

CENTURY FINANCIAL BROKERS

# FUTURES TRADING

*An Introduction to the Futures Markets*

# FUTURES TRADING 101

## TABLE OF CONTENTS

1. INTRODUCTION
2. FUTURES MARKETS: WHAT, WHY & WHO
3. THE MARKET PARTICIPANTS
4. WHAT IS A FUTURES CONTRACT?
5. THE PROCESS OF PRICE DISCOVERY
6. AFTER THE CLOSING BELL
7. THE ARITHMETIC OF FUTURES
8. TRADING
9. MARGINS
10. BASIC TRADING STRATEGIES
11. BUYING (GOING LONG) TO PROFIT FROM AN EXPECTED PRICE INCREASE SELLING
12. (GOING SHORT) TO PROFIT FROM AN EXPECTED PRICE DECREASE SPREADS
13. WHAT TO LOOK FOR IN A FUTURES CONTRACT
14. THE CONTRACT UNIT
15. HOW PRICES ARE QUOTED
16. MINIMUM PRICE CHANGES
17. DAILY PRICE LIMITS
18. POSITION LIMITS
19. UNDERSTANDING (AND MANAGING) THE RISKS OF FUTURES TRADING
20. CHOOSING A FUTURES CONTRACT
21. LIQUIDITY
22. TIMING
23. STOP ORDERS
24. SPREADS
25. OPTIONS ON FUTURES CONTRACTS
26. BUYING CALL OPTIONS
27. BUYING PUT OPTIONS
28. HOW OPTION PREMIUMS ARE DETERMINED
29. SELLING OPTIONS
30. IN CLOSING

## INTRODUCTION

Futures markets have been described as continuous auction markets and as clearing houses for the latest information about supply and demand. They are the meeting places of buyers and sellers of an ever-expanding list of commodities that today includes agricultural products, metals, petroleum, financial instruments, foreign currencies and stock indexes. Trading has also been initiated in options on futures contracts, enabling option buyers to participate in futures markets with known risks.

Notwithstanding the rapid growth and diversification of futures markets, their primary purpose remains the same as it has been for nearly a century and a half, to provide an efficient and effective mechanism for the management of price risks. By buying or selling futures contracts--contracts that establish a price level now for items to be delivered later--individuals and businesses seek to achieve what amounts to insurance against adverse price changes. This is called hedging.

Volume has increased from 14 million futures contracts traded in 1970 to 179 million futures and options on futures contracts traded in 1985.

Other futures market participants are speculative investors who accept the risks that hedgers wish to avoid. Most speculators have no intention of making or taking delivery of the commodity but, rather, seek to profit from a change in the price. That is, they buy when they anticipate rising prices and sell when they anticipate declining prices. The interaction of hedgers and speculators helps to provide active, liquid and competitive markets. Speculative participation in futures trading has become increasingly attractive with the availability of alternative methods of participation. Whereas many futures traders continue to prefer to make their own trading decisions--such as what to buy and sell and when to buy and sell--others choose to utilize the services of a professional trading advisor, or to avoid day-to-day trading responsibilities by establishing a fully managed trading account or participating in a commodity pool which is similar in concept to a mutual fund.

For those individuals who fully understand and can afford the risks which are involved, the allocation of some portion of their capital to futures trading can provide a means of achieving greater diversification and a potentially higher overall rate of return on their investments. There are also a number of ways in which futures can be used in combination with stocks, bonds and other investments.

Speculation in futures contracts, however, is clearly not appropriate for everyone. Just as it is possible to realize substantial profits in a short period of time, it is also possible to incur substantial losses in a short period of time. The possibility of large profits or losses in relation to the initial commitment of capital stems principally from the fact that futures trading is a highly leveraged form of speculation. Only a relatively small amount of money is required to control assets having a much greater value. As we will discuss and illustrate, the leverage of futures trading can work for you when prices move in the direction you anticipate or against you when prices move in the opposite direction.

It is not the purpose of this brochure to suggest that you should--or should not--participate in futures trading. That is a decision you should make only after consultation with your broker or financial advisor and in light of your own financial situation and objectives.

Intended to help provide you with the kinds of information you should first obtain--and the questions you should seek answers to--in regard to any investment you are considering:

- \* Information about the investment itself and the risks involved
- \* How readily your investment or position can be liquidated when such action is necessary or desired
- \* Who the other market participants are
- \* Alternate methods of participation
- \* How prices are arrived at
- \* The costs of trading

- \* How gains and losses are realized
- \* What forms of regulation and protection exist
- \* The experience, integrity and track record of your broker or advisor
- \* The financial stability of the firm with which you are dealing

In sum, the information you need to be an informed investor.

## **FUTURES MARKET**

The frantic shouting and signaling of bids and offers on the trading floor of a futures exchange undeniably convey an impression of chaos. The reality however, is that chaos is what futures markets replaced. Prior to the establishment of central grain markets in the mid-nineteenth century, the nation farmers carted their newly harvested crops over plank roads to major population and transportation centers each fall in search of buyers. The seasonal glut drove prices to giveaway levels and, indeed, to throwaway levels as grain often rotted in the streets or was dumped in rivers and lakes for lack of storage. Come spring, shortages frequently developed and foods made from corn and wheat became barely affordable luxuries. Throughout the year, it was each buyer and seller for himself with neither a place nor a mechanism for organized, competitive bidding. The first central markets were formed to meet that need. Eventually, contracts were entered into for forward as well as for spot (immediate) delivery. So-called forwards were the forerunners of present day futures contracts.

Spurred by the need to manage price and interest rate risks that exist in virtually every type of modern business, today's futures markets have also become major financial markets. Participants include mortgage bankers as well as farmers, bond dealers as well as grain merchants, and multinational corporations as well as food processors, savings and loan associations, and individual speculators.

Futures prices arrived at through competitive bidding are immediately and continuously relayed around the world by wire and satellite. A farmer in Nebraska, a merchant in Amsterdam, an importer in Tokyo and a speculator in Ohio thereby have simultaneous access to the latest market-derived price quotations. And, should they choose, they can establish a price level for future delivery--or for speculative purposes--simply by having their broker buy or sell the appropriate contracts. Images created by the fast-paced activity of the trading floor notwithstanding, regulated futures markets are a keystone of one of the world's most orderly envied and intensely competitive marketing systems. Should you at some time decide to trade in futures contracts, either for speculation or in connection with a risk management strategy, your orders to buy or sell would be communicated by phone from the brokerage office you use and then to the trading pit or ring for execution by a floor broker. If you are a buyer, the broker will seek a seller at the lowest available price. If you are a seller, the broker will seek a buyer at the highest available price. That's what the shouting and signaling is about.

