Mechanics of Futures Trading

The Futures Contract

A futures contract is an agreement to later buy and sell a commodity. In these thirteen words lies the first and most important key to understanding futures trading. Trading is in contracts for later consummation. Trades are exercises in futurity. They are not purchases and sales of actual or cash commodities. Title does not change hands; money does not change hands. The unit of the commodity that the contract pertains to may but need not exist at the time that the contract is made.

Second only to this fundamental is the fact that very few—one or two percent—of the contracts made ever mature and are consummated. Trading in futures contracts is for purposes other than the exchange of title. The purposes are what the study of futures trading is about. They relate to the real world of trading in actual commodities. The contracts are for real and may be consummated if the buyer or the seller elects to hold the contract to maturity. Futures trading is not a game played in a commercial vacuum—it just seems like it at first glance.

Contracts calling for later performance are quite usual in the economic system and are familiar to everyone. Occasionally a customer goes into an automobile agency, selects a car, pays for it, and drives it away. But this is not the way most purchases and sales are made. Usually a contract is made and signed describing the car to be purchased, the time of delivery, and outlining the financial terms. The actual automobile may be at the agency, the factory, or may not even exist. It may be necessary to make up the combination of colors, accessories, etc. that the customer wants. Usually the customer posts some money to guarantee the contract with the understanding that the money posted
will eventually be applied to the purchase. Another example is a contract calling for the purchase and sale of a house that has not yet been built. The builder and the buyer make an agreement accurately describing the house, its location, time of completion, terms of payment, the price, and the penalties to be exacted in the event of default on the contract. Usually a monetary guarantee of performance is posted by one or both parties to the contract.

In the businesses relating to trading in cash commodities, contracts calling for deferred delivery are also a quite common, if not the usual way of doing business. For example, corn is sold by farmers to country elevators, to interior merchants, and to processors or exporters. These are lots of actual corn that move through the marketing channels from production to consumption. Change of title takes place at each point and payment is made. Physical movement and exchange of title may take place at essentially the time that the agreements are made but this is not always the case. The farmer may, and often does, sell corn in October or November for delivery at the local elevator in January or March or May. The elevator may sell for prompt shipment or shipment by Dec. 15 or March 15. The exporter may sell a loaded cargo or a cargo for delivery at a foreign port several weeks or months later, etc. These are cash forward contracts involving physical and ownership transfer. They may involve specific lots but usually relate to a described quality.

These contracts calling for deferred performance and exchange of title are both like and unlike futures contracts. The same basic terms relating to price, quantity, quality, time and place of delivery, terms of payment, and recourse in the event of default are present. But we should distinguish three principal differences. First, futures contracts are traded on organized exchanges while cash forward contracts are traded in informal, decentralized markets. There is a legal difference for commodities traded on United States futures markets. According to the Commodity Futures Trading Commission Act of 1974, all goods, articles, services, rights and interests traded for future delivery are under regulation of the Commodity Futures Trading Commission. Futures trading is prohibited except on designated (those licenced and supervised) exchanges. It is illegal to trade in corn futures contracts except on designated exchanges for which corn futures trading has been approved. Any other trading in corn that relates to deferred consummation is not futures trading and, for purposes of completeness of classification, should be called forward contracting.

This fine line of distinction is more interesting as we consider onions. Onions are a commodity so that futures trading in onions can be conducted only on a designated exchange. But a separate piece of legislation prohibits futures trading in onions on any designated exchange. Thus, there is no futures trading in onions. Yet, onions are grown extensively under contractual arrangements between producers and marketing agents and forward contracts are made between marketing agents and users of onions. The distinction seems to be in the
degree of formalization. Just how organized the forward contracting in cash onions could get to be without becoming illegal is a subject to which no attention has been paid but is intriguing.

Second, futures trading is in standardized contracts. The contracts are identical with regard to all terms (quantity, quality, etc.) except the month of delivery and the price. The months of maturity are designated and the time of delivery within the month is standardized. Thus, contract negotiation involves only the number of contracts and the price. The hubbub on the floor of an active exchange is only about price and number of contracts.

Third, trading in futures contracts is highly formalized. The rules of trading are detailed and strictly enforced. The objective of this formalization is to assure open, competitive trading in which all traders have an equal opportunity to do business. Futures trading is done in market places modeled after the oldest concepts of open markets. The rules are similar to those of the medieval fairs of France and England during the Middle Ages. The rules of the ancient fairs provided that trading be confined to the designated market place and the times that were agreed upon for trading, that all bids and offers be made publicly before witnesses, and that every person in the market have equal opportunity to accept bids and offers. The rules prohibited merchants from going out from the market place and engrossing the supply so that they might become the sole or controlling seller. Private negotiations behind closed doors were prohibited. Disputes arose that related to such things as merchants who went into the countryside, bought all of the geese and brought to the market only the number that would maximize their total revenue. It appears that the demand for geese was inelastic and the principle of profiting from monopoly control of the supply of a commodity having an inelastic demand schedule was recognized at least a thousand years ago. More significantly, it was disapproved and prohibited.

**The Trading**

The detail of the trading processes varies among exchanges according to the volume of business and the customs of the exchanges. But the rules of the exchanges are quite similar and the differences in procedures are of minor significance. The trading is in pits or rings with, generally, one pit or ring for each commodity. Where volume is small or commodities are closely related more than one commodity may be traded in the same pit or ring.

The pit is a structure of wood, usually hexagonal in shape, with three or four steps up the outside and a similar number down the inside. Some pits are as much as 75 feet across. The whole thing is quite horizontal and the bottom of the pit is at the exterior floor level. The term pit is not very descriptive; it is a series of raised steps designed so that the traders can see each other better.
Various areas of the pit are designated by a pit committee for trading in the various delivery months with trading in the most active month usually taking place on the top steps where there is the greatest access to messages and phones. Trading is not restricted by area; anyone can trade in any delivery month with anyone else.

The ring is a circular or oval piece of brass that may be as much as 20 feet in diameter raised some 31/2 feet—a comfortable leaning height—above the floor by posts. The traders stand behind the ring and trade across the ring with each other.

In some markets trading starts and ends simultaneously in all deliveries of all commodities and in all pits or rings. In others, trading starts at different times in the different commodities and for the different delivery months of each commodity. At some markets trading is a continuous auction from opening to closing bell while others open with a call. In a call market opening bids and offers are posted and each delivery month is called separately. The initial trades—amounts and prices—are posted and continuous auction trading follows.

In all markets the times of trading are established by the rules and trading is started with a loud bell. There are usually warning bells rung just before trading starts and ends. Trading before the opening bell and after the closing bell is prohibited and the rules are strictly enforced. The occasional violations that occur are usually detected and the offenders disciplined. This rule results in quite hectic activity at times, particularly in the expiring delivery months. Orders flow into the pit for execution near or at the close of trading and sometimes the volume of this business is quite large. Each principal behind the order wants execution at the last traded price which cannot always be accomplished. Some markets, notably the Chicago Board of Trade, close trading in the expiring delivery month at a time other than the general closing time. At Chicago the general closing time is 1:15 P.M. but trading in expiring contracts ceases at high noon. This gives a clearer field for the traders interested in the expiring month.

The rules require that all bids and offers be cried out in a loud, clear voice so that all can hear and that each trader have equal opportunity of acceptance. This is done with such vigor that the noise makes it virtually impossible in active markets for anyone to hear what is being said. As a result, the traders resort to hand signals. A palm held out is an offer to sell and a palm in is a bid to buy. Fingers held vertically indicate the quantity in bushels or in contracts. Fingers are then turned horizontally to indicate the price at which the bid or offer is being made.

When a bid or offer is made the trade must be made with the first person to accept. If more than two people accept simultaneously the business is split between them if more than one contract is involved.
At each pit there is a raised pulpit in which observers are placed. They overlook the trading and note the prices at which traders are made. The traders are obligated to see that the observers are informed of the prices at which trades are made. The observers record the prices, time stamp them and feed them into a communication system.

The communication system is extensive and nearly instantaneous. The prices are communicated by telephone to board markers or to a computer which activates price display boards on the trading floor. At the same time the prices are put on ticker tape that feeds out of receiving machines located in brokerage offices and the offices of commodity firms. In 1975 there were 770 Chicago Board of Trade ticker receiving points, scattered over the U.S., Canada, and in Europe. The ticker coverage of other exchanges is smaller but none-the-less great.

In addition, the quotations from all of the exchanges are fed into central computer operated reporting systems and transmitted to subscribers where they activate electrically operated display boards or desk top units. The number of these units is large and increasing rapidly. At the end of 1975 Chicago Board of Trade quotations were received in 90 countries.

Time is of the essence in reporting prices. The time lag from trader to pulpit is measured in seconds—say one or two. From that point the time lag is measured in milliseconds. Prices are registered on the trading floor and at ticker outlets at the same time. There is a further time lag between the ticker and the central reporting services but it, too, is measured in split seconds. Thus one can sit in a brokerage office or at one's desk in the office of a processing firm or grain exporter in Decatur, Ill., London, or Hong Kong and know the prices at which trades are made quite as soon as can the people on the exchange floors.

When a trade is made each of the traders makes a note on a card of the price, the quantity, the delivery month, and the person with whom the trade was made. Thus the trade is recorded twice. This record is submitted to the Clearing House for reconciliation after the close of the trading session. It is interesting to note that many of the trades are quite large and price changes are frequent so that the gains or losses from trades are often substantial by the close of the session. Yet agreements are reached quickly with a shout or a hand signal and without the signing of documents or even exchange of memoranda. Often as much as 100 million bushels of soybeans, worth $600 million, are traded in a day by these verbal contracts without any disputes arising.

