markets. (Note that this Primer is followed by a short list of key definitions used to describe OTC derivatives markets.)

Derivatives 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. The term *derivative* comes from how the price of these contracts is *derived* from the price of some underlying commodity, security or index or the magnitude of some event. The term *derivative* is used to refer to the set of financial instruments that includes futures, forwards, options and swaps. The combination of a derivative with a security or loan is called a *hybrid instrument* or alternatively a *structured security* and *structured financing*.

Derivatives are traded in two kinds of markets: exchanges and OTC markets. Exchanges have traditionally been defined by "pit" trading through open outcry, but exchanges have recently adopted electronic trading platforms that automatically match the bids and offers from market participants to execute trades in a multilateral environment. The trading of derivatives (traditionally futures and options) on exchanges is conducted through brokers and not dealers.

The Commodity Exchange Act describes this arrangement as a *trading facility* and in particular as an organized exchange (see definitions in Section V).

The OTC markets are organized along several different

lines. The first is called a "traditional" dealer market, the second is called an electronically brokered market and the third is called a proprietary trading platform market. Although these terms, unfortunately, are not used consistently throughout the policy debate, they will be spelled out in this Primer to help clarify the actual character of these markets.

II. TRADITIONAL DEALER MARKET – "BILATERAL NEGOTIATION"

The OTC markets have traditionally been organized around one or more dealers who "make a market" by maintaining bid and offer quotes to market participants. The quotes and the negotiation of execution prices are generally conducted over the telephone, although the process may be enhanced through the use of electronic bulletin boards by the dealers for posting their quotes. The trading process of negotiating by phone, whether end-user-to-dealer or dealer-to-dealer, is known as bilateral trading because only the two market participants directly observe the quotes or execution.

This bilateral trading arrangement, from a regulatory point of view, is not considered a trading facility because it is not multilateral. However, it should be pointed out the bilateral negation process under this market arrangement is often highly automated. Dealers have direct phone lines between themselves and other dealers and their major customers, and this enables instantaneous communication so that a market participant can call up a dealer ask for quotes and then hang up and call another so as to survey several dealers in just a few seconds. A quick series of such calls can give an investor a view of the market that is not entirely different from a view obtained by observing a multilateral negotiating process.

III. ELECTRONICALLY BROKERED MARKETS —

OTC markets have also adapted new electronic and networking technologies to their trading needs. One use of the technology is the formation of an electronically brokered OTC market through the use of an electronic brokering platform (sometimes referred to as an electronic brokering system). These electronic brokering platforms are essentially the same as the electronic trading platforms used by exchanges, and they create a multilateral trading environment.

If this electronic brokering platform automatically matches bids and offers so as to execute a trade, the Commodity Exchange Act defines this trading arrangement as a trading facility because it is open to multilateral participation (i.e. the quoting of bid and offer prices and the execution of trades) by many parties. If it functions merely as an electronic bulletin board for the posting of bids and offers, then it is excluded from the definition.

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 or act as a counterparty to any of the trades made through the system. However, this situation changes if the electronic brokering platform adopts a clearing house. In this case the clearing house assumes all the credit risk of trades that are made through the electronic brokering platform and reported to the clearing house.

IV. PROPRIETARY ELECTRONIC DEALER OR TRADING PLATFORM

Yet another type of trading arrangement found in OTC derivatives markets is a composite of the traditional dealer and the electronic brokering platform in which an OTC derivatives dealer sets up their own proprietary electronic trading platform. Note the use of the term electronic *trading*, not *brokering*, platform because it is a dealing platform and does not function as a neutral broker. In this arrangement, the bids and offers are posted exclusively by the dealer; other market participants observe these quotes, and possibly also execution prices, in what is best described as a *one-way* multilateral environment. It is *one-way*, because no one but the dealer's quotes are observable and those of the other market participants might at best be inferred from changes in the execution price.

In this electronic trading, or dealing, platform, the dealer is the counterparty to every trade so that the dealer holds the credit risk in the market.

The Commodity Exchange Act is not easy to read in regards to this third type of OTC market. A careful reading of the definition of a *trading facility* reveals that the Proprietary Electronic Dealer Platform is NOT considered a *trading facility* because the bids and offers can not be posted by all the participants and thus not all participants can trade "by accepting bids and offers made by other participants that are open to multiple participants in the facility or system." (see complete definition in Section V)

V. DEFINITIONS – ECONOMIC AND STATUTORY

The immediately following section provides definitions of some much used terms in the policy debate over regulating OTC markets. The section following that

contains some of the relevant definitions from the Commodity Exchange Act, as amended by the Commodity Futures Modernization Act of 2000.

Bid quote:

The expression of a price at which someone is willing to buy.

Bilateral trading:

Trading in which the quoting of prices and execution are conducted between two parties in such a way that other market participants do not observe the trading.

Bilateral transactions:

This term is a misnomer because all derivatives contracts are bilateral in that they involve obligations or rights between two parties. The term should refer not to the contract but rather the manner in which the contract is traded: the bilateral negotiation of the contract (see above).

***Broker*:**

The broker's economic function is to connect, and possibly negotiate on behalf of, the ultimate buyer and seller. Potential seller A (for ask) notifies the broker of their willing to sell at a price P_A, and then the broker contracts potential buyer B (for bid) and notifies B of the possibility of buying at P_A or inquires about their willingness to buy at some other price. Once the broker negotiates a single price at which one is willing to sell and the other is willing to buy, then the transaction can be executed.

