COMMODITY EXCHANGES

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PREFACE

Within the last few years six new exchanges have been established in the United States for trading in commodities, whose values aggregate hundreds of millions of dollars annually. The economic importance of these exchanges, together with their intimate and direct influence on the industries in connection with which they function, have stimulated a wide interest in commodity exchanges and the service which they render.

In the organization of three exchanges and in the preparation of their by-laws and rules, the writer was confronted by many problems. A search for precedent and authority for the solution of these problems, revealed the fact that there was no general work which dealt at all comprehensively with the organization of commodity exchanges and the technique of their operation. Excellent treatises on the work of particular exchanges and on certain phases of exchange operation were available. The most authoritative information was found in voluminous Government documents, particularly in the reports of the United States Senate Investigating Committees, of the Department of Agriculture, of the United States Bureau of Corporations and of the Federal Trade Commission. Articles in numerous periodicals contained some data. These sources of information, however, were so widely scattered that it was impossible to respond to the numerous requests received for a reference book on Commodity Exchanges.

This book is an attempt by the authors to present to those interested a comprehensive picture of commodity exchanges,

their organization, their purposes and their economic functions. It combines the data gathered from many sources with the knowledge gained from years of daily contact with the practical operation of commodity exchanges.

Grateful acknowledgment for assistance is made to many of the officers and directors of commodity exchanges in New York City, to associates of many of the commission houses and to representatives of the United States Department of Agriculture, the United States Department of Commerce and other Government officials. Particular expression must be made of our indebtedness to Francis R. Henderson, President of the Rubber Exchange of New York, Jerome Lewine, Vice-President of the National Raw Silk Exchange, J. Chester Cuppia, Treasurer of the Rubber Exchange of New York, Otto Keusch, member of the Board of Trade of the City of Chicago, August Schierenberg, President of the New York Coffee and Sugar Exchange Clearing Association, Dr. J. W. T. Duvel, Chief of the Grain Futures Administration of the United States Department of Agriculture, Henry Waite, Assistant Secretary-Treasurer of the New York Cotton Exchange Clearing Association, Walter Dutton, Secretary of the Rubber Exchange of New York, Frederick F. Kuhlmann, Assistant Secretary of the New York Cotton Exchange, John P. Sullivan, Treasurer-Secretary of the National Raw Silk Exchange Clearing Association, and to George W. Bacon of the faculty of Fordham University Law School.

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New York

COMMODITY EXCHANGES

Commodity Exchanges

Chapter I

THE FUTURES CONTRACT

A GLANCE at the financial pages of a newspaper will reveal a section devoted to commodity markets. In addition to columns of quotations of stocks and bonds, there are summaries of the day's price changes in wheat, corn, oats, rye, cotton, sugar, coffee, rubber, silk, tin, cocoa, cottonseed oil, barley, flaxseed, provisions, etc. For different delivery months the opening, high, low, and closing prices are given just as they are set forth for each stock traded in on the Stock Exchange.

Cash Markets and Futures Markets.—There are apparently two markets for every commodity traded in on an organized exchange—a cash, or spot market and a market for trading in contracts for future delivery. But these two markets are, in reality, one. Prices of futures contracts and spot or cash prices are closely related and ordinarily fluctuate closely together. There is one world-wide or country-wide market for the commodity, divided into departments—cash and futures—in accordance with whether the trading is in the commodity or in contracts for future delivery of the commodity. A type of daily commodity price quotations is shown in the following summary of prices on the New York Cotton Exchange on October 10, 1928, taken from the *Journal of Commerce* of October 11.

	High	Low	Closing Oct. 10	Closing Oct. 9
Oct.	19.03	18.91	19.02	19.01—19.02
Nov.	....	....	*18.89	*18.91 ....
Dec.	18.98	18.80	18.90—18.92	18.92—18.95
1929—				
Jan.	18.93	18.70	18.86—18.88	18.86—18.88
Feb.	....	....	*18.79	*18.74 ....
Mar.	18.80	18.57	18.72—18.74	18.73—18.75
Apr.	....	....	*18.68	*18.69 ....
May	18.72	18.50	18.65—18.66	18.64—18.65
June	....	....	*18.57	*18.58 ....
July	18.54	18.40	*18.50	18.53—18.54

Market steady. Trans., 19.02.

Opening: October, 18.91-18.95; December, 18.80-18.83; January, 18.70-18.73; March, 18.58-18.59; May, 18.50-18.55; July, 18.40-18.41.

* Nominal.

The quotations given above are not spot, but are the prices of contracts for future delivery. The futures contract is the distinguishing characteristic of the commodity exchange, with whose operations this book is concerned. Although time contracts appear in commercial dealings of earlier days, the futures contract is essentially a modern American institution, born of necessity in the development of the vast agricultural resources of the Great West and the bountiful production of cotton in the South. It will conduce to an understanding of the modern futures contract if we first outline the manner in which it came into being.

We will realize that its growth was spontaneous, and engendered by economic necessity, and that the industrial development of the past hundred years has made imperative the assumption of otherwise uninsurable risks of production and trade by a body of specialized risk bearers, the speculators. We will then be in a position the better to distinguish between futures contracts and cash contracts and to understand all the salient characteristics of the futures contract,

what it is, what it does, and some of the ways in which it is used.

Origin of the Futures Contract.—The opening of the broad fertile areas of the Great West was far less spectacular than the development of the gold fields of California; yet the golden grain harvested in abundance from a virgin soil was a far more vital factor and more permanent contribution to economic progress.

> White-topped prairie schooners crawling toward the setting sun. Plains flecked with buffalo and antelope. Traders gliding up and down interior streams bargaining for fur. . . . Such were the early days of the nineteenth century.
>
> Like the finger of destiny, the historic pilgrimage of pioneers pointed ever westward, straggling onward in unending lines. "Caravans of Faith" they were called as they joggled across Illinois and into Iowa. And theirs was a profound faith, the faith of the dreamer striking out for the land of his dreams.
>
> The acreage which the pioneers planted to grain continued widening each year. They shipped their grain to Chicago, then an ugly little town cuddled on the shore of the lake. Part of the money received in return was quickly converted into farm implements. These implements meant larger production. Subsequently the stream of grain that poured into Chicago bulged the sides of the little town and made necessary almost constant expansion of marketing and storing facilities.[1]

In the fast-growing lake port, a custom of trading sprang up which was not new, but which had been used chiefly for the sale of goods shipped across the ocean from distant countries. This was the practice of selling "to arrive." The long distances from which grain came to Chicago made the development of "to arrive" sales and time contracts entirely logical. Quotations of these forward contracts appeared in Chicago papers before the Civil War. The Chicago Board of Trade was organized in 1848, after which year trading in spot grain and in grain for forward delivery was carried on in an organized market. Before long the extension of railroads into

[1] Edward Jerome Dies, *The Wheat Pit* (The Argyle Press, Chicago, 1925), pp. 10, 11.

the Western states, facilitating the shipment of grain, augmented receipts at Chicago, and made necessary the establishment of warehouses—*i.e.*, grain elevators, for storing the vast supplies, which arrived faster than they could be sold into consumption. A system of inspection and grading followed close upon the growth of terminal facilities. The elevators issued receipts showing the grade and amount of the grain which was stored, and these receipts, evidencing the title to so many bushels of wheat of a certain quality, were capable of transferring the title when passed from hand to hand. So the grain dealer could sell his wheat and transfer it to the buyer by mere delivery of the elevator receipt—the document of title. If a sale could be effected by delivery of an elevator receipt, then anybody who anticipated declining prices could turn his belief to commercial advantage, even though he owned no grain. He could sell and borrow elevator receipts for an amount of grain equivalent to the amount sold. These receipts he would deliver to the buyer; but he would remain under the necessity of returning, later, receipts for an equivalent amount of grain to the lender. If his judgment were correct, he could buy grain in the same amount and grade at a later time when the price had fallen, and turn over to the lender the receipt for this grain. If, contrary to his expectations, the price rose, the financial results would be less satisfactory to the seller, but his obligation would be discharged in the same way. At first the elevator receipts represented specific lots of grain; but later they represented grain of a given grade without regard to any one specific lot, and thus developed a system of trading in grain for forward delivery. The Civil War gave an impetus to the use of contracts of this sort, and in 1869 we find the Chicago Board of Trade adopting its first rules for regulating trading in futures.