This detail of trading rules and procedures is worth noting because it demonstrates the open competition of the markets. All traders, large and small, have equal access to all other traders. All bids, offers, and transactions are public, and all prices become public information instantly.
Contract Terms

As we have noted, very few futures contracts ever reach maturity and are consummated. But some do and are. They are valid, enforceable contracts. If the seller elects to make delivery he may do so and will receive payment at the price at which he made the contract. If the buyer wishes to hold his contract to maturity he will receive delivery and in effect will pay the price at which he made the contract. As noted, futures contracts are standardized and interchangeable. The specific terms of the contracts vary by commodities and by exchanges. The terms of the contracts are precise and closely specified. One gets the impression in reading them that every conceivable loophole has been tried, discovered, and plugged. The exchange officials have done a remarkable job of anticipating every devious thought of the sellers. For example the pork belly futures contract on the Chicago Mercantile Exchange requires three and one half pages of relatively small type for description. The original futures contracts for grains as they evolved in the 19th century followed existing trade practices. As the contracts of more recent origin were written, careful attempts were made to precisely describe existing practices in trading the cash commodity. These contracts, then, are interchangeable with and as close substitutes as possible for transactions in cash commodities. Because they must be uniform, that is, cannot vary by individual lots, they cannot be perfect substitutes for cash contracts which can and do vary individually. But when futures contracts have been written that failed to accurately represent existing trade practices, active trading has failed to develop. The terms of some futures contracts are fairly frequently revised as the conditions of the cash commodity trading changes. For others, contract terms remain constant over long periods of time.

It is important that each person who trades in futures contracts know the general terms of contracts in which he trades. There is sufficient uniformity among contracts that an example is adequate for our purposes here.

Suppose that on January 10 one buys a contract of May soybeans futures for $5.87. What does this mean? It means that he has made a contract, an agreement, to buy some soybeans to be delivered in May and pay $5.87 per bushel for them. What are the terms of the contract?

1. The commodity is soybeans.
2. The price is $5.87 per bushel.
3. The quantity is 5000 bushels.
4. The quality is No. 2 yellow as determined on the basis U.S. Department of Agriculture grain standards. But the seller, if he elects may substitute No. 1 yellow and be paid a premium of 3 cents per bushel or No. 3 yellow (14% or less moisture) and be paid a discount of 3 cents per bushel. In addition, the seller must furnish live transit rail billing.
5. The time of delivery is some day in May, whichever day the seller elects—from first to last.

6. The place of delivery is in store in a public warehouse that has been designated as regular for delivery by the Chicago Board of Trade. The elevators designated regular for delivery must be licensed, located within the rail switching district of the City of Chicago, and be located on both rail and water. An exception to this is that delivery may be made during the last three business days of the delivery month in rail cars located in the switching district of Chicago. In fact, delivery is made by the seller furnishing an endorsed warehouse receipt. (This latter note should dispel the old wives' tale of the man who took delivery and woke up one morning to find several carloads of a commodity dumped in his front yard.)

7. The terms of payment are cash on delivery of the warehouse receipt. There are no credit transactions in the making and taking of delivery on futures contracts. It should be kept in mind, however, that the warehouse receipt is a negotiable instrument so that a high proportion of the value of the soybeans can be borrowed to make payment.

8. In the matter of default, should the buyer of a contract fail to take delivery on a contract, the deliverer shall promptly sell the commodity on the open market for the account of the delinquent. The rules governing failure to make delivery are not as simple because the solution is not as simple. It is easy to sell something in hand but it is not easy to buy something to replace a defaulted delivery; the seller would not default if the commodity were available at the delivery point. The general principle is that the holder of the contract to buy takes whatever measures are necessary to fulfill his own obligations and takes recourse upon the seller. But these things do not happen; the sellers make delivery "or else," and the buyers take delivery "or else." The "or else" is easier if the trader does it himself rather than leave it to the exchange. Anything can be negotiated at a price and there is an old saw common in futures trading circles that goes "He who sells what isn't his'n must pay the price or go to prison." Exchanges have broad emergency powers under which they can suspend trading and fix settlement prices when delivery cannot be made. But these powers are almost never used. The posture of the exchanges is that these are valid contracts and will damned well be honored. There are no contract defaults or fixed settlement prices on record in the modern history of the Chicago Board of Trade or the Chicago Mercantile Exchange and these two do some 75% of all the commodity futures business.

In addition to the terms of the contracts there are additional regulations of trading that should be noted. First, price quotations and minimum price fluctuations are established by the exchanges. Soybeans, as most grains, are quoted in cents and quarters of a cent per bushel, with 1/4¢ per bushel ($12.50 per contract) as the minimum change. Frozen orange concentrate is quoted on a pound
price, showing as 50.15 or 50 and 15/100 cents per pound. Fluctuations are recorded in multiples of 5/100 cents per pound, with 5/100 cent fluctuation representing $7.50 on each contract of 15,000 pounds.

Second, the exchanges generally establish maximum daily permissible price changes. For soybeans the permissible change is 50 cents per bushel above or below the previous day's close. For orange juice the regulation is: No limit is imposed on or after the 8th day of the current delivery month. In others, prices may move no more than 3 cents ($450.00 per contract) above or below the lowest price in the closing range of the previous market session. During any session, trades may not be made at prices more than 3 cents per pound above the lowest price for that session, or more than 3 cents per pound below the highest price. For nearly all commodities on all exchanges there are limits on possible daily price ranges but it is not at all unusual for these limits to be suspended during the delivery month as in the case of frozen orange concentrate.

The purpose of the daily limits is to prevent a major price change from carrying too far from its own momentum; a chance for the traders to consider the matter overnight (not to suggest that they could sleep on it) and for the losers to regroup their forces. Setting the limits is a delicate matter. They are kept narrow in the interest of orderly movements in prices. But if they are set too narrow they hamper the normal movement of prices and, more importantly, they act as a magnet. Holders of contracts to buy do not want to be caught in a market that is down the limit so that they can't sell. Conversely, holders of contracts to sell do not want to be caught in a market that is up the limit. In either case liquidity is lost and the trader has lost control of his own destiny. Thus, as a market moves up or down sharply and approaches the daily permissible limit, traders about to be caught, get out, which forces the price farther in the direction it is already moving, thereby aggravating the move. The fact remains, though, that the loss that can occur on a single day is limited.

The increased volatility of prices beginning in 1972 created extensive problems in setting daily variation limits. For some commodities, as cattle in 1973, there were extensive periods of continuous limit moves. In 1975, coffee futures rose the limit on seven successive days. In the main, the problems were solved by increasing limits, as from 1 to 11/2 cents per pound for cattle. The Chicago Board of Trade adopted a system of variable limits. If the price changes the limit for three successive days, the limit is increased by 50 percent until the problem is solved. When limit moves cease, limits revert to earlier levels.

A limit move on a major exchange is interesting to watch. Limit moves nearly always occur as the result of a major change in one or more of the factors affecting prices and usually happen when market participation is at a high level. An example: In the summer of 1966 the weather was unfavorable for grain production and prices rose. The soybean price, in particular, was quite strong. The August 1st crop report made it clear that there would be a shortage and
that high prices would be required to ration the supply during the ensuing 12 months, and the price continued to rise. Market participation was broad and the volume of trading large. Huge sums of money were made and lost. The government report estimating production on Sept. 1, to be released after the market close on Friday, September 9, was anxiously awaited. The price ran up eight cents near the close of trading on Friday. The report showed a marked improvement in the crop during August—from 859 million bushels indicated August 1 to 925 million indicated on September 1. This report dramatically changed the thinking of the traders. The holders of contracts to buy were discouraged and wanted out and the holders of contracts to sell were gleeful, anticipating that they could buy supplies for delivery at much lower prices. It was a long, anxious weekend and the tension was tremendous as the opening bell on Monday approached. The bell rang and there was great noise and congestion in the pit with people pushing, shouting, and frantically waving arms and hands. But nothing happened. The price was down the 10 cent limit offered and there were no buyers. An eerie quiet settled with only an occasional plaintive cry to sell made. And so the day went with almost no trading. Occasionally an offer to sell was quietly accepted. On Tuesday the market opened down the limit and there was very little trading until mid-session when the sellers decided the break might be over and started to buy. For a time the volume of trading was huge. The price strengthened one and one half cents but more sales came in so that it closed down the limit with no trading. Prices stabilized on Wednesday with a large volume of trading in a narrow range. The total volume of trading by days in bushels was:

<table>
<thead>
<tr>
<th>Date</th>
<th>Volume (bushels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 9</td>
<td>67,312,000</td>
</tr>
<tr>
<td>September 12</td>
<td>3,655,000</td>
</tr>
<tr>
<td>September 13</td>
<td>66,335,000</td>
</tr>
<tr>
<td>September 14</td>
<td>54,159,000</td>
</tr>
</tbody>
</table>

Third, there are usually volume of trading and position limits imposed on some classes of traders. For the principal grains these limits are established by the government. The limits vary by exchanges and commodity. For example no person may own more than 3 million bushels of corn futures nor trade more than 3 million bushels in a single day. The rule applies only to speculators—bona fide hedgers are excepted. The rule does not affect very many people but it is noted because it is a significant difference between futures trading and cash forward trading where there are no limits.

Fourth, trading in the delivery month is stopped prior to the end of the month. The length of time before the end varies by commodities and exchanges with five or seven business days the most usual. For example, trading in grains is stopped so that seven business days remain which is, roughly, the 20th. After
the suspension of trading all outstanding contracts must be settled by delivery. The purpose of the early cessation of trading is to allow time for moving commodities into position for delivery and an orderly exchange of title.

It is obvious from the large number of contracts traded in the several exchanges that there are a lot of specific contract terms with which traders need be familiar. Such familiarity is not as difficult as it might seem at first glance. Most people trade in but a few commodities. It is not necessary to know all of the technical detail of the commodity contract but rather the general provision and the relative values of the commodity on delivery and the cash commodity in ordinary commercial transactions. Most exchanges publish and distribute brief leaflets that describe the commodity, the general terms of the futures contract, and the rules of trading for each commodity. These are available on request from exchanges and brokers.

**Delivery Months**

Several delivery months for each commodity are established by the exchanges. There are three bases for selection of months: natural climactic months relating to the season of the year, concentration of volume of trading for liquidity, and inertia. In the beginning, a century ago, the months for grain futures trading evolved from existing trade practices and related to the times of growing, harvesting, and marketing of crops. For wheat, July was the first month of harvest and availability of winter wheat. September is the month of harvest of wheat planted in the spring. By December the size of the harvest was known and much information about use for the year was available. Also December was the last month for shipment via the Great Lakes before the winter freeze. The Great Lakes were and are an important channel in the flow of wheat to market. March is the first month of shipment via the Lakes after the spring thaw. May is a “clean up” month—the last full month before the new crop is available. In May, the old crop influences of supply dominate the price-making factors, while the prospects for the new crop harvest dominate the July price. For corn, December is the first month of availability of new crop corn at the terminal markets. March is the opening of navigation on the Lakes. By May, careful appraisals can be made of the carry-over of old crop corn at the beginning of harvest in the fall and the first indications of planting and weather are guides to the need to save corn for use the following year. In earlier times, July reflected the summer weather and the rate of use and September was the last old crop month. More recently July tends to be the last purely old crop month and September a transition to new crop. There are distinct seasonal years for the crop commodities and certain months are climactic in bringing price making forces into focus and are thus natural delivery months for future contracts.

