Action in the Marketplace

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Why We Need Futures Markets

The price you pay for goods and services depends to a great extent on how well businesses handle risk. By using futures markets effectively, businesses can minimize their risk, which, in turn, lowers their cost of doing business. This price savings can benefit consumers, whether it's lower food prices or a better return on a pension or investment fund.

The need for efficient forward pricing and risk management mechanisms is the reason for the tremendous growth in futures markets. Futures markets like the Chicago Board of Trade (CBOT®) enable raw material producers and users, financial intermediaries, and international trading firms to manage their price, interest rate, and exchange rate risk. And speculators throughout the world can interpret the information that converges on exchange floors to enter the futures markets as investors.

Because of its ease of use and its many economic benefits, futures trading has expanded to include numerous and varied markets throughout the world. The increased importance of futures can be seen in the dramatic volume growth over the past decade. In the early 1970s, approximately 13 million futures contracts were traded in the United States—most of which were agricultural. By 1999, trading volume exploded to more than 593 million, with only 11 percent related to agricultural products.

Today, there are futures contracts for interest rates, stock indexes, manufactured and processed products, nonstorable commodities, precious metals, as well as foreign currencies and foreign bonds. And the number of proposals for new contracts continues to grow.

Reading through this brochure you will gain insight not only into the CBOT and the futures industry, but also the global marketplace. Topics covered include: why the CBOT was created, how the exchange is run, the mechanics of how contracts are traded, the economic purpose behind futures markets, and the ways futures markets are regulated.

Birth of an Exchange

The history of futures trading began on the Midwestern frontier in the early 1800s. It was tied closely to the development of commerce in Chicago and to the grain trade in the Midwest. Chicago's strategic location, at the base of the Great Lakes and close to the Midwest's fertile farmlands, contributed to the city's rapid growth and development as a grain terminal. Problems of supply and demand, transportation, and storage, however, led to a chaotic marketing situation, which resulted in the logical development of futures markets.

Grain trade expanded, and in 1848, 82 merchants formed a centralized marketplace—the Chicago Board of Trade. Their purpose was to promote commerce in the city by providing a place where buyers and sellers could meet to exchange commodities. Growing use of contracts "to arrive," which specified delivery of a particular commodity at a predetermined price and date, made the CBOT increasingly popular as a centralized marketplace.

These early forward contracts in corn were first used by river merchants. They received farmers' corn in late fall and early winter and needed to ship it to processors. But shipment required two conditions—a crop with a low moisture content, so it would not freeze during transport, and a river free of ice to make transport possible. Often the corn needed to be stored all winter.

To reduce the price risk of winter storage, these river merchants travelled to Chicago, where they entered into contracts with processors for the spring delivery of grain at an agreed-upon price. In this way, they ensured themselves a buyer and a price for grain. March 13, 1851, marks the earliest recorded forward contract—3,000 bushels of corn to be delivered in June.

Cash forward contracts had their drawbacks. They were not standardized according to quality or delivery time, and merchants and traders did not always fulfill their forward commitments. In 1865, the Chicago Board of Trade formalized grain trading by developing standardized agreements called *futures contracts.* Unlike forwards, futures contracts standardized the traded commodity's quality, quantity, and time and location of delivery. The only variable was price—discovered through an auctionlike process on the trading floor.

Standardized Agreements: Futures Contracts

Because futures contracts were standardized, buyers and sellers were able to exchange one contract for another and actually offset their obligation to deliver the underlying cash commodity. (*Offset* in the futures market means taking a futures position opposite and equal to one's initial futures transaction. For example, buying a contract if previously one was sold.)

Standardized contract terms led agricultural firms to increasingly use futures markets. Grain merchandisers, processors, and other agricultural companies found that by trading futures contracts they were able to protect themselves from erratic price movements in the commodities they traded.

Speculators, on the other hand, were attracted to the futures market's profit potential. By purchasing and selling grain that may not have traded otherwise, speculators absorbed the price risks, made the markets more liquid, and minimized price fluctuations by placing incremental prices between the wide bid and offer spreads made by the commodity traders.

The Chicago Board of Trade, in the same year it introduced futures contracts, initiated a *margining system* to eliminate the problems of buyers and sellers not fulfilling their contracts. The margining system required traders to deposit funds with the exchange or an exchange representative to guarantee contract performance. Although early records were lost in the Great Chicago Fire of 1871, it has been quite accurately established that by 1865 most basic principles of futures trading were in place. But no one could have guessed how this infant industry would change and develop in the next century and beyond.

Growth in futures trading increased in the late 19th and early 20th centuries as more and more businesses adopted futures strategies into their business plans. Still, the most dramatic growth in the futures industry was yet to come—in the form of financial instrument futures.

Meeting the Needs of the Times—Financial Futures

The development of financial futures markets resulted from a changing world economy following World War II. Greater financial interdependence among nations and sharp increases in the amount of government debt characterized the economic environment.

The fixed exchange rate between U.S. and West European currencies, established after World War II, began to unravel in the early 1970s. Floating currencies contributed to the volatility of not only money, but other financial assets—such as Treasury bonds and Treasury notes—as well. This, along with the explosion of U.S. government-issued debt, moved the world economy away from a relatively stable interest rate environment to one that was much more volatile. Interest rates became totally unhinged in 1979, when Fed chairman Paul Volcker announced that they would be allowed to float.