In the cotton trade, the development of the use of futures

contracts proceeded along similar lines. In the days when both cotton and news crossed the Atlantic in sailing vessels, little "to arrive" selling was done. The advent of the steamship introduced a new and hazardous factor into the cotton trade between England and the South. The cotton still traveled in sailing ships, but news went by steamer. The risk to the owner of the cotton was now great, if the news should have an unfavorable effect on prices. By the time cotton in the slow sailing vessel reached Liverpool, intelligence of factors depressing its price would have preceded it, and it became a matter of vital necessity to eliminate this risk by marketing the cotton before its price could be affected during the time of transit. So the custom arose of taking samples from bales which were being shipped to Liverpool and offering them for sale in New York "to arrive" at Liverpool; and if a sale were not effected in the New York market, the samples would be sent by steamer to Liverpool as soon as the sailing vessel with its cargo of cotton weighed anchor at the Southern port. In Liverpool the samples were offered on the same basis. Then came the transatlantic cable, and with it another step forward in cotton marketing. Instead of selling from sample "to arrive," cotton was now offered in Liverpool to sail in one of two months, and in New York, to sail during one named month. Instead of selling from sample, contracts specified an established grade—"middling —nothing below low middling." Active dealing in these cotton contracts sprang up in New York. Brokers scurried around from office to office, buying and selling cotton to sail from Southern ports in different months; and two years after the Chicago Board of Trade adopted its first rules governing trading in grain futures contracts, the New York Cotton Exchange was organized.

A Futures Contract Defined.—In his work, *Speculation on the Stock and Produce Exchanges of the United States,*

Professor H. C. Emery defines a future as "a contract for the future delivery of some commodity, without reference to specific lots, made under the rules of some commercial body, in a set form, by which the conditions as to the unit of amount, the quality, and the time of delivery are stereotyped, and only the determination of the total amount and the price is left open to the contracting parties." [2]

This definition is clear and it describes the nature of the futures contract. The following description is somewhat more comprehensive, bringing out those features of the futures contract which distinguish it sharply from the everyday commercial contract:

A futures contract may be defined as a contract for the sale of a stipulated amount of a specified grade of some commodity at a fixed price at a future date. Typically, it contains the following special features: First, the specific provisions of the contract are determined by the rules of the exchanges, the actual bargain being made in a highly informal way. The rules and practices of the exchange are implied in each bargain, in the absence of a specification to the contrary. Second, the futures contract is a *basis contract*, which means that the commodity delivered under it may be either of the "contract grade" or of some other grade which may be delivered at the seller's option at a price above or below the contract price. The method of determining the differential varies in different exchanges. Third, the seller is given the option of making delivery at any date between specified limits; in this country at any date within a specified calendar month. Fourth, the enforcement of the contract is insured by a provision that a specified amount known as a margin shall be deposited with some third party by each of the contracting parties. These deposits are intended to protect the seller against a refusal of the buyer to make good his contract in case of a fall in prices, and, conversely, to protect the buyer against a default on the seller's part in case of a rise. Fifth, delivery is effected by delivery of warehouse receipts for the commodity, which must be stored in a specific place—usually in approved warehouses in the city in which the exchange is situated.[3]

[2] p. 46.

[3] Charles O. Hardy, *Risk and Risk Bearing* (University of Chicago Press, 1923), pp. 205, 206.

It is necessary to an understanding of the futures contract to banish from mind any thought of time as an essential element. This is important. Cash trading is carried on in every commodity. Sales "to arrive" are made now as they were in the days before organized commodity exchanges existed. Contracts for forward delivery are made whenever a cotton spinner or a miller buys cotton or wheat from dealer or grower for shipment or for delivery at some later date; but the forward contract is not a futures contract, nor is the sale "to arrive" a futures contract. In the markets of today, there are two broad divisions into which transactions fall: cash (also known as "spot") sales and sales of futures. Brown, in May, buys a contract for the delivery of May cotton on the New York Cotton Exchange. Since Brown has bought a contract in the current month, the seller may, even on the following day, issue a transferable notice, and Brown may receive delivery on the same day. The contract, however, is a futures contract because Brown has merely contracted to *accept* delivery during the month of May, the exact time being at the option of the seller. He also reserves the right to close his contract prior to delivery by selling the same future and thus passing the responsibility of accepting delivery to someone else.

On the other hand, Brown buys cotton in May from a merchant in the South to be delivered in July, and though he will not obtain the cotton for two months, it is a cash transaction. The reason the purchase from the Southern merchant is a cash and not a futures transaction becomes apparent by a reference to Professor Emery's definition. It is not a transaction "made under the rules of some commercial body, in a set form, by which the conditions as to the unit of amount, the quality, and the time of delivery are stereotyped." On the other hand, if he buys a contract on the New York Cotton Exchange for the delivery of cotton

in any month, it will be a futures contract. In brief, a futures contract is one traded in on an organized commodity exchange; every other kind of sale is a cash transaction.

The Form of the Futures Contract.—Every commodity exchange has a standard (or basis) contract adapted to the distinguishing peculiarities of the commodity in which its members trade. The contract adopted by the National Raw Silk Exchange is typical. The following is the form prescribed by the by-laws of the exchange, the observance of which is promised when contract slips are signed.

NATIONAL RAW SILK EXCHANGE, INC.

JAPANESE RAW SILK CONTRACT

New York, N. Y., *19*

A. B. have this day *sold / bought* *and agreed to* *deliver to / receive from* *.....C.D. 5 bales of Japanese Raw Silk (about 650 pounds), at the price of ....dollars and .....cents per pound for Exchange Grade D, with additions or deductions for other grades and sizes (denier) as provided by the By-Laws, Rules and Regulations of the National Raw Silk Exchange, Inc., deliverable from licensed warehouse in the Port of New York, between the first and last delivery days of ....inclusive, the delivery within such time to be at seller's option in one warehouse, upon notice to buyer, as provided by the By-Laws and Rules of the National Raw Silk Exchange, Inc.*

Either party may call for a margin, as the variations of the market for like deliveries may warrant, which margin shall be kept good.

This contract is made in view of, and in all respects subject to the By-Laws, Rules and Regulations of the National Raw Silk Exchange, Inc.

For and in consideration of One Dollar ($1.00) to the undersigned, in hand paid, receipt whereof is hereby acknowledged, the undersigned accepts this contract with all its obligations and conditions.

It will be noted that the date, the names of buyer and seller, the price, and the month of delivery are the only terms which remain to be filled in.

Characteristics of the Futures Contract.—As stated, the contract calls for the delivery of Japanese Raw Silk, Exchange Grade D. The by-laws of the exchange provide that one particular grade shall be designated in the contract, and they further provide that other specified grades may be delivered at the option of the seller. The grade named in the standard contract is the basis grade and the contract is a basis contract. A basis contract means that although one grade of the commodity is specified in the contract, nevertheless other grades are tenderable, subject to price differentials determined from the contract grade as the basis.[4]

A second characteristic is that delivery may be made between the first and last days of the delivery month, and the time for delivery within these limits is at the seller's option. The contract unit is always fixed, and the margin requirement is an inherent provision of the futures contract designed to protect both parties. Both parties to the contract must be members of the exchange and although they may be acting as brokers, in so far as the exchange is concerned, they are regarded solely as principals. Finally, delivery in accordance with the contract is accomplished by means of warehouse receipts evidencing the seller's title to the commodity in the amount named, and accompanied by a certificate that it is one of the grades recognized by the exchange as acceptable for delivery.

Each of these characteristics has a definite reason for inclusion. Some of them are discussed in detail in other chapters. Here it will be helpful to state first the reasons for the existence of basis contracts.

Reasons for a Basis Contract.—If any commodity were so nearly uniform in quality that any one unit of it was indistinguishable from any other, there would be no neces-

[4] Commodity exchange contracts are usually basis contracts. An exception is cottonseed oil on the New York Produce Exchange.

sity for basis contracts; but every commodity which is traded in on an organized exchange has many grades which are well recognized in the trade and which may extend into many divisions and subdivisions. One of the most important and far-reaching economic problems of the exchange is the determination of the number of grades which shall be tenderable against exchange contracts and what shall be the basis grade.

A basis contract is designed (1) to make the various grades tenderable against exchange contracts representative of the commercial demand for the commodity, (2) to provide merchants and manufacturers with ample facilities for hedging, and (3) to provide a sufficiently large percentage of the commodity for delivery against exchange contracts to prevent squeezes. The exchange cannot undertake to deal in all the various grades of the commodity without introducing needless complication. On the other hand, great discrimination must be exercised so that the grades selected are commercially representative of the commodity and to guard against the possibility of the exchange being used as a dumping ground for grades not readily saleable. Commercial demand thus forms the foundation upon which exchanges work in determining the various qualities of the commodity which may be tendered in fulfillment of a futures contract. Only such grades are adopted as are representative of qualities in substantial use in the industry.

The foregoing characteristics are those which are important to dealer and manufacturer. There is another group whose activities are highly important to the successful operation of the exchange, namely, the speculators. The speculator is concerned primarily with simplicity. His need is for a contract which will require no attention to details or technicalities but which is clear and definite in its provisions

and unvarying in the conditions and obligations which it imposes.

Considerations in Establishing Grades.—"The ideal characteristics of a contract grade are first, that it be as narrow as possible, *i. e.* contain grain of as nearly equal quality as possible, and second, that it contain enough grain to make a corner in the contract grade normally impossible."[5]

The contract grade, known also as the basis grade, is the one named in the futures contract, and is usually representative of that grade of the commodity for which there is the greatest commercial use. There are other grades, some inferior and some superior in quality to the basis grade. A problem difficult of determination and of great commercial importance faces the exchange in determining the number of grades which shall be deliverable. There are several reasons for this.