Some non-crop commodities have seasonal patterns of production and stor-
age. This was true of eggs until recently when the seasonal pattern of production was smoothed out by improved technology. There is a seasonal pattern of stocks of pork bellies with a low in September–October and a high in May–June. The winter is a season of accumulation and the summer a season of liquidation. February is a natural first month and August a last.

Many commodities do not have pronounced seasonal patterns of production, inventory, and use so that there is not a logical crop year and one month is the same as another for delivery purposes. Some of these commodities as cattle or iced broilers are not storable. It would be desirable to have every month a delivery month but to do so would scatter the volume of trading to such an extent that the markets would not be liquid and liquidity—ease of getting in and out without disturbing the price—is important. Thus, there is a tendency to designate every other month for trading with the expectation that as volume permits, all months can be traded.

There is no way to explain the existence of the delivery month pattern for some commodities except that exchanges are great democratic institutions that change slowly. Soybeans is a case in point. At one time November was the month of harvest and September ended the season but technology changed so that new crop soybeans are nearly always available in moderate volume in September and are always available in large volume in October. When September became neither fish nor fowl the climactic old crop trading was concentrated in July. But July was too long before the end of the season so August was added without dropping the others. A more logical pattern could be worked out than the current September, November, January, March, May, July, and August but there is a great reluctance to drop a month that some people want to use.

The time that futures contracts extend forward is generally one year. As one contract reaches maturity and expires it is replaced by the same month of the next year. There is a tendency to extend the life of contracts. Corn has been extended from one year to about 14 months. Contracts for some commodities do not run a full year while others extend much more than a year; in 1975 silver had a 15 month time span.

**Settlement of Contracts**

Futures contracts may be settled by delivery or by making an opposite or offsetting transaction in futures. The holder of a contract to buy will receive delivery of the cash commodity if he waits until maturity and the seller of a contract must make delivery if he waits until contract maturity. There are some, but not many, deliveries on every maturing delivery of every commodity traded. When delivery is made and taken, title passes and the futures contract becomes a cash transaction. It has matured, is fulfilled, and ceases to exist. The delivery provision and the fact that deliveries are made and taken forces the trade in,
and the prices of futures contracts to conform to the real world of cash commodity transactions.

Most futures contracts are offset by making opposite transactions. The owner of a futures contract to buy, say, December corn may elect at any time before he receives delivery to make a contract to sell December corn. He now both owns a contract to buy and a contract to sell which is a nonsense position. As the price goes up he makes on the one hand and loses on the other. Were the contracts to exist until maturity he would receive delivery from the person he made the purchase contract with at the agreed price and make delivery to the person with whom he made the contract to sell at the different agreed price, all of which would obviously be a cumbersome process and is not permitted. No person may hold both a contract to buy and a contract to sell the same maturity of the same commodity on the same exchange. As soon as the second transaction is made it is matched against the first and both are canceled and cease to exist. If the buying price of the original contract is lower than the selling price of the second contract a profit has been made and the trader receives money from the settlement system but if the price agreed in making the original contract is higher than the price agreed in the second transaction, the trader has lost and must pay money in. Contracts are settled by the payment of value differences when the contracts are offset.

*Long, Short, and the Open Interest.* When a trader, in his first transaction, makes a contract to buy he is long; he has commodity coming. And when a trader, in first transaction, makes a contract to sell he is short; he owes commodity. This is the long and the short of it. When a trader who is long makes a contract to sell the two are offset and he is out of the game; is neither long nor short. All that is left is to count the winnings and losings. The same is true, of course, of an original short who makes a contract to buy. The terminology as it is used here—"makes a contract to buy," and "makes a contract to sell" is clumsy and in actual usage is shortened to "buy" and "sell." One buys to become long or one buys to offset an existing short position and become even.

An open contract is an outstanding agreement that has been neither settled by delivery or offset. It remains to be reckoned with. Someone is long and someone else is short. If A sells to B, A is short, B is long, and there is one open contract. If subsequently C sells to B, A is short one contract, B is long two contracts, C is short one contract, and the open interest is two contracts. If then D sells to A, A is even, C is short one, B long two, D is short one, and the open interest is still two. Next, C buys a contract from B; now C is even, B is long one, D is short one and the open interest is one. For every buyer there is a seller and for every seller there is a buyer. For every long position there is a short position and vice versa. One long plus one short equals one open contract.

The significance of volume of trading and open interest will be considered in later chapters but one quantitative fact is worth noting here: It takes a lot of
volume of trading to change the open interest appreciably. Volume of trading, open interest at the close and change in open interest in all corn futures on five consecutive days were:

<table>
<thead>
<tr>
<th>Date</th>
<th>Vol. of Trade 000 bu.</th>
<th>Open Interest 000 bu.</th>
<th>Change in Open Int.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>21,095</td>
<td>263,490</td>
<td>—</td>
</tr>
<tr>
<td>2</td>
<td>21,535</td>
<td>264,320</td>
<td>+830</td>
</tr>
<tr>
<td>3</td>
<td>28,205</td>
<td>265,955</td>
<td>+1,635</td>
</tr>
<tr>
<td>4</td>
<td>37,900</td>
<td>272,060</td>
<td>+6,105</td>
</tr>
<tr>
<td>5</td>
<td>25,695</td>
<td>270,230</td>
<td>—1,830</td>
</tr>
</tbody>
</table>

Some casual observations may be made: 1) The volume of trading varies greatly from day to day. 2) Size of the change in open interest is somewhat but not closely related to the volume of trading. Note that the ratios of volume to change in open interest were 26:1, 17:1, 6:1, and 14:1. 3) The volume of trading is much greater than the minimum required to increase or decrease the open interest. From these it follows that there are a lot of positions taken and offset within a trading day and that the identity of who is long and who is short may change rapidly.

Clearing House. The complexity of settling monetary differences is readily apparent when the volume of trading and the year or longer life of individual contracts is considered. A may buy from B in January and hold the position until December and stand for delivery. In the meantime, B may buy from C offsetting his contract, C buy from D, etc. a thousand times over. For A to find out who owes him the commodity would be quite a stunt. There is another problem: There would be a marked tendency for the losers to disappear from the scene and the winners to show up promptly.

In cash forward markets, contracts for deferred shipment often change hands several times. They are endorsed from person to person and settlement often becomes complicated. In the early days of futures trading clerks went from office to office each day to collect and pay out money. The system was advanced when the clerks met in a single room and settled up differences. Then came settlement by offset with the meaningless contract canceled. Finally came the Clearing House. The Clearing House is a party to all trades and guarantor of all contracts.

The exchanges have developed corporations charged with the functions of 1) reconciliation of all futures transactions, and 2) assuring the financial integrity of these transactions. With two exceptions, the clearing houses of the several exchanges are separate corporations. Membership in the clearing corporation is limited to but does not include all members of the exchange; membership in the clearing corporation is much smaller than exchange membership and require-
ments for entry are much more difficult to meet. The clearing corporations are stock companies and each member is required to purchase stock, the amount of stock depending on the volume of business cleared. In addition, members are required to deposit a substantial sum of money in the guarantee fund of the corporation. Members of the exchange who are not clearing members must clear through a clearing member.

The clearing corporation has a board of governors who are elected and represent all segments of the membership. It has paid staff officers who cannot be associated with member firms. The clearing corporation is operated not-for-profit. Its income is derived chiefly from service fees from members for clearing trades and from interest earned on invested capital.

The clearing corporation becomes a party to all trades; a buyer to all sellers and a seller to all buyers as soon as each day's trading is reconciled and accepted. Each day, each clearing member receives cards from the trading floor that carry the details of each transaction in the pits. The clearing member enters this information on trade confirmation cards and forwards them to the Clearing House. Thus, for each transaction there is a "buy" card and a "sell" card. After all trade confirmation cards are received from every clearing member, the buy records are matched to the sell records. The data for each trade must match exactly as to the clearing member buying, clearing member selling, commodity, delivery month, quantity, and price.

If a trade confirmation record cannot be matched to one for the opposite side of the trade a duplicate unmatched trade notice is made. These trades are known, as "out trades." One copy of the notice is returned to the clearing member buying and one copy to the clearing member selling. These two must then reconcile the differences between the reports whether the trades are for the clearing member's accounts or non-clearing member's accounts cleared through them. The number of "out trades" is quite small and the differences are nearly always small and quickly reconciled. If differences cannot be reconciled by a meeting of the two parties the trades are rejected by the clearing house and the dispute then goes to the arbitration of the exchange. Thus, each day's business is balanced before the next day's trading begins. The volume of business handled is large—as many as 20,000 transactions per day—and fully automated and computerized on the large exchanges.

There have been occasions when, with a large volume of business, the work of the clearing house could not be completed before time to open the market the next day and the opening was delayed. The root cause of the delay was not with the method or with difficulty in reconciling out trades but rather with difficulty in locating traders whose cards did not match. After such hectic days the boys hied themselves off to local watering holes where they could not be found or reasoned with if found. Disciplinary action quickly corrected the problem.

An essential part of settling all accounts daily is establishing a settlement
price for each delivery month of each commodity traded. This settlement price is based on the closing price or closing range. It becomes the official basis for paying money into and taking money out of the clearing house.

In addition to owning stock and making a guarantee deposit, each clearing member must make a margin deposit as a performance bond to assure settlement of the contracts. Margin is deposited by both buyers and sellers. The amount of the margin deposit is determined by the number of open contracts held by the clearing member. The standing margins per contract are fixed by the governors of the clearing corporation.

Margins are usually the same for all clearing members, although the governors may depart from the rule of uniformity in emergencies or where particular risks are deemed hazardous. Hazardous conditions exist when one clearing member holds a large share of either the long or short side of the open interest. This rarely occurs. The size of the standing margin is kept as low as is consistent with security of the contracts. Excessive margins add to marketing costs through interest costs and loss of liquidity. The clearing corporation closely watches margin requirements in relation to market conditions.