In either case, the person who takes the opposite side of your trade may be or may represent someone who is a commercial hedger or perhaps someone who is a public speculator. Or, quite possibly, the other party may be an independent floor trader. In becoming acquainted with futures markets, it is useful to have at least a general understanding of who these various market participants are, what they are doing and why.

## **HEDGERS**

The details of hedging can be somewhat complex but the principle is simple. Hedgers are individuals and firms that make purchases and sales in the futures market solely for the purpose of establishing a known price level--weeks or months in advance--for something they later intend to buy or sell in the cash market (such as at a grain elevator or in the bond market). In this way they attempt to protect themselves against the risk of an unfavorable price change in the interim. Or hedgers may use futures to lock in an acceptable margin between their purchase cost and their selling price. Consider this example:

A jewelry manufacturer will need to buy additional gold from his supplier in six months. Between now and then, however, he fears the price of gold may increase. That could be a problem because he has already published his catalog for a year ahead.

To lock in the price level at which gold is presently being quoted for delivery in six months, he buys a futures contract at a price of, say, \$350 an ounce.

If, six months later, the cash market price of gold has risen to \$370, he will have to pay his supplier that amount to acquire gold. However, the extra \$20 an ounce cost will be offset by a \$20 an ounce profit when the futures contract bought at \$350 is sold for \$370. In effect, the hedge provided insurance against an increase in the price of gold. It locked in a net cost of \$350, regardless of what happened to the cash market price of gold. Had the price of gold declined instead of risen, he would have incurred a loss on his futures position but this would have been offset by the lower cost of acquiring gold in the cash market.

The number and variety of hedging possibilities is practically limitless. A cattle feeder can hedge against a decline in livestock prices and a meat packer or supermarket chain can hedge against an increase in livestock prices. Borrowers can hedge against higher interest rates, and lenders against lower interest rates. Investors can hedge against an overall decline in stock prices, and those who anticipate having money to invest can hedge against an increase in the over-all level of stock prices. And the list goes on.

Whatever the hedging strategy, the common denominator is that hedgers willingly give up the opportunity to benefit from favorable price changes in order to achieve protection against unfavorable price changes.

## **SPECULATORS**

Were you to speculate in futures contracts, the person taking the opposite side of your trade on any given occasion could be a hedger or it might well be another speculator—someone whose opinion about the probable direction of prices differs from your own.

The arithmetic of speculation in futures contracts—including the opportunities it offers and the risks it involves—will be discussed in detail later on. For now, suffice it to say that speculators are individuals and firms who seek to profit from anticipated increases or decreases in futures prices. In so doing, they help provide the risk capital needed to facilitate hedging.

Someone who expects a futures price to increase would purchase futures contracts in the hope of later being able to sell them at a higher price. This is known as "going long." Conversely, someone who expects a futures price to decline would sell futures contracts in the hope of later being able to buy back identical and offsetting contracts at a lower price. The practice of selling futures contracts in anticipation of lower prices is known as "going short." One of the attractive features of futures trading is that it is equally easy to profit from declining prices (by selling) as it is to profit from rising prices (by buying).

## **FLOOR TRADERS**

Persons known as floor traders or locals, who buy and sell for their own accounts on the trading floors of the exchanges, are the least known and understood of all futures market participants. Yet their role is an important one. Like specialists and market makers at securities exchanges, they help to provide market liquidity. If there isn't a hedger or another speculator who is immediately willing to take the other side of your order at or near the going price, the chances are there will be an independent floor trader who will do so, in the hope of minutes or even seconds later being able to make an offsetting trade at a small profit. In the grain markets, for example, there is frequently only one-fourth of a cent a bushel difference between the prices at which a floor trader buys and sells.

Floor traders, of course, have no guarantee they will realize a profit. They may end up losing money on any given trade. Their presence, however, makes for more liquid and competitive markets. It should be pointed out, however, that unlike market makers or specialists, floor traders are not obligated to maintain a liquid market or to take the opposite side of customer orders.

	REASONS FOR BUYING FUTURES CONTRACTS	REASONS FOR SELLING FUTURES CONTRACTS
Hedgers	To lock in a price and thereby obtain protection against rising prices	To lock in a price and thereby obtain protection against declining prices
Speculators and floor Traders	To profit from rising prices	To profit from declining prices

## WHAT IS A FUTURES CONTRACT?

There are two types of futures contracts, those that provide for physical delivery of a particular commodity or item and those which call for a cash settlement. The month during which delivery or settlement is to occur is specified. Thus, a July futures contract is one providing for delivery or settlement in July.

It should be noted that even in the case of delivery-type futures contracts, very few actually result in delivery.\* Not many speculators have the desire to take or make delivery of, say, 5,000 bushels of wheat, or 112,000 pounds of sugar, or a million dollars worth of U.S. Treasury bills for that matter. Rather, the vast majority of speculators in futures markets choose to realize their gains or losses by buying or selling offsetting futures contracts prior to the delivery date. Selling a contract that was previously purchased liquidates a futures position in exactly the same way, for example, that selling 100 shares of IBM stock liquidates an earlier purchase of 100 shares of IBM stock. Similarly, a futures contract that was initially sold can be liquidated by an offsetting purchase. In either case, gain or loss is the difference between the buying price and the selling price.

Even hedgers generally don't make or take delivery. Most, like the jewelry manufacturer illustrated earlier, find it more convenient to liquidate their futures positions and (if they realize a gain) use the money to offset whatever adverse price change has occurred in the cash market.

\* When delivery does occur it is in the form of a negotiable instrument (such as a warehouse receipt) that evidences the holder's ownership of the commodity, at some designated location.

## WHY DELIVERY?

Since delivery on futures contracts is the exception rather than the rule, why do most contracts even have a delivery provision? There are two reasons. One is that it offers buyers and sellers the opportunity to take or make delivery of the physical commodity if they so choose. More importantly, however, the fact that buyers and sellers can take or make delivery helps to assure that futures prices will accurately reflect the cash market value of the commodity at the time the contract expires--i.e., that futures and cash prices will eventually converge. It is convergence that makes hedging an effective way to obtain protection against an adverse change in the cash market price.\*

\* Convergence occurs at the expiration of the futures contract because any difference between the cash and futures prices would quickly be negated by profit-minded investors who would buy the commodity in the lowest-price market and sell it in the highest-price market until the price difference disappeared. This is known as arbitrage and is a form of trading generally best left to professionals in the cash and futures markets.

Cash settlement futures contracts are precisely that, contracts which are settled in cash rather than by delivery at the time the contract expires. Stock index futures contracts, for example, are settled in cash on the basis of the index number at the close of the final day of trading. There is no provision for delivery of the shares of stock that make up the various indexes. That would be impractical. With a cash settlement contract, convergence is automatic.