To meet the demand of this new economic environment, the CBOT expanded its contract offerings, giving financial institutions the opportunity to manage price risks. The first futures contracts in financial instruments were launched with the Chicago Board of Trade's Government National Mortgage Association (GNMA) mortgage-backed certificates and the Chicago Mercantile Exchange's foreign currency futures in the 1970s.

While no longer traded, GNMAs paved the way for other financial contracts, most notably the U.S. Treasury Bond futures contract, which quickly grew to be one of the world's most actively traded futures contracts. This contract's success led to the introduction of other financial contracts, including U.S. Treasury Note futures, 30-Day Fed Funds futures, Municipal Bond Index futures, and Agency Note contracts.

Launched on March 15, 2000, CBOT 10-Year Agency Note futures and options contracts are based on non-callable Fannie Mae® Benchmark Notes℠ and Freddie Mac Reference Notes℠. These contracts provide additional trading and spreading opportunities in a market that boasts average daily volume of more than $6 billion. The success of the 10-year agency note contract has led the CBOT to plan to launch a 5-year agency note contract as well.

CBOT® Dow Jones Industrial Average℠ Products

On October 6, 1997, the exchange launched CBOT® Dow Jones Industrial Average℠ futures and futures options. These contracts, based on the world's most recognized stock index, give retail and institutional investors alike a new world of financial market opportunities.

CBOT® DJIA℠ futures recently surpassed the 40,000 daily volume milestone after only two years and six months of trading. By comparison, the CBOT's benchmark Treasury Bond futures contract reached the 40,000 mark two years and 10 months after its August 1977 launch. The CBOT plans to list contracts on three additional Dow Jones Averages℠—Transportation, Utilities, and Composite—to complement the CBOT® DJIA℠ contracts that are currently traded.

A New Marketing Alternative: Options on Futures

By 1982, another market innovation—*options on futures*—was instituted. In contrast to futures, options on futures allow investors and risk managers to define risk and limit it to the cost of a premium paid for the right to buy or sell a futures contract. At the same time, options provide the buyer with unlimited profit potential.

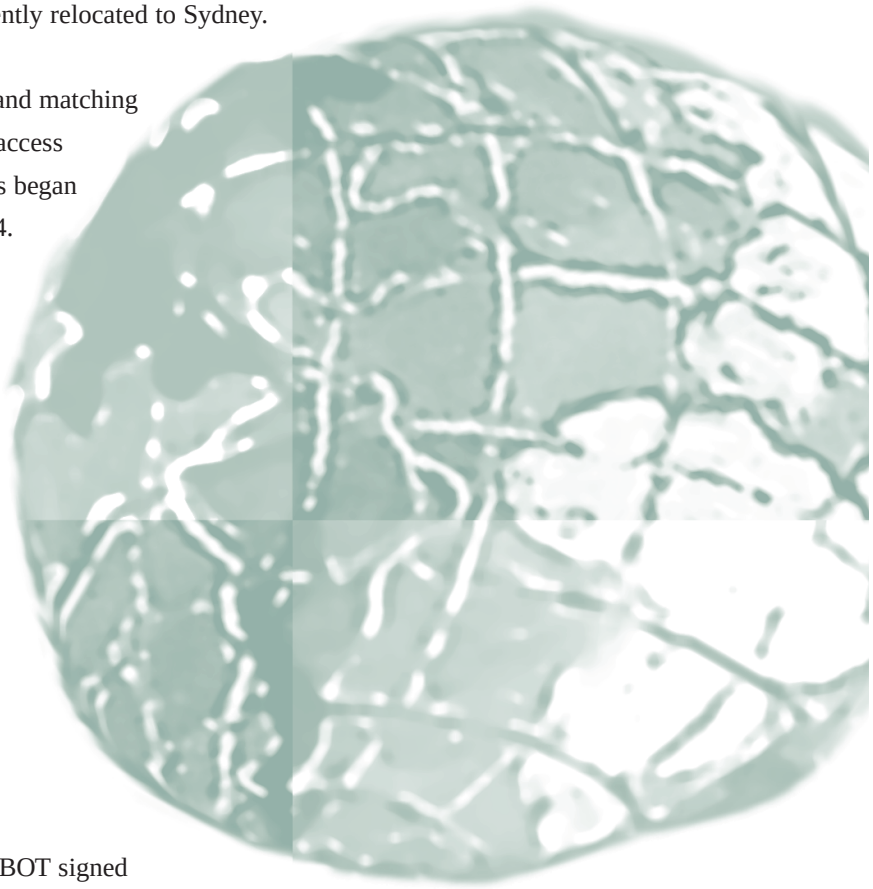
The CBOT's first option contract began trading in October 1982—U.S. Treasury Bond options. Its success opened the way for options on agricultural and other financial futures, beginning with

soybean and corn options in 1984 and 1985, respectively. Now almost every CBOT futures contract has a corresponding option contract.

Perhaps one of the most remarkable things about financial instrument futures and options is their phenomenal growth. While it took decades for agricultural markets to develop, the financial futures markets sprang up in less than 15 years. Trading volume in CBOT financial contracts soared from a mere 20,125, when they were first introduced in 1975, to more than 191 million in 1999.