When the clearing house has reconciled and accepted all trades at the end of the day, the clearing house computes the “pay or collect” amounts for all accounts, both the clearing members and non-member accounts cleared through the members. On most exchanges, the collect and pay amounts are offset to obtain a net pay or collect amount. If a net payment to restore the full standing margin is due the clearing house it must be made before the opening of the next day’s trading. The clearing house provides checks for members with net collect balances. Many clearing members maintain surplus margins so that when their net positions grow they already have enough margin on deposit.

Standing margins are usually large enough to cover daily maximum price fluctuations. However, when market prices move against a member’s position his standing margin is impaired to the extent of the price change. The clearing house can call for additional margin at any time to cover these price changes. This is known as a variation margin call, and the member must pay the amount called for by certified check within one hour.

There is no record of any buyer or seller ever having financial loss through default on a transaction cleared through the clearing house of a U.S. exchange. This is much more of a tribute to the meticulous operation of clearing houses than it is to the integrity of members. How can they lose? They get their money first. The system does speak for the integrity of the contracts and to the rigor with which all trades are backed by sufficient financial resources to accept losses.

It should be noted here that this system of financial guarantee applies only to the relationship of the clearing house to its members. A different system governs the financial relationship of clearing members and exchange members who clear through them and clearing members and their non-exchange member customers.
A final note on the clearing house is that it breaks even. Except for the small clearance fee it pays out quite as much money as it takes in and takes in quite as much as it pays out. It is a party to all trades; short to all longs and long to all shorts. Thus, the total of all futures trading is a gross zero. Futures trading is a zero sum game. This is a fact that should be tucked away for later reference.

Making Delivery. Delivery on futures contracts is made by the seller furnishing a negotiable instrument to the buyer. This may be a warehouse receipt for a stored commodity, a shipping certificate for a commodity that is furnished out of current production, or an inspection certificate for a commodity not in storage. The essence of the matter is that the seller furnishes and transfers a document of title and receives payment. The specific procedures and documents vary by commodity and by exchange.

In general, the contract terms call for “delivery within the contract month to be at the seller’s option upon notice to the buyer as prescribed by the rules.” That is, the seller must furnish advance notice of delivery. Notice time extends from the end of the current day up to as much as eight days depending on the commodity and the exchange. In the case of a one notice day commodity such as the grains, the first notice day is the last business day of the month preceding the delivery month—for December contracts it is November 30 unless it falls on a holiday or weekend, etc. The buyer is warned, “Tomorrow it is yours; be prepared.”

There is provision made for retendering. If the notice of delivery the next day is received before a specific hour in the trading session—say 11:30—the person receiving the notice may go into the pit and sell a like amount and retender the notice. This ends his obligation to accept delivery. If the notice is received too late in the day to sell and retender, he may furnish notice and deliver the following day in which case he incurs storage, insurance, and interest costs for his overnite ownership. For some commodities there are additional commission charges and reinspection fees that must be paid. For example, in pork bellies and eggs, you must accept delivery, sell and deliver, incurring an extra commission.

From this process two things should be noted. First, the documents of delivery can circulate rapidly so that one lot of a commodity can satisfy quite a lot of open contracts. Delivery may lodge with a buyer who wants, will take, ship, or use the commodity or it may lodge with a buyer who treats it like a hot potato and quickly flips it back into the system. Thus, the quantity of a commodity in delivery position is not necessarily a measure of the liquidation that may take place even if only a small number of delivery notices circulate. Second, getting rid of an unwanted delivery is simple and not very expensive so long as trading in the delivery month is still in progress. Once trading ceases, only the longs and shorts who really mean it remain, but until the last bell, both longs and shorts have their options open.
The clearing house, a party to all trades, is the instrument through which delivery is made. It receives or makes payments on deliveries and passes delivery notices to the longs and either clears their offsetting trades or collects from them. Thus, the full financial resources of the clearing house are behind the delivery integrity of all contracts.

The clearing house passes delivery notices to the oldest long—the clearing member who has been long for the greatest period of time. The clearing member, in turn, passes the notice to the non-clearing member or the customer who has been long the longest; the first shall be served.

**The Traders**

We have pictured the floor and the pits of an exchange as a crowded and busy place. This is true for the active commodities traded on the high volume exchanges. There are regularly 200 to 250 of the 500 members of the Chicago Mercantile Exchange on the floor actively trading. The norm on the Chicago Board of Trade is 400 to 500 of the 1402 members. On the other hand not more than a dozen of the 400 members of the Minneapolis Grain Exchange may be seen in the wheat pit on a given day. The primary business of the membership of the Minneapolis Exchange is cash grain trading and the volume of futures trading is small. There are all gradations of attendance and activity, from a small pit with one, two, or perhaps five people standing or sitting idly about to a large pit containing 200 wildly active traders. Yet on all exchanges there are present, if not in the pits on the floor, the same general types of traders. The description here relates to relatively active trading.

Who are the traders? With our academic penchant we can classify them but it should be kept in mind that the classifications are not discreet and distinct. Some members belong exclusively to one classification, others mostly to one, and the activities of others are scattered over the several classifications. The list includes four types: scalpers, pit traders, floor traders, and brokers.

**Scalpers.** The scalper is a busy type, interjecting himself into as many trades as possible. He stands ready to buy one trading unit—$\frac{1}{4}$ cent per bushel—below the last traded price and ready to sell one trading unit up from the last price. The operating principle is that an incoming order to buy will raise the price slightly, after which it will sink to its old level and an incoming order to sell will depress the price slightly and then the price will return to its equilibrium level. In this case the scalper bridges a time gap in the flow of orders to the pit. He adds to the liquidity of the market and enables orders to be filled without delay at very small price concessions. A second activity of the scalper is to spread orders. A spread is the simultaneous purchase of one delivery month and the sale of another for the same commodity. A broker may receive an order to buy December and sell March. He knows that the two months have been trading at
a difference of 4 cents so he tries it at that difference. If there are no takers a scalper may offer to sell December and buy March at 3\frac{3}{4}. If it is the best that the broker can do, he will accept. The scalper then tries to reverse his position by buying December and selling March at the old difference of 4 cents. He may do it on opposite spread orders or he may do it one leg at a time, buying the December if the next move of the market is down and expecting to get out even on the March on the next upsurge. Or the sale of the December side may fit and make profitable a purchase that the scalper has just made on our first kind of scalp so that he has only to break even on the March purchase. Or the spread may fit two scalps that he has just made, evening him up at a profit (or letting him out of a losing position before the losses get large). A third kind of scalp is geographical within a pit. Pits get physically congested and when prices are fluctuating sharply the quick execution of market orders is imperative. A scalper may hear a broker on one side bid a higher price than another broker on the other side offers. The scalper says "done" to one and "done" to the other. It seems improbable but it can and does happen.

The scalper deals in small fluctuations in price, quarters of a cent as described here. In active markets he may try for a half or a cent. These seem small amounts but a quarter of a cent on one contract of 5000 bushels is $12.50. It is a small accommodation price to a broker in a hurry or with a large order to fill instantly but if done enough times successfully it adds up to enough to make a living.

The crux of the matter is doing it successfully; a high proportion of the scalps turn out to be losses instead of profits. The scalper may buy 1/4 below the last trade and then find several orders to sell. He must then make a quick decision. Should he accommodate the decreasing offers for another 1/4 and still another or should he take his loss and start over? If he is a true scalper he admits his error and gets out as best he can—quickly. Scalping is a journeyman type of operation, involving a highly specialized skill. The scalper tries to anticipate the direction of the next change in price and profit from it. His basic posture is that a stable price will continue stable, that a down trending price will continue down, and that an uptrending will continue up. In a market that he judges to be stable he initiates trades from both the buy and the sell sides. In uptrending markets he initiates from the buy side and in downtrending markets from the sell side. Judging the very short run trends in prices is difficult, requiring a high degree of skill. The other traders in the pit are not in the business of giving away multiples of $12.50. There are other scalpers to contend with, each trying for small profits on a liveable percentage of a lot of trades. When a broker makes a price concession to a scalper in filling an order he has, in some degree, been defeated. The essential scalping skills are lightning fast judgment in initiating trades and quickness in admitting and coping with errors. The service that scalpers perform is furnishing liquidity in filling orders; they bridge short time gaps in the flow of orders. Scalpers limit their activities to a single pit or ring and infrequently move from one pit to another.
Pit Traders. One characterization of a pit trader is that he is a grown up scalper with more money and intestinal fortitude. This is hardly fair to scalpers because scalpers possess skills that pit traders lack and so are more "grown up" in one sense, but it does describe what pit traders do in the sense that they take bigger positions and stay with them for longer periods of time and larger price changes; they bridge bigger time gaps in the flow of orders. Pit traders enter the pits each day with no position and leave at the close with no position. They try to make money from intra-day price changes. They buy when they think the price is going up and sell when they think it is going down.

There are as many methods of operation as there are pit traders, and each pit trader tries them all at different times. They match wits with each other, with scalpers, brokers, and floor traders. One method of operation is to trade against the flow of orders from the outside. If the initial flow of orders for the day seems to be predominantly selling, the pit trader buys on a scale down, assuming that the selling will soon be exhausted and will be followed by a flow of orders to buy that he can sell to on a scale up, taking profits. All day long the pit trader watches the other traders, brokers in particular, trying to anticipate the trades that they will make before the end of the session and get in position to accommodate them—profitably. If the pit trader anticipates large selling orders near the close he sells short during the session as the opportunity to do so presents itself with small bulges in the market. He is thus set to buy when the price declines under the weight of selling late in the session. If he anticipates all of this correctly he makes some money. If, on the other hand, the selling orders do not come, he is caught in the position of having to extricate himself from his short position rather quickly so that he can end the day even, and, the chances are, this will cost him some money. This is particularly true if other pit traders have made the same mistake and compete with him for the limited sell orders or if a floor trader who will take an overnight position catches him short and frantic and will only sell to him on a rising scale of prices. This method of operation against the market is that of a skeptic or a cynic; one who says, "This move is false. The price will end the day where it started."

A second method of operation is to trade with the market; to sense the development of a price move and either buy or sell quickly as is appropriate. The key consideration in this game is to know whether a given move in price foretells a further move in the same direction or whether the move will quickly be reversed. This type is a believer, trying to ride on the coattails of the flow of orders.