## THE PROCESS OF PRICE DISCOVERY

Futures prices increase and decrease largely because of the myriad factors that influence buyers' and sellers' judgments about what a particular commodity will be worth at a given time in the future (anywhere from less than a month to more than two years).

As new supply and demand developments occur and as new and more current information becomes available, these judgments are reassessed and the price of a particular futures contract may be bid upward or downward. The process of reassessment--of price discovery--is continuous.

Thus, in January, the price of a July futures contract would reflect the consensus of buyers' and sellers' opinions at that time as to what the value of a commodity or item will be when the contract expires in July. On any given day, with the arrival of new or more accurate information, the price of the July futures contract might increase or decrease in response to changing expectations.

Competitive price discovery is a major economic function--and, indeed, a major economic benefit--of futures trading. The trading floor of a futures exchange is where available information about the future value of a commodity or item is translated into the language of price. In summary, futures prices are an ever changing barometer of supply and demand and, in a dynamic market, the only certainty is that prices will change.

## AFTER THE CLOSING BELL

Once a closing bell signals the end of a day's trading, the exchange's clearing organization matches each purchase made that day with its corresponding sale and tallies each member firm's gains or losses based on that day's price changes--a massive undertaking considering that nearly two-thirds of a million futures contracts are bought and sold on an average day. Each firm, in turn, calculates the gains and losses for each of its customers having futures contracts.

Gains and losses on futures contracts are not only calculated on a daily basis, they are credited and deducted on a daily basis. Thus, if a speculator were to have, say, a \$300 profit as a result of the day's price changes, that amount would be immediately credited to his brokerage account and, unless required for other purposes, could be withdrawn. On the other hand, if the day's price changes had resulted in a \$300 loss, his account would be immediately debited for that amount.

The process just described is known as a daily cash settlement and is an important feature of futures trading. As will be seen when we discuss margin requirements, it is also the reason a customer who incurs a loss on a futures position may be called on to deposit additional funds to his account.

## THE ARITHMETIC OF FUTURES TRADING

To say that gains and losses in futures trading are the result of price changes is an accurate explanation but by no means a complete explanation. Perhaps more so than in any other form of speculation or investment, gains and losses in futures trading are highly leveraged. An understanding of leverage--and of how it can work to your advantage or disadvantage--is crucial to an understanding of futures trading.

As mentioned in the introduction, the leverage of futures trading stems from the fact that only a relatively small amount of money (known as initial margin) is required to buy or sell a futures contract. On a particular day, a margin deposit of only \$1,000 might enable you to buy or sell a futures contract covering \$25,000 worth of soybeans. Or for \$10,000, you might be able to purchase a futures contract covering common stocks worth \$260,000. The smaller the margin in relation to the value of the futures contract, the greater the leverage.

If you speculate in futures contracts and the price moves in the direction you anticipated, high leverage can produce large profits in relation to your initial margin. Conversely, if prices move in the opposite direction, high leverage can produce large losses in relation to your initial margin. Leverage is a two-edged sword.

For example, assume that in anticipation of rising stock prices you buy one June S&P 500 stock index futures contract at a time when the June index is trading at 1000. And assume your initial margin requirement is \$10,000. Since the value of the futures contract is \$250 times the index, each 1 point change in the index represents a \$250 gain or loss.

Thus, an increase in the index from 1000 to 1040 would double your \$10,000 margin deposit and a decrease from 1000 to 960 would wipe it out. That's a 100% gain or loss as the result of only a 4% change in the stock index!

Said another way, while buying (or selling) a futures contract provides exactly the same dollars and cents profit potential as owning (or selling short) the actual commodities or items covered by the contract, low margin requirements sharply increase the percentage profit or loss potential. For example, it can be one thing to have the value of your portfolio of common stocks decline from \$100,000 to \$96,000 (a 4% loss) but quite another (at least emotionally) to deposit \$10,000 as margin for a futures contract and end up losing that much or more as the result of only a 4% price decline. Futures trading thus requires not only the necessary financial resources but also the necessary financial and emotional temperament.

## **TRADING**

An absolute requisite for anyone considering trading in futures contracts--whether it's sugar or stock indexes, pork bellies or petroleum--is to clearly understand the concept of leverage as well as the amount of gain or loss that will result from any given change in the futures price of the particular futures contract you would be trading. If you cannot afford the risk, or even if you are uncomfortable with the risk, the only sound advice is don't trade. Futures trading is not for everyone.

## **MARGINS**

As is apparent from the preceding discussion, the arithmetic of leverage is the arithmetic of margins. An understanding of margins--and of the several different kinds of margin--is essential to an understanding of futures trading.

If your previous investment experience has mainly involved common stocks, you know that the term margin--as used in connection with securities--has to do with the cash down payment and money borrowed from a broker to purchase stocks. But used in connection with futures trading, margin has an altogether different meaning and serves an altogether different purpose.

Rather than providing a down payment, the margin required to buy or sell a futures contract is solely a deposit of good faith money that can be drawn on by your brokerage firm to cover losses that you may incur in the course of futures trading. It is much like money held in an escrow account. Minimum margin requirements for a particular futures contract at a particular time are set by the exchange on which the contract is traded. They are typically about five percent of the current value of the futures contract. Exchanges continuously monitor market conditions and risks and, as necessary, raise or reduce their margin requirements. Individual brokerage firms may require higher margin amounts from their customers than the exchange-set minimums.

There are two margin-related terms you should know: Initial margin and maintenance margin.

Initial margin (sometimes called original margin) is the sum of money that the customer must deposit with the brokerage firm for each futures contract to be bought or sold. On any day that profits accrue on your open positions, the profits will be added to the balance in your margin account. On any day losses accrue, the losses will be deducted from the balance in your margin account.

If and when the funds remaining available in your margin account are reduced by losses to below a certain level--known as the maintenance margin requirement--your broker will require that you deposit additional funds to bring the account back to the level of the initial margin. Or, you may also be asked for additional margin if the exchange or your brokerage firm raises its margin requirements. Requests for additional margin are known as margin calls.

Assume, for example, that the initial margin needed to buy or sell a particular futures contract is \$2,000 and that the maintenance margin requirement is \$1,500. Should losses on open positions reduce the funds remaining in your trading account to, say, \$1,400 (an amount less than the maintenance requirement), you will receive a margin call for the \$600 needed to restore your account to \$2,000.

Before trading in futures contracts, be sure you understand the brokerage firm's Margin Agreement and know how and when the firm expects margin calls to be met. Some firms may require only that you mail a personal check. Others may insist you wire transfer funds from your bank or provide same-day or next-day delivery of a certified or cashier's check. If margin calls are not met in the prescribed time and form, the firm can protect itself by liquidating your open positions at the available market price (possibly resulting in an unsecured loss for which you would be liable).

