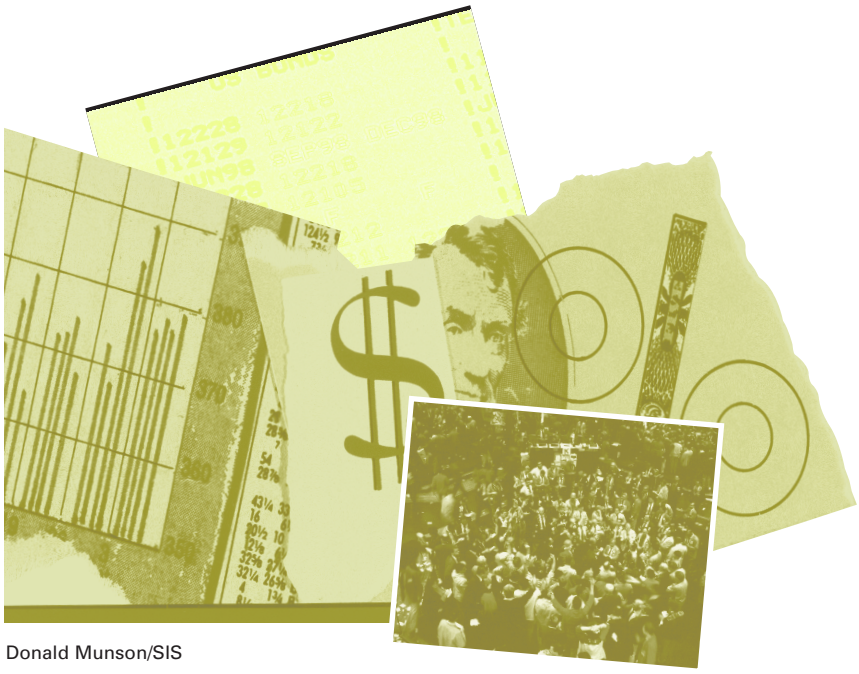
Trading in futures can provide considerable financial rewards.



Donald Munson/SIS

Trading in futures can provide considerable financial rewards. Futures speculation, however, also involves substantial risks. The key to avoiding the pitfalls and reaping the rewards is to develop your trading skills and knowledge of the markets.

The Chicago Board of Trade (CBOT®) created this booklet to help you take the first step. It provides a thorough introduction to speculating for those who have had only minimal exposure to the futures markets. If you want to learn more, see our web site at www.cbot.com, contact your broker, or refer to the numerous resources listed in the appendix of this booklet.

Contents

Introducing the Speculator

Speculators play a vital role in the futures markets. While futures are designed primarily to assist hedgers in managing their exposure to price risk, this would not be possible without the participation of speculators. Speculators, or traders, assume the price risk that hedgers attempt to lay off in the markets. In other words, hedgers often depend on speculators to take the other side of their trades, and to add depth and liquidity to the markets.

Many people are attracted to futures market speculation after hearing stories about the amount of money that can be made trading futures. While there are success stories, the number of big-time traders is not unlike the number of superstars in professional sports. Many people strive for the top, but few ever reach it.

At the same time, many people have achieved a more modest level of success in futures trading. The keys to their success are typically hard work, a disciplined approach, and a dedication to master their trade. If you intend to follow this path, this book can help you get started.

Types of Traders . . .

Futures traders can be categorized in any number of ways. Some are full-time professional speculators while others only dabble in the markets. Some of the major classifications follow:

Professional Traders

Perhaps the most visible and colorful speculator is the professional floor trader, or local, trading for himself or herself on the floor of an exchange. Locals come from all walks of life and frequently begin their careers as runners, clerks, or assistants to other traders and brokers. Very few locals, however, reach a high level of success. Trading on the floor requires a unique set of skills, and the cost of participation is typically high.

In addition to floor traders, many professional traders can be found at a computer participating in the market through the a/c/e℠ platform. a/c/e (alliance/cbot/eurex) provides trading members electronic access to the exchange.

CBOT trading privileges are generally tiered by product group. Full trading privileges allow

Visit www.cbot.com and click on the a/c/e button for further information on electronic trading.

Further information on acquiring CBOT trading privileges can be obtained by contacting the CBOT Member Services Department at 312-435-3499 or online at www.cbot.com.

traders to trade all CBOT contracts, while other trading privileges are limited to index, debt, and energy contracts, for example.

Proprietary Traders

Another major speculator is the proprietary trader who works off the floor on a professional trading desk. These "upstairs" traders are employees of large investment and commercial banks and trading houses typically located in major financial centers. Their job is to earn money for their employer by engaging in speculative trading activity. They are then compensated according to the profits they generate.

Public Speculators

While locals and proprietary traders grab the most attention in the markets, the vast majority of speculators are individuals trading with private funds. As a group, they are called the retail business, or public speculators, and are serviced by account executives in the United States and throughout the world.

. . . and How They Trade

Several other terms are also used to describe traders and their approaches to the market.

A *scalper* trades in and out of the market many times during the day, hoping to take a small profit on a heavy volume of trades. Because a scalper is willing to buy at the asking price and sell at the bid price, he or she plays a vital role in providing liquidity to the market. A scalper rarely holds a position overnight. Most floor traders are scalpers.

A *day trader* is similar to a scalper in that he or she also typically trades on the floor and doesn't hold overnight positions. A day trader makes fewer trades, however, and hopes to profit from intraday trends. Many proprietary traders and some public speculators are day traders.

A *position trader* maintains a position for days, weeks, or even months. Position traders focus on major long-term price trends and are less concerned with minor fluctuations. Most public speculators are position traders.

How to Access the Market

Once you've decided that you want to trade in futures, you'll also need to determine how your trades will be executed.

If you're new to the markets, it's particularly important to get professional assistance from a full-service broker or trading advisor. The broker or advisor can walk you through everything you need to know and provide professional trading advice.

Once you've become fully experienced and want to make your own trading decisions, you may consider using a broker for execution purposes only. Numerous discount brokerage companies specialize in this kind of business. Further, if your trading volume becomes substantial, you may want to consider obtaining trading privileges, which would give you the lowest possible trading fees.

In recent years it has become increasingly popular to gain exposure to the futures markets by investing in managed futures funds. Most major brokerage houses offer managed accounts, as do numerous independent fund operators.

If you choose this route, your money will be pooled with that of many other investors and all trading decisions will be made by the fund manager. You'll want to research the fund's historical performance and the manager's trading style before deciding if you want to invest.

Regardless of your approach, it will be helpful to become familiar with the most important terms and procedures in the futures markets. The next section will introduce you to these basics.

Further information on finding a broker can be found on www.cbot.com.

Market Mechanics and Terminology

MONTH CODES
(for the current year)

Janruary	F
February	G
March	H
April	J
May	K
June	M
July	N
August	Q
September	U
October	V
November	X
December	Z

In order to understand the workings of the futures markets, it's essential to become familiar with some basic terminology and operations. These terms may sound confusing at first. In time, however, they'll become quite familiar. While the trading rules and procedures of each futures exchange vary slightly, these terms tend to be used consistently by all U.S. exchanges.

Identifying the Contract and Trading Month

All futures contracts have been assigned a unique one- or two-letter code. This abbreviation, or ticker symbol, is used to identify the contract on quotation vendor machines, on the price boards located on the exchange floor, and on the a/c/e platform. The codes are also used by trading floor personnel to process all transactions through their member firms and the clearing house.

For example, the ticker symbol for CBOT Treasury bond futures is US on the floor and ZB on the a/c/e platform. A full list of contract ticker symbols can be found online at www.cbot.com.

To identify the precise futures contract you want to trade, the contract, month code, and year must be specified. For example, knowing that the exchange floor ticker symbol for Treasury bond futures is US, noting on the table that the code for March is H, and knowing that it is 2001, you can see that the March T-bond contract identifier is USH1.

Volume and Open Interest

Volume is the most frequently cited statistic in reference to a futures contract's trading activity. Each unit of volume represents a contract traded and includes both the long and the short side of the trade. Volume is typically quoted on a daily basis.

Open interest, on the other hand, refers to the number of futures positions that remain open, or unliquidated, at the close of each trading session.

To illustrate, assume that a trader buys 15 contracts and then sells 10 of them back to the market before the end of the trading day. His trades add 25 contracts to that day's total volume figure. Since 5 of the contracts remain unliquidated, open interest would increase by 5 contracts.