Capital or risk-based capital:

The sum of tier 1 and tier 2 capital. The former includes the value of outstanding shareholder equity, perpetual preferred stock, retained earnings and minority interests in consolidated subsidiaries. The later includes subordinated debt, other intermediate and long-term preferred stock and a portion of allowances for loan losses.

Dealer:

The dealer's economic function is to make-a-market so that buyers and sellers can readily buy and sell in the liquid market. A potential buyer or seller contacts a dealer, by telephone or on an electronic trading platform, and inquires about the dealer's bid or offer quotes. If the quote is acceptable, the potential buyer can execute a trade at the offer price (called lifting an offer) or the potential seller can sell at the bid price (hitting a bid). The dealer is the counterparty in either case.

Electronic brokering platform:

A system in which all market participants can enter bids and offers, and observe others entering bids and offers, and then observe as the quotes are matching according to an algorithm and then executed.

Electronic bulletin board:

A system whereby dealers or all market participants can post bids and offers, but they are not matched or executed.

Electronic trading platform:

An electronic brokering platform or a proprietary system in which bids and offers can be posted by a dealer and market participants can execute trades with by hitting of lifting bids and offers (i.e. signaling the acceptance of posted bids and offers).

End-user:

An end-user enters a derivatives contract in order to hold the position, whether for hedging, speculative or arbitrage purposes, and not for the purpose of market making.

Exchange:

Also known as a board of trade or contract market, it is a central market in which all participants can observe the bids, offers and execution prices of all other participants.

Execution price:

The price at which a trade occurs.

Multilateral trading:

Trading in which all market participants observe all price quotes and trade executions in the market place.

Offer (or ask) quote:

The expression of a price at which someone is willing to sell.

OTC market:

Named for what was once an informally organized market, the over-the-counter (OTC) is now a well organized market place, however, with little or no regulatory oversight in comparison to an exchange.

From the Commodity Exchange Act:

TRADING FACILITY:

(A) IN GENERAL.–The term 'trading facility' means a person or group of persons that constitutes, maintains, or provides a physical or electronic facility or system in which multiple participants have the ability to execute or trade agreements, contracts, or transactions by accepting bids and offers made by other participants that are open to multiple participants in the facility or system.

(B) EXCLUSIONS.–The term 'trading facility' does not include

(i) a person or group of persons solely because the person or group of persons constitutes, maintains, or provides an electronic facility or system that enables participants to negotiate the terms of and enter into bilateral transactions as a result of communications exchanged by the parties and not from interaction of multiple bids and multiple offers within a predetermined, nondiscretionary automated trade matching and execution algorithm;

(ii) a government securities dealer or government securities broker, to the extent that the dealer or broker executes or trades agreements, contracts, or transactions in government securities, or assists persons in communicating about, negotiating, entering into, executing, or trading an agreement, contract, or transaction in government securities (as the terms 'government securities dealer', 'government securities broker', and 'government securities' are defined in section 3(a) of the Securities Exchange Act of 1934; or

(iii) facilities on which bids and offers, and acceptances of bids and offers effected on the facility, are not binding.

Any person, group of persons, dealer, broker, or facility described in clause (i) or (ii) is excluded from the meaning of the term 'trading facility' for the purposes of this Act without any prior specific approval, certification, or other action by the Commission.

(C) SPECIAL RULE.–A person or group of persons that would not otherwise constitute a trading facility shall not be considered to be a trading facility solely as a result of the submission to a derivatives clearing organization of transactions executed on or through the person or group of persons.

ELECTRONIC TRADING FACILITY:

The term 'electronic trading facility' means a trading facility that (A) operates by means of an electronic or telecommunications network; and (B) maintains an automated audit trail of bids, offers, and the matching of orders or the execution of transactions on the facility.

ORGANIZED EXCHANGE:

The term ''organized exchange'' means a trading facility that

(A) permits trading

(i) by or on behalf of a person that is not an eligible contract participant; or

(ii) by persons other than on a principal-to-principal basis; or

(B) has adopted (directly or through another nongovernmental entity) rules that -

(i) govern the conduct of participants, other than rules that govern the submission of orders or execution of transactions on the trading facility; and

(ii) include disciplinary sanctions other than the exclusion of participants from trading.

ENDNOTES

[1] The term multilateral is used to refer to a trading environment in which all market participants can observe each participant's bid or offer quote as well as the price and quantity of trades.

[2] The Commodity Exchange Act refers to derivatives traded in the OTC markets through bilateral negotiation as "bilateral derivatives." Of course all derivatives are bilateral in the sense that they are contracts between two entities.

[3] Familiar versions of electronic brokering platforms include the Reuters trading machines and the newer EBS (Electronic Brokering System) which are used to trade foreign exchange. It is the author's understanding that the ICE platform function much the same way.

[4] They are the same in that the automatically match bids and offers, and order can be submitted and observed by all market participants. The difference are: i) OTC market participants are "appropriate persons" or "eligible contract participants" and not the general investing public, ii) exchanges have a high standard for posting margin or collateral and OTC do not, and iii) exchanges clear through a multilateral clearing house and while OTC are able to do so they do not at this time.

[5] It is possible that the system be operated such that market participants are given the choice of whether to clear through the clearing house or to hold the counterparty credit risk themselves.

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