One aspect of the question has already been mentioned. If tenderable grades embrace too small a proportion of the merchantable commodity, it is an open invitation to artificial price manipulation. The result of such a situation would be to permit squeezes to be readily accomplished, thus impairing the usefulness of the exchange as a medium for hedging. The merchant who sells or purchases, relying upon an orderly price relationship, only to find it disturbed by a squeeze when he comes to cover his hedge, may find the protection he seeks all or partly dissipated.[6]

On the other hand, the tenderable grades must not be too numerous. The seller has the option of tendering any grade made deliverable by the by-laws of the exchange. If eleven grades of a commodity are deliverable, Grade No. 11 being the poorest in quality, this may be the one

[5] L. D. H. Weld, *The Marketing of Farm Products* (The Macmillan Company, 1924), p. 329.

[6] For full discussion of the problems arising from artificial price movements, see Chapters VII and X.

which it is hardest to market in ordinary commercial channels. The result is that the less desirable grades of the commodity tend to accumulate for delivery on exchange contracts. The prices of all grades will be adversely affected, for the buyer will be apprehensive that he may be tendered the objectionable grade if he accepts delivery, and this apprehension is reflected in the price of all grades. Evidently too wide a range of tenderable grades will have the effect of accumulating those grades for which there is the least commercial demand for delivery on the futures contract.

Grades Deliverable on Commodity Exchanges.—But while the exchange does not wish to become a dumping ground for undesirable grades, the primary object in establishing grades for futures trading is not necessarily to insure delivery of a high quality of the commodity. Millers, spinners, or others who use the futures market do not do so ordinarily in order to obtain the wheat, cotton, or other commodity they need. They use it for the purpose of hedging, as explained in detail in Chapter V. Grades are established primarily to connect futures markets effectively with the cash markets; that is, since exchange grades are recognized in the cash market, there must be a substantial parity between the cash market and the futures market so that commercial interests may use both.

The two sides of this question are well summarized in the Report of the Federal Trade Commission on the Grain Trade: "A system of narrowly specified deliverable grades facilitates manipulation and corners. On the other hand, if the deliverable grades are broad, millers and others will be less willing to take delivery, because they will not be able to tell what sort of grain they are going to get by this means. Contract grades ought, if possible, to be such that the miller will be ready, if necessary, to take delivery. Although the volume of future trading may be greater under a system of broad

deliverable grades, because of the less likelihood of a corner, the proportion of deliveries will be less, and thus the connection between the cash market and the futures market may become somewhat artificial." [7] A commodity may be graded solely in accordance with the by-laws and rules of the futures exchange; or a standard may be prescribed by law.

From the foregoing, it will be apparent why the number of deliverable grades on different exchanges varies according to the requirements of each trade.

On the Chicago Board of Trade seventeen grades of wheat, nine grades of corn, three grades of oats, three grades of rye, and two grades of barley are made tenderable on futures contracts. The basis grades for wheat are No. 2 Hard Winter, No. 2 Yellow Hard Winter, and No. 2 Red Winter. In addition to these, four other grades—No. 1 Hard Winter, No. 1 Yellow Hard Winter, No. 1 Red Winter, and No. 1 Northern Spring—are all deliverable at the contract price. They are not basis grades but the equivalent of basis. On the differences prevailing January 1, 1929, No. 2 Dark Hard Winter commanded a premium of ½ cent per bushel; No. 1 Dark Northern Spring, a premium of 1 cent; No. 1 Dark Hard Winter, a premium of 1½ cents, and No. 1 Hard Spring wheat, a premium of 2 cents per bushel. Grades deliverable at a discount were No. 2 Dark Northern Spring at 2 cents per bushel "off" the basis grade, and No. 2 Northern Spring at a discount of 3 cents; while the No. 3 grades—Dark Hard Winter, Hard Winter, Yellow Hard Winter, and Red Winter—were deliverable at a discount of 5 cents per bushel.

The contract grade for corn is No. 2 Mixed, with No. 1 Mixed deliverable at the contract price. Four grades, No. 1 and No. 2 White corn, and No. 1 and No. 2 Yellow corn, commanded a premium of ½ cent per bushel. The No. 3

[7] Vol. V, p. 199.

grades of White and Yellow corn were subject to a discount of 2 cents per bushel from the contract price, while No. 3 Mixed corn was deliverable at a discount of 2½ cents.

The basis grade for oats is No. 2 White, with No. 1 White deliverable at a ½ cent per bushel premium, and No. 3 White subject to a discount of 3 cents. The basis grade for rye is No. 2, with No. 1 deliverable at the contract price, and No. 3 subject to a discount of 5 cents per bushel. There is no premium grade applicable to rye deliveries. On the other hand, there is no discount grade for barley. Special No. 2 barley is the contract grade, with No. 1 deliverable at a premium of 2 cents per bushel. However, there has been no active trading in barley futures on the Chicago Board of Trade since September, 1923.[8]

The three basis grades on the Chicago Board of Trade are all winter wheat, and it is generally known as a winter wheat contract; however, at times the deliveries are confined mainly to No. 1 Northern Spring Wheat. Minneapolis is primarily a spring wheat market;[9] consequently we find No. 1 Northern Spring established as the basis grade, No. 1 Hard Spring Wheat commanding a 2 cents per bushel premium, and No. 1 Dark Northern Spring, a 1 cent premieum. Discount grades are No. 2 Dark Northern Spring deliverable at a discount of 2 cents per bushel, and No. 2 Northern Spring, at a discount of 3 cents. The winter wheat grades are not deliverable on the spring wheat contract. Winter wheat deliveries can be made only on a winter wheat con-

[8] Approximately 90 per cent of the trading in barley is done on the Minneapolis Chamber of Commerce. Special No. 2 is the basis grade deliverable at contract price, with No. 1 barley tenderable at a premium of 2¢, No. 2 at a discount of 5¢, and No. 3 at a discount of 8¢.

[9] Spring wheat is grown chiefly in the Northwest states for which Minneapolis and Duluth are the natural markets. The winter wheat states, among which Kansas and Nebraska lead in production, are more closely related to Chicago and Kansas City as marketing and shipping centers.

tract; this contract has not been active for years although the rule still stands.

The Winnipeg Grain Exchange is the primary futures market for the great spring wheat crop of Canada. The basis grade is No. 1 Manitoba Northern. Grades 2, 3, and 4 Manitoba Northern were deliverable at discounts of 3, 8, and 21 cents respectively (as of January 1, 1929). A futures contract for oats provides for No. 2 Canada Western as the basis grade, with No. 3 Canada Western and Extra No. 1 Feed oats deliverable at a 3-cent discount and No. 1 Feed oats at a 5-cent discount. Two grades of barley, rye, and flax are made deliverable on the Winnipeg exchange. The basis grades are No. 3 Canada Western barley, No. 2 Canada Western rye, and No. 1 North Western Canada flaxseed. Barley and flax have discount grades, and No. 1 rye is deliverable at the contract price for the basis grade. It will be noted that there are no premium grades. Any grade superior to the basis grade of wheat, oats or barley is made deliverable on a futures contract at the price prevailing for the basis grade.

The number of grades tenderable against an exchange contract is established by the by-laws of the exchange, with the single exception of cotton, in which grades are prescribed by statute. Standards in the grain trade have been established by Federal statute, and the grades traded in on each exchange have been selected from those established by Federal law, for which the exchange is a natural market. The exchange selects the deliverable grades.

The United States Cotton Futures Act establishes rules and machinery for the classification and inspection of cotton. On the New York Cotton Exchange seventeen grades of cotton are deliverable. Middling is the basis grade, with Strict Good Middling, Good Middling, and Strict Middling commanding premiums over the price for the contract grade;

and Strict Low Middling, Low Middling, Good Middling Tinged, Strict Middling Tinged, and Middling Tinged deliverable at discounts. On other markets, such as the Coffee and Sugar Exchange, the Rubber Exchange, Silk Exchange, the National Metal Exchange, the Cocoa Exchange, and the New York Produce Exchange (dealing in cottonseed oil), the grades tenderable are established by the exchanges in accordance with the three principles named: (1) that of preserving parity between the cash and futures markets; (2) insuring against squeezes; and (3) insuring that the commodity delivered shall be of a quality merchantable and useful in the trade.

Differentials.—In the foregoing section, the premium and discount for each grade of wheat deliverable on the Chicago Board of Trade were given in cents and fractions of a cent per bushel. These price spreads between the premium or discount grades and the contract grade are known as differentials. The method of fixing these differentials is usually prescribed by the exchanges in their by-laws. On exchanges where grading and inspection are both subject to government regulation, the method of establishing differentials may also be prescribed by law.