Volume and open interest figures are often used to gauge the level of commercial participation in a

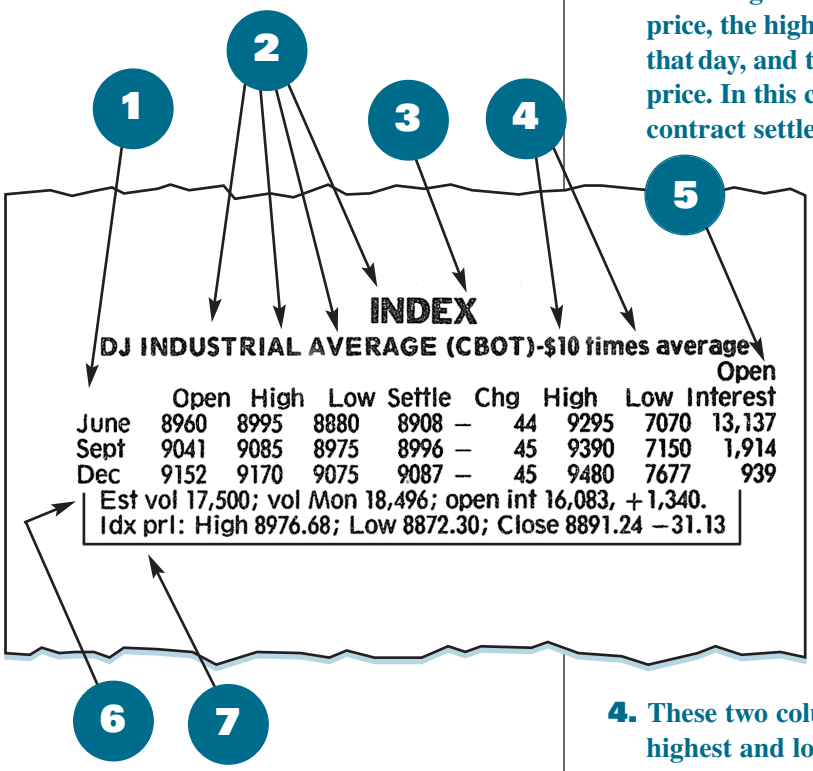
market. For example, if a contract experiences relatively low volume levels but high open interest, it is generally assumed that commercial participation is high. This is because commercial hedgers tend to use the markets for longer-term hedging purposes, putting their trades on and keeping them until they're no longer needed to manage a given risk. Conversely, high volume with low open interest tends to indicate more speculative activity. This is because the majority of traders prefer to get in and out of the market on a daily basis.

Reading the Prices

In addition to www.cbot.com, numerous national and local newspapers publish futures and options prices, and volume and open interest figures, on a daily basis. In order to understand a price, you must first know how it is quoted. CBOT® DJIA℠ futures contracts, for example, are quoted in whole index points. The table on the following page shows how to read CBOT® DJIA℠ futures prices in *The Wall Street Journal*.

Each morning, information is displayed on the prior day's trading session. This quote, which appeared in a Wednesday issue, shows prices, volume, and open interest based on Tuesday's market.

Current prices and the previous day's settlement prices can be found online at www.cbot.com.



1. **The first column indicates the delivery month.**

2. **Following are the opening price, the high and low price for that day, and the final settlement price. In this case, the June contract settled at 8908.**

3. **This column indicates how much today's settlement price is higher or lower than the previous settlement price. In this case, the price of the June contract declined by 44 index points.**

4. **These two columns display the highest and lowest prices ever reached for each delivery month since the contract began trading.**

5. **Finally, the total open interest, or outstanding positions, for each contract month is shown.**

6. **Across the bottom is the total estimated volume for CBOT® DJIA℠ futures traded on that day, the actual volume from the previous day, the total open interest in all delivery months, and how much open interest has increased or decreased from the prior trading day.**

7. **Preliminary numbers of the underlying cash market.**

Tick Size

The smallest unit of exchange in U.S. currency is a penny. Similarly, each futures contract has a minimum price increment called its tick size. The term *tick size*, or simply *tick*, dates back to the old ticker tape machines, which were the original means of conveying price information from the trading floor.

The tick size varies for different futures contracts. CBOT T-bond futures, for example, have a tick of 1/32nd of one percent. Since a single contract represents a $100,000 face value bond, the tick size equals $31.25.

Traders frequently talk in terms of ticks to express profits or losses on a trade. For example, the value of a tick in CBOT muni bond futures is $31.25. Hence, if a trader says he's made 10 ticks in muni bonds, he's earned $312.50 per contract.

The Route of an Order

As a public speculator, your futures trades must go through a registered broker at a Futures Commission Merchant (FCM).

FCMs are brokerage firms licensed to handle customer business in the futures markets. When you instruct your broker to execute a trade for you, the broker transmits the order (either verbally or electronically) to

the appropriate trading arena. Trade confirmations are then relayed back to the customer. Depending on the type of order and the current market conditions, this whole process can sometimes be completed in a matter of seconds.

Types of Orders

There are many different ways to enter orders into the futures markets. Your decision about which type of order to use will depend on your trading objectives and your broker's recommendation. Further, each brokerage firm and futures exchange has discretion in determining which kinds of orders are accepted.

It is vital, however, for you and your broker to fully understand and agree on the type of order you are entering. Mistakes can be costly but can almost always be avoided with clear communication.

Following are the most regularly used orders:

Market Order

The most common type of order is the market order. If you enter a market order, you simply state the number of contracts you want to buy or sell in a given delivery month. You do not specify price, since your objective is to have the order executed as soon as possible at the best possible price.

When the order is filled, it's usually close to the price that was trading at the time it was placed. In a fast market, however, the price could be considerably different.

Limit Order

A limit order specifies a price limit at which the order must be executed. In other words, it must be filled at that price or better. The advantage of a limit order is that you know the worst price you'll get if the order is executed. The disadvantage is that you can't be certain that the order will be filled.

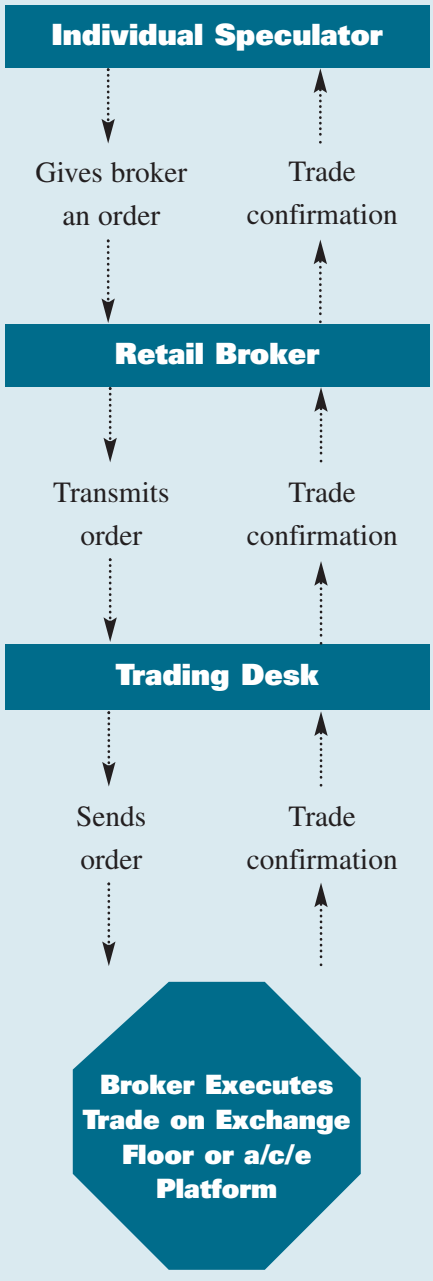
Stop Order

Stop orders are not executed until the market reaches a given price, at which time they become market orders. They are normally used to liquidate earlier positions.

Stop orders can also be used to enter the market. Suppose you expect a bull market only if the price passes through a specified level. In this case, you could enter a buy-stop order to be executed if the market reached this point.

One variation is a stop-limit order. With this type of order, the trade

THE ROUTE OF AN ORDER



must be executed at the exact price (or better) or held until the stated price is reached again. If the market fails to return to the stop-limit level, the order is not executed.

Position and Price Limits

In order to maintain orderly markets, futures exchanges typically set both position and price limits. A position limit is the maximum number of contracts that may be held by a market participant. While position limits apply to both hedgers and speculators, hedgers can expand their limits if they meet certain criteria.

Price limits, also called daily trading limits, specify a maximum price range allowed each day for a contract. Typically, these limits can be expanded under special provisions during periods of extreme price volatility. Further, price limits are frequently lifted during the delivery month of a futures contract. The daily price limits for CBOT futures contracts appear in their individual contract specifications on www.cbot.com, as do position limits.

Margins

To trade in the futures markets, you will be required to post a performance bond margin to ensure your performance against the obligations of the futures contract. Minimum margin requirements represent a very small percentage of a contract's total value. For example, the margin required for a T-bond futures position worth $100,000 may be as little as $2,400. While futures exchanges set minimum margin levels, brokerage firms can, and often do, require a larger margin than the exchange minimum.

When you first place an order, the amount you must deposit in your account is called initial margin. Based on the closing prices, your account is then debited or credited each day you maintain your position. For example, assume you bought 10 CBOT silver futures contracts at a price of $4.50 per troy ounce and posted initial margin. At the end of that trading day, the market closed at $4.55. As a result, the market has moved in your favor by 5 cents per troy ounce, or a total of $500 (for 10 contracts). This amount will then be credited to your account and is available for withdrawal. Losses, on the other hand, will be debited. This process is called marking-to-market.

Subsequent to posting initial margin, you must maintain a minimum margin level called maintenance margin. If debits from market losses reduce your account below the maintenance level, you'll be asked to deposit enough funds to bring your account back up to the initial margin level. This request for additional funds is known as a margin call.