## BASIC TRADING STRATEGIES

Even if you should decide to participate in futures trading in a way that doesn't involve having to make day-to-day trading decisions (such as a managed account or commodity pool), it is nonetheless useful to understand the dollars and cents of how futures trading gains and losses are realized. And, of course, if you intend to trade your own account, such an understanding is essential.

Dozens of different strategies and variations of strategies are employed by futures traders in pursuit of speculative profits. Here is a brief description and illustration of several basic strategies. Buying (Going Long) to Profit from an Expected Price Increase

Someone expecting the price of a particular commodity or item to increase over from a given period of time can seek to profit by buying futures contracts. If correct in forecasting the direction and timing of the price change, the futures contract can later be sold for the higher price, thereby yielding a profit.\* If the price declines rather than increases, the trade will result in a loss. Because of leverage, the gain or loss may be greater than the initial margin deposit.

For example, assume it's now January, the July soybean futures contract is presently quoted at \$6.00, and over the coming months you expect the price to increase. You decide to deposit the required initial margin of, say, \$1,500 and buy one July soybean futures contract. Further assume that by April the July soybean futures price has risen to \$6.40 and you decide to take your profit by selling. Since each contract is for 5,000 bushels, your 40-cent a bushel profit would be 5,000 bushels x 40 cents or \$2,000 less transaction costs.

		Price per bushel	Value of 5,000 bushel contract
January	Buy 1 July soybean futures contract	\$6.00	\$30,000
April	Sell 1 July soybean futures contract	\$6.40	\$32,000
	Gain	\$ .40	\$ 2,000

- For simplicity examples do not take into account commissions and other transaction costs. These costs are important, however, and you should be sure you fully understand them. Suppose, however, that rather than rising to \$6.40, the July soybean futures price had declined to \$5.60 and that, in order to avoid the possibility of further loss, you elect to sell the contract at that price. On 5,000 bushels your 40-cent a bushel loss would thus come to \$2,000 plus transaction costs.

		Price per bushel	Value of 5,000 bushel contract
January	Buy 1 July soybean futures contract	\$6.00	\$30,000
April	Sell 1 July bean futures contract	\$5.60	\$28,000
	Loss	\$ .40	\$ 2,000

Note that the loss in this example exceeded your \$1,500 initial margin. Your broker would then call upon you, as needed, for additional margin funds to cover the loss. (Going short) to profit from an expected price decrease The only way going short to profit from an expected price decrease differs from going long to profit from an expected price increase is the sequence of the trades. Instead of first buying a futures contract, you first sell a futures contract. If, as expected, the price declines, a profit can be realized by later purchasing an offsetting futures contract at the lower price. The gain per unit will be the amount by which the purchase price is below the earlier selling price.

For example, assume that in January your research or other available information indicates a probable decrease in cattle prices over the next several months. In the hope of profiting, you deposit an initial margin of \$2,000 and sell one April live cattle futures contract at a price of, say, 65 cents a pound. Each contract is for 40,000 pounds, meaning each 1 cent a pound change in price will increase or decrease the value of the futures contract by \$400. If, by March, the price has declined to 60 cents a pound, an offsetting futures contract can be purchased at 5 cents a pound below the original selling price. On the 40,000 pound contract, that's a gain of 5 cents x 40,000 lbs. or \$2,000 less transaction costs.

		Price per pound	Value of 40,000 pound contract
January	Sell 1 April livecattle futures contract	65 cents	\$26,000
March	Buy 1 April live cattle futures contract	60 cents	\$24,000
	Gain	5 cents	\$ 2,000

Assume you were wrong. Instead of decreasing, the April live cattle futures price increases--to, say, 70 cents a pound by the time in March when you eventually liquidate your short futures position through an offsetting purchase. The outcome would be as follows:

		Price per pound	Value of 40,000 pound contract
January	Sell 1 April live cattle futures contract	65 cents	\$26,000
March	Buy 1 April live cattle futures contract	70 cents	\$28,000
	Loss	5 cents	\$ 2,000

In this example, the loss of 5 cents a pound on the futures transaction resulted in a total loss of the \$2,000 you deposited as initial margin plus transaction costs.

## SPREADS

While most speculative futures transactions involve a simple purchase of futures contracts to profit from an expected price increase--or an equally simple sale to profit from an expected price decrease--numerous other possible strategies exist. Spreads are one example. A spread, at least in its simplest form, involves buying one futures contract and selling another futures contract. The purpose is to profit from an expected change in the relationship between the purchase price of one and the selling price of the other. As an illustration, assume it's now November, that the March wheat futures price is presently \$3.10 a bushel and the May wheat futures price is presently \$3.15 a bushel, a difference of 5 cents. Your analysis of market conditions indicates that, over the next few months, the price difference between the two contracts will widen to become greater than 5 cents. To profit if you are right, you could sell the March futures contract (the lower priced contract) and buy the May futures contract (the higher priced contract). Assume time and events prove you right and that, by February, the March futures price has risen to \$3.20 and May futures price is \$3.35, a difference of 15 cents. By liquidating both contracts at this time, you can realize a net gain of 10 cents a bushel. Since each contract is 5,000 bushels, the total gain is \$500.

November	Sell March wheat	Buy May wheat	Spread
	\$3.10 Bu.	\$3.15 Bu.	5 cents
February	Buy March wheat	Sell May wheat	
	\$3.20	\$3.35	15 cents
	\$ .10 loss	\$ .20 gain	

**Net gain 10 cents Bu. Gain on 5,000 Bu. contract \$500** Had the spread (i.e. the price difference) narrowed by 10 cents a bushel rather than widened by 10 cents a bushel the transactions just illustrated would have resulted in a loss of \$500. Virtually unlimited numbers and types of spread possibilities exist, as do many other, even more complex futures trading strategies. These, however, are beyond the scope of an introductory booklet and should be considered only by someone who well understands the risk/reward arithmetic involved.

## **WHAT TO LOOK FOR IN A FUTURES CONTRACT?**

Whatever type of investment you are considering—including but not limited to futures contracts—it makes sense to begin by obtaining as much information as possible about that particular investment. The more you know in advance, the less likely there will be surprises later on. Moreover, even among futures contracts, there are important differences which—because they can affect your investment results—should be taken into account in making your investment decisions.

## **THE CONTRACT UNIT**

Delivery-type futures contracts stipulate the specifications of the commodity to be delivered (such as 5,000 bushels of grain, 40,000 pounds of livestock, or 100 troy ounces of gold). Foreign currency futures provide for delivery of a specified number of marks, francs, yen, pounds or pesos. U.S. Treasury obligation futures are in terms of instruments having a stated face value (such as \$100,000 or \$1 million) at maturity. Futures contracts that call for cash settlement rather than delivery are based on a given index number times a specified dollar multiple. This is the case, for example, with stock index futures. Whatever the yardstick, it's important to know precisely what it is you would be buying or selling, and the quantity you would be buying or selling.