An example of the former method is afforded by the by-laws of the Rubber Exchange which require differentials to be fixed by the Adjustment Committee on the fifteenth of each month to govern all deliveries for the ensuing calendar month. The committee establishes these differentials upon the basis of cash prices in the world's markets. The United States Cotton Futures Act specifically provides a method for the determination of differentials between the various grades deliverable on futures contracts. If a spot market exists on the exchange, the differentials prevailing in the spot market on the sixth business day prior to the delivery date govern the differentials on grades deliverable on a futures

contract. There is no spot market on the New York Cotton Exchange. Accordingly, the law requires that differentials on deliverable grades are to be governed by an average of prices prevailing in ten selected spot markets: thus prevailing differentials in the ten spot markets are transmitted by telegraph to the New York Cotton Exchange, where the average differentials are calculated and then posted on the bulletin board of the exchange with a notation of the delivery day to which they apply. In connection with differentials, it is interesting to note that in the grain trade the amount of the discount on substandard grades is fixed at a greater amount, on the average, than discounts on the same grades in the spot market. This is done with design. The object is to exert pressure to bring about delivery to the buyer of the contract grade in so far as possible, and to keep the futures contract from use as a medium for dumping low-quality grain. The fact that discount grades are discriminated against through a wider price spread than that prevalent in the spot market is a factor tending to accomplish this object.

Unit of Trading.—In determining the contract unit, the primary object is to establish one which shall be the most serviceable to commercial interests, *i. e.*, a unit convenient for hedging. On the other hand, the exchange must guard against making its facilities available for irresponsible speculation. If the unit is so small that uninformed outsiders with little capital are tempted to trade, the exchange doors will be thrown open to ill-advised speculation. The trading unit, accordingly, is fixed with these two considerations in view. On the Chicago Board of Trade, the trading unit in wheat and corn is 5,000 bushels. Trades are made in 1,000 bushels or multiples thereof, known as job lots, but these are bought at ⅛ to ¼ cent below or sold at ⅛ to ¼ cent above the regular quotations which are based on round lots only,

not on job lots. The futures contracts on the New York Cotton Exchange and the New Orleans Cotton Exchange call for the delivery of "50,000 pounds in about 100 square bales of cotton, growth of the United States." The futures contracts on the New York Coffee and Sugar Exchange call for the delivery of 32,500 pounds of coffee or 112,000 pounds of sugar, as the case may be. On the Rubber Exchange the trading unit is 5,600 pounds; on the Silk Exchange the trading unit is 650 pounds; on the Cocoa Exchange, 30,000 pounds; while a futures contract for cottonseed oil on the New York Produce Exchange calls for the delivery of 40,000 pounds. The trading unit in tin on the National Metal Exchange is 11,200 pounds.

Price Decimals.—The instrument must be adapted to its purpose. For the delicate and exact work of the chemist, scales of the greatest precision and sensitiveness are necessary. Futures markets are the centers of countrywide and worldwide trading. That intangible personality which we term the "market" is a composite of all types of opinion and of all states of financial resources. Banker, manufacturer, merchant, broker, trader, large or small, nervous or resolute, form the market which reflects their composite judgment. It is sensitive in the highest degree to every development which bears upon the supply of and demand for the commodity, and to every development which bears upon the borrowing power of merchants. Mr. W. P. Hamilton comments that "the stock market represents, in a crystallized form, the aggregate of all America knows about its own business." [10] So the commodity market represents the aggregate of all that America and other nations know about the commodity in which trading is carried on.

Price fluctuations must be small enough to reflect ac-

[10] W. P. Hamilton, *The Stock Market Barometer* (Harper & Brothers, 1922), p. 182.

curately this sensitive market. These minimum fluctuations are established by by-law of each exchange. Prices of wheat and corn fluctuate in eighths of a cent per bushel. Silk is quoted at variations of 1 cent a pound; rubber is quoted at variations of 1/10 of a cent per pound; tin at 1/20 of a cent per pound. Price fluctuations of 1/100 of a cent per pound record the shifting buying and selling pressure for coffee, cotton, sugar, cocoa, and cottonseed oil.

The Delivery Months.—The futures contract usually permits delivery during any one of twelve successive calendar months. The active trading months may be few, however, as in the grain trade, where active trading is confined largely to the May, July, September, and December futures, (and in recent years, the March future) and in the cotton trade where some months are normally active and others inactive.

The choice of the four months referred to is explained as follows, primarily with reference to wheat. July is the month when the new winter wheat begins to come on the market. The elevator man who is buying in the Southwest before the end of May—perhaps contracting ahead with the farmer—can protect himself by hedging for July delivery. Much of his wheat will go to market in that month. The July price is supposed to reflect the size of the crop of winter wheat. September, on the other hand, reflects spring wheat conditions and represents the initial movement of the spring wheat crop. The hedging of spring wheat purchases begins to be important just before the middle of August. December represents the winter storage of both the winter and spring wheat crops. Navigation is closed, and only the more costly rail facilities are available for shipment to the seaboard. It is generally considered that wheat in store in December will remain there till spring. May is the clean-up time for the old crop. Navigation opens and there is an inclination to ship out accumulations to make way for the next crop. But May is also influenced by the volume of the new crop.[11]

Thus, due to causes affecting the growth, harvesting, shipping, and warehousing of the commodity, trading in grain futures is concentrated in these four delivery months.

[11] Report of the Federal Trade Commission on The Grain Trade, Vol. V, p. 62.

On the New York Cotton Exchange, trading as a rule is concentrated in six months, with two other months occasionally active. The February, April, June, and November futures are relatively inactive. The reason for this is less apparent. One authority suggests that "the peculiarities of the movement of cotton in the days of sailing vessels had something to do with the custom of trading in certain months to the exclusion of others." [12]

Delivery at Seller's Option.—The seller has the entire month during which to make delivery on his contract. The reason for this is that commodities, brought to the market by steamship and railway, may be delayed by circumstances beyond the seller's control. Permitting delivery at any time during the month militates against a seller's being penalized by reason of shortage in the deliverable stocks of the commodity. When delivery is made, it is effected by the transfer of a warehouse receipt from seller to buyer.

Warehouse Receipts.—At the beginning of this chapter, it was mentioned that the practice of grading and issuing warehouse receipts was established in the grain trade at an early date. The use of warrants, or warehouse receipts, was known to the Phoenicians, and the Italian traders of the Mediterranean. At about the same time that grading and the use of warehouse receipts in the grain trade became current in the United States, warrants representing iron in store came into use in Great Britain

The warehouse receipt which passes from seller to buyer when delivery is made is evidence of the seller's title to the goods. Its transfer passes title. On the grain and cotton exchanges inspection and grading are carried on under government supervision, as will be noted in detail in Chapter IX. For other commodities, inspection, grading, and weigh-

[12] W. Hustace Hubbard, *Cotton and the Cotton Market* (D. Appleton & Co., 1923), p. 240.

ing are carried on by a staff of experts in the employ of, or licensed by the exchange.

The warehouses in which lots of a commodity to be delivered on a futures contract are stored, are "official" warehouses; that is, they are approved and licensed by the exchange. By setting up the machinery for grading, and by licensing warehouses in which the commodity may be stored, the exchange does all within its power to insure that each grade shall be a known and definite quality and weight, or measure. Warehouse receipts accompanied by certificates issued under the authority of the exchange are accepted in full confidence that the commodity which they represent is of the grade and weight specified.

The warehouse receipt is the muniment of title to the commodity. In the grain trade it does not represent any specific lot; it represents a definite quantity of any lot of a given grade or of a mixture of tenderable grades. In other commodities, however, the warehouse receipt represents definite and specific lots; identified by serial number, chop mark, brand or other identifying marks, which are set forth on the face of the receipt. A negotiable instrument, such as a promissory note or a bill of exchange, represents a promise to pay money; the warehouse receipt represents commodities in store. The note or bill of exchange may be endorsed and passed from hand to hand; the warehouse receipt is likewise capable of transfer by endorsement and delivery. It is evident that there is a close analogy between the warehouse receipt and the negotiable instrument. The transfer of the warehouse receipt accomplishes delivery as effectively as if the seller were to make physical delivery of the goods.

Chapter II

GOVERNMENT AND OPERATION OF A COMMODITY EXCHANGE

Ancient Markets and Modern Exchanges.—Without the fairs and markets which spread over England and Europe in the Middle Ages, internal trade must have remained entirely local. Communication depended upon travel, and travel was difficult, dangerous and slow. Commerce in the products of distant places awaited the growth of market places where buyer and seller could meet. Once established, the medieval fairs spread with rapidity, dotting England and France with busy centers which afforded the chief means of carrying on internal commerce and offered nearly the sole means of trade in the products of distant lands and places.