Because margins represent a very small portion of your total market exposure, futures positions are considered highly leveraged transactions. This can be an attractive feature of futures trading because little capital is required to control large positions. At the same time, a bad trade can accrue losses very quickly. This is why successful traders must develop a sound trading plan and exercise great discipline in their trading activities. For specific margin amounts for each futures contract, you can look at the online margin requirements documents on www.cbot.com.

Delivery

Traders sometimes joke about having a truckload of soybeans dumped in their front yard as a result of a futures trade. While the potential for delivery is vital to linking cash and futures prices, in reality, very few futures trades actually result in delivery (and never in your front yard). Public speculators typically have no incentive to enter into the delivery process.

Delivery assignments for futures positions can begin once you enter the delivery month for a given contract. Typically, the oldest outstanding position is selected to match a delivery request. Some futures contracts use a cash-settlement process instead of physical delivery. For example, if you held a position in the CBOT® DJIA℠ futures contract until its expiration, you would simply receive (or pay) the final gains (or losses) on the contract based on the difference between the entry price and final settlement price.

In order to get the best advice regarding deliveries, you should again rely heavily on your broker. He or she will be able to advise you on how best to avoid or, at times, capitalize on delivery situations.

Using Fundamental Analysis to Forecast Prices

If you could predict the direction of prices with perfect accuracy, you'd obviously have no trouble making a fortune in the futures markets. Assuming that you can't, however, your next best option is to learn the forecasting techniques used by successful traders. One method, called fundamental analysis, is based on supply and demand information. In other words, if you expect increased demand for a product or supplies to be scarce, then prices should rise. Conversely, a lack of demand or excess supplies should drive prices down.

Fundamental analysis grew out of the agricultural markets but is also applied to financial futures trading. Much of the fundamental trade, particularly in the financial markets, centers upon the release of key reports. If these reports are in line with prior expectations, the impact on market prices will be minimal. When actual figures vary from expectations, market prices can respond dramatically.

Days on which key reports are released can present real trading opportunities. To take advantage of these opportunities, you must understand the meaning and potential impact of the report, as well as the market's prior expectations. Your broker can assist you in assessing this information.

The CBOT assists traders in finding key reports by supplying intraday market commentary which announces actual figures after they are released. Commentary is posted three times daily—at the opening, mid, and close of the market. For intraday, weekly, and historical commentaries, please click on the News Room button under www.cbot.com.

It's also important to keep in mind that price volatility is usually higher on release dates. Even if you don't intend to trade based on a given number, you may find the value of any open positions changing significantly on these days. Of course, this could work to your benefit or your detriment. In any event, it's important to understand the impact of the major reports and other critical events, regardless of whether or not you intend to trade on fundamental information.

Like any trading method, fundamental analysis has its limitations. Key statistics can be reported inaccurately, or your subjective interpretation of the information could be incorrect. New data is always filtering through the markets and creating

price changes. Opportunities can come and go before you even have a chance to react. And while one piece of information may point clearly in one price direction, other factors can combine to drive prices the other way.

Although forecasting futures prices is clearly tricky business, all traders face the same set of challenges. It's probably best to concentrate at first on only one or two related futures markets. Since so many factors can influence prices, limiting your efforts in this way will make fundamental analysis a much more manageable task. To get you started, we'll cover the major sources of fundamental news in both the agricultural and financial markets.

Fundamental Analysis in the Agricultural Markets

The CBOT's agricultural markets follow a yearly crop cycle, beginning with plantings and concluding with harvest. At the beginning of the season, the market assesses the supply situation by looking at how much acreage is expected to be planted in each crop and how much of the old crop remains in storage.

During the growing season, as traders begin to focus on final crop yields, weather becomes the major story. For example, a continued lack of rainfall in the Midwest will tend to drive grain prices higher. As growing conditions improve or worsen, grain prices fall or rise accordingly.

Livestock inventories can also affect prices—as cattle, hogs, and chickens are major consumers of corn and soybean meal. An increase in the number of cattle on feed, for example, would increase the demand for corn and drive corn prices higher.

But fundamental analysis in the agricultural markets doesn't stop with the U.S. crop. These markets are international in scope, and the study of supply and demand information must extend beyond U.S. borders. The U.S. corn and soybean crops compete primarily with Brazil and Argentina on the world market, while Canada is a major competitor in wheat. Japan, on the other hand, is probably the world's largest consistent importer of corn, wheat, and soybeans.

When assessing future price trends, the fundamental analyst must weigh the impact of numerous variables, both foreign and domestic. The major supply and demand factors for the agricultural markets can be summarized as follows on the next page:

On the Supply Side . . .

Carryover inventories

If a substantial amount of the prior crop remains in storage, supplies may be considered excessive and prices will be held down.

Planting intentions

At the end of the first quarter, estimates are released on how much will be planted in each crop. This is the market's first official look at the new-crop year.

Weather/crop progress

Crop projections are released throughout the growing season. Weather reports also factor largely in the market's assessment of final crop yields.

Final harvest results

Final supply figures are determined and sales versus new inventories are tallied.

International competitors

Traders also watch the progress of major foreign crops to assess the supply situation on a global scale.

Government programs

Domestic support programs may increase or decrease the amount of acres planted in various crops. The U.S. government also can support export prices through the Export Enhancement Program (EEP). Further, the rules of international trade agreements, like the General Agreement on Tariffs and Trade (GATT) and the North American Free Trade Agreement (NAFTA), can affect U.S. export policies.

Foreign government programs

Like the United States, other countries may subsidize their exports, bringing additional supplies into the world market.

On the Demand Side . . .

Livestock reports

Since cattle, hogs, and chickens are major consumers of corn and soybean meal, traders also monitor regular livestock reports.

Consumer preferences

As food preferences change, the demand for certain crops may be affected. For example, when studies indicated oats had a beneficial impact on cholesterol levels, the demand for oats increased, leading to higher oat prices for a time.

Foreign purchases

Traders watch other major countries (such as China and the former Soviet Union) to assess their potential import demand. Population growth rates, domestic production, and economic strength are monitored to determine a country's need and ability to buy agricultural products.

Government programs

While the U.S. government regularly supports the supply of and demand for U.S. crops with export programs, it can also severely curtail U.S. export potential by imposing trade embargoes against certain countries.

Currency markets

As the value of the U.S. dollar fluctuates, the relative cost of U.S. agricultural products versus agricultural products from other countries will change. If the dollar is too strong, for example, demand for U.S. crops may be hurt.

Fundamental traders sort through these and other factors to determine how they want to position themselves. For example, assume favorable weather conditions in South America are helping Argentina and Brazil produce a bumper crop of soybeans. This addition to the world supply would tend to drive prices down (assuming all other factors remained constant). As a result, a fundamental trader might decide to take a short position in soybean futures in anticipation of declining prices.

Information sources

The U.S. Department of Agriculture (USDA) is the major source of information on the agricultural markets. Several reports are released throughout the season—providing key information on initial planting, crop progress, and existing stocks. Livestock reports are also published by the USDA. A schedule of the primary reports affecting the CBOT agricultural markets appears below. Statistical data on the international agricultural markets is also readily available by contacting the USDA Foreign Agricultural Services (FAS) division.

A complete Agricultural Statistics Board calendar of all USDA reports, as well as a catalog of other publications, can be obtained from the Economic Research Service—National Agricultural Statistics Service at 800-999-6779. Cornell University's Mann Library is another excellent source of information regarding USDA data. It offers an online reference desk that can be reached at www.mannlib.cornell.edu/reference/mailref.html

MAJOR USDA AGRICULTURAL REPORTS

Report	Schedule	Web Site
World Agricultural Supply and Demand Estimates (WASD)	Monthly	www.econ.ag.gov/whatsnew/calendar
Grain Stocks	Quarterly	jan.mannlib.cornell.edu/reports/nassr/field/pgs-bb/
Prospective Plantings	End of March	jan.mannlib.cornell.edu/reports/nassr/field/pcp-bbp/
Crop Production	Monthly, April-December	jan.mannlib.cornell.edu/reports/nassr/field/pcp-bb/
Crop Progress	Weekly, April-December	jan.mannlib.cornell.edu/reports/nassr/field/pcr-bb/
Cattle on Feed	Monthly	jan.mannlib.cornell.edu/reports/nassr/livestock/pct-bbc/
Grain Transportation Report	Weekly	www.ams.usda.gov/tmd/grain.htm
USDA National Agricultural Statistics Service (NASS) Reports Calendar	Monthly	www.usda.gov/nass/pubs/rptscal.htm

Fundamental Analysis in the Financial Markets

In the financial markets, fundamental analysis hinges on money supply and demand, business cycles, and inflation. Because so many factors influence the financial markets, fundamental analysis is typically much more complex than in the agricultural markets. In general, traders watch three major sources of information: (1) the key economic reports issued by various government agencies and private organizations; (2) the Federal Reserve Bank; and (3) the U.S. Treasury Department. We'll take a brief look at each.