Globalization

The tremendous volume growth in CBOT financial contracts represents not only an increase in the use of CBOT markets by U.S. firms, but also by international businesses that need efficient and cost-effective ways to hedge their price risks. The CBOT has worked extensively to appeal to international market users with the opening of a European office in London in 1986 and with the opening of an Asia-Pacific office recently relocated to Sydney.



Project A®, an electronic order-entry and matching system, further expanded worldwide access to CBOT products. Financial products began trading electronically in October 1994. This afternoon session started after the open outcry markets closed and gave traders the opportunity to react to late-breaking news. Little more than a year later, Project A added an overnight session and increased its product offerings to include agricultural futures and options. Today, Project A remains the largest U.S. electronic derivatives trading platform with more than 500 workstations worldwide.

CBOT/Eurex Alliance, L.L.C.

On October 1, 1999, Eurex and the CBOT signed final agreements to create an alliance and joint venture company that will operate a single global electronic trading system. This alliance will create the world's most advanced

trading network by providing members and customers with the opportunity to trade the most active futures and options products in the world from a single screen.

As the world business environment continues to change, the CBOT will continue to introduce new products and instruments to better meet marketplace demands.

On the Internet

The CBOT has remained at the forefront of the futures industry by adapting to new technologies. The Internet is a case in point. The World Wide Web quickly caught the world's attention, and the CBOT saw it as an ideal way to reach the public. It established a web site that offers information for everyone, from beginners who have never encountered futures and options to experienced traders who use these products every day.

The site splits its information among several different sections where surfers can learn about different products and news affecting the markets. For instance, the section devoted to agricultural futures provides contract specifications for corn, soybeans, and all other agricultural products traded at the CBOT. But you also will find out why people trade these contracts and how they use them in their trading strategies. The same holds true for financial products, such as bonds, and for environmental products as well.

The CBOT web site also provides recent press releases, futures industry news, background on the exchange's leaders, such as the president and the chairman of the board, and methods for obtaining literature that the exchange publishes and distributes. Other items are continuously updated to provide details about the most current exchange events.

Organization of a Futures Exchange: A Close Look at the Chicago Board of Trade

While all U.S. futures exchanges share some general characteristics, no two are exactly alike. Many differences have to do with their historical development. The CBOT is organized as a not-for-profit membership association. It has several types of memberships, each granting access to all or some of the contract markets designated at the exchange. Every membership is owned by an individual; however, companies, corporations, partnerships, and cooperatives may be registered for certain membership privileges.

A membership is sold through a bid-and-ask system. An applicant must meet certain financial requirements and have two exchange members as sponsors. The exchange conducts a thorough investigation of each member applicant. It focuses on the applicant's credit standing, financial responsibility, character, and integrity.

There are approximately 1,400 full members eligible to trade any CBOT contract. In addition, a number of associate memberships and membership interests offer holders limited groups of products to trade. For example, a CBOT associate membership allows an individual to trade financial instrument futures and other designated markets. IDEMs may trade all futures contracts in the index, debt, and energy markets category (gold, municipal bond index, and stock index futures, etc.); COMs may trade all option contracts listed in the commodity option market category.

The self-governing association has a board of directors that includes an elected chairman, 2 vice chairmen, 18 member directors, 5 public directors, and the exchange president.

Currently, a few key committees, composed of exchange members, advise and assist the board in developing policies for a variety of exchange activities. CBOT staff carries out these policies under the direction of an executive staff headed by an appointed president.

Affiliation

The Chicago Board of Trade also has an affiliate—the MidAmerica Commodity Exchange (MidAm). The affiliation was approved on March 24, 1986, by the Commodity Futures Trading Commission (CFTC), the independent regulatory agency of the federal government that administers the Commodity Exchange Act. Under this affiliation, the MidAm remains a separate legal entity and a separate exchange, with the CBOT as its sole voting and equity member. Also, the CBOT staff provides administration and support services for the MidAm.

The Purpose of Futures Markets

Futures exchanges, no matter how they are organized and run, exist because they provide two vital economic functions—risk transfer and price discovery. Futures markets make it possible for those who want to manage price risk—*hedgers*—to transfer some or all of that risk to those who are willing to accept it—*speculators.*

Price-Risk Transfer: Hedging

A primary economic function of futures markets is *hedging.* Hedging is buying and selling futures contracts to offset the risks of changing cash market prices. This risk-transfer mechanism has made futures contracts virtually indispensable to companies and financial institutions around the world.

Hedgers either own or plan to own a cash commodity—corn, soybeans, wheat, U.S. Treasury bonds, notes, bills, etc.—and are concerned that the commodity's price may change before they buy or sell it. Almost anyone who seeks protection against unwanted price changes in the cash markets can use the futures markets for hedging—farmers, grain elevator operators, merchandisers, producers, exporters, bankers, bond dealers, insurance companies, money managers, pension fund managers, portfolio managers, thrifts, manufacturers, and others.

Price risk exists throughout business. In agriculture, for instance, a prolonged drought may affect a farmer's crop supply as well as the income he receives. The drought also may affect the price paid by grain companies for corn, wheat, soybeans, and oats. Those prices, in turn, may directly impact consumer prices for cereals, cooking oils, salad dressings, bread, meat, and poultry.