Between the fair of the thirteenth century and the commodity exchange of today, there appears little in common. Yet both were born of the same economic necessity. Modern liners cross the Atlantic in less time than the medieval traveler required to journey one hundred miles. Modern communications enable the Manchester spinner to reach his market more quickly than the itinerant merchant could travel from house to house. But through all the economic development of centuries the need of central markets has remained, their nature changing, their purview widening, until today "The stock and produce exchanges are the nerve centers of the industrial body, and are in themselves as necessary institutions as the factory and the bank." [1]

[1] H. C. Emery, *Speculation on the Stock and Produce Exchanges of the United States,* "Studies in History, Economics and Public Law," Columbia University, p. 12.

The organized commodity exchange in this country is a direct outgrowth of the boards of trade and chambers of commerce which were formed to regulate trading in grain at large terminal points. We can briefly define an exchange as an organized market if all that is comprised in the word "market" be comprehended. The exchange provides a market place where its members trade under established rules and regulations and where buyers and sellers from every quarter of the globe meet through member brokers who represent them. It establishes rules to govern transactions made on its floor and it endeavors to secure uniformity in the customs of the trade. Finally, it is a futures market and not a cash market.

Cash Markets and Futures Markets.—A cash sale, also known as a spot sale, contemplates a delivery of some specific grade of the commodity. Many of the commodity exchanges have facilities for spot trading. In the grain trades, for instance, samples of the grain contained in cars which have arrived at the delivery point are displayed on tables, and purchases are made on the basis of the samples representing each carload lot. Spot markets exist separate and apart from the largest organized exchange in the cotton trade. But while some commodity exchanges may have facilities for spot trading, their primary purpose is to serve as a market for future delivery contracts. Their quotations are for future delivery; their sales are made not from sample but on the basis of standardized grades. This chapter is concerned with the operations of such futures exchanges. We shall examine their organization, their purposes and their aims, the manner in which they regulate trading among members, and the way in which that trading is carried on upon their floors.

Organization of Exchanges.—The older commodity exchanges were chartered by special acts of the legislature, not

because of any inherent peculiarity but because they came into being before the adoption of membership corporation laws. The Chicago Board of Trade, which commenced operations in 1848 and received its charter in 1859, is the oldest of the exchanges. Next in point of time come the New York Produce Exchange and the New York Cotton Exchange. The Produce Exchange was incorporated in 1862. The Cotton Exchange was organized in 1870 and chartered as a corporation the following year. The most recently formed futures markets, all located in New York, are the Rubber Exchange, the National Raw Silk Exchange and the National Metal Exchange.

A mere casual survey of the list of commodities in which future trading is done will suggest that their markets cannot be identical in every respect. Wheat, corn, rye, and oats are traded in for future delivery. Cotton, coffee, and sugar, rubber, cottonseed oil, raw silk and tin have organized futures markets. Differences in the commodities make for necessary minor differences in the rules of trading and in the terms of contracts. But the same broad, fundamental plan of organization is found in all of the exchanges. Their rules differ in particulars but not in essentials. Hence it is possible to present a composite picture of the commodity exchange, taking as an example one market and noting only material variations from its rules and practices.

The National Raw Silk Exchange, Inc., has been selected as a type for illustrating the organization and operation of a futures market. Its very youth adapts it to our purpose. Organized in 1928 under the membership corporation law of New York, with three-quarters of a century of exchange history upon which to draw, its by-laws and rules were framed with a view of embodying those provisions which appeared soundest and best in the experience of the older exchanges.

Objects.—The objects of a commodity exchange are set forth in its charter. Primarily it is organized to provide, regulate, and maintain a market place and to afford its members facilities for trading. In order to further these purposes, its declared objects are to establish equitable and just principles; to maintain uniformity in rules and usages; to effect standards of classification or grading in the commodities in which its members deal; to acquire and disseminate useful information; to decrease local risks and to cooperate with other exchanges having similar aims.

Membership.—The membership list of commodity exchanges is representative of every division of the industry and of every country where the commodity is an important element in trade. Flour mills, elevator companies, exporters and dealers in grain in all parts of the world, are represented on the Chicago Board of Trade. Merchants in England, in Europe, and in Japan; manufacturers, dealers, and brokers in New England and in the South, hold memberships on the New York Cotton Exchange. Seats on the Silk Exchange are owned by members residing in France, England, Italy, Switzerland, Japan, India, and China, in addition to a membership in the United States distributed over nine of the leading commercial states.

The broad requirements for membership are that a candidate be of good character and of sound financial responsibility. An application for membership must be endorsed by two members of the exchange and the name of the applicant must be posted on the bulletin board for a period before action is taken by the membership committee. The committee conducts an investigation of the applicant's qualifications, and all members are requested to advise it in confidence if they know of any objections to the candidate. Both the applicant and his sponsors are examined by the membership committee, and if the applicant meets the test of

character and financial responsibility, the favorable finding of the committee is reported to the board of governors which elects by a majority vote. Upon his election, the new member subscribes to the exchange's by-laws and rules and agrees thereby to abide by all existing by-laws and rules and all subsequent amendments.

A firm, at least one of whose general partners is an exchange member, may have its business transacted at the commission rates prevailing for exchange members and the same privilege is accorded to a corporation one of whose executive officers is a member of the exchange.

Seats.—In addition to qualifying by election, it is necessary for the new member to obtain a "seat." A seat is a member's interest in the exchange, similar to the share in a corporation evidenced by a stock certificate. The new member obtains his seat by purchase and since the seat gives the privilege of doing business on the exchange, it possesses at all times a definite market value. The relative price of seats on different exchanges is determined by the volume of business transacted, by the size of the membership, and the financial resources of the exchange.

Dues.—Members of an exchange pay dues sufficient to cover its ordinary running expenses. These dues are based upon the budget estimate for the ensuing year. Whatever may be the method of levying dues, the end in view is never profit for the exchange, but merely the collection of sufficient revenue to carry on its work.

Government.—The central government of an exchange is vested in a president, vice president, and treasurer, and a governing body known as the board of governors or board of managers. The officers and governors are elected annually. On some exchanges, however, the terms of members of the board are distributed so that one-third of the board is elected annually. While committees appointed by the

board play an important part in administering the exchange's machinery, the board exercises final control.

The Secretary.—The secretary of an exchange is a salaried officer, chosen by the board of governors, and upon his shoulders rests much of the responsibility for the smooth working of the exchange machinery. He presides at the calls and he is usually the superintendent of the exchange. In addition to performing all the duties ordinarily imposed upon the secretary of a stock corporation, he is responsible for the proper operation of the trading floor. He collects dues, assessments and fees from members and keeps the books and records of the exchange. Transfers of membership are effected through his office. He is charged with the posting and mailing of notices to members on matters of importance relating to the exchange, and he brings to the attention of the board and of the various committees such matters as he considers may require their action. He performs such other duties as may be required of him by the board of governors and the various committees. The secretary is the most active officer of the exchange and must possess unusual executive ability. He is aided by a clerical staff in the routine work of his office and in his supervision of the official records and statistics.

Committees.—The active administration of an exchange is carried on by committees, appointed by the board of governors. The work of some of them is formal and requires little more than mention. The work of other committees is connected intimately with the highly specialized operations of a commodity exchange.

The Arbitration Committee.—Organized exchanges uniformly provide for the adjustment of disputes between members without recourse to courts of law. In general, one of two policies is adopted. The exchange may (1) provide the machinery for arbitration and leave to the disputing parties

the option of resorting to it; or (2) the arbitration committee may act upon the complaint of one of the parties, serving notice upon the adverse party, and compelling the latter to arbitrate.

The rules of the Chicago Board of Trade provide merely that "the policy of the Association is to encourage, but not to compel, the arbitration of disputes." In compulsory arbitration the procedure is similar to that of an action at law, stripped of its formalities and rigidity. A "submission," which is a written recital of the subject matter of the controversy, is filed with the arbitration committee and a duplicate served upon the other party, who is required to file his answer within a specified number of days. Three members of the exchange, appointed as arbitrators, then proceed to hear and determine the matter in controversy.

The arbitrators possess judicial powers which are ample for conducting the hearing to a rapid and just determination. They may compel the production of papers by exchange members and they may subpœna members to attend the hearings and give testimony. Disregard of a subpœna issued by the arbitration committee, or by other committees empowered to conduct hearings, renders a member subject to suspension from the exchange. The hearings in arbitration proceedings are private unless the parties request open sessions.

The decision of the arbitrators concludes the entire matter, unless an appeal is taken to the board of appeals, another committee appointed by the board of governors, whose decision is final.

Whether the arbitration proceeding is of the voluntary or involuntary type, the findings constitute an award which is binding upon the parties. In the voluntary type, the parties agree to abide by the award when the arbitration agreement is signed, and exchange by-laws enforce the decisions of the

arbitrators by disciplinary action. Suspension from the exchange until performance of the award and expulsion, in extreme cases, are penalties sufficient to insure acceptance of the final decision.[2]

Every year, controversies involving large sums of money are thus disposed of with a minimum of expense and delay by the determination of arbitrators thoroughly conversant with the customs and usages of the trade. The machinery of arbitration makes for a speedy and just determination and its rules of evidence are calculated to insure a full and fair hearing untrammeled by technicalities. The rule of evidence which is given below, taken from the rules governing arbitration of the National Raw Silk Exchange, sums up the spirit in which affairs of arbitration are conducted.