Pit traders rely on different kinds of information in forming their expectations about the next move in price. Some close their ears to all news about factors affecting the cash prices of the commodity and rely only on what they see, hear, and sense in the pit itself. Others have substantial disdain for the technical position of the pit and rely on news of the commercial world: whether primary producers are selling or holding, processors are ready buyers or not, the
amount of export business done, and speculator buying. The underlying philosophy of the first is that the pit will read itself and tells its own story and, if they can read the pit fast and accurately, they will make money. The basic philosophy of the second is that commercial factors determine the flow of orders and the game is to be right with the flow. This categorization is fine for illustrative purposes and pit traders typically identify themselves in one direction or the other. But when one is asked why he did what he did at that time, the answer may flow from one kind of information at one time and from the opposite at another. Doubtless there are pit traders who know nothing and care nothing about the outside world but they are not numerous. They know which is trade of outside origin and which is trade of inside origin and the forces behind the flow of orders from the outside.

Pit traders are quick to take advantage of conditions of unexecuted orders in the pits. Sometimes there are resting orders of substantial size a bit above or a bit below the current price. There may be orders to buy substantial amounts moderately below the trading level; that is, the price may be trading around $2.75 with orders to buy if the price declines to, say, $2.74 and more at $2.73 and/or orders to sell at, say $2.76 and $2.77. It is to the advantage of the holders of these orders to conceal their existence and they are skillful at concealment, but pit traders are skillful readers. When such orders exist and are accurately read they make an excellent backstop for pit traders. With resting orders at $2.74 the pit trader can buy with impunity at $2.741/4; he can’t lose much and may make a lot—even from just above resting orders to buy to just below other resting orders to sell. This does not have quite the character of shooting fish in a barrel that it seems. The resting orders may be a figment of the trader’s imagination or they may be pulled out as the price approaches, leaving our hero dangling. Or some competing pit trader will sense the resting order and take a bigger risk, buying at $2.741/2, cutting our hero out.

In addition to resting orders, there are unactivated stop loss orders in the pits. The stop loss order says, "If the price goes so low as $2.74 I give up. Sell me out.” A stop loss order becomes a market order to be executed as best the broker can when a trade is made or an offer to sell made at $2.74 or below. If this happens the price may skid sharply. If the pit traders sense an abundance of stop loss orders close under (or above) the market they can profit by selling (or buying) vigorously to touch off the stops and then catching the market in a basket when the stop selling (or buying) is exhausted. This maneuver has its offsets, too. Other pit traders may catch them at it and buy aggressively at $2.741/4 in the expectation that the price will move back up to $2.75 making a profit and leaving our heroes poorer and wiser. Rarely will a pit trader admit to taking a shot at a stop. But how many football players will admit to a forearm shiver?

Pit traders also scalp when the opportunity is presented but generally they are
preoccupied with other games and the scalpers are quicker. There is not a firm
distinction between the two activities nor are individuals exclusively identified
with one or the other. In addition, pit traders occasionally take overnight posi­
tions when they like the looks of the situation or when they cannot handily get
loose from an existing position. But, when they do this they put on another tag
and join our next category—the floor trader.

Floor traders. Floor traders are more difficult to categorize than scalpers and
pit traders. They are professional speculators whose positions are quite flexible,
who trade in more than one commodity, who usually go into the pits only to
observe, and who take relatively large positions. They wander about the floor
pensively, listening to comments, nodding, and occasionally commenting. They
are the oracles, the students, and are at the front of the pecking order. Their
reputations vary widely with some being spoofed as unimportant and others
held in awe, regarded as quite successful, and major market factors. The hard
facts about their success or failure and size of operations are nearly nonexistent.
They are almost all quite secretive and there is widespread interest in where
they stand in the market. Their number is quite small.

The methods of operation of floor traders are as diverse as they are numer­
ous. Some trade predominantly with the market and others against, but almost
none do either exclusively. Some are basically spreaders, long some delivery
months and short others; long some commodities and short others while others
tend to be long or short nearly all commodities at a given time. They are all
sometimes long and sometimes short and generally do not have a strong bias
toward either long or short. As a group they are short run opportunists and long
run position traders. They often build up rather large basic positions, adding to
them as they sense strength or weakness. Above all else they are flexible; their
opinions and positions are good for the moment only even though they often
hold opinions and positions for protracted periods of time.

Comments of floor traders about the course of prices ahead are a mixture of
the discussion of underlying commercial forces affecting cash commodity prices
and the technical position of the other traders and the speculating public. Some
appear to be more aware of and responsive to commercial factors while the
thinking of others seems to be dominated by technical considerations and current
price behavior.

The greatest difference among floor traders is in their time horizons. The
behavior of some is much like pit traders with a lot of trading in and out each
day and a frequent reversal of position. The positions of others appear to be
much more stable, remaining unchanged, in broad outline, for weeks or months.

Occasionally, the behavior of a floor trader is quite spectacular, conspicuously
buying, selling, and taking delivery. Such actions may or may not indicate what
he is actually doing. He may appear to be doing one thing while he actually is
doing the opposite through orders placed with brokers. Or he may be attempt-
ing to encourage a following to help the anticipated move along. Or he may simply feel that quite as many people will move against him as with him and not really care what anyone knows.

**Brokers.** In most markets the largest group is the brokers. These men execute the orders that flow in from the outside and that are placed with them by floor traders. They act as agents for principals. They are paid a fee for each contract traded and the regulations of most exchanges provide that they be paid in this way rather than on a salaried basis.

Brokers can and do trade for their own accounts although there is a marked tendency to specialize. Some trade exclusively for single firms such as futures commission merchants, processors, exporters, merchants, and warehouse companies while others get business from a multiplicity of sources. Some firms may have two or three brokers in a single active pit as wheat, soybeans, or pork bellies and, at times, use independent brokers. In pits in which there is little activity independent brokers predominate.

The positions that brokers take come about in three main ways. First, they inherit their own mistakes. When a broker executes an order in a different way than instructed the trade is his rather than the customer's. He may buy 20,000 bushels to fill an order that read 10,000 bushels in which case he is long 10,000 for his own account. Or he may try to execute a spread order one leg at a time and miss, in which case the one leg is his. Some brokers do a huge volume of business under great pressure and mistakes are easily made. Some mistakes are profitable and others are unprofitable.

Second, some brokers make trades for their own accounts to supplement brokerage earnings while they are getting established or to simply supplement brokerage income in low volume markets. Getting established as a broker is a slow process and a supplemental source of income is often necessary.

Third, some brokers continue to accept brokerage business while getting established as traders for their own accounts. In this case, the brokerage business is on the descendency.

One reason for specialization in brokerage rather than trading for one's own account is that a broker is a highly skilled technician who must concentrate all of his attention on his specialty. A second reason is that the two activities are often in conflict. Under the regulations, an order to a broker for the account of someone else takes precedence over any trades for his own account. Suppose that a broker has sold 25,000 bushels for his own account expecting a fractional price decline and a few extra dollars for his day's work and then receives an order to buy 250,000 bushels at the market. He must execute the second order before he can offset his own position, even though the order tells him he has made a mistake. The conflict may cost him money on his own trade and cause him to do a poor job of executing the order. Brokers know when they have resting orders and stop loss order in hand and can often accurately anticipate the
inflow of orders from their own sources. If they trade for themselves they are
tempted to use their special information to their advantage as traders. This in­
evitably reduces their effectiveness as brokers. The two functions, brokerage
and pit trading are in fundamental conflict and only rarely can one man wear
the two hats successfully.

There is a great range in the amount of business done by different brokers. It
varies, of course, by exchanges and by commodities. If the trading in a com­
modity goes flat the brokers lose income. Brokers who specialize in commercial
business have more stable incomes than brokers who specialize in speculative
business because speculative volume is more variable. But there is a wide range
in the amount of business done by the different brokers in the same pit. They are
all paid the same per contract. Their stock in trade is their skill in execution of
orders. They must decide, instantly, the tactics that will be most effective in
filling a given order; whether to wait for bids or offers, or whether to hold with
the current price, or to bid up or offer down promptly. To be effective they must
know the pit; who will do how much at what price. They must read the inten­
tions of scalpers, pit traders, and other brokers while concealing their own
intentions.

There is no objective way to measure the effectiveness of brokers and they are
judged on the basis of impressions of customers. They gain reputation for being
good or not so good and business flows to them or away from them. Some
brokers have incomes ranging into six figures, while others make a meager
living.

One of the skills of a broker is in knowing his deck. The deck is a stack of
orders that are to be executed away from the current price. Some are to buy and
some are to sell as the price rises while others are to buy and sell as the price
declines. Some are at specific prices while others are for immediate execution as
soon as a price is reached, and some involve a scale of quantities and prices. The
orders are typically on pieces of paper about five by seven inches. The broker
arranges them in the order of execution that will take place as the price moves
up or down. He then folds them lengthwise for concealment and puts them in
his pocket so that his hands will be free to handle his trading card and pencil,
and to signal with. Occasionally, the decks are as much as an inch thick and
require great memory skill and anticipatory planning.

The Contest. The activities of the traders in the pits are a contest in which the
rewards are trading profits and brokerage fees. They are all adversaries, each
against all of the others. There are winners and losers and there are great
ranges in the size of the winnings. People come, try their hands, stay if they
win, and go away if they lose. Very little is known about who wins and who
loses or how much. Brokerage fees flow into the pit in relation to the volume of
outside trade.

Scalpers and pit traders have two sources of income, each other and the
Description

difference between prices paid by outside buyers and received by outside sellers. In exchange for this difference the outside principals receive liquidity in making trades. The cost is not known. Presumably the scalpers and pit traders do, in the aggregate, make money but this is not absolutely certain. The traders in the pits make money from the outside traders and collect it from the brokers. The brokers keep the collection as small as they can and are paid on the basis of their skill in doing so.

The game in the pits is an intensively competitive one, the name of which is skill in anticipating movements of price and quickness in execution of trades. The hours from bell to bell are great but so is the pressure and the outcome is uncertain with disaster always in the wings.

The Futures Commission Merchant

To this point we have been concerned with the trade on the exchange floor but this is not what futures trading is mainly about. It mainly has to do with the activities of the people that the brokers represent—the outside trade. Brokers represent three general classes of principals: individual members who do not want to execute their own trades, commercial firms such as merchants, exporters, and processors who are members of the exchange and members of the Clearing House, and Futures Commission Merchants. The first two of these are principals in their own right rather than intermediaries.