For manufacturers, diminished supply—caused by an extended labor strike or embargo of a raw material—could result in a sharp price increase of a specific manufactured product. These economic factors may directly affect the price manufacturers and consumers pay for an array of commodities, ranging from gasoline and home heating oil to jewelry. For a bank, savings and loan, or other financial institution, an interest rate change affects the rate the institution pays on certificates of deposit. This, in turn, influences its lending rates.

There is no escaping the varying degrees of price fluctuation, i.e., risk, in every sector of today's economy. Hedging in the futures markets minimizes the impact of these undesirable price changes.

Take the example of a contractor who wants to build a development with 20 houses. He decides to sell each house before beginning construction to remove the risk of falling real estate values, which would cause him to lose money. Of course, by preselling, he forfeits the benefits from any appreciation in land value as well. Instead, he locks in a price for his development and removes any risk, good or bad, associated with real estate market fluctuations.

The buyers of those houses do much the same thing. By locking in their price, they are protected from rising real estate prices, but they also lose the ability to buy the house more cheaply if prices fall during the construction process. Both the home buyers and the contractor used hedging to buy the price stability they wanted.

For a futures example, suppose a soybean processor agrees to sell soybean oil to a food manufacturer six months from now. Both agree on a price today even though the oil will not be delivered for six months. The soybean processor does not yet own the soybeans she will eventually process into oil, but she is concerned that soybean prices may rise during the next six months, causing her to lose money.

To hedge against rising prices, the soybean processor buys soybean futures contracts calling for the delivery of the soybeans in six months. When five and a half months have passed, the soybean processor purchases the soybeans in the cash market and, as feared, prices have risen. Because she hedged in the futures market, however, the soybean processor can now sell her futures contracts at a profit, since futures prices also have increased. She uses the gain in the futures contract to offset the higher cost of soybeans, protecting her profit on the sale of the soybean oil.

Cash and futures prices tend to move in a roughly parallel pattern since they react to the same supply/demand factors. In general, hedgers are most interested in the difference between the cash price and futures price—the *basis*—which is more stable and predictable than the actual cash and futures price levels.

Financial futures provide the same type of hedges. Suppose a major financial institution holds a significant amount of long-term U.S. Treasury bonds. The firm's financial officers are concerned that interest rates may rise in the near term, causing a decline in the value of the bonds. Knowing there is a substantial risk in holding this unhedged cash position, they elect to sell U.S. Treasury bond futures.

A month later, as expected, interest rates rise and bond prices decline. The firm lifts its hedge, buying back the futures it originally sold, and earns a profit. The firm succeeded in protecting the value of the cash bonds, as the profit from the hedge offsets the decline in the Treasury bonds' cash market value. Of course, the market does not always move as expected. A hedger accepts that possibility, sometimes forfeiting the opportunity to make a gain in the market. It is more important to establish and achieve market objectives, like eliminating price risk.

Price Discovery

As the needs and expectations of hedgers and speculators converge on the exchange floor, trades are made and price information is provided to the world. This price information is used as a benchmark to determine the value of a particular commodity or financial instrument on a given day and time. The benefits of futures exchanges reach every sector of the world where changing market conditions create economic risk.

Speculators Add Liquidity and Capital to the Markets

Speculators fulfill several vital economic functions, as they facilitate the marketing and trade of basic commodities and financial instruments. Speculators do not create risk; they assume it in the hope of making a profit.

In a market without these risk-takers it would be difficult, if not impossible, for hedgers to agree on a price because the sellers (or short hedgers) want the highest possible price, while the buyers (or long hedgers) want the lowest possible price. Finding offsetting hedgers would not be very cost-efficient. Sellers would have to accept the bid regardless of how low and buyers would have to accept offers regardless of how high. Speculators bridge the gap between bids and offers, thus making the market more cost-efficient.

When speculators enter the marketplace, the number of ready buyers and sellers increases and hedgers are no longer limited by the hedging needs of others. In addition to assuming risk and providing liquidity and capital, speculators help ensure the stability of the market.

Speculators trade in the futures markets to profit from price fluctuations. Many external factors affect the price of a commodity or financial instrument. The price of grain, for example, changes along with supply and demand. Plentiful supplies at harvest usually mean a lower price for grain. Higher prices may result from such things as adverse weather conditions during the growing season or an unexpected increase in export demand. Financial instruments fluctuate in price due to interest rate changes and various economic and political factors.

When speculating in futures markets, both profits and losses are possible—just as in owning the actual cash commodity. But speculators rarely have an interest in owning the cash commodity or financial instrument that underlies a futures contract. They buy contracts expecting prices to increase, hoping to later make an offsetting sale at a higher price and, thus, a profit. They sell contracts expecting prices to fall, hoping to later make an offsetting purchase at a lower price and, again, a profit. A speculator can enter the market with either a purchase or sale—a unique aspect of futures markets. His market expectations ultimately drive his decision.

The speculator's profit potential is proportional to the amount of risk he assumes and his skill in forecasting price movement. Potential gains and losses are as great for the selling (short) speculator as for the buying (long) speculator. Whether long or short, speculators can offset their positions and never have to make or take delivery of the actual commodity.