Economic Reports

The major financial markets key in on different types of economic indicators. Fixed-income markets are primarily concerned with reports that address the pace of economic growth and inflation. The foreign exchange markets also look at these figures, as well as at foreign trade imbalances. The stock market is affected by economic growth to the extent that this affects general earnings. But stocks are also dependent on specific company and industry fundamentals. In addition, changes in interest rates will affect the stock market to the extent that rate shifts may cause investors to be more or less attracted to stocks relative to bonds. Finally, as the financial markets are international in scope, market movements often result from investor preferences for (or concerns about) a particular country's or region's economy.

Prior to the release of an economic report, many of the news services survey the major dealers and publish forecasts. These surveys are an excellent barometer of the financial market's expectations and are built into market prices prior to the report release date.

But the forecasts aren't always accurate. Once the number is released, prices quickly adjust to reflect the new information.

Consider the fixed-income markets, for example. Assume the employment report showed a lower unemployment rate than expected. This would signal stronger business conditions, more consumer income, and increased spending—all signs that the economy is heating up. This news would tend to drive interest rates up. And because prices and yields move inversely in the fixed-income markets, an increase in interest rates would mean a decrease in prices.

Over time, the markets tend to favor and follow certain reports more than others. For example, if the current concern is centered on inflation, then the CPI and PPI reports will

MAJOR ECONOMIC REPORTS

Report	Description	Typical Release Date	Released by	Period Covered	Web Sites
CPI	The Consumer Price Index measures the average change in prices for a fixed basket of goods and services.	10th Business Day of the Month	Labor Dept. Bureau of Statistics	Prior Month	stats.bls.gov/news.release/cpi.toc.htm
Durable Goods Orders	One of a series of manufacturing and trade reports. Focuses on new orders.	10th Business Day of the Month	Commerce Dept. Census Bureau	Prior Month	www.census.gov/ftp/pub/indicator/www/m3/index.htm
Employment	A survey of households providing very timely information on the rate of unemployment.	First Friday of the Month	Labor Dept. Bureau of Statistics	Prior Month	stats.bls.gov:80/newsrels.htm
GDP	Gross Domestic Product measures the value of items produced within the U.S.	20th Business Day of the Month	Commerce Dept. Bureau of Economic Analysis	Prior Quarter	www.bea.doc.gov/
Housing Starts	Measures new residential units started. Most significant for the financial markets during turning points in the business cycle.	15th Business Day of the Month	Commerce Dept. Census Bureau	Prior Month	www.census.gov/const/www/newresconstindex.html
IP	Industrial Production measures output in manufacturing, mining, and utility industries.	15th Business Day of the Month	Federal Reserve Bank	Prior Month	www.federalreserve.gov/releases/g17
U.S. International Trade	Details the monthly exports and imports of U.S. goods and services.	Third Week of the Month	Commerce Dept. Census Bureau	Two Months Prior	www.census.gov/foreign-trade/
NAPM	The National Association of Purchasing Management Index is a composite index of new orders, production, supplier deliveries, inventories, and employment.	First Business Day of the Month	National Association of Purchasing Management	Prior Month	www.napm.org/index.cfm
PPI	The Producer Price Index measures the average domestic change in prices, less discounts received, by wholesale producers of commodities.	10th Business Day of the Month	Labor Dept. Bureau of Statistics	Prior Month	stats.bls.gov/news.release/ppi.toc.htm
Retail Sales	A measure of consumer spending, reporting on sales of both nondurable and durable consumer goods.	Mid-Month	Commerce Dept. Census Bureau	Prior Month	www.census.gov/svsd/www/advtable.html
Unemployment Insurance Claims	Reflects actual initial claims for unemployment insurance filed with state unemployment agencies.	Every Thursday	Labor Dept. Employment and Training Administration	Prior Week, ending Saturday	www.dol.gov/dol/public/media/main.htm

take on more significance. If the value of the dollar and its impact on international trade becomes a major issue, then the merchandise trade report becomes more important. The chart above highlights some, but certainly not all, of the key economic reports for the financial markets.

Federal Reserve Bank

The Federal Reserve Bank looks at economic indicators too in making U.S. monetary policy decisions. At the same time, the rest of the world looks at the Fed as a major source of fundamental information. The Fed chairman affects the financial markets

perhaps more than any economic indicator. His speeches are carefully scrutinized for any hint of possible future Fed actions.

The Fed obviously realizes the impact of the chairman's comments and often uses this as a tool to support its current monetary policy. Or the Fed may choose to overtly increase or decrease the supply of money either by announcing a change in the discount rate or by engaging in open market operations. A summary of these activities and their general impact on the interest rate markets appears on the left.

FEDERAL RESERVE BANK POLICY

Activity	Interest Rate Instrument Prices	Reason
Fed Raises Discount Rate	▼	An increase in the borrowing rate the Fed charges its member banks usually results in increased interest rates for all borrowers. This action is used to slow business expansion.
Fed Does Repurchase Agreements	▲	Fed puts money into the banking system by purchasing collateral and agreeing to resell it later. This helps bring interest rates down.
Fed Does Reverses or Matched Sales	▼	Fed takes money out of the banking system by selling collateral and agreeing to buy it back at a later date. This helps drive interest rates up.
Fed Buys Bills	▲	Fed permanently adds to banking system reserves, which may cause interest rates to drop.

U.S. Treasury Department

Finally, another major player in the financial markets is the U.S. Treasury Department. By issuing bills, notes, and bonds, the Treasury meets the financing needs of the U.S. government. Further, the Treasury's decisions about allocating issuance across maturities affects the supply (and thus the price) of shorter-term notes relative to longer-term bonds. For example, if the Treasury concentrates its issuance at the short end of the yield curve for a long period of time, the yields of these instruments are likely to fall because of the abundant supply. Conversely, if the Treasury engages in a buy-back of long bonds and longer-term notes, the ensuing supply shortage will drive yields for these instruments higher.

The Treasury sells its securities through periodic auctions. The days preceding major auctions can be quite volatile as traders assess the market's ability to absorb the new debt. Although it has changed over time, the current Treasury schedule appears on page 17.

The Importance of Earnings in Stock Market Analysis

While the equity market is sensitive to major economic reports and the activities of the Fed and the Treasury, it is also strongly influenced by corporate earnings news. Stock market performance is frequently expressed in terms of price to earnings (P/E) ratios. If a stock's price rises faster than its current or projected earnings, investors may become concerned that the P/E ratio is too high and the stock is overvalued.

Conversely, very low P/E ratios may indicate a good buying opportunity.

Price to earnings ratios also can be applied to evaluate a broader segment of the market. For example, an inflated P/E ratio for a stock in the Dow Jones Industrial Average℠ may cause you to expect a decline in prices. You may, in turn, decide to short the market (a much easier thing to do in futures than in the cash market) in anticipation of a decrease in the value of the DJIA℠. Earnings news, in addition to other factors, often drives such changes in the overall direction of the market.

Summary

The CBOT provides traders with monthly calendars for the agricultural and financial markets which list the economic reports scheduled for release each month. These calendars can be viewed online at www.cbot.com, and you can subscribe to receive automatic e-mail notification when new calendars are released. A subscription can be established at the Contact Us section of www.cbot.com.