## **HOW PRICES ARE QUOTED**

Futures prices are usually quoted the same way prices are quoted in the cash market (where a cash market exists). That is, in dollars, cents, and sometimes fractions of a cent, per bushel, pound or ounce; also in dollars, cents and increments of a cent for foreign currencies; and in points and percentages of a point for financial instruments. Cash settlement contract prices are quoted in terms of an index number, usually stated to two decimal points. Be certain you understand the price quotation system for the particular futures contract you are considering.

## **MINIMUM PRICE CHANGES**

Exchanges establish the minimum amount that the price can fluctuate upward or downward. This is known as the "tick" For example, each tick for grain is 0.25 cents per bushel. On a 5,000 bushel futures contract, that's \$12.50. On a gold futures contract, the tick is 10 cents per ounce, which on a 100 ounce contract is \$10. You'll want to familiarize yourself with the minimum price fluctuation—the tick size—for whatever futures contracts you plan to trade. And, of course, you'll need to know how a price change of any given amount will affect the value of the contract.

## **DAILY PRICE LIMITS**

Exchanges establish daily price limits for trading in futures contracts. The limits are stated in terms of the previous day's closing price plus and minus so many cents or dollars per trading unit. Once a futures price has increased by its daily limit, there can be no trading at any higher price until the next day of trading. Conversely, once a futures price has declined by its daily limit, there can be no trading at any lower price until the next day of trading. Thus, if the daily limit for a particular grain is currently 10 cents a bushel and the previous day's settlement price was \$3.00, there can not be trading during the current day at any price below \$2.90 or above \$3.10. The price is allowed to increase or decrease by the limit amount each day. For some contracts, daily price limits are eliminated during the month in which the contract expires. Because prices can become particularly volatile during the expiration month (also called the "delivery" or "spot" month), persons lacking experience in futures trading may wish to liquidate their positions prior to that time. Or, at the very least, trade cautiously and with an understanding of the risks which may be involved. Daily price limits set by the exchanges are subject to change. They can, for example, be increased once the market price has increased or decreased by the existing limit for a given number of successive days. Because of daily price limits, there may be occasions when it is not possible to liquidate an existing futures position at will. In this event, possible alternative strategies should be discussed with a broker

## **POSITION LIMITS**

Although the average trader is unlikely to ever approach them, exchanges and the CFTC establish limits on the maximum speculative position that any one person can have at one time in any one futures contract. The purpose is to prevent one buyer or seller from being able to exert undue influence on the price in either the establishment or liquidation of positions. Position limits are stated in number of contracts or total units of the commodity. The easiest way to obtain the types of information just discussed is to ask your broker or other advisor to provide you with a copy of the contract specifications for the specific futures contracts you are thinking about trading. Or you can obtain the information from the exchange where the contract is traded.

## **UNDERSTANDING (AND MANAGING) THE RISKS OF FUTURES TRADING**

Anyone buying or selling futures contracts should clearly understand that the Risks of any given transaction may result in a Futures Trading loss. The loss may exceed not only the amount of the initial margin but also the entire amount deposited in the account or more. Moreover, while there are a number of steps which can be taken in an effort to limit the size of possible losses, there can be no guarantees that these steps will prove effective. Well-informed futures traders should, nonetheless, be familiar with available risk management possibilities.

## **CHOOSING A FUTURES CONTRACT**

Just as different common stocks or different bonds may involve different degrees of probable risk, and reward at a particular time, so may different futures contracts. The market for one commodity may, at present, be highly volatile, perhaps because of supply-demand uncertainties which--depending on future developments--could suddenly propel prices sharply higher or sharply lower. The market for some other commodity may currently be less volatile, with greater likelihood that prices will fluctuate in a narrower range. You should be able to evaluate and choose the futures contracts that appear--based on present information--most likely to meet your objectives and willingness to accept risk. Keep in mind, however, that neither past nor even present price behavior provides assurance of what will occur in the future. Prices that have been relatively stable may become highly volatile (which is why many individuals and firms choose to hedge against unforeseeable price changes).

## **LIQUIDITY**

There can be no ironclad assurance that, at all times, a liquid market will exist for offsetting a futures contract that you have previously bought or sold. This could be the case if, for example, a futures price has increased or decreased by the maximum allowable daily limit and there is no one presently willing to buy the futures contract you want to sell or sell the futures contract you want to buy. Even on a day-to-day basis, some contracts and some delivery months tend to be more actively traded and liquid than others. Two useful indicators of liquidity are the volume of trading and the open interest (the number of open futures positions still remaining to be liquidated by an offsetting trade or satisfied by delivery). These figures are usually reported in newspapers that carry futures quotations. The information is also available from your broker or advisor and from the exchange where the contract is traded.

## **TIMING**

In futures trading, being right about the direction of prices isn't enough. It is also necessary to anticipate the timing of price changes. The reason, of course, is that an adverse price change may, in the short run, result in a greater loss than you are willing to accept in the hope of eventually being proven right in the long run. Example: In January, you deposit initial margin of \$1,500 to buy a May wheat futures contract at \$3.30--anticipating that, by spring, the price will climb to \$3.50 or higher. No sooner than you buy the contract, the price drops to \$3.15, a loss of \$750. To avoid the risk of a further loss, you have your broker liquidate the position. The possibility that the price may now recover--and even climb to \$3.50 or above--is of no consolation. The lesson to be learned is that deciding when to buy or sell a futures contract can be as important as deciding what futures contract to buy or sell. In fact, it can be argued that timing is the key to successful futures trading.

## STOP ORDERS

A stop order is an order, placed with your broker, to buy or sell a particular futures contract at the market price if and when the price reaches a specified level. Stop orders are often used by futures traders in an effort to limit the amount they might lose if the futures price moves against their position. For example, were you to purchase a crude oil futures contract at \$21.00 a barrel and wished to limit your loss to \$1.00 a barrel, you might place a stop order to sell an off-setting contract if the price should fall to, say, \$20.00 a barrel. If and when the market reaches whatever price you specify, a stop order becomes an order to execute the desired trade at the best price immediately obtainable. There can be no guarantee, however, that it will be possible under all market conditions to execute the order at the price specified. In an active, volatile market, the market price may be declining (or rising) so rapidly that there is no opportunity to liquidate your position at the stop price you have designated. Under these circumstances, the broker's only obligation is to execute your order at the best price that is available. In the event that prices have risen or fallen by the maximum daily limit, and there is presently no trading in the contract (known as a "lock limit" market), it may not be possible to execute your order at any price. In addition, although it happens infrequently, it is possible that markets may be lock limit for more than one day, resulting in substantial losses to futures traders who may find it impossible to liquidate losing futures positions. Subject to the kinds of limitations just discussed, stop orders can nonetheless provide a useful tool for the futures trader who seeks to limit his losses. Far more often than not, it will be possible for the broker to execute a stop order at or near the specified price. In addition to providing a way to limit losses, stop orders can also be employed to protect profits. For instance, if you have bought crude oil futures at \$21.00 a barrel and the price is now at \$24.00 a barrel, you might wish to place a stop order to sell if and when the price declines to \$23.00. This (again subject to the described limitations of stop orders) could protect \$2.00 of your existing \$3.00 profit while still allowing you to benefit from any continued increase in price.