Types of Speculators

Speculators can be classified by their trading methods. A *position trader* initiates a futures or options position and holds it over a period of days, weeks, or months. A *day trader* holds market positions only during the course of a trading session and rarely carries a position overnight. Most day traders are exchange members who execute their transactions in the trading pits. A *scalper* trades only for himself in the pits. He trades in minimum fluctuations, taking small profits and losses on a heavy volume of trades. Like a day trader, a scalper rarely holds positions overnight.

Finally, speculators also may be spreaders. *Spreaders* trade the shifting price relationships between two or more different futures contracts. Examples include: different delivery months of the same commodity, the prices of the same commodity on different exchanges, products and their by-products, and different but related commodities.

Hedging Example

Hedging in the futures market is a two-step process. Depending upon the hedger's cash market situation, he either will buy or sell futures first. For instance, if he is going to buy a commodity in the cash market at a later time, his first step is to buy futures contracts. Or if he is going to sell a cash commodity at a later time, his first step is to sell futures contracts.

The second step occurs when the cash market transaction takes place. At this time, the futures position is no longer needed for price protection and should be offset (closed out). If the hedger was initially long (long hedge), he would offset his position by selling the contract. If he was initially short (short hedge), he would buy back the futures contract. Both the opening and closing positions must be for the same commodity, number of contracts, and delivery month.

Example:

Assume in June a farmer expects to harvest at least 10,000 bushels of soybeans during September. By hedging, he can lock in a price for his soybeans in June and protect himself against the possibility of falling prices.

At the time, the cash price for new-crop soybeans is $6 and the futures price of November soybean futures is $6.25. The delivery month of November marks the harvest of new-crop soybeans.

The farmer short hedges his crop by selling two November soybean futures contracts (5,000 bushels per contract) at $6.25. (Typically, farmers do not hedge 100 percent of their expected production, because the exact number of bushels produced is unknown until harvest. In this scenario, the producer expects to produce more than 10,000 bushels of soybeans.)

By the beginning of September, cash and futures prices have fallen. When the farmer sells his cash beans to the local elevator for $5.72 a bushel, he lifts his hedge by purchasing November soybean futures at $5.95. The 30-cent gain in the futures market offsets the lower price he receives for his soybeans in the cash market.

Cash	Futures
Jun	
Price for new-crop soybeans at $6.00/bu	Sells 2 Nov Soybean contracts at $6.25/bu
Sep	
Sells 10,000 bu soybeans at $5.72/bu	Buys 2 Nov soybean contracts at $5.95/bu
Result	
Cash sale price	$5.72/bu
Futures gain	.30/bu
Net selling price	$6.02/bu

Had the farmer not hedged, he would have received only $5.72 a bushel for his soybeans—30 cents less than he did.

Speculating Example

Depending on a speculator's expectations of future price movement, she either will buy or sell futures as her first market position.

A speculator would go long contracts when expecting prices to rise, hoping to later make an offsetting sale at a higher price and, thus, a profit. Or a speculator would go short contracts when expecting prices to fall, hoping to later make an offsetting purchase at a lower price and, again, a profit.

The speculator will offset her opening position before the futures contract expires by taking a second position opposite the opening transaction. Both opening and closing positions must be for the same commodity, number of contracts, and delivery month.

Example:

Bond futures are trading at 92-00, and a trader believes that bond prices will rise (and interest rates will fall). Assume she goes long one $50,000 MidAm T-bond contract. Subsequently, bond prices rise to 94-00. She offsets the original long position by selling—a profit of 2-00 points, or $1,000.

Long one contract at 92-00, or $46,000
Short one contract at 94-00, or $47,000

Profit $1,000

If a speculator anticipates an increase in interest rates, she also expects bond futures to fall. A short futures position may be used to take advantage of a falling bond market.

For example: Bond futures are trading at 92-00. The trader goes short in anticipation of falling bond prices. Prices drop to 89-00, and she offsets the original position to realize a 3-00 point gain, or $1,500 profit.

Short one contract at 92-00, or $46,000
Long one contract at 89-00, or $44,500

Profit $1,500

The speculator made a profit by trading bond futures because her price expectations were correct. The opposite is also possible. If the speculator had been wrong, her position could have resulted in a loss. That is why it is important to keep a close watch on the market, to develop a trading plan before initiating a futures position, and to understand the risks involved in trading.

The Trading Process: Mechanics of the Market

Buyers and sellers meet in the pits of futures exchanges, where open outcry is used to discover a price for specific futures and options contracts. At first glance, this open outcry system appears chaotic.

In reality, the whole trading process has gone through almost a century and a half of refinement—whether it's a customer placing an order through a commission house or the dissemination of price information from the trading floor. By taking a few minutes to look at the trading process, you'll discover just how orderly the system really is.

The Customer and the Commission Merchant

Commission houses handle most customer operations through commodity representatives. A number of terms are used to describe commission houses, i.e., wire houses, brokerage houses, and futures commission merchants (FCMs). Some firms specialize in commercial hedging accounts; others concentrate on public speculative commodity trading.

A commission house becomes a registered member firm of the CBOT to trade or handle accounts in CBOT markets. Regardless of the firm's name, size, and scope, its basic function is to represent the interests of those in the market who do not hold seats on the commodity exchange. The commission house places orders, collects and segregates margin monies, provides basic accounting records, and counsels customers in their trading programs in return for commission fees.