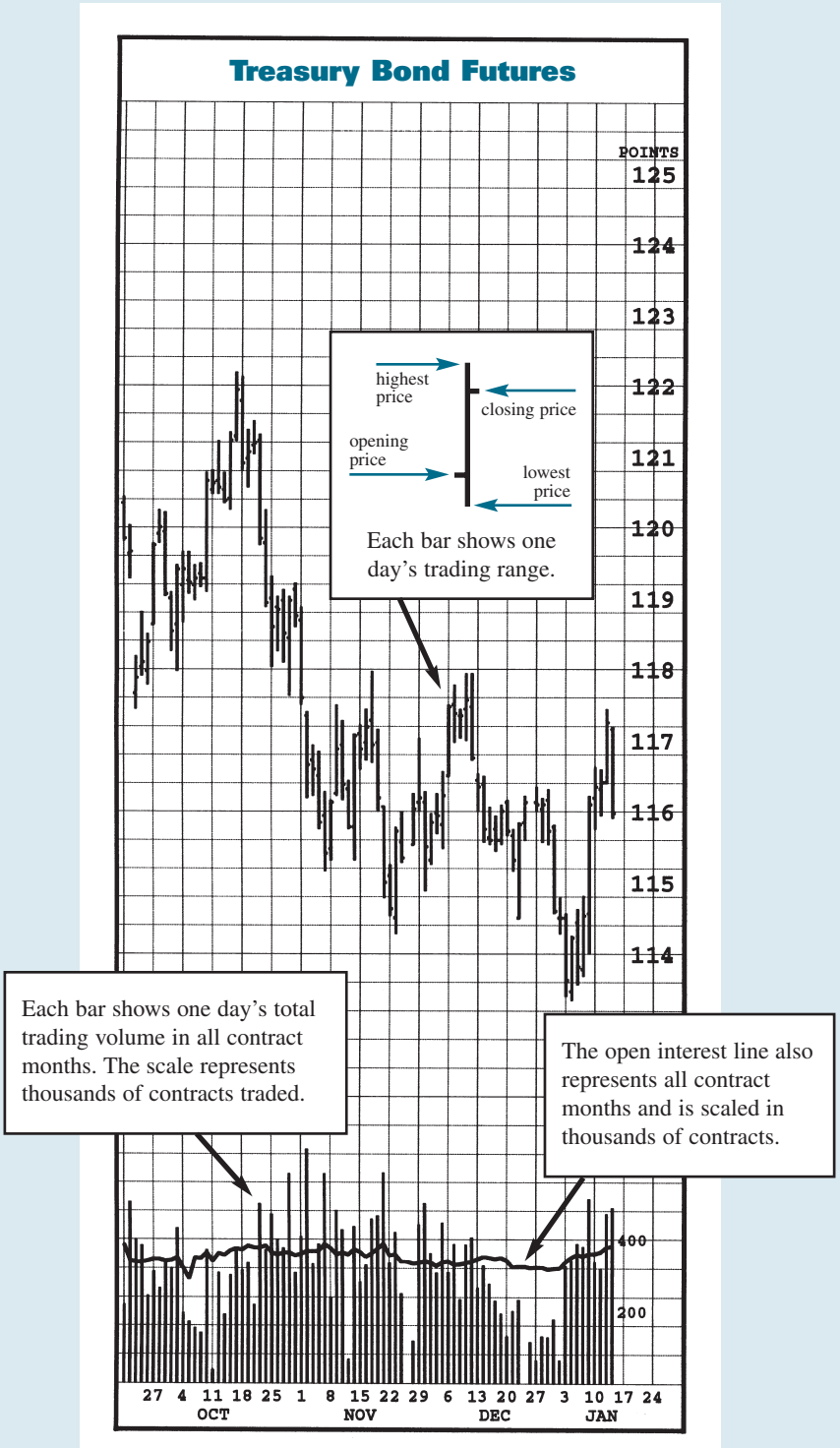
Whether you choose to focus on agricultural or financial futures markets, a good understanding of fundamental price information will go a long way toward improving your trading success. But fundamental analysis is just one method. Technical analysis is another technique. Most traders use some combination of the two to determine if they want to be long or short and to time their trades. The next section introduces technical analysis.

U.S. TREASURY FINANCING SCHEDULE*

Security	Frequency
3-month bill	Weekly
6-month bill	Weekly
2-year note	Monthly
5-year note	Quarterly
10-year note	Quarterly
30-year bond	Feb., Aug.

** From time to time, the U.S. Treasury adjusts the issuing cycle and may add or subtract maturities from its auction schedule. The web site for information on Treasury issuance of bills, notes, and bonds is www.publicdebt.treas.gov/sec/sec.htm.*

Using Technical Analysis to Forecast Prices



Technical analysis is another method of forecasting prices. The technical analyst focuses purely on market information—primarily price movements, but also volume and open interest figures. The pure technician works on the assumption that all fundamental information is already reflected in the price, and that it is more important to study the market's resulting behavior. Unlike the fundamentalist, the technician is not concerned with understanding why the market moved the way it did. Rather, the technician attempts to predict future price direction by looking for established patterns of price behavior that have signaled major movements in the past.

Charts are the major tool of the technical analyst. While traders can organize and analyze market data in any number of ways, the bar chart is most common. In this type of chart, a vertical line, or bar, extends from the highest to the lowest price of that time period (usually a trading day). A small horizontal mark to the right of the line indicates the closing price. Some charts also indicate the opening price to the left of the bar. Volume and open interest information typically appears along the bottom of the page.

Traders use charts to identify price trends, special patterns or formations, and areas of support and resistance. Price support occurs where there is sufficient buying of the futures contract to halt a price decline. Resistance, on the other hand, refers to a ceiling where selling pressure can be expected to stop a rally. When the market trades sideways for an extended period of time, it is said to be in a consolidation phase.

Chart Formations

The study of technical indicators is quite extensive, certainly encompassing much more detail than can be provided here. It's possible, however, to introduce the general concepts of charting and the major chart patterns. The most universally accepted interpretations of price pattern behavior are listed on the right.

Keep in mind that while a sequence of price movements often indicates the likelihood of future direction, exceptions to past patterns can always occur. For a great many traders, however, interpreting these commonly recognized price patterns can serve as a helpful barometer. Find CBOT bar charts online at www.cbot.com to test your skill at interpreting them.

Uptrend

A sequence of higher highs and higher lows. A trend line is drawn by connecting the low end of the prices. Major trends are usually accompanied by increases in volume and open interest.

Downtrend

A sequence of lower highs and lower lows. The downtrend line is drawn along the tops of the prices. Again, a major trend will typically show increasing volume and open interest.

Top

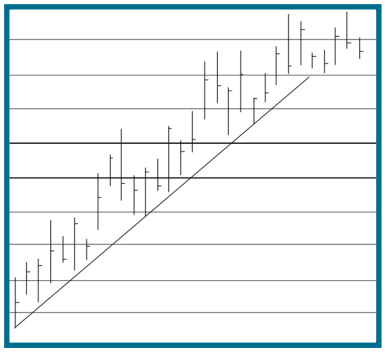
Indicates the probable end of an uptrend. A double top is a stronger indicator that an uptrend has ended.

Bottom

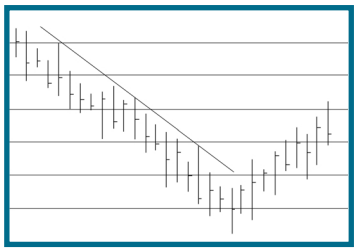
Signals the probable end of a downtrend. Again, a double bottom would be considered a stronger indicator that a downtrend has ended.

Head and Shoulders (Top)

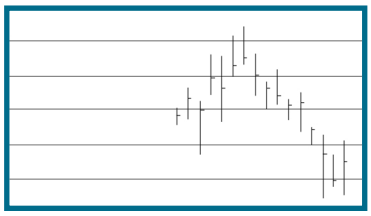
Often indicates a major reversal of an uptrend. The head and shoulders pattern involves four phases—the formation of the left shoulder, the head, the right shoulder, and the penetration of the neckline. Once the neckline is penetrated, the downtrend is considered to begin.



Uptrend



Downtrend



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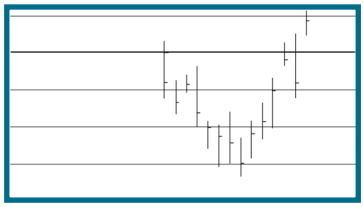

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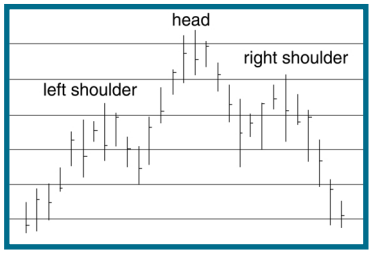
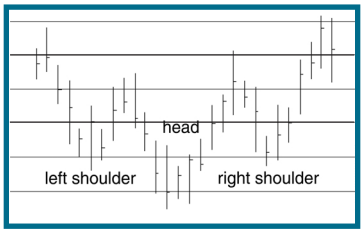
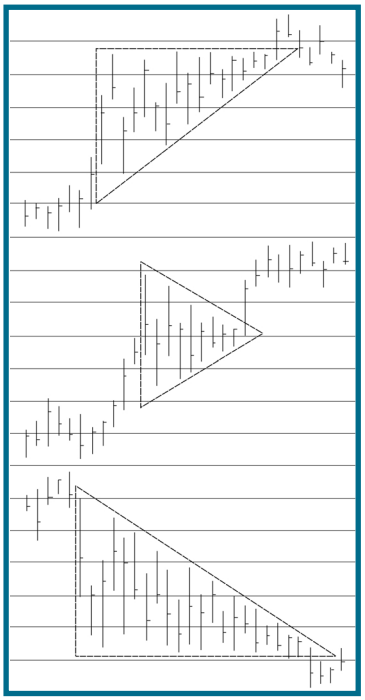


Head and Shoulders (Top)



Head and Shoulders (Bottom)



Triangles

Top: Ascending
Middle: Symmetrical
Bottom: Descending

Head and Shoulders (Bottom)

Also indicates the likelihood of a major reversal, but from a downtrend to an uptrend. The shape is the same as the standard head and shoulders, but inverted.

Triangles

There are three types of triangle patterns—the ascending, the descending, and the symmetrical triangle. An ascending triangle points to a breakout of prices on the upside. Descending triangles, on the other hand, often indicate a possible breakout to the downside. A symmetrical triangle forecasts that a substantial move out of a consolidation phase may take place, but does not indicate the direction of the move.

Traders watch for these and other patterns to position themselves for impending price movements. For example, assume you see a head and shoulders pattern taking shape. As the second shoulder becomes discernible, you may choose to go short in anticipation of a major downward price movement.