> Liberality of procedure is to be observed and such methods are to be followed by the Arbitrators as will be best calculated to elicit all the evidence pertaining to the case. The Arbitrators shall conduct the arbitration with the end in view of establishing and enforcing equity and fair dealing in matters of trade and commerce, irrespective of technicalities and with the least possible delays and expenditures consistent with a comprehensive investigation of each controversy presented. The spirit of conciliation should guide the Arbitrators in their conduct of the proceedings, and they should endeavor to remove all doubts and misunderstandings between the parties so as to effect, if possible, a harmonious disposition of the controversy.

Discipline.—Just as arbitration provides a means of settling business disputes, analogous to civil actions at law, so the exchanges enforce their own rules of conduct by a procedure analogous to that of the criminal courts. Refusal to arbitrate and refusal to abide by an award have been cited as offenses subject to disciplinary action. Violation of a contract, reporting false purchases or sales and, in general, any dishonest conduct or acts of bad faith are made punishable.

[2] Under statutes in many states, an award in arbitration proceedings may be docketed and have the full force of a judgment obtained in a court of law.

To indicate the extensive disciplinary powers which the exchange exerts over its members, the following section of the by-laws of the Raw Silk Exchange is quoted. A member may be suspended or expelled

(a) For violating, disobeying or disregarding any By-Law or Rule of the Exchange.

(b) For refusing to submit to and/or abide by any award or decision of any Arbitrators, the Arbitration Committee, the Board of Appeals, or the Supervisory Committee. . . .

(c) For buying or selling contracts for the delivery of raw silk for a clerk or employee of the Exchange or for a clerk or employee of another member of the Exchange without the written consent of his employer.

(d) For the publishing, or permitting to be published, in his own name, or that of his firm, or in the name of any officer of his firm, or that of any of his partners, employees, or agents, . . . any advertisement that contains any misstatement of facts, or is otherwise calculated to mislead the public, whether by direct or implied misrepresentation, or unfair concealment of facts, or that contains a request for money to be sent as margin for operating on discretionary orders, or any other matter that shall tend to bring discredit upon the business of dealers or brokers . . . or upon the Exchange. . . .

(e) For any other misconduct in his relations to the Exchange or any member or members thereof.

(f) For any disreputable or fraudulent transaction with any person not a member of the Exchange.

(g) For any conduct detrimental to the best interest of the Exchange or to the welfare of the United States.

An exchange member is responsible not only for his own acts and omissions but for the conduct of his employees and of his partners. If any of the prohibited acts are committed by associate or agent, the member's non-participation affords no protection against disciplinary penalties.

Charges of any misconduct rendering a member subject to discipline may be preferred (1) by the board of governors, (2) by any committee or arbitrators having the power to complain, or (3) by any member of the exchange.

The Business Conduct Committee.—This body resembles a grand jury. Its duty is to investigate any misconduct on

the part of a member. It may do so on its own initiative or by direction of the board of governors. The findings of the business conduct committee are reported to the board, and if facts so warrant, a formal complaint against the member is preferred.

The Supervisory Committee.—When a complaint is filed, the supervisory committee assumes jurisdiction. The complaint is in writing, setting forth in detail the accusation. It is accompanied by a list of witnesses and by any documentary evidence bearing upon the case. Upon receiving the complaint the supervisory committee serves a copy of it, together with the documents and the list of witnesses, upon the member accused. He is furnished at the same time with a copy of the by-laws and rules and his attention is specifically drawn to the by-law or rule alleged to have been violated, the by-law or rule under which the complaint is made, and the provisions governing procedure. The defendant member is required to answer within a given time, accompanying his reply with a list of his witnesses and any documentary evidence he may have to offer.

As soon as practicable after the answer has been filed, or if no answer be filed, after the time for filing it has elapsed, the supervisory committee proceeds to a hearing, notifying the parties and their witnesses. Neither party may be represented by counsel at any hearing. After a formal hearing, the committee reports its conclusion to the board of governors, with a summary of the facts established and all the documentary evidence submitted. If the supervisory committee finds against the defendant, the board of governors fixes the penalty to be imposed.

When a member fails, the supervisory committee conducts an investigation to ascertain the reasons which occasioned it. If unbusinesslike or unethical conduct has been a contributing factor, the committee so reports to the board of

governors and the failed member becomes ineligible for reinstatement.

The Floor Committee.—The committees just described have jurisdiction over broad questions of business conduct. The floor committee is the exchange's constabulary. It is charged with preserving order on the floor of the exchange and enforcing the rules applicable to trading and to the conduct of members on the floor. Misleading or ambiguous bids may be the subject of disciplinary action, and in the case of any disputes arising from bids, offers or acceptances in the course of regular trading, the question is decided on the spot by those members of the floor committee who are present.

The Quotations Committee.—Every transaction made upon the floor of an exchange must be made by outcry across the ring and the time and price must be reported immediately upon its consummation. The quotations committee is charged with enforcing this rule and it settles on the floor any disputes regarding price quotations. A record of all trades and their prices is kept and a summary published daily. The quotations committee meets each day and establishes official "bid and asked" quotations and the nominal quotations for the inactive months. These quotations are informative to the public and necessary for the working of the clearing house.

On the ticker, as reports of the market's close come out, the reader sees that the close was "firm," "steady," or "weak." It is the duty of the quotations committee to give this characterization or "tone" to the closing dealings of each day.

Committee on Commissions.—The minimum rates of commission to be charged by members are rigidly prescribed. Pressure of competition precludes charging rates above the minimum, so that the established minimum schedules become standard for all exchange transactions. Any rebate to a

customer of all or any part of the prescribed commission is punishable by suspension for a first offense and by expulsion for a second.[3] The commission rules regulate competition by placing members on a plane of equality in their dealings with the public. It prevents competition on a price basis by splitting commissions. It benefits the public by precluding the possibility of discrimination between the charge for service rendered to large or small operators. The committee on commissions decides all controversies which involve an interpretation of the commission law.

Committee on Information and Statistics.—In markets highly sensitive to changes in demand and in the visible and future supply of the commodity, accurate and up-to-the-minute information about all factors which may influence prices is of the utmost importance. The information that is gathered and published regarding weather conditions in crop areas, supplies on hand and afloat, takings by consumers, etc., will be described in detail in a later chapter.[4] It may be noted here that the exchanges maintain efficient newsgathering agencies and in addition receive statistical information through government services which is distributed to members in the reports later to be described.

[3] "The above-mentioned rates shall be in each case the minimum commission that may be charged by any member of the Exchange, and shall be absolutely net and free of all and any rebate, in any way, shape or manner; nor shall any bonus or pro rata percentage of commission be given or allowed to any clerk or individual for business procured or sought for any member of the Exchange.

"For violating or evading, or seeking, offering, proposing, promising or agreeing to violate or evade the provisions of this Section in any way, shape or manner whatsoever, whether by an agreement, arrangement or understanding, expressed or implied, either directly or indirectly, in person or through any firm of which a member may be or may appear to be a partner or officer or through any agent or agents or otherwise, the penalty shall be, upon conviction for the first offense, suspension, and for the second offense, expulsion." Extract from Section 58, By-Laws of the National Raw Silk Exchange, Inc.

[4] See Chapter VIII.

The work of compiling and publishing the statistics that flow into the exchanges by telegraph and cable is performed under the direction of the secretary, the committee on information and statistics exercising a general supervisory power over this phase of the exchange's activities.

Grading and Warehousing Committee.—The stocks of a commodity which may be delivered against a futures contract must be stored in warehouses which have been approved and licensed by the exchange. Every lot of the commodity intended for delivery must be weighed, sampled, and graded either by government officials or by the official weighers, samplers, and inspectors of the exchange. The receipt which the warehouse issues passes from seller to buyer as the representative of the goods. The grading and warehousing committee has the important duty of supervising the inspection bureau of the exchange. This bureau has charge of the inspection, grading, and weighing of the commodity for certification. The committee also supervises the warehousing of the certificated stocks.

Other Committees.—The foregoing committees have been described in some detail as their work is peculiarly related to the specialized operations of a commodity exchange. There are other committees which require no more than mention, as their work is paralleled in many other corporate bodies. The executive committee has general administrative functions including control over the quotation service, management of the exchange building, the hiring of employees and the purchase of supplies. The finance committee has general supervision over the fiscal affairs of the exchange and the auditing of the books of the treasurer. A committee on by-laws and rules considers all amendments to existing by-laws and rules and frames any amendment or new regulation submitted to members to be voted on. The nominating committee nominates the slate for officers and members of

the board to be voted upon at the annual election. It is essentially a selection committee; in most instances its ticket is the only one in the field and its nominees are elected as a matter of course.