Opening a Trading Account

The trading process begins when a prospective customer discusses his financial goals with a registered commodity representative. At that time, the risks associated with trading futures and options are explained to the customer. An account can be opened once the customer understands the financial risks and meets certain financial requirements. The customer also signs several legal documents concerning his and the firm's responsibilities regarding the account.

There are various types of futures and options accounts: *individual accounts* in which trading decisions are made by the customers, *joint accounts* in which all parties have input on trading decisions, and *discretionary accounts* (also known as *controlled* or *managed accounts*) in which the customer authorizes another person to make all trading decisions. For all accounts, written confirmations of all transactions must be sent to the customer.

Margins

When a customer places an order, she must post a *performance bond margin*—a financial guarantee required of both buyers and sellers to ensure they fulfill the obligation of the futures contract. Futures exchanges set minimum margin requirements, usually between 5 and 18 percent of a contract's face value, but brokerage firms can require a larger deposit.

The initial amount a market participant must deposit is called *initial margin.* The margin is debited or credited daily based on the close of that day's trading session (referred to as *marking to the market*) with respect to the customer's open position. A customer must maintain a set minimum margin known as *maintenance margin* in her account. When the debits from a market loss reduce the funds in the customer's account below the maintenance level, the broker calls the customer for additional funds to restore the account to the initial margin level. This request for additional money is called a *margin call.* Margin in excess of the required amount is available for withdrawal by the customer.

The Auction in Action

While all market participants have indirect access to the floor through their brokers, only exchange members have the privilege of trading on the floor. Since many people are intrigued by the trading process, the mechanics of what occurs on the floor deserve a closer examination.

The Trading Floor

The trading floor is specifically designed for futures trading. Trading at the CBOT is done in pits—raised octagonal platforms with steps descending toward the inside. The configuration permits all buyers and sellers to see each other. Traders stand in specific areas in the pits according to the delivery month in which they trade.

On each business day, trading is officially opened by the clanging of a large gong, a historic instrument that has been in use for more than 80 years. No futures trade can be made before the gong booms out the official opening signal, and none can be made after it sounds the closing.

During trading hours, the trading floor is usually a scene of feverish activity. Computers and monitors on the trading floor relay current information from the major securities exchanges, while the major news wire services provide a constant flow of current information—including weather conditions in pertinent crop-growing regions and market reports from other commodity exchanges.

Hand Signals

Most visitors seeing the trading floor for the first time ask, “What do those hand signals mean?” The Rules and Regulations of the CBOT require pit traders to use open outcry in buying and selling. In addition, they use standard hand signals to clarify their verbal bids and offers, particularly when trading is fairly active. Hand position tells whether a trader is buying or selling; his palm faces inward if he is buying, and his palm faces outward if he is selling. With his arms extended, a trader uses finger signals to indicate his bid or offer.

Hand signals also indicate the number of contracts a trader wishes to buy or sell. For grains, each finger held in a vertical position indicates 5,000 bushels, or one contract.

Bids and offers are made by open outcry so that any trader in the pit who wishes to take the opposite side of the trade may do so. An important verbal distinction also shows if a trader wants to buy or sell. Buyers call out price first and then quantity; sellers call out quantity first, then price.

When a trade is made, each trader writes the completed transaction on a trading card or multipart order form. For instance, a trading card for T-bond futures must include the contract month, the price, the trader's initials, the other trader's identity, the opposite side's clearing firm, and a code indicating time. These trading cards constitute original records, and the essential data from them is transferred to the buyer's and seller's clearing firms.

Order Routing System

Customer service has always been a priority at the CBOT. To that end, a major effort to streamline the order flow in both the Financial and Agricultural Complexes resulted in the Order Routing System (ORS).

ORS provides electronic order entry to either the FCM's centralized desk off the floor or to its booth on the trading floor. These orders, in turn, can be sent directly to an electronic device that brokers have in the pit, an alternative to either flashing or running a paper ticket into the pit.

Once received, the broker executes the trade in the open outcry marketplace. The broker or his clerk then electronically confirms the trade with the FCM, immediately providing the firm with the order's price and quantity.

In February 2000, the Chicago Board of Trade introduced OrderDirect™ API, an exclusive connection between FCM order management systems and the primary CBOT routing network for the trading floor. Functioning as a communications link, OrderDirect API enables brokerage firms to provide quick customer trade confirmations. Through the Internet, order entry turnaround times on market orders are often less than one minute.

Trading Badges

Because all trades must be recorded, traders must be able to identify each other. All traders wear a badge, the color of which indicates the trading privileges they may exercise. Yellow badges identify full members; red badges, associate members; green badges, COM members; and black badges, IDEM members. Each badge bears a trading acronym of no more that three letters by which traders record their trades. No two acronyms are the same. The letters usually represent a trader's initials, but any letters may be chosen that are not already being used by another trader.

Trading Jackets

Exchange rules dictate that trading floor personnel must wear jackets and ties. Business attire is not tailored with the physical demands of the trading pit in mind. So the trading jacket was developed as a lightweight, loose-fitting alternative in which a trader may move more freely.

Member brokerage firms maintain large floor staffs. To find each other in the trading floor crowd, every brokerage staff wears the same color trading jackets, which sometimes bear the company name or logo—like sports teams with uniforms.