The Futures Commission Merchants are intermediaries who stand in between the brokers in the pits (and subsequently the clearing house) and their customers who are the real principals in a high proportion of all trades. The legal definition is: "The words 'futures commission merchant' shall mean and include individuals, associations, partnerships, corporations, and trusts engaged in soliciting or in accepting orders for the purchase or sale of any commodity for future delivery on or subject to the rules of any contract market and that, in or in connection with such solicitation or acceptance of orders, accepts any money, securities, or property (or extends credit in lieu thereof) to margin, guarantee, or secure any trades or contracts that result or may result therefrom." The usual trade term for the Futures Commission Merchant is, "Commission House." They are members of the exchanges who act as agents for their customers.

In 1969 there were 420 futures commission merchants registered under the Act. They had 2,554 principal and branch offices and agents in 467 offices. There are commission house offices located within reasonable proximity of nearly every potential customer in the United States, Canada, Europe, and Japan and throughout much of the rest of the world.

Kinds of Commission Houses. There is a multiplicity of kinds of commission houses. Some are large firms with a primary emphasis on securities who main-
taining commodity departments. They own memberships or have working relationships with members of all of the active commodity exchanges. They vary in the degree of emphasis that they place on commodity business with commodity trade ranging from minor to major importance. Firms of this type are the largest in commodity commission business.

A second type of commission house is one that specializes in commodity futures business. Some, but not many, of these have expanded into the securities business. These may be quite large, holding memberships on all of the commodity exchanges or they may specialize in commodities traded on only one exchange. It is fairly usual for two or three members of an exchange to form a commission house and start soliciting business. Their scale of operation may remain small and specialized in the commodities of one exchange or they may expand to include membership in other exchanges and do business in many or all commodities. For most, the degree of expansion depends upon the degree of success but some remain small and specialized by choice. The commodity commission business is one of relatively easy entry.

A third type of futures commission business is the cash commodity firm that more or less incidentally does some futures commission business. These are merchants, processors, exporters, etc. who own memberships in exchanges and who have found it profitable in the conduct of their principal business to become clearing members. There is little else involved in becoming a futures commission merchant so that they can gain some income from commissions at little cost. In addition, their business of buying cash commodities may be aided by offering a futures trading service. An example is the cash grain merchant at a terminal whose primary business is originating grain from independent country elevator firms. The country elevators have occasion to use futures markets and the terminal merchant is in a stronger position to originate grain if he can offer a full line of services.

Agreements with Customers. Commission houses enter into agreements with their customers, with the customer signing a Customers Agreement Card. The agreement forms used by the various companies are different, some being quite long and detailed. Generally speaking, the longer a company has been in business the longer is the form, as it has a longer record of problems in dealing with customers. The customer agreements provide: (1) All orders and transactions shall be subject to the constitution, rules, regulations, customs, and usages of the pertinent exchange and its clearing house. (2) The commission house is directed, required, and authorized as agent and for the customers account to (a) execute or cause to be executed all orders for contracts for the purchase or sale of commodities for future delivery and (b) to accept or make deliveries on any maturing contracts. (3) The commission house has the right to refuse to accept orders or to cancel open orders. (4) That the customer shall, at all times, maintain, without call or notice, the minimum margins required by the commis-
tion house or by the exchange or its clearing house. The commission house is authorized to liquidate inadequately margined positions. The liability of the customer is not limited to the amount of margin posted but rather he is liable for all losses that may occur. (5) The customer agrees to pay commissions, delivery and inspection fees and interest on debit balances as provided by the rules of the exchange. (6) Any indulgences granted by the commission house shall not constitute a waiver of any right of the commission house. (7) That the customer (if a natural person) represents himself to be over 21 years of age. These are the key provisions and all of the others relate to the use of funds and securities and enforcement. The agreement is a limited power of attorney in which the commission house is authorized to execute the orders placed, the customer agrees to abide by the rules of the exchange, maintain margins as required, be financially responsible for the trades he makes, and the commission house is empowered to refuse orders or make offsetting transactions if the customer is in violation of the agreement. There are special agreements for partnerships and corporations, husbands and wives, and trading for minors.

In addition, there are discretionary agreements in which the commission house may be authorized to initiate trades for the account of the customer.

Still further, there are management agreements in which some person other than the customer is authorized to place orders with the commission house for the account of the customer. Management agreements take many forms and are subject to special rules and regulations, by both the exchanges and the Commodity Futures Trading Commission.

The agreements are written by the commission houses and so deal primarily with the performance of the customer. However, the houses are responsible for a workmanlike job of execution of the orders that they accept, proper accounting, and the security of funds and financial instruments placed in their trust. Commission houses are liable for the mistakes that they make when the mistakes work to the disadvantage of the customer but when the mistakes work to the advantage of the customer the results are credited to the customer's account. Suppose a customer places an order to buy five contracts and the house executes ten. If the price is higher when the error is discovered and the five contracts offset, the profit is credited to the customer's account but if the price has gone down the house has to assume the loss.

Services Provided. Commission houses provide four general kinds of services for customers. All are designed for his care and success; once a house has him it wants to keep him. First, they offer the best order execution of which they are capable. The first factor in order execution is speed. Commission houses must maintain extensive communication networks to direct orders to the proper exchanges and to the pits at the exchanges. Every effort is made to minimize the time from order placement to execution in the pit. The system is so well oiled that there are instances on record in which the time lapse from customer's
verbal order to pit execution was less than 10 seconds. The customer is typically not only in a hurry to get orders executed but also anxious to know the price so that the route back to central office to branch office needs to be nearly as fast. The second element of execution is the skill of the broker. The commission houses try to employ the services of the best brokers in each of the pits. Some brokers are more skilled in filling some kinds and sizes of orders than others and the houses try to use the best brokers for the particular orders involved. A third facet of order execution is in knowing the price at which an order can be filled. A customer may have in mind the sale of 100,000 bushels and want to know the price at which it can be done before deciding how to place the order. The house needs to be able to form an accurate judgment and advise the customer. Success in this depends upon a flow of good information.

Second, the commission house acts as the agent of the customer in several ways in addition to the execution of trades; it guarantees the contracts to the clearing house, it makes and takes delivery, collects and pays money on delivery or offset, serves as the custodian of funds of the customer, and keeps and renders accounting of profits, losses, and balances. With the recent mechanization and computerization of accounting many of the reports have gotten to be quite elaborate, showing the result of each transaction, the credit balance, the profit and loss position of each existing position, an equity balance, the margin required, and the free balance available for new positions. Accounting is usually made after each new transaction and at the end of each month.

Third, the commission houses provide information for customers. This service takes many forms and varies widely among houses. In former times there were numerous advisory services that provided, for a fee, publications recommending positions and making themselves available for telephonic or telegraphic advice. Most of these have disappeared. The advice job for which they were paid has been taken over by the commission houses. Some houses spend large amounts of money assembling information, analyzing it, and advising customers. They hire commodity analysts who are responsible for small groups of commodities as grains, livestock products, precious metals, etc. They pay well enough that they employ a substantial proportion of the best analysts in the business.

Information is transmitted to customers through market letters and through registered representatives. The letters take several forms and different letters go to different customers. This is not to suggest that houses give different advice to different customers, rather they treat different customers with different degrees of thoroughness and in the way that each customer wants to be treated. As a general proposition the larger customers get the more elaborate and frequent analyses and the more sophisticated customers the more specific advice. Some houses furnish daily letters to customers, others weekly. Some wire market reviews to their branch offices each day that are available to customers on
request. Some houses furnish periodic, in depth studies, of the situation and outlook for individual commodities.

Many firms also distribute information provided by independent advisory firms such as Commodity Research Bureau, Inc.

Houses vary widely in the degree to which they make specific recommendations about positions. Most houses do form and hold opinions but most are restrained in the extent to which they make these available. Few make their opinions public. Some have a policy of providing background information only so that the customer is expected to weigh the facts and make up his own mind. Others are quite specific about saying be long this, short that, and leave this one alone. Most houses try to guide customers away from what the house thinks are bad positions.

In addition to information affecting the future course of prices some houses develop and publish reference materials regarding specific commodities such as soybeans, cocoa, and silver, general descriptions of markets and trading methods, and how to use markets for specialized purposes such as hedging stored commodities.

Fourth, the commission houses furnish registered representatives. Every customer is a customer of someone. The registered representative is the contact point of the customer. He accepts and transmits orders and reports filling prices. He calls the customer to inform him of new developments in markets and answers questions when the customer calls him. He calls the customer when interesting market situations develop, usually called to his attention by the analytical staff of the home office. He helps the customer in formulating trading objectives and procedures, trying to take into account the individual circumstances involved.

There is some specialization among registered representatives. Many are general, concerned with all of the trading activity of their customers, both securities and commodities. They get their information from the home office specialists, both verbally and from the various publications. There is a wide range in their interest in and attention to commodity trading. Primary interest is in security investors who occasionally make a commodity trade.

The large integrated houses employ specialized commodity registered representatives who handle a limited number of commodities each. They handle the large commodity accounts, especially the trade accounts. One, for example, may be a specialist in the soybean complex—soybeans, soybean oil, and soybean meal. They are prepared to take the problems of commercial firms in hand and advise customers about positions. The kinds of firms handled by such a specialist include soybean processors, mixed feed manufacturers, oil refiners, margarine manufacturers, and such other firms as buy and sell soybeans and soybean products. These people have access to the analytical work of the research department but they are also analysts in their own right. Thus firms with specialized problems and whose accounts are fairly large have access to the results of a comprehensive analytical system.
In the smaller firms that specialize in commodities, the registered representatives generally handle all of the trading activities of each of their individual customers. In some instances, the house maintains a research staff that the account executive can turn to for information and analysis so that they concentrate on servicing accounts and acquiring new customers. In others, the account executives are both analysts and responsible for servicing accounts. In these cases the account executives tend to specialize in groups of commodities and trade information with each other.

Registered representatives are paid in different ways by the different companies. Some are salaried, some paid a share of the commissions generated, and some are paid by a combination of the two. Policy varies among companies and within companies. With relatively few exceptions the compensation of registered representatives is importantly related to the volume of trading done by their customers. Registered representatives cultivate customers, develop close working relationships with them, and closely guard the identity of their customers. Registered representatives change jobs from time to time, taking some of their customers with them. Customers are capricious, changing registered representatives and firms fairly frequently. There is a wide range in the earnings of registered representatives as is to be expected in any activity paid extensively on a production basis. Some barely make a living while others do quite well, some do so well that they decline opportunities to move into managerial positions when they arise.