Moving Averages

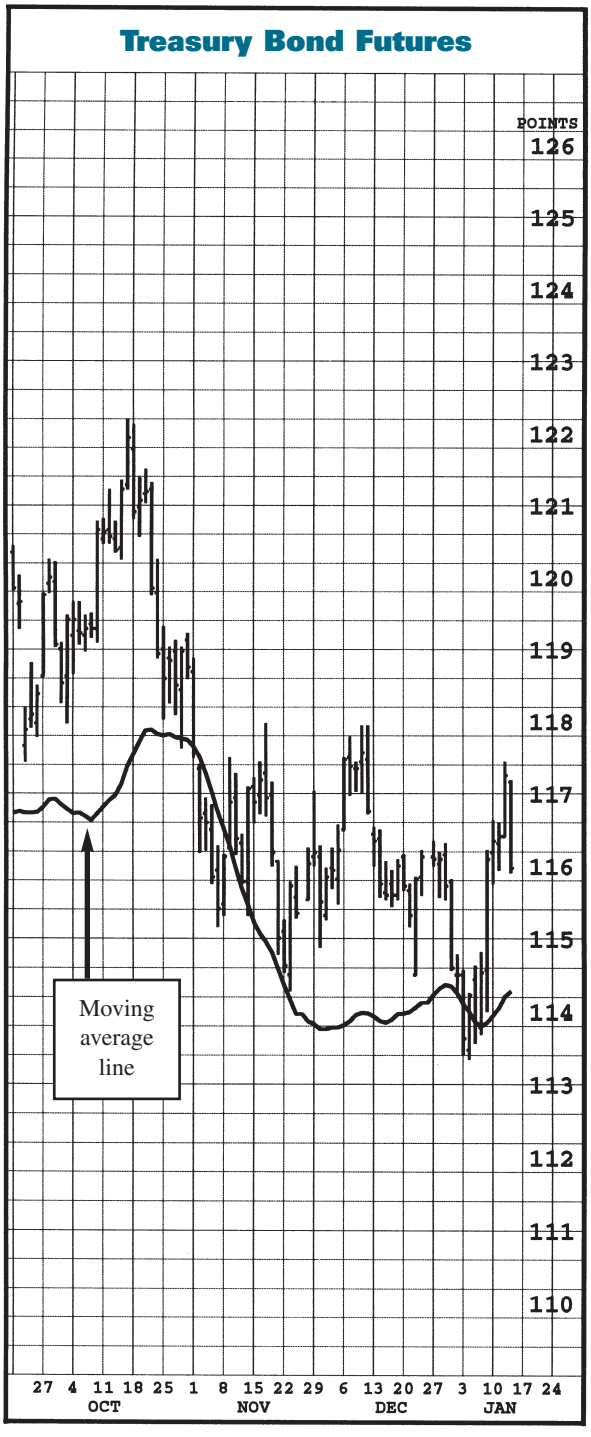
Moving averages provide another tool for tracking price trends. In its simplest form, a moving average is an average of prices that rolls over time. For example, a 10-day moving average takes the last 10 closing prices, adds them up, and divides by 10. On the next day, the oldest price is dropped, the newest price is added, and these 10 prices are divided by 10. In this manner, the average "moves" each day.

Used in a disciplined manner, moving averages can provide a more mechanical approach to entering and exiting the market. In this sense, they help to take some of the emotion out of trading. This is due in large part to the smoothing effect of a moving average.

If an upward-trending market suddenly has one day of lower prices, a moving average would factor that day's price in with several other days—thus lessening the impact of one trading day on the moving average. As long as there is generally more buying than selling pressure, the moving average will continue to indicate an uptrend. Conversely, a downtrend will be sustained as long as there is more selling than buying pressure.

To help identify entry and exit points, moving averages are frequently superimposed onto bar charts. When the market closes above the moving average, a buy signal may be generated. A sell signal may result when the market moves below the moving average. Some traders prefer to see the moving average line actually change direction before declaring a buy or sell signal.

The sensitivity of the moving average line, and thus the number of buy and sell signals it produces, relates directly to the length of time chosen for the average. A 5-day moving average will be more sensitive and will prompt more buy and sell signals than a 20-day moving average. If the average is too sensitive, you may find yourself jumping in and out of the market too much—possibly paying excessive transaction costs. If the moving average is not sensitive enough, you may miss opportunities by identifying buy and sell signals too late.



Moving averages can be designed any number of ways, and traders develop their personal favorites. Besides selecting the length of time, you can also alter the kinds of prices used. While closing prices are most common, some traders use an average of the high, low, and closing prices. Or you could run two moving averages—one of high prices and another of the lows—effectively creating a channel of prices. It is also possible to weight a moving average line so that recent prices carry greater impact than older prices.

While experimenting with various moving average designs may sound like tedious work, the computer has made this task easier. Various software and on-line vendors have designed programs to simplify this process further.

In any event, you should recognize that a moving average, unlike the chart formations, is not a forward-looking indicator of market trends. Rather, it follows the market and identifies only established trending patterns. This is the primary disadvantage of moving average lines.

Their designation as a trend-following device also points out another limitation of moving averages. When the market is not in a trend—say, when it's trading sideways or in a choppy pattern—moving averages may be less useful. And this can happen fairly often. Still, moving averages have their value and, if used properly, can be a useful tool for the technical trader.

Volume and Open Interest

Bar charts and moving averages concentrate on price information. Generally, technical analysts consider price the most important element in their information mix. By adding the dimensions of volume and open interest, however, you can learn more about the collective bullish or bearish sentiments of a market. Volume and open interest are considered confirming indicators, providing clues about how much strength is behind a trend.

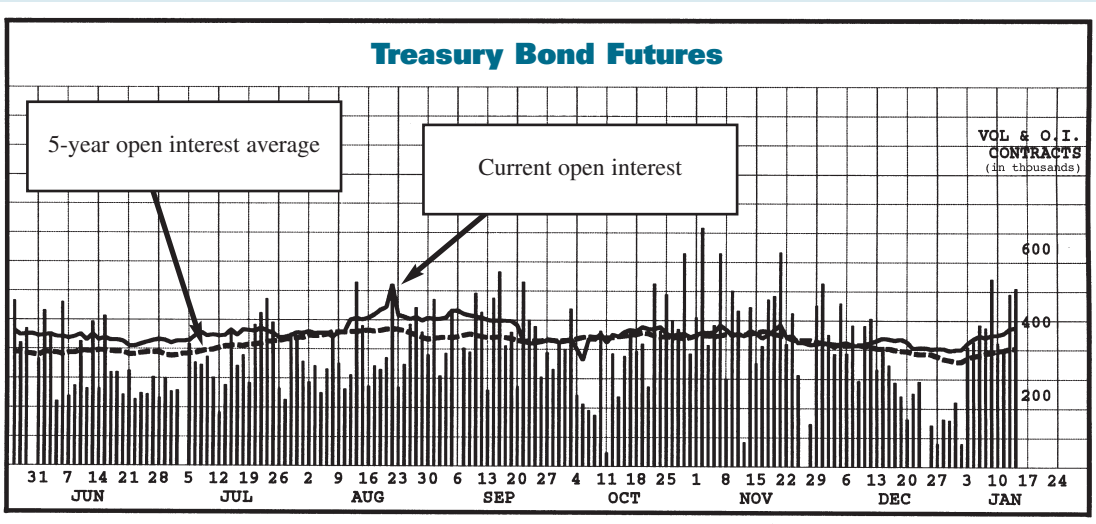
For example, if volume and open interest increase with prices, it is considered a healthy sign of a solid bull market. The longs are eager to add to their positions and new longs are attracted to the market. If prices fall momentarily, and volume declines as well, the bull market is probably not in jeopardy since this may reflect only a small sell-off.

Generally, strong volume and increasing open interest support a price trend, regardless of its direction. At the same time, this scenario is more likely to occur in a bull market since many public speculators are more naturally inclined to buy into a rally than to sell into a bear market.

When looking at open interest trends, it's also important to keep a couple of other points in mind. First of all, many of the physical commodity markets (such as grains) have historical open interest patterns, or seasonality factors. For this reason, changes in open interest should be considered in relative terms. If open interest is increasing relative to historical patterns, then it is a sign of market strength. The chart books frequently add a 5-year historical open interest average to help track this (as shown below).

Secondly, many futures contracts will show a sharp drop in open interest as a delivery month approaches expiration. By looking at the behavior of open interest during past delivery months, you can judge better whether a current open interest trend is stronger or weaker than past patterns.

Two valuable sources of open interest information are www.cbot.com and the Commitments of Traders Report released by the Commodity Futures Trading Commission (CFTC) every two weeks. The CBOT web site provides daily volume and open interest figures



for all CBOT contracts. The Commitment of Traders Report breaks down open interest as of the end of the prior month among large hedgers (commercials), large speculators (noncommercials), and small speculators. Large market participants—whether hedgers or speculators—must report their open positions to the CFTC. This data is compiled and subtracted from the total open interest figures to arrive at what is assumed to be the small traders' positions.

You can tell from the report whether large traders, for example, are net long or short in a given market. This can be valuable information if you work on the assumption that large traders are generally more skilled and will tend to be on the right side of the market. You may choose to use this information to ally yourself with large traders or to confirm your opinions on market trends.

The primary limitation of the report is its timeliness. By the time it is released, the information can be up to two weeks old. Still, some traders find the report valuable and even track recent and historical patterns among hedgers and speculators.