## SPREADS

Spreads involve the purchase of one futures contract and the sale of a different futures contract in the hope of profiting from a widening or narrowing of the price difference. Because gains and losses occur only as the result of a change in the price difference—rather than as a result of a change in the overall level of futures prices—spreads are often considered more conservative and less risky than having an outright long or short futures position. In general, this may be the case. It should be recognized, though, that the loss from a spread can be as great as—or even greater than—that which might be incurred in having an outright futures position. An adverse widening or narrowing of the spread during a particular time period may exceed the change in the overall level of futures prices, and it is possible to experience losses on both of the futures contracts involved (that is, on both legs of the spread).

## OPTIONS ON FUTURES CONTRACTS

What are known as put and call options are being traded on a growing number of futures contracts. The principal attraction of buying options is that they make it possible to speculate on increasing or decreasing futures prices with a known and limited risk. The most that the buyer of an option can lose is the cost of purchasing the option (known as the option "premium") plus transaction costs. Options can be most easily understood when call options and put options are considered separately, since, in fact, they are totally separate and distinct. Buying or selling a call in no way involves a put, and buying or selling a put in no way involves a call.

## BUYING CALL OPTIONS

The buyer of a call option acquires the right but not the obligation to purchase (go long) a particular futures contract at a specified price at any time during the life of the option. Each option specifies the futures contract which may be purchased (known as the "underlying" futures contract) and the price at which it can be purchased (known as the "exercise" or "strike" price). A March Treasury bond 84 call option would convey the right to buy one March U.S. Treasury bond futures contract at a price of \$84,000 at any time during the life of the option. One reason for buying call options is to profit from an anticipated increase in the underlying futures price. A call option buyer will realize a net profit if, upon exercise, the underlying futures price is above the option exercise price by more than the premium paid for the option. Or a profit can be realized if, prior to expiration, the option rights can be sold for more than they cost. Example: You expect lower interest rates to result in higher bond prices (interest rates and bond prices move inversely). To profit if you are right, you buy a June T-bond 82 call. Assume the premium you pay is \$2,000. If, at the expiration of the option (in May) the June T-bond futures price is 88, you can realize a gain of 6 (that's \$6,000) by

exercising or selling the option that was purchased at 82. Since you paid \$2,000 for the option, your net profit is \$4,000 less transaction costs. As mentioned, the most that an option buyer can lose is the option premium plus transaction costs. Thus, in the preceding example, the most you could have lost--no matter how wrong you might have been about the direction and timing of interest rates and bond prices--would have been the \$2,000 premium you paid for the option plus transaction costs. In contrast if you had an outright long position in the underlying futures contract, your potential loss would be unlimited. It should be pointed out, however, that while an option buyer has a limited risk (the loss of the option premium), his profit potential is reduced by the amount of the premium. In the example, the option buyer realized a net profit of \$4,000. For someone with an outright long position in the June T-bond futures contract, an increase in the futures price from 82 to 88 would have yielded a net profit of \$6,000 less transaction costs. Although an option buyer cannot lose more than the premium paid for the option, he can lose the entire amount of the premium. This will be the case if an option held until expiration is not worthwhile to exercise.

## **BUYING PUT OPTIONS**

Whereas a call option conveys the right to purchase (go long) a particular futures contract at a specified price, a put option conveys the right to sell (go short) a particular futures contract at a specified price. Put options can be purchased to profit from an anticipated price decrease. As in the case of call options, the most that a put option buyer can lose, if he is wrong about the direction or timing of the price change, is the option premium plus transaction costs. Example: Expecting a decline in the price of gold, you pay a premium of \$1,000 to purchase an October 320 gold put option. The option gives you the right to sell a 100 ounce gold futures contract for \$320 an ounce. Assume that, at expiration, the October futures price has--as you expected--declined to \$290 an ounce. The option giving you the right to sell at \$320 can thus be sold or exercised at a gain of \$30 an ounce. On 100 ounces, that's \$3,000. After subtracting \$1,000 paid for the option, your net profit comes to \$2,000. Had you been wrong about the direction or timing of a change in the gold futures price, the most you could have lost would have been the \$1,000 premium paid for the option plus transaction costs. However, you could have lost the entire premium.

## **HOW OPTION PREMIUMS ARE DETERMINED**

Option premiums are determined the same way futures prices are determined, through active competition between buyers and sellers. Three major variables influence the premium for a given option: \* The option's exercise price, or, more specifically, the relationship between the exercise price and the current price of the underlying futures contract. All else being equal, an option that is already worthwhile to exercise (known as an "in-the-money" option) commands a higher premium than an option that is not yet worthwhile to exercise (an "out-of-the-money" option). For example, if a gold contract is currently selling at \$295 an ounce, a put option conveying the right to sell gold at \$320 an ounce is more valuable than a put option that conveys the right to sell gold at only \$300 an ounce. \* The length of time remaining until expiration. All else being equal, an option with a long period of time remaining until expiration commands a higher premium than an option with a short period of time remaining until expiration because it has more time in which to become profitable. Said another way, an option is an eroding asset. Its time value declines as it approaches expiration. \* The volatility of the underlying futures contract. All else being equal, the greater the volatility the higher the option premium. In a volatile market, the option stands a greater chance of becoming profitable to exercise.

## **SELLING OPTIONS**

At this point, you might well ask, who sells the options that option buyers purchase? The answer is that options are sold by other market participants known as option writers, or grantors. Their sole reason for writing options is to earn the premium paid by the option buyer. If the option expires without being exercised (which is what the option writer hopes will happen), the writer retains the full amount of the premium. If the option buyer exercises the option, however, the writer must pay the difference between the market value and the exercise price. It should be emphasized and clearly recognized that unlike an option buyer who has a limited risk (the loss of the option premium), the writer of an option has unlimited risk. This is because any gain realized by the option buyer if and when he exercises the option will become a loss for the option writer.

	REWARD	RISK
Option Buyer	Except for the premium, an option buyer has the same profit potential as someone with an outright position in the underlying futures contract.	An option maximum loss: is the premium paid for the option
Option Writer	An option writer's maximum profit is premium received for writing the option	An option writer's loss is unlimited. Except for the premium received, risk is the same as having an outright position in the underlying futures contract.