The foregoing committees are those which are common to most of the exchanges. If more than one commodity is traded in on the exchange, a separate committee will exist for each commodity, and whenever some phase of the work of an exchange assumes more than passing importance, a committee charged with its supervision will be formed.

The Exchange and its Facilities.—Trading is carried on in a large room or hall in which the ring, or pit, occupies the central and most prominent place on the floor. On exchanges where more than one commodity is traded in, there may be a separate pit, or ring, for each commodity. Private wires from telephone booths on the exchange floor connect with the offices of dealers and commission houses, while from a bridge, raised above the trading ring, quotations are sent out over the ticker system and telephoned to attendants for posting on a blackboard in full view of the trading ring. On the exchange floor are bulletin boards for the posting of statistical data and notices to members; exchanges having a spot market provide tables for the display of samples for cash trading. Executive offices and committee rooms are within easy access of the trading room.

The Trading Ring.—Trading on the Stock Exchange is carried on around posts, each post being the trading point for certain stocks. The futures trading ring (or pit, as it is called on the grain exchanges) is the counterpart of a trading post on the Stock Exchange. The following description of the trading ring of the New York Cotton Exchange gives a representative and graphic picture:

> The future trading ring is located near one end of the cotton-exchange room, affording an easy view of the blackboard space, which is pro-

vided on adjacent walls well above the heads of the men in the ring or pit. It is about 30 to 35 feet in diameter and consists of a ring-shaped platform rising from the floor by a series of three to five steps to a height of about 2½ feet, and on the inside descending again by a tier of four or five steps to the floor. The central floor space of the ring, about 12 feet in diameter, is kept clear by a railing, behind which the traders stand upon the tiers of steps, facing each other across the open center space, so that each trader may be clearly seen and may see all the other traders gesticulating and shouting their bids and offers or acceptances across the ring.[5]

Reporting Trades.—Exchange rules provide that the time and price of each trade must be reported immediately upon its consummation. The reporting is done by a staff of uniformed attendants who stand at the ring. As soon as a transaction is made, the reporter takes note of the price, the amount sold, and the delivery month. These data are immediately flashed by finger signals to a clerk stationed on the bridge. The clerk telephones the particulars of the sale to the attendant who posts quotations on the blackboard,[6] and the transaction is entered by another clerk on the exchange's record sheets. The prices so reported simultaneously appear on the tape wherever commodity tickers are installed. Frequent summaries of the day's trading appear also on the news tickers.

Telephone Booths.—Throughout the trading day, orders come pouring in to the exchange floor from dealers and brokerage houses spread countrywide. These orders are telephoned to the exchange floor. Around the floor of the exchange are rows of telephone booths which are leased to members. An attendant receives the order and delivers it to the broker at the ring. After the order has been executed, the same facilities permit the attendant to report the price at which the purchase or sale was made.

[5] *The Cotton Trade,* Senate Document No. 100, 68th Congress, 1st Session, Part I, p. 107.

[6] See Chapter IV.

Trading Ring, National Metal Exchange

Hours of Trading.—All exchanges have fixed hours for trading. In New York most of the exchanges open at ten o'clock and the trading day ends at three o'clock, except on Saturdays when the close is at noon. There are practical reasons for the limited trading day. Even with only five hours at the ring, a broker is likely to quit the floor thoroughly exhausted when the market has been active and his volume of orders large. A second reason is closely linked with the fundamental purpose of the exchange's existence. To fulfill its economic purpose, prices registered on the exchange floor should be representative. A long session would not only make for lethargic trading during the part of the day, but it would also increase the opportunity for price manipulation. The more active the market, the more likely are prices to be representative of demand and supply. It must be remembered that execution of the order at the ring is only a part of the story of a trade. After trading has ended for the day, trades remain to be cleared and margins remain to be adjusted with the clearing house. Long after the brokers have left the exchange, lights will be burning in the offices of commission houses where bookkeeping staffs are posting to customers' accounts and preparing notices of the execution of orders which have been carried out that day. Finally, exchange hours must correspond to banking hours. The difficulties in obtaining margins if exchanges were to operate after the banks close, might involve exchange members in serious financial consequences.

It is a strict rule, enforced under penalties, that no trades may be made before or after trading hours. The brokers gather at the ring at ten o'clock awaiting the stroke of the gong which sets the machinery of the exchange in motion. Promptly at the closing hour the cessation of trading is proclaimed by the fall of the secretary's gavel and the sound

of the gong. All orders unexecuted must await the opening of the exchange on the following business day.

Statistical Information.—After the close of each business session the exchange publishes sheets compiled under the direction of the secretary, in which a complete summary of the day's trading is given, together with the latest statistical information relating to the production, movement, and supplies of the commodity. These sheets are for the convenience of members. In addition, many exchanges publish periodical compilations of statistical information in great detail. An extended description of this phase of the exchange's activities will be found in Chapter VIII.

Standard Contract.—Each commodity exchange has a fixed unit of trading. The unit is prescribed by by-law and incorporated in the futures contract. The amount traded in is thus always fixed and certain. One contract calls for the delivery or the receipt of one unit. Every trade is made in terms of that unit.[7]

Price Quotations.—Just as the trading unit is prescribed in the interest of uniformity, so the minimum limits of price quotations in fractions or decimals of a cent are established. Offers are made and accepted in terms of cents or a fraction of a cent per pound or bushel of the standard unit. An illustration will make this clearer. The New York Cotton Exchange permits bids and offers to be made in fractions of 1/100 of a cent per pound. Let us say that a broker sells "ten November" at 21.85. This means that his contract is to sell for delivery in November, ten lots of 100 bales each, at a price of 21 and 85/100 cents per pound. Let us say a rubber exchange broker sells "five December" at 18.5. His contract is to deliver 28,000 pounds of rubber—five lots—

[7] For contract units on various Exchanges, see Chapter I, pp. 17, 18.

and for this the buyer will pay at the rate of 18.5 cents per pound.[8]

Trading Months.—At the beginning of each month, futures may be sold for delivery in that month or in any one of a stated number of succeeding calendar months. In some commodities active trading is carried on throughout the year. In others, either from custom or because of harvesting and marketing conditions peculiar to the commodity, active trading is centered in a few months and there is little buying or selling of contracts for delivery in the inactive months. Thus on the Chicago Exchange Board of Trade futures trading is concentrated in four months of the year—May, July, September, and December. That is, the vast majority of contracts made are for delivery in one of these four months.

Trading for delivery in the current month comes to an end on the last day on which transferable notices may be issued for delivery during the current month.[9] The next calendar month then becomes the earliest month for trading, while the most remote calendar month, of those in which trading is carried on, moves up as the last delivery month.

Calls.—Trading on many of the exchanges is opened by a "call," the call resembling an auction by months. It is an orderly means of establishing prices at the opening for all delivery months instead of plunging at once into general trading. The call is presided over by the Secretary. He is the arbiter of any disputes arising over bids and offers during the call, and settles them forthwith. As soon as the opening gong has sounded, the name of the current month or the first month in which trading is being conducted, is exhibited by card or indicator. Offers to buy and sell are then made for that month only. The bids may or may not result in trades. In either event the market quotations for the call

[8] For price decimals on Commodity Exchanges, see Appendix A.

[9] See *infra* Chapter IV.

hours are thus publicly established either in terms of actual transactions or of bids and offers. After all bids and offers for one month have been concluded, the secretary proceeds with the next month, and so on through the list until the last month in which the commodity may be traded in has been reached. The call is then adjourned and regular trading begins. A second and, on some exchanges, a third call is held during each day.

Trading Rules.—The scene at the ring, or pit, must seem to the onlooker one of utter confusion. Numerous brokers are crying out, simultaneously, their bids and offers. Their voices mingle in what appears to be a meaningless babel. Excited brokers shout and gesticulate, reiterating the same bid or offer apparently oblivious to all that is going on around them. Hands are waved and two brokers jot something on pads. Nobody else pays any attention to them. But the scene is one of apparent confusion only for those who do not understand the machinery of the ring. An airplane is an incomprehensible device to the tyro in aeronautics. He knows that the machine is capable of flight but he understands little or nothing of why the monoplane has replaced the biplane in general use; why the form of the plane is what it is; why it flies or how it is navigated while it is in flight. So the spectator who knows that an exchange is a nation-wide or, rather, a worldwide market place may be bewildered by what he sees, but his bewilderment is only akin to that of any inexperienced onlooker who recognizes effect and performance while knowing little about causes.

As a matter of fact, the written and unwritten rules which govern trading at the ring make for the highest degree of certainty and fairness in trading. In the first place, every offer to sell and every bid must be announced by outcry across the ring. This rule causes the babel of voices at the ring, but it makes for an *open* market. Every trade, and the price at

which it is made, is certain of registration, and the market becomes an accurate recorder not of some prices but of all prices, a function it could never perform if private trades or trades away from the ring were permitted.