The Dow Theory

One widely known and debated system for trading in the stock market is the Dow Theory. Its roots trace back to articles written by Charles Dow in *The Wall Street Journal* at the turn of the century. William Peter Hamilton, the *Journal's* editor, later wrote numerous editorials that elaborated further on the theory.

In its most common form, Dow Theory states that the Dow Jones Transportation Average℠ must move with the Dow Jones Industrial Average℠ to confirm and reinforce a prolonged bull or bear market. Since Hamilton's writings, analysts and academics have debated the validity of the Dow Theory. While the jury is still out regarding its legitimacy, Dow Theory remains a popular system for trading the Dow Jones℠ stocks, as well as the CBOT® DJIA℠ futures contract.

For more information on Dow theories, you can read *Another Look at Dow Theories* online at www.cbot.com.

Summary

The technical analysis methods introduced here barely scratch the surface of charting techniques and technical trading systems. Numerous other methods have been developed. Many proprietary trading systems are also available as software programs or online services. If you wish to explore technical analysis further, several resources are listed in the appendix. Your broker is likely to be aware of others as well and can help make recommendations.

But don't assume you must learn every technical trading technique to use technical analysis. Many traders have stuck to the basics presented here. Besides, regardless of whether you prefer a fundamental or technical approach, several other factors may actually be more essential to trading success. These will be discussed further in the next section.

When comparing technical to fundamental analysis, you'll find advantages and disadvantages. The primary advantage of technical analysis is you can follow several markets much more easily than when using a fundamental approach. If one market isn't doing much, you can monitor others for developing trends.

One disadvantage of technical trading is you'll find many other traders looking for the same signals you're hoping to identify. As a result, when a distinct chart pattern does develop, many orders may be sitting under the market waiting for the same trigger price. It's important to keep this in mind and to make your decisions carefully about what types of orders to use and how.

Since both technical and fundamental analysis have their strengths and weaknesses, it's unusual to find traders who use one exclusively. Many will follow the fundamentals to get a broader picture of the market, while using technicals to fine-tune their strategy and to select entry and exit points.

Trading Guidelines

Regardless of whether you prefer a fundamental or technical approach to forecasting prices, your ultimate success will hinge largely on your ability to develop good trading habits. Numerous expressions of market wisdom attempt to give guidance. Phrases like "cut your losses and let your profits run" or "the trend is your friend" are helpful but a bit vague. What then are some helpful guidelines that can improve your results? The following 10 "rules of trading" will go a long way toward getting you started on the right path.

1. Buy low and sell high.

This may sound obvious but, since it's the only way to earn trading profits, it bears repeating. Also, don't forget in the futures markets you can do the reverse—sell high and buy low—just as easily. Bulls start their trades with a long (buy) position, while bears are initially short (sellers).

For example, if you expected a rally in corn, you might enter the market with a long position at $2.50 per bushel. Over the next two weeks, suppose corn moved up to $2.60. If you closed out your position at this price, you would realize a gain of $500 (10 cents x 5,000 bushels) per contract.

On the other hand, you might be bearish on T-bond futures. Let's assume you shorted that market at 102-00. If prices then moved down to 101-00, you could buy back your position and make $1,000 (1 full point on a $100,000 face value bond) per contract traded.

2. Determine the right size for your trading account.

The funds you put into a trading account should be completely discretionary. In other words, ask yourself if you can afford to lose whatever you invest in that account and possibly more. Savings for college, retirement, or emergencies should not be included.

3. Set definite risk parameters.

Before you enter into a trade, determine how much of a loss you're willing to accept. You can express this as a dollar figure or as a percent of the margin amount. In either case, you should always keep some money in reserve. By setting limits up front, you'll lessen the risk of emotions dictating your decisions if the market happens to turn against you. Wishful thinking could easily drive you deeper into trouble,

but hard and fast parameters are difficult to ignore.

4. Pick the right contract(s).

There are many futures contracts to choose from and several things to consider when deciding which ones are right for you.

Volatility

Futures contracts that experience wider daily trading ranges are considered more volatile and more risky. Soybeans, for example, can have an average daily range of 2 to 3 cents, whereas corn is only 1/2 to 1 cent. Some traders prefer a more volatile contract because the cost of trading (commission fees) is the same, yet the potential for profit can be greater. Of course, the risk for loss is also greater.

Liquidity

Make sure the futures contract you select has enough volume and open interest to ensure you can exit your position just as easily as you entered it.

Contract Size

For some commodities, you can choose between full- and smaller-size contracts. While adverse weather news will affect both a full-size and a fifth-size corn contract the same way, you will obviously have fewer dollars at risk with the smaller contract. Further, if your trading account is relatively small, trading smaller contracts allows you to diversify to a degree that may not otherwise be possible. That reduces your risk exposure to any one market. For contract size information, check contract specifications under www.cbot.com for the futures contracts you are interested in trading.

Margins

Margin levels are a function of a contract's size and price volatility. While you may be comfortable trading in volatile markets, the size of your account and the margin requirements may limit your selection of which futures contracts to trade.

5. Diversify.

Rather than exposing your entire trading account to a position in one futures contract, it is more prudent to take smaller positions in several contracts. At the same time, don't trade too many markets at once, or you'll have a difficult time tracking your positions and following the fundamental information or technical indicators for each market.

6. Have a trading plan.

Before you actually enter into a futures position, develop a plan to guide your decision based on careful analysis of the market(s) you plan to trade. Following are some of the issues you'll want to evaluate:

- What is my goal with each trade? (To hit a given entry and exit price? To capitalize on an anticipated market indicator? To ride a trend for a specified period of time?)
- What fundamental or technical factors will steer my plan?
- What types of orders will I use? (In particular, consider the use of stop orders to enforce your risk parameters.)
- What systems will I use to monitor market developments and my positions?

7. Stick to it.

Discipline is the key to successful trading. Don't let rumors or offhand remarks undercut your confidence. If you've put serious thought and analysis into your plan, it's likely to be more sound than isolated comments made by others. At the same time, be willing to recognize when conditions have legitimately changed and adjust your plans.

8. Don't trade in and out too much.

Because every trade in the futures markets comes with a price tag—namely transaction costs—you'll want to avoid any plan that has you constantly jumping in and out of the market. Try to focus your efforts instead on making fewer well-timed trades.

Frequently trading in and out of the market tends to be more appropriate for scalpers on the floor (where their exchange membership entitles them to much lower trading fees). If you find your experience and trading account are building, however, you may decide to trade in larger volume. In this case, you may want to investigate obtaining direct trading privileges to reduce your trading costs. CBOT trading privileges are generally tiered by contract group. Several categories of memberships with differing trading privileges are available on the CBOT.

9. Begin by paper trading.

While there's no better way to learn than to have your own money on the line, it's still a good

idea to practice first by trading on paper. Pick a couple of markets to follow and experiment with your trading plan. This is also a good way to become familiar with the price quotations, the market terminology, and the general behavior of a particular futures contract.

The chart on the following page shows one way to track your positions. In this example, the trader was monitoring a long position in the CBOT® DJIA℠ futures market. You could duplicate the work sheet, or develop one of your own to suit your particular style and needs.

10. Select a good broker.

Your broker plays a vital role in your trading success. Make sure you've discussed the level of support you'll be given and the fees you'll be charged. While fees can vary considerably, it's generally true that you get what you pay for. Full-service brokers provide more in the way of guidance and research support. Discount brokers leave all the decisions in your lap but charge less to execute your trades. The size of your account or your trading volume may also affect the fees you'll be charged. Further information on finding a broker can be found on www.cbot.com.

The National Futures Association (NFA) directly supervises the activities of all futures brokers (officially called associated persons). All members of NFA must observe high levels of conduct that extend beyond legal requirements. The NFA investigates any complaints against its members and issues fines and suspensions, if necessary. Contact the NFA if you ever encounter serious problems or want to check a broker's credentials. (The NFA address and web site appear in the appendix.)

Professional Money Management

By now you may be thinking there's much more involved in futures trading than you initially realized. And you may be wondering if you can dedicate enough time to do it right. If you're concerned about trading for your own account but still want to participate in the futures markets, you might consider professional money management.

One possible route is to employ a Commodity Trading Advisor, (CTA) either for personal trading advice or to actually manage your funds. If you opt for direct money management, you'll have to give your power of attorney to the CTA and sign a risk disclosure document. In turn, the CTA

PAPER TRADING EXAMPLE

Futures Contract: *September Dow Jones Futures (CBOT)*

	POSITIONS				DAILY ANALYSIS	
Date	Buy/Sell	Qty.	@ Price	Gain (Loss) Per Contract/Total	Closing Price	Comments/Objectives
6/10	*Buy*	*5*	*@ 10820*		*10839*	*Target price of 10920. Exit market if declines to 10785.*
6/11					*10805*	*Stock prices fall due to concern over a possible interest rate hike by the Fed.*
6/12					*10788*	*Market declines further and almost hits stop order of 10785.*
6/13					*10840*	*Market rebounds on bullish productivity numbers.*
6/14					*10866*	*Neutral employment report allows rally to continue.*
6/17					*10912*	*Strong earnings reports drive prices higher.*
6/18					*10895*	*Minor selloff.*
6/19	*Sell*	*5*	*@ 10920*	*$1,000/ $5,000*		*Liquidate position as market rebounds and trades through target price.*

WORK SHEET

Futures Contract:_____

POSITIONS					DAILY ANALYSIS	
Date	Buy/Sell	Qty.	@ Price	Gain (Loss) Per Contract/Total	Closing Price	Comments/Objectives

must spell out his or her trading program, past performance, potential risks, and fee structure.