## IN CLOSING

The foregoing is, at most, a brief and incomplete discussion of a complex topic. Options trading has its own vocabulary and its own arithmetic. If you wish to consider trading in options on futures contracts, you should discuss the possibility with your broker and read and thoroughly understand the Options Disclosure Document which he is required to provide. In addition, have your broker provide you with educational and other literature prepared by the exchanges on which options are traded. Or contact the exchange directly. A number of excellent publications are available. In no way, it should be emphasized, should anything discussed herein be considered trading advice or recommendations. That should be provided by your broker or advisor. Similarly, your broker or advisor--as well as the exchanges where futures contracts are traded--are your best sources for additional, more detailed information about futures trading.

Source: National Futures Association

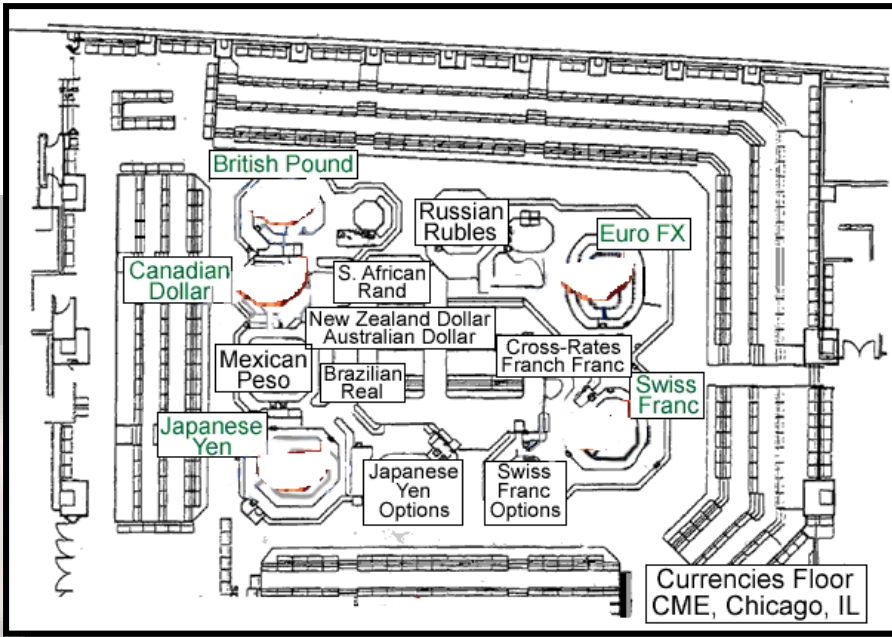
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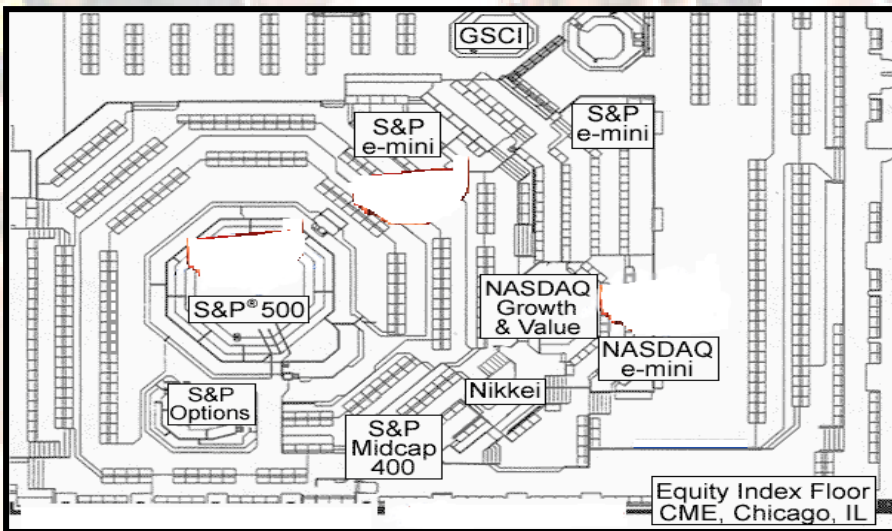