Independent traders often wear trading jackets in colors of their own choosing, or they might wear the same color jacket as the member firm that clears their trades.

Price Quotations

Electronic wall boards—located on the CBOT's trading floor—flash price changes during trading. A market data quotation network then disseminates these to the outside world. For open outcry pit trading, quantities associated with last prices are not shown on the market data feed. Instead, the Board of Trade Clearing Corporation compiles trading day volume figures to be released officially the next day, primarily via the CBOT's Market Data Information Department and market quotation network.

Price quote dissemination starts in the pits and works like this. From a raised position above each pit—the reporter's perch—CBOT market reporters use laptop computers to constantly input changing prices into an electronic price reporting system. This system immediately updates both the wallboards on the CBOT's trading floors and a mainframe database, while transmitting the data over the CBOT market data network to quotation vendors, who redistribute it to world-wide users. (Typically, these users see CBOT market data on quote vendor terminal displays or their own PC screens.) The last, or most current, price posted constitutes the market until a different price is posted.

Newspapers vary in the manner in which they print quotations. *The Wall Street Journal* follows commonplace procedures and provides a key to reading most commodity columns.

For instance, the months listed are the time of maturity, or delivery. The word *Open,* signifies either the price of the day's first contract traded or the price based on an opening range. The next column is the *High*, which designates the highest price of the day. Following is the *Low* price. The *Settle* column refers to the settlement price, which is the closing trade. If there is a closing range, the Board of Trade Clearing Corporation determines a settlement price, usually the midpoint of the range. The *Change* column refers to the change from the previous day's settlement price. The next two columns give lifetime high and low prices of that particular contract. *Open Interest* is the final column, and it gives the number of contracts that have not yet been offset by opposite futures contracts or fulfilled by delivery of the commodity.

Safeguarding the Marketplace

Protecting the interests of all participants in the futures market is the responsibility of all exchange and industry members, as well as federal regulators. Working in concert, they ensure an honest, open trading environment for all market participants.

There is a long history of self-regulation by U.S. futures markets that dates as far back as the mid-1800s and predates both state and federal regulations.

The CBOT's extensive rules and regulations are designed to support competitive, efficient, liquid markets. The CBOT continuously scrutinizes these rules and regulations and periodically amends them to reflect the needs of market users.

Making sure that these trading rules and regulations are followed is the responsibility of the CBOT's Office of Investigations and Audits (OIA). OIA staff members work to prevent trading irregularities and investigate possible violations of exchange regulations. The activities of the OIA Department include daily on-site surveillance of trading activity, continuous monitoring with state-of-the-art technology of member firms' risk exposure, and auditing members firms' financial conditions, as well as reviewing firms' trading practices and customer complaints.

In particular, OIA conducts surveillance programs, such as the Computerized Trade Reconstruction (CTR) system. Developed by the CBOT in 1986 and enhanced in 1994, CTR (now called Advanced CTR) is able to pinpoint the traders, the contract, the quantity, the price, and can input the time of execution for any trade. A program within the system called SMART®—Sophisticated Markets Analysis and Research Technology, developed in 1996—is able to reconstruct the trading activities of members and member firms to detect patterns of conduct that might indicate rule violations.

Board of Trade Clearing Corporation

U.S. commodity exchanges use clearing operations as another mechanism to uphold the integrity of futures markets. The Board of Trade Clearing Corporation (BOTCC®) is an independent corporation that settles all trades made at the CBOT and MidAm. The BOTCC acts as a guarantor to clearing members for trades it maintains, reconciles all clearing member firm accounts each day to ensure that all gains have been credited and all losses have been collected, and sets and adjusts clearing member firm margins for changing market conditions.

Throughout the CBOT trading session, each trader turns endorsed orders of his completed trades over to his clearing firm. There are approximately 130 member firms of the BOTCC. The BOTCC settles each member firm's account at the end of the trading day, balancing quantities of commodities bought with those sold. Traders are financially responsible to their clearing firms, and the BOTCC guarantees performance of all contracts between itself and its clearing members.

Upon clearance of the trade, the BOTCC substitutes itself as the opposite party of the transaction. It interposes itself as the buyer to every clearing member seller and the seller to every clearing member buyer and becomes, in effect, a party to every clearing member transaction. What was initially a sale by clearing member A to clearing member B becomes a sale by A to the BOTCC. B's purchase becomes a transaction with the BOTCC rather than with A. Because of this substitution of parties, it is no longer necessary for the buyer (or seller) to find the original seller (or buyer) when he wishes to offset his position. He merely executes an equal and opposite transaction, usually with an entirely different party, and ends up with a net zero position.

One of the most important financial safeguards in ensuring performance on futures contracts is the *clearing original margin,* which clearing member firms must maintain against their position in each commodity. These margins are set by the BOTCC risk committee and governors. They are separate from the margins that individual holders of commodities accounts are required to deposit with the brokers by exchange regulation.

The BOTCC settles its accounts daily. As closing or settlement prices change—causing variations in the value of all outstanding futures positions—the BOTCC collects from those who have lost money and credits the funds immediately to the accounts of those who have gained. Thus, before each day's trading begins, all of the previous day's losses have been collected and all gains have been paid. In this way, the BOTCC maintains very tight control over margins as prices fluctuate. It ensures that sufficient margin money will be on deposit at all times to guarantee the performance of all CBOT contracts.