What happens when a bid or an offer is made? In the din of voices, how is the acceptor to be determined? The by-laws provide for every contingency. An offer to sell is open to the first buyer who meets the price. A bid must be closed with the first broker who offers a lot at the named price. So much of the apparently meaningless shouting and gesticulation becomes simple of comprehension, for a shout or a wave of the hand may be only the effort of a broker to attract another's attention so that a transaction may be made between them. With buying and selling prices being cried out simultaneously by many brokers, how can there be a representative market price at any given time? May not trades be consummated on opposite sides of the ring at wide variations in price? Again the rules govern.

All trades must be made at the market. At any given time the market rests between an upper and a lower limit. For illustration, the lower limit may be taken as the highest price which any buyer is bidding and the upper limit as the lowest price at which anybody is offering to sell. Say A is offering to sell a lot of 10 May cotton at 19 cents. As long as he continues this offer, a trade cannot be made at a higher figure. Similarly, if B is bidding for May cotton at 18.90 cents, no trade may be made at a lower price while he maintains his bid. The lowest offer and the highest bid constitute the price limits for the market. The purpose of the rule is, of course, to fix prices as closely and definitely as possible.

In describing the work of the floor committee, its function in settling priority in the case of disputes over simultaneous acceptance of bids or offers was mentioned. In one case the

matter may be decided without recourse to this committee. A offers 10 May cotton and X and Y simultaneously meet the price, X bidding for 10 contracts and Y for five. Here X has the priority. All or any part of a lot which is offered may be accepted. The seller cannot offer his lot "all or none." But if there are simultaneous acceptances, one for all and the other for part of a lot, the former prevails.

Brokers make note immediately of the particulars of a trade which has been consummated; both buyer and seller are careful to compare. In case notes do not agree, the member who claims to have made the purchase or sale is required by rule to close out the contract at the market, leaving the question of responsibility for loss to be determined by arbitration. A more informal method in common practice is for the brokers to share responsibility by halving the profit or loss resulting from closing out the disputed trade.

Commissions.—Minimum commissions are prescribed for all exchange members. The commission is established in terms of the standard unit of trading. Thus, a resident of the United States, not a member of the Chicago Board of Trade, pays a commission of $12.50 for the purchase or sale for his account of 5,000 bushels of wheat. On all exchanges commissions for orders executed on account of a foreign buyer or seller are higher per contract unit than the rates prescribed for residents, while the commission charged a member of the exchange is one-half that which is paid by the non-member.[10]

On many exchanges, instead of a flat rate, applicable to all contracts at all prices, a graduated scale of commissions is established. Thus, on the New York Cotton Exchange, the minimum commission is $25 per contract on all orders executed at a price of 25 cents per pound or less. If the price is above 25 cents and not over 30 cents, the minimum com-

[10] For commission rates prevailing in organized markets, see Appendix B.

mission is $30, with similar advances of $5 in the commission rate for successive increases of 5 cents in the price to a maximum commission of $40 per contract. The New York Coffee and Sugar Exchange, the National Raw Silk Exchange, the National Metal Exchange, and the Cocoa Exchange have graduated scales.

Floor brokers who make a specialty of executing orders for other members and who "give up" their principals receive lower rates of commission. These brokers correspond with the "two-dollar brokers" on the Stock Exchange. They execute orders at the ring for fellow members, but they do not become obligated on the contract. Instead, when confirmation slips are exchanged, they give up the names of their principals and then step out of the transaction entirely. A, a floor broker, buys from B, 10 May rubber for X, an exchange member. Normally the buyer, A, and the seller, B, would exchange confirmation slips. But when A "gives up" X as the real member in interest, the contract will be signed by X and B. Since the floor broker's work is thus confined to the making of the trade at the ring, his commission is lower. On the Rubber Exchange, where the member rate is $7.50 per contract, the floor brokerage rate is $1.00. On the New York Cotton Exchange where the member rate is $12.50 for contracts closed at 25 cents or under, the floor brokerage rate is $1.25. The floor broker's commission is low, but he does not maintain the elaborate establishment which is necessary for the commission broker who has an outside clientele.

Contracts are often switched from one delivery month to another. The seller of 10 May may decide, before May arrives, to maintain his short position. He does so by "covering" or buying 10 May and selling 10 October. While this is but a continuation of his position, so far as the principal is concerned, the purchase and the sale are regarded as new transactions, subject to regular commission rates.

Members on the Floor.—While any member of an exchange may execute orders at the ring, in actual practice the trading is carried on by specialists. Many members of exchanges rarely appear in the pit. In the group of traders around the ring will be found two broad classes of brokers: one class whose business it is to execute orders for other members or for customers of the houses which they represent, the other class, traders who deal on their own account.

Ring brokers, representing commission houses, devote their time entirely to executing the orders which come in from the customers of their houses. Members who trade for their own account are usually floor speculators who buy or sell in anticipation of closing the contract at a higher or lower price within a short time. The floor speculator is in and out of the market continually. He is alert to close his trade if the price goes against him. He does not seek large profits on a single transaction, but is content with small gains from many transactions.

The floor speculator rarely trades at the first bid or offered price, but he tries for a more advantageous figure that will enable him to make the turnover of his trade quickly and profitably. In the chapter on "Speculation" the part played by those who make the market will be considered in more detail. The floor speculator is a useful factor in making the market. When trading is inactive, the market thin, and bids and offers far apart, speculators may supply an important part of the buying power and the selling pressure that bring bid and offer together and make a closer market.

Contract Slips.—While trades are made at the ring *viva voce,* brokers do not rely solely upon their memories for details of the transaction. Each broker carries with him a trading card, one side of which is ruled in red and the other side in black. Sales are noted on the side ruled in red, purchases on the side ruled in black. These memoranda

are given to clerks during the day and contract slips are made up from them. The slips are short memorandum forms with spaces for the names of the seller and buyer, the date, the number of contracts traded in, the delivery month, and the price.

At the close of the day's trading, slips properly filled in with the data for each trade are ready for the brokers' signatures. The seller will present his slip to the buyer for signature, and the buyer's slip will be signed by the seller. The signing of the slips constitutes an enforceable contract between the parties. Later the particulars of the contract evidenced by the slip are posted on the books of the commission house. The slips are also used for a purpose more germane to our interest. Details of the contracts they represent are entered upon separate sheets of purchases and sales which are sent to the clearing house. This is a separate organization but one which exists for the purpose of simplifying and expediting the settlement of contracts between members. The clearing house and its work will be the subject of the following chapter.

Chapter III

THE CLEARING HOUSE AND ITS RELATIONSHIP TO THE EXCHANGE

JUST as the medieval fair was a prototype of the commodity exchange, so in these ancient markets appear the rudiments of a clearing system. With the growth of commerce, a means of offsetting debts among merchants became as necessary to the fair as the fair had been indispensable to the economic life of the people. The markets of the Middle Ages achieved their greatest growth in the twelfth and thirteenth centuries, and it is toward the end of this period that an efficient clearing system is found at the fairs of Lyons. Settlement days were established after each of the four fairs held during the year.

> Every banker came to these settlements prepared with a balance sheet of his debits and credits. Three steps were required in completing settlements; first, the acceptance of bills by those upon whom they were drawn . . . the comparison of accounts and finally the settlement in money of which very little was ultimately required.[1]

Clearing houses for the offsetting of debits and credits among banks have long been established institutions in the banking field. A commodity exchange clearing house bears the same relationship to the commodity exchange that the financial clearing house bears to the banks. But it goes several steps further. It clears not only money accounts but contracts. During the course of a day's work on the exchange, a broker executes many contracts of purchase and sale. Some of his sales will probably be to a member from

[1] Conant, *Principles of Money and Banking*, Vol. II, p. 239.

whom he has bought other contracts, and since the purpose of an exchange is to facilitate business, "it would be as idle to insist upon an actual delivery between the members of an Exchange as it would be to compel the banks to carry to each other's banking house the actual money called for by the checks severally received by each upon the other." [2]

Direct Settlements and Ring Settlements.—Before describing the work of the modern clearing house, it may be well to mention briefly the methods of settlement which existed before commodity exchange clearing houses were known. Without clearing houses, brokers were accustomed to settle their trades with one another by direct settlement and rings. Suppose a broker on a grain exchange to have on his books, in April, contracts to deliver many thousands of bushels of May wheat, and also contracts for the receipt of many thousands of bushels of May wheat. If no settlement by offsetting sales and purchases were possible before delivery, all accounts would remain open. Margins would be maintained on all contracts until delivery time, *i. e.*, the month of May. Then would come the business of receiving deliveries and paying for them; of making deliveries, and of billing and collecting. If, however, broker A has sold contracts for the delivery of May wheat to broker B and has purchased from B other contracts for delivery in the same month, their contracts can be settled by the offsetting of like purchases against like sales, and the payment of differences in price. If the price at which A sold his contracts to B is higher than the price at which he made his purchases, he may bill the difference to B, and payment of the difference will close the transaction between them. Thus, assuming A's sale to have been 5,000 bushels of May wheat at $1