Some firms prohibit registered representatives and analysts from trading for their own accounts while others permit trading and still others encourage trading almost to the point of making it mandatory. One school of thought is that analysts and registered representatives who trade are better motivated, more thorough in their work, and that customers have more confidence in advice from people who have their money where their advice is. Another thought is that employees who trade are primarily concerned with their own activities to the neglect of customers and tend to let their market judgment become biased by their own positions. There is a third influencing factor. Some analysts and registered representatives develop large customer following and can fairly well write their own tickets.

Operational Objectives. The primary objective of the commission house is to maximize commissions. The fulfillment of this objective requires three principal secondary objectives: effective execution of orders, location of new customers, and keeping existing customers alive. The key test of commission house operation is how effectively the house can accept, transmit, and fill customers' orders. Nothing alienates customers faster than for the house to return a report of "unable" when the market has traded at the price ordered subsequent to the order placement. It means that the house couldn't get the job done even though someone else did. Nor do customers like to see a price bid up when they are buying only to see the price recede as soon as the orders are filled.
The search for customers is a delicate matter with regard to speculative business. Speculation, particularly commodity futures speculation, has long since been under a pall of public question. It offends some concepts of morality, is linked with a gambling image, and is widely regarded as a fast way to lose money. Regardless of the merit or demerit of this image the result of its existence has been a soft sell approach to potential speculators. There has been little aggressive search for new business and about as far as houses go is to point out the potential of commodity trading to some securities customers. On the other hand, the use of commodity futures by trade interests for "hedging" has a favorable image so that commission houses aggressively advertise for new business.

Keeping existing customers alive is important in maximizing commissions; a customer who loses money trades in ever decreasing amounts until he ceases entirely while a customer who makes money spends ever increasing amounts on commissions. Money paid into the clearing house because of customer losses is money that cannot be spent on commissions.

The houses place primary emphasis on "suicide prevention" in the preservation of customers. It is generally thought that the worst mistake that speculators make is in letting small losses grow into disastrous losses. Registered representatives watch accounts carefully and try to get customers to close losing positions while losses are small.

The Customers

Number and Identity. The number of people who are customers of commission houses is not known but is thought to be large. It is known that many commission houses have several thousand customers each. The Commodity Exchange Authority made occasional cross section studies of the composition of the market for specific commodities on single days. One was a study of the soybean futures market on November 30, 1959. They required all clearing members who reported positions to furnish information about each of their customers. This information included the size of the position, whether long, short, or spread, whether hedging or speculation and the occupation and address of the customer. There were 8,075 individual positions of which 7,311 were speculative and 754 were hedging. The occupations covered the complete range of occupations found in the U.S. For example, there were 252 grain merchandisers and exporters, 99 livestock feeders and dealers, 1,617 farmers, 103 professional speculators, 255 physicians, 117 lawyers, 252 salesmen, 46 housemaids and private detectives, 56 brokers, 408 housewives, 34 students, 648 retired and 22 unemployed. The geographic distribution was world wide. A similar study of corn futures on Sept. 30, 1961 revealed 4,456 speculators and 381 hedgers; one made of wheat futures August 31, 1964 showed 6,717 specu-
lators and 522 hedgers, and another for corn on Jan. 27, 1967 showed 11,709 speculators and 1,509 hedgers. The occupational and geographical distributions were comparable to those of the soybean study. Traders in commodities are numerous and diverse. The term, "Speculating Public" is frequently used and is accurately descriptive.

Getting to be a Customer. In this complicated world some things are simple and getting to be a customer of a commission house is one of them. It is somewhat like buying an automobile or television set; the problem is more how not to than how to. If one shows some interest he will be offered an agreement to sign, asked for money, and promised a large amount of service and careful supervision. This is the way that the economy works in general and we should expect it to apply to commission house customers but it only applies with limits. Different houses have different policies in accepting customers so that some are more selective than others. In part, selectivity is based on the expected profitability of the account but it is also based on whether the house thinks that the potential customer really has any business trading in commodity futures.

A first distinction made is between trade and speculative accounts. Trade accounts are those who "legitimately" use futures markets in their ordinary business activities. Farmers, warehousemen, merchants, processors, etc. can and should use futures contracts as a tool in business. These are the "hedgers" and "hedging" has a favorable image. Hedging accounts are sought and welcomed without question. But, as we shall see, hedgers speculate, both as a part of their hedging activities and in addition to hedging. Rarely is an account of a business related to commodities refused.

Speculative accounts are more closely examined. Some houses fail to make their services available to potential customers if they judge the account will trade in such small volume, complain so much, and require so much service as to be more bother than it is worth. Nearly all houses apply some minimum criteria before signing on a new customer. The basic assumption is that the speculating customer will lose money; and the houses have qualms about whose money they will be a party to taking. One almost gets the impression that even the commission houses have doubts about the advisability of commodity speculation.

The first question the house asks is whether the customer can afford and is willing to lose the money deposited. If the answer isn't pretty clearly "yes" the account is declined. Some houses require registered representatives to apply a "know your customer" rule, that they inquire into the general financial status, reputation, and credit rating of the customer. Some require financial statements and place upper limits on the size of margin deposits, size of positions, and total losses that they will permit in an attempt to prevent serious losses.

A universal rule is that the customer be 21 years of age. Some houses refuse to accept accounts of women. Whether this is because women complain so much
when they lose that the business isn't worthwhile or whether they think that women are psychologically incapable of accepting the risks of commodity speculation is uncertain.

Some houses require a minimum initial deposit of $5,000, $10,000 or more. This is partly to assure that the account is large enough to cover its cost but it also is a means of establishing the customer's ability to absorb losses and of assuming that he can absorb losses from more than one trade without being forced to quit. Both of these contribute to the chances of success.

None of this should dismay the potential trader who has only a little money that he can't afford to lose—he can find a house that will accept him. Some houses take the position that everyone who wants to trade will find a way and go no farther than to caution the customer that he may lose.

**Kinds of Orders.** When a customer has signed an agreement and deposited some money he is ready to trade and must instruct the registered representative. When he has decided which commodity, whether to buy or sell, how much, and which delivery month, he must indicate any price reservations that he may wish to make. There are several common kinds of orders:

- **Market.** The market order is to be filled promptly at the best price that the broker can obtain. If he has to bid up to buy or offer down to sell he does so. In active markets with a large volume of trading, market orders can be filled with little or no price concession but large orders may result in paying more or receiving less than would be the case if more time were allowed, and market orders in low volume markets may require substantial price concession.

- **Limit.** The customer may say "buy but pay no more than" or "sell but take no less than" and thus be assured that he will get at least the price he wants if the order is filled but he also runs the risk of not getting the order filled.

- **Stop.** A "buy stop" instructs the broker to buy when the price (or a bid) rises to the specified level and a "sell stop" instructs him to sell when the price (or an offer) declines to the specified level. A stop order becomes a market order when the commodity is traded at the specified price. Once the price is ticked the broker promptly executes as best he can. Stop orders may be used to either initiate or to offset positions. The most common use is the "stop loss" order in which the customer says, in effect, if the price goes against my position (down if long or up if short) by a specified amount, I want out. They may be used to protect existing profits or limit losses. Stop loss orders are often placed immediately after positions are initiated. They are not complete protection because some price concession may have to be made after the specified price is reached.

- **Stop Limit.** The stop order may be modified by placing a limit on the conces-

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2 There is a peculiarity in terminology that should be noted. The amount is stated in terms of the numbers of contracts for all commodities except grain. One pork belly is one contract of 36,000 pounds, one soybean meal is 100 tons, etc., but the grains are stated in the number of bushels. An order for one contract of 5,000 bushels of wheat is stated as 5,000 bushels, or an order for 10 contracts as 50,000 bushels, etc. instead of 1 wheat or 10 wheat.
sion that the broker may make after the stop is reached. The customer may say, "Sell if the price declines to $2.481/2 but do not take less than $2.481/4." He runs the risk of not getting the stop order filled.

**Trailing Stop.** A trailing stop is a variable rather than a specified stop price. If the customer is long he may place a two cent trailing stop which becomes a market order anytime the price declines two cents from the highest level reached.

**Scale Orders.** This is a series of limit orders. The customer may want to buy one contract at 9.80, a second at 9.70, etc. until he has accumulated a total of five. He may buy on a scale down or a scale up or he may sell on a scale down or up.

**Contingent Orders.** These require the broker to fill an order when something happens in another delivery month or in a different commodity. He may be instructed to buy May soybeans at the market if January soybean oil trades at 20.20 or to buy July corn at the market if December trades at $2.75, etc.

**Spread.** These are entered at differences rather than specific prices. The order may say "Buy one February bellies and sell one May bellies at 40 points difference or more, premium May." The broker must make the two transactions at a difference of no less than 40 points.

**Time.** Orders may be placed for execution at a specific time such as 10:05 A.M. More often time orders are placed for execution at the open or close of the market. In this case the broker must execute the order within the opening or closing range of prices. This is not difficult because he may make one or the other side of the range in filling the order.

**Discretionary.** The broker may be instructed to exercise some judgment in filling the order in which case he can not be held responsible for the outcome. The amount of discretion offered or accepted is limited. These generally take the form of "take your time" (Marked T.Y. T. or Not Held) the import of which is that the broker should act promptly but not so fast as to force the market.

In addition to the several kinds of orders placed there are various time limitations placed on the period to which the order applies. Market orders apply, by definition, to the current moment. But the limit orders have expiration times. At one extreme is "fill or kill" which says to execute immediately at the specified price if possible but if it cannot be done to cancel the order. The order may be good until a specified time such as 11:00 A.M. or good today only, or good this week or "Open." An open order lasts until filled or expiration of trading in the delivery month.

Problems are sometimes created by open orders because they may be forgotten. A trader may be long broilers at 38¢ anticipating that the price will go to 41¢ and so places a limit order to sell at 41 or better. Time passes without much change taking place until the price starts to sag. The trader tires of his loss and sells at 37, forgetting the existence of the open order. Suppose, then, that the price increases to 41¢, at which time the open order becomes effective. The
trader thus becomes short without intending to. One of the jobs of a registered representative is to prevent this kind of thing. A device used is to make the notation "One offsets the other" when a trader has two offsetting orders in the market at one time. A trader may see that July corn is trading at about $2.76 and decide to become short because he expects a price decline. He could enter an order to sell at the market with a three cent stop loss, and a limit order to buy at $2.71, one cancels the other, good until cancelled. The order is executed promptly at the best price the broker can obtain, say 2.75%. Should the price go up to 2.78¼ the stop becomes a market order to be executed at the best price possible but should the price go down to $2.71 the short position is bought in. In either case the opposite order is cancelled. The bracketing orders remain in effect until one or the other prices is reached or until trading in the July delivery ends.