The success of this system is obvious. Since its start in 1925, no customer within or outside of the exchange has lost money due to default on a futures position.

Industry and Federal Regulations

Besides exchange efforts to uphold the integrity of the futures markets, there are also industry and federal regulations in place.

The U.S. commodity industry operates under an extensive regulatory umbrella, whose beginnings date back to 1924. The Commodity Futures Trading Commission (CFTC), established under the 1974 amendments to the Commodity Exchange Act (CEA), has far-reaching authority over a wide variety of commodity industry activities. The National Futures Association (NFA) provides an additional layer of self-regulation over the nonexchange industry.

Congress created the CFTC in 1974 as an independent agency responsible for administering the federal commodities law, which focuses primarily on customer protection and market integrity. Subject to certain express limitations, the CFTC has exclusive jurisdiction over transactions in futures, options, and leverage contracts involving commodities and options contracts on physical commodities. In 1982, amendments to the CEA specified the CFTC's jurisdiction over futures and options involving a group or index of securities under the Shad/Johnson Accord.

The CFTC's powers reach all persons involved in domestic commodity trading, including, but not limited to, exchanges, exchange members, and FCMs. The CFTC's primary regulatory tools include the authority to approve or disapprove contract market designations and contract market rules, rule-making authority, and the ability to bring enforcement actions. Further, the CFTC provided a reparation procedure for investors to assert claims based on violations of federal commodities law.

The NFA was registered by the CFTC as a "futures association" under CEA Section 17 in September 1981. An industrywide, industry-supported, self-regulatory organization for futures and options on futures markets, the NFA is mandated under the CEA to adopt and implement a comprehensive self-regulatory program for the futures industry, with its primary focus on persons and firms that are not members of a commodity exchange.

The NFA's primary responsibilities are to enforce ethical standards and customer protection rules, screen futures professionals for membership, audit and monitor professionals for financial and general compliance rules, and provide for arbitration of futures-related disputes.

The NFA directs educational efforts at both members and the investing public. Members are assisted in complying with NFA rules and CFTC registration. For the investing public, the NFA produces materials concerning such topics as futures trading fundamentals and fraud identification.

It is through the individual exchanges and industry and federal actions that the financial interests of all market participants are protected.

About the Building and Its Trading Floors

The Chicago Board of Trade building stands authoritatively over the city's financial district at LaSalle and Jackson, the exchange's home since 1930. Atop the structure sits a 31-foot statue of Ceres, the Roman goddess of grain and harvest.

Designed by the noted architectural firm of Holabird and Root, the original CBOT structure is classically art deco and a significant element in the cityscape. Accorded status as a Chicago landmark in 1967, the building creates a dramatic focus at the southern end of Chicago's LaSalle Street "canyon."

The CBOT eventually outgrew its original structure and, in 1982, undertook the first of two major expansions to increase trading floor capacity. The 1982 annex added a 32,000 square-foot trading facility as well as office space to the building's south end. The building addition included an atrium, rising from the 12th floor to the 23rd, that is bound by three "glass walls" and a limestone wall from the original 1930 structure.

In 1997, the CBOT unveiled a new 60,000 square-foot trading floor, making it the world's largest open outcry facility at 92,000 square feet. State-of-the-art technology provides members with the most sophisticated order-routing system for more efficient trading.

The Board of Trade Visitor Center

Located on the CBOT's fifth floor, the Visitor Center features an observation gallery overlooking the agricultural trading floor. From this excellent vantage point visitors clearly see the entire trading process—phone clerks, runners, brokers, and price boards. An observation gallery is also available providing visitors with a firsthand view of trading on the CBOT's financial floor.

Adjacent to the agricultural gallery, a historical mini-museum displays artifacts and photos that trace the evolution of commodities trading, from its beginnings to the present day.

Education is a key function of the Visitor Center, where guests listen to an explanation of the markets while viewing the trading activity. The Visitor Center also presents the CBOT's award-winning film, "A Window on Futures." In addition to presentations in English, audio and videotaped market explanations are available in 11 languages, including Japanese, Korean, Chinese, French, German, Spanish, Portuguese, Italian, Russian, Polish, and Danish. Informational brochures also have been translated into foreign languages and are provided to Visitor Center guests.

The Visitor Center is open Monday through Friday from 8:00 a.m. to 2:00 p.m., except on legal holidays. Reservations are required for groups of more than 10. The minimum age required for group members is 16. Call 312-435-3590 or 312-435-3625 for additional information or to make reservations. There is no admission fee.

If you have occasion to be in Chicago's financial district, please take the time to stop by the exchange. This gallery truly offers a firsthand opportunity to see the "action in the marketplace."

For More Information

To receive a free CBOT publications catalog, which lists the many educational publications and audiovisual materials available, call or write:

Chicago Board of Trade
Publications Department
141 W. Jackson Blvd.
Suite 2210
Chicago, IL 60604-2994
800-THE-CBOT or 312-435-3558
Fax: 312-341-3168

Also, those with Internet access can find regularly updated contract specifications and various other information regarding both the CBOT and MidAm at the following addresses:
CBOT web site: www.cbot.com
MidAm web site: www.midam.com

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