CTAs may charge two kinds of fees to manage your money.

Almost all will charge an incentive fee based on their trading performance. Some also charge a management fee that is to be paid regardless of whether profits are earned. Most require a fairly substantial sum to open an account.

Another possibility—particularly if you're a smaller investor—is to participate in a commodity pool. Commodity pools are conceptually similar to mutual funds. Almost all pools are organized as limited partnerships with the Commodity Pool Operator (CPO) acting as the general partner. The day-to-day trading decisions may be made by the general partner, or the commodity pool may employ a third-party CTA.*

If you're considering joining a pool, you'll want to check the trading manager's track record and review the risk disclosure documents. Also, be certain you know up front how to exit the pool if you so desire. Many pools place limitations on when this can occur.

The chief advantage of using trading advisors or commodity pools is you'll be able to capitalize on someone else's trading expertise and significantly reduce the amount of personal time and effort required for trading. At the same time, professional assistance carries a higher price tag. You will also limit your ability to develop your own expertise. Still, depending on your circumstances and personal goals, professional money management may be a viable option.

** Note that CTAs and larger CPOs must register with the NFA. The NFA can be consulted for background information on CTAs and larger CPOs or to register a complaint.*

The Next Steps

Now that you've had a chance to get acquainted with speculating in futures, you may want to learn more or take steps to actually begin trading. There are numerous books, articles, and other resources to draw upon to develop your knowledge of futures trading. Some of them are listed in the appendix. And once you've selected a broker, you should solicit his or her help in identifying other sources.

The Chicago Board of Trade offers many other publications. Most of them are free. If you would like to order CBOT publications, you can do so at www.cbot.com or call the Publications Department at 800-THE-CBOT or 312-435-3558.

In addition to publication information, www.cbot.com, provides information on CBOT contracts, fundamental information, market news and commentaries, price quotes, volume reports, and other information you will need to start trading futures. Because www.cbot.com is a dynamic site, please feel free to contribute your ideas for expanding it.

As an introduction to speculation, this booklet has looked at futures trading only from the perspective of taking outright long and short positions. It has also introduced techniques to improve your trading results. There are other ways to profit in the futures markets you may also want to investigate.

Spread trading, for example, involves taking two or more related futures positions simultaneously. The goal is to profit from changes in the relative price movements between different but similar futures contracts. For example, a MOB (muni over bond) trader may enter a spread position that gains in value as long as munis outperform T-bonds. The primary advantage of spread trading is it generally entails less risk than outright futures positions and, as a result, requires lower margin deposits.

Options on futures contracts, on the other hand, have completely different trading terms and conditions than their futures counterparts. And they offer a virtually unlimited array of profit opportunities. One of the chief advantages of options is the ability to tailor positions to meet your specific risk parameters and market outlook. For example, assume you expect a major

breakout in a market but aren't certain about the price direction of the move. You could design an option position that would gain in value if the breakout did come within certain time parameters, regardless of its direction.

As your knowledge and skill grow, you'll begin to develop your own preferences among different futures or options contracts, price forecasting methods, and trading strategies. And you'll soon see why so many savvy investors have turned to futures to expand the diversity and profit potential of their investment portfolios. If done properly, futures trading can offer rewards vastly exceeding those available in other markets.

Appendix
Selected Bibliography
Internet Sites
Industry Contacts

SELECTED BIBLIOGRAPHY

Bernstein, Jack. *The Compleat Day Trader: Trading Systems, Strategies, Timing Indicators, and Analytical Methods*. New York: McGraw Hill, 1995.

Chande, Tushar S., PhD. *Beyond Technical Analysis: How to Develop and Implement a Winning Trading System.* New York: John Wiley & Sons, 1997.

DeMark, Thomas R. *The New Science of Technical Analysis.* New York: John Wiley & Sons, 1994.

——. *New Market Timing Techniques: Innovative Studies in Market Rhythm and Price Exhaustion*. New York: John Wiley & Sons, 1997.

LeBeau, Charles, and David W. Lucas. *Technical Traders Guide to Computer Analysis of the Futures Market*. Homewood, IL: Business One Irwin, 1992.

Murphy, John J. *Technical Analysis of the Futures Markets: A Comprehensive Guide to Trading Methods and Applications*. New York: New York Institute of Finance, 1986.

——. *Study Guide for Technical Analysis of the Futures Markets: A Self-Training Manual*. New York: New York Institute of Finance, 1987.

Niemira, Michael P., and Gerald F. Zukowski. *Trading the Fundamentals: The Trader's Guide to Interpreting Economic Indicators and Monetary Policy*. New York: McGraw-Hill, 1998.

Pring, Martin. *Technical Analysis Explained*. Third Edition. New York: McGraw Hill, 1991.

Ruggiero, Murray A., Jr. *Cybernetic Trading Strategies: Developing a Profitable Trading System with State-of-the-Art Technologies.* New York: John Wiley & Sons, 1997.

Sambul, Nathan J. *Top Trader's Guide to Technical Analysis: How to Spot Patterns for Big Profits*. Chicago: Dearborn Financial Publishing, 1995.

Schwager, Jack D. *Fundamental Analysis on Futures*. New York: John Wiley & Sons, 1995.

——. *A Complete Guide to the Futures Markets: Fundamental Analysis, Technical Analysis, Trading, Spreads, and Options*. New York: John Wiley & Sons, 1984.

Sperandeo, Victor. *Trader Vic II—Principles of Professional Speculation.* New York: John Wiley & Sons, 1994.

Tanier, Evelina M. *Using Economic Indicators to Improve Investment Analysis*. New York: John Wiley & Sons, 1993.

INTERNET SITES

In recent years there has been a proliferation of information available on the Internet. While the list of web sites is potentially endless, the addresses to the right are home pages for many of the best sources for studying the futures industry and the underlying markets. Many of these sites also offer links to other sources. Keep in mind the addresses for specific web pages may occasionally change as organizations reconstruct their sites. These addresses are current as of this printing.

	Source	Internet Address
U.S. Futures Exchanges/ Regulators/Associations	Chicago Board of Trade	www.cbot.com
	Commodity Futures Trading Commission (CFTC)	www.cftc.gov
	National Futures Association (NFA)	www.nfa.futures.org
	Futures Industry Association (FIA)	www.fiafii.org
Newswires	Market News International	www.economeister.com
	Reuters	www.reuters.com
	Dow Jones	bis.dowjones.com
	Bloomberg Business News	www.bloomberg.com
	Data Transmission Network (DTN)	www.dtn.com
Publications	The Wall Street Journal	www.wsj.com
	Barron's	www.barrons.com
	The Financial Times	www.ft.com
	The New York Times	www.nytimes.com
	The Washington Post	www.washingtonpost.com
	Futures	www.futuresmag.com
	Feedstuffs	www.Feedstuffs.com
Media	CNBC	www.cnbc.com
	CNN	www.cnn.com
	MSNBC	www.msnbc.com
U.S. Government	U.S. Department of Agriculture	www.usda.gov
	U.S. Department of Commerce	www.doc.gov
	U.S. Bureau of Census	www.census.gov
	U.S. Department of Labor	www.dol.gov
	U.S. Bureau of Labor Statistics	www.bls.gov
	Joint Economic Committee	www.house.gov/jec/welcome.htm
	U.S. Bureau of Transportation Statistics	www.bts.gov
Central Banks	Federal Reserve Board	www.federalreserve.gov
	Bank of Canada	www.bank-banque-canada.ca/english/intro-e.htm
	Bank of England	www.bankofengland.co.uk
	Bank of Japan	www.boj.or.jp/en/index.htm
	Deutsche Bundesbank	www.bundesbank.de/index_e.html
Foreign Statistical Sources	Statistics Canada	www.statcan.ca
	U.K. Office of National Statistics	www.statistics.gov.uk
	Japan External Trade Organization	www.jetro.go.jp
	Japan Cabinet Office	www.cao.go.jp/index-e.html
	German Federal Statistical Office	www.statistik-bund.de/e_home.htm
Other Sources	FedStats	www.fedstats.gov
	Investment Company Institute (mutual fund data)	www.ici.org

INDUSTRY CONTACTS

U.S. Futures Industry Regulators
Commodity Futures Trading Commission (CFTC)
Three Lafayette Center
1155 21st Street, N.W.
Washington, D.C. 20581
Tel: 202-418-5030
Fax: 202-418-5520

National Futures Association (NFA)
200 West Madison Street, Suite 1600
Chicago, IL 60606
Tel: 312-781-1300
Fax: 312-781-1467

The National Futures Association offers free publications to the investing public.

Industry-Related Resource
Futures Industry Association (FIA)
2001 Pennsylvania Ave., N.W., Suite 600
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