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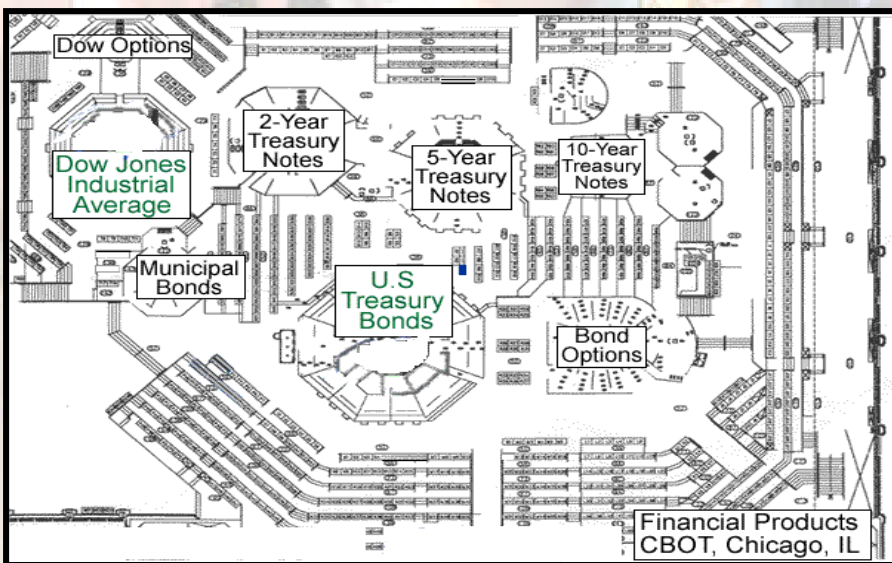
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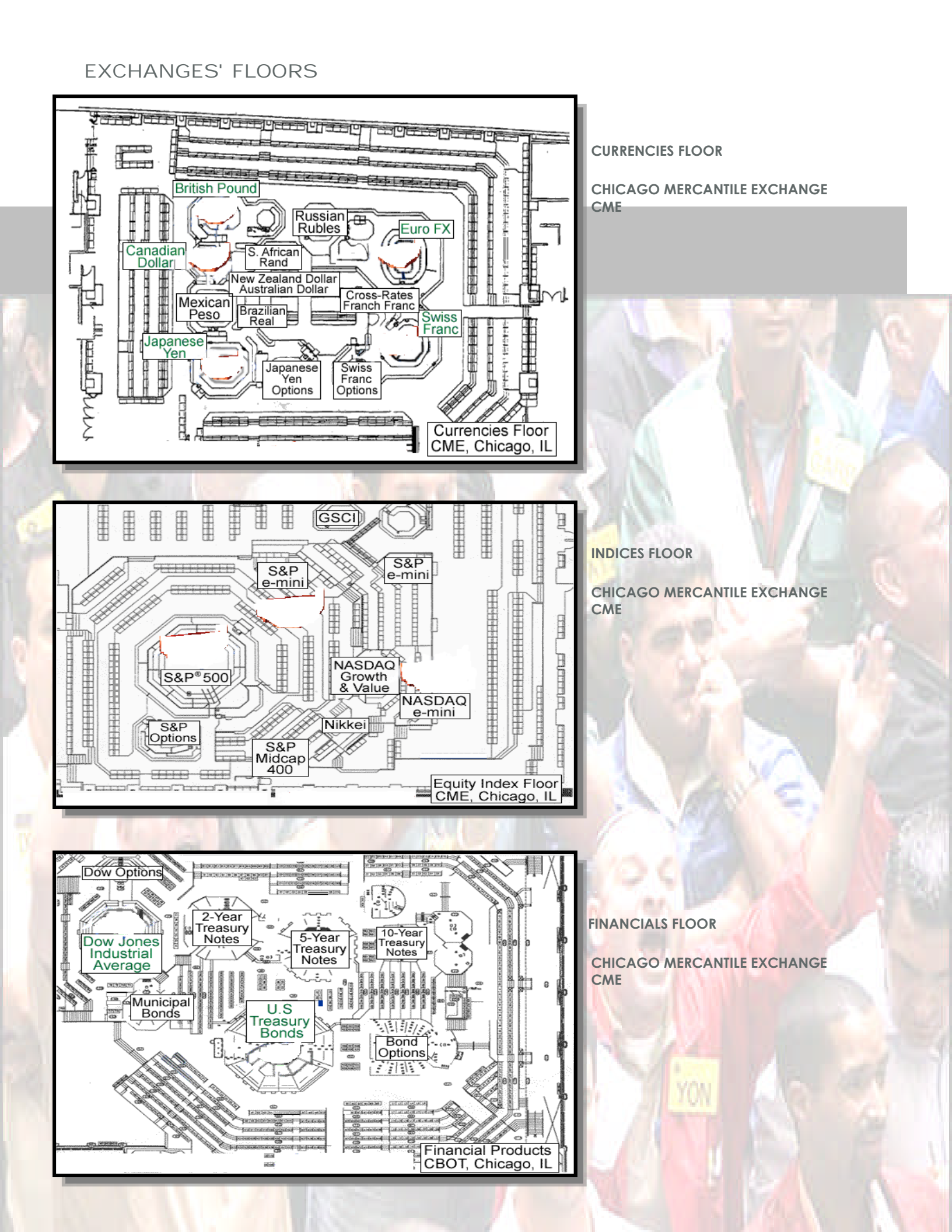
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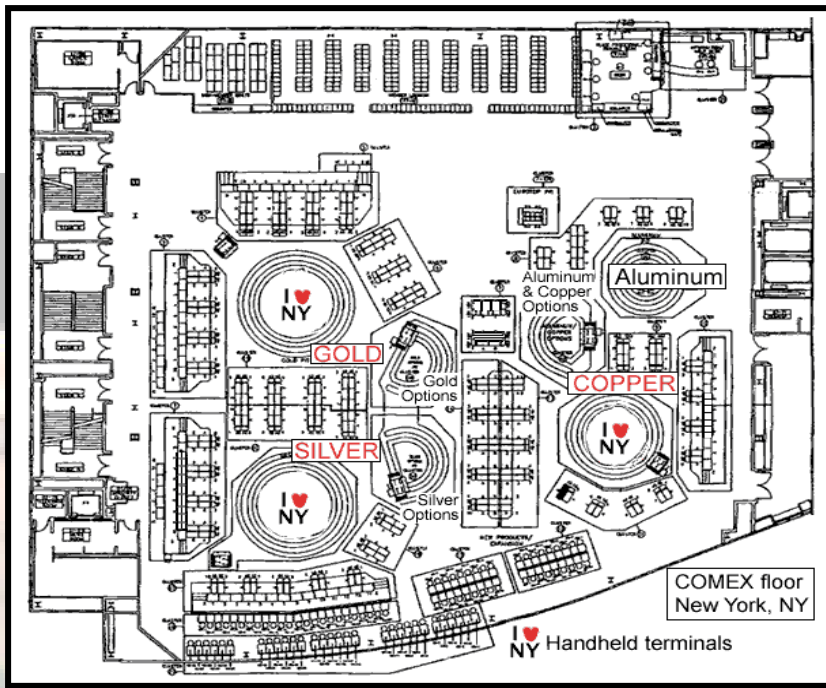
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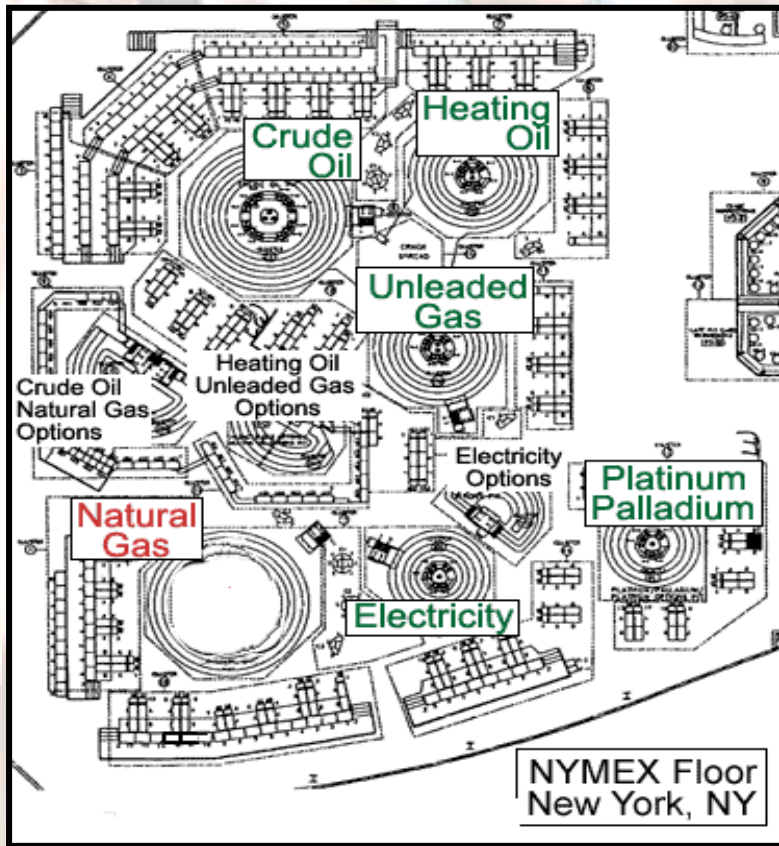
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