This last example is not the end of the complexity that can be obtained by combining the various kinds of orders listed above. What all of this says is that the commission house and the broker can usually be given any instructions that can be understood and kept track of.

Houses vary in the degree of complexity and difficulty of the orders that they will accept. Some are reluctant to accept intermarket spreads at fixed differences such as buy Kansas City May wheat and sell Chicago May wheat at 3 cent premium Chicago, while others accept such orders readily. Some houses refuse to accept orders to trade at the close of expiring deliveries, insisting that offsetting orders become effective five or two minutes before the final bell while others accept such orders readily. But most houses will try anything that they can understand.

Margin Requirements. In addition to the margins required by the clearing house of its members, the exchanges establish margin requirements that all clearing members must require of their customers. On some exchanges, these requirements are different for members and nonmembers. The comments here relate to the nonmember customers of commission houses. In addition, on some exchanges, margins are different for intra-day and inter-day positions with a smaller margin required for in and out trades within one trading session. In some cases margins vary with the classification of the trade with the margins of "hedging" accounts being less than for speculative accounts.

The margin requirements are minimum; the individual houses may require larger margins for different customers. There are original and maintenance margins, the latter being the equity value below which the position value may not fall. Should the equity value fall below the maintenance level the customer must post additional margin to restore the account to the original margin value.

As we have seen, the purpose of the margin requirement of the clearing house is to guarantee contract performance. The requirement that commission houses require margins of their customers serves this same purpose and assures
commission house solvency; the houses are not permitted to extend credit to customers, because it might thus jeopardize their own solvency. The law requires that customers' margin money be kept in segregated accounts so that it is not available for the use of the commission houses. These accounts are audited frequently. Thus, commission houses cannot accept customer deposits and use them to margin their own speculative activity. The rules of the exchanges and the law are remarkably tight. They have become that way more as a matter of plugging holes after unfortunate occurrences than as a matter of foresight. But laws and rules are broken and there have been instances when commission houses did use customers' money to speculate, lost, and went bankrupt. Restitution was made by other houses and the exchanges involved. From an exchange point of view there are some open questions about the regulation of commission houses but from a customer's point of view the money on deposit is as safe as the banking system. The customer should keep this security in mind when he receives a margin call.

Margins are established in dollars per contract. There is a tendency for them to be on the general order of five to ten percent of the value of the contract. The general principle in setting margins is that they be kept as low as is judged to be consistent with contract security. This judgment is reached on the basis of observation of the ordinary fluctuations in the price of the commodity and on the basis of specific situations that arise from time to time that might lead to erratic price fluctuations. While there is no formula, margins appear to be a function of the value of the commodity represented by the contract and price volatility. Margins are changed infrequently, often remaining constant for a commodity for one or more years. There is a tendency for the maintenance margin to be on the order of 80 percent of the original margin although it may be as high as 85 percent or as low as 60 percent.

All of this becomes simpler with some illustrations. A table of margin accounting may be established:

<table>
<thead>
<tr>
<th>Day</th>
<th>Transaction</th>
<th>Price</th>
<th>Original Margin</th>
<th>Maintenance Margin</th>
<th>Position Value</th>
<th>Capital</th>
<th>Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. B 10 JLY Corn</td>
<td>2.80</td>
<td>$2000.00</td>
<td>$1500.00</td>
<td>0</td>
<td>$2000.00</td>
<td>2000.00</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>2.79</td>
<td>&quot;</td>
<td>&quot;</td>
<td>100.00</td>
<td>2000.00</td>
<td>1900.00</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>2.78</td>
<td>&quot;</td>
<td>&quot;</td>
<td>150.00</td>
<td>2000.00</td>
<td>1850.00</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>2.74</td>
<td>&quot;</td>
<td>&quot;</td>
<td>550.00</td>
<td>2000.00</td>
<td>1450.00</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>2.74</td>
<td>&quot;</td>
<td>&quot;</td>
<td>550.00</td>
<td>2550.00</td>
<td>2000.00</td>
<td></td>
</tr>
<tr>
<td>6. B 10 JLY Corn</td>
<td>2.74</td>
<td>4000.00</td>
<td>3000.00</td>
<td>550.00</td>
<td>4550.00</td>
<td>4000.00</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>2.78</td>
<td>&quot;</td>
<td>&quot;</td>
<td>150.00</td>
<td>4550.00</td>
<td>4700.00</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>2.80</td>
<td>&quot;</td>
<td>&quot;</td>
<td>550.00</td>
<td>4000.00</td>
<td>4550.00</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>2.85</td>
<td>&quot;</td>
<td>&quot;</td>
<td>550.00</td>
<td>4550.00</td>
<td>4000.00</td>
<td></td>
</tr>
<tr>
<td>10. S 20 JLY Corn</td>
<td>2.84</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3660.00</td>
<td>3660.00</td>
<td></td>
</tr>
</tbody>
</table>

On day 1 a customer goes to the wire office with the thought that the price of corn should rise. He signs a customer agreement, learns that the margin re-
Description

Requirement is $1000.00 per contract of $5,000 bushels or 20 cents per bushel and that he must maintain a minimum equity of $750 per contract or 15 cents per bushel, deposits $2000, and buys 10,000 bushels of July corn at $2.80. He has made a contract to buy and pay for 10,000 bushels of number two yellow corn in store in a public warehouse in Chicago on which any day the following July the seller may elect to deliver, the additional details of the transaction to be governed by the rules and regulations of the Chicago Board of Trade. He is on his way to fame and fortune, particularly the latter. The next day he notes that something has gone wrong with the system and the price has gone down to 2.79. His position is worth a negative $100. He still has a credit balance and his equity is $1900, more than the minimum $1500 required. Perhaps tomorrow will be better. But it wasn’t, the price declining to 2.781/2. He now has a position value of negative $150 (11/2 \times 10,000 bushels) a credit balance of $2000, and an equity of $1850 which he notes is only $350 away from a margin call. The next day is worse with the price down 4c which he now instantly translates to $400 for a total loss of $550. He now lacks the minimum equity of $1500 and his registered representative requests that he restore the original margin by depositing $550. If he does not make the deposit the position will be closed and he will have lost $550 and have to pay $70 in commission, leaving a credit balance of $1380. It might be even worse if the selling order is filled at less than $2.741/2 the next day. On day 5 he deposits $550, the price is unchanged so that his position value is still negative $550, his capital is $2550 and his equity $2000. On day 6 he decides that if a purchase of corn at $2.80 was a good thing, $2.741/2 is even better, he digs up another $2000 for original margin, and buys 10 more July corn. He now has a capital of $4550 and an equity of $4000. Fortune shines on day 7 and the price goes up to $2.78 so that his equity is $4700. On day 8 the price goes up two cents, making him look very good indeed. He has a position value of plus $550 (nothing on the first purchase and 41/2c \times 10,000 on the second), capital of $4550 an an equity of $5100. This is all so good that he requests a check for the additional margin deposit of $550, reducing his capital and equity accordingly. The price continues to rise reaching $2.85. He has 5c profit on the first purchase and 101/2c on the second for a total position value of $1550. This plus the capital of $4000 is a total of $5550. Noting that he needs only $4000 margin he withdraws his $1550 profit leaving only $2450 capital and a total equity of $4000. He could have left the money in and bought more, using the profit as margin. He might try to take out an additional $1000 to reduce the equity to the maintenance margin of $3000 but the house would probably refuse. On day 10 the price goes down to $2.84 reducing his position value to $1350 and his equity to $3800. He decides to quit, selling 20 July corn for $2.84. He has no margin requirement, no position value, his account is credited for $1210 (1350–140 commission) so that he has a credit balance of $3660 which he may leave or withdraw.
For our purposes here we need not attempt to guess at the reasoning of our customer at the points of decision nor comment on the wisdom of his action—they were obviously wise because he won just as they would have been obviously stupid had the price continued down—but some points are worth noting. Commission did not enter into the calculation until the positions were closed although they were in mind. Changes in equity were a large percentage of the capital investment even though the price did not change greatly.

In addition to illustrating the mechanics, this table serves to underscore the reality of the profits and losses associated with changes in price even though trades remain open. He had to put money in when he got behind. He could have used equity gains to margin additional trades. He took money out when he got ahead. These were not paper profits and losses; they were for real. A contract is not worth the original purchase or sale price but today’s price regardless of when the capital account is debited or credited.

This discussion of margin requirements and the earlier comment on the margin agreement leave a somewhat delicate question open: Just how exacting are the houses in requiring margins? Under the agreement the customer is responsible for margin maintenance without notice and the house may close an inadequately margined trade. But this does not mean it will automatically offset inadequately margined trades; in practice, they don’t. Exchange rules provide that the houses require maintenance of minimum margins. Accounts must be checked continually and customers requested to deposit additional margin when the account equity is below the minimum margin requirement. They do not require that houses automatically offset deficiently margined positions. The customer may have a “reasonable” period in which to make the deposit. There is flexibility in being “reasonable.” Margin calls antagonize customers, a thing to be avoided whenever possible.

Any deficiency will draw a routine notice by mail. When the deficiency is small, the market quiet, and the account one of substantial size that has been with the company for some time, the company can be very reasonable. The company will let the process take place at the leisurely pace of the U.S. mail, or be content with “I will put a check in the mail if the price does not change favorably enough tomorrow.” If the deficiency is large the customer is contacted by telephone and the “reasonableness” is less. At the other extreme, if the account is small and there has been a history of margin calls that have been hard to get—to the point that the house doesn’t care whether it keeps the account—“reasonableness” may be reduced to a certified check in one hour. There are all gradations in between.

Two additional factors enter into the interpretation of reasonableness. First, the houses try to act in the best interest of the customer. If a customer gets frequent margin calls he is probably overtrading and losing more money than he should or holds a losing position that will probably get worse and should be terminated. The house tries to nudge him in the right direction. Second, the
house doesn't intend to let the account run into a total deficit so that it loses money. This can happen and technically the customer is liable for any deficiency existing when the account is closed but these are difficult and expensive to collect. Typically, the registered representative is responsible should the customer lose more money than he has on deposit and the reasonableness of registered representatives runs out before their own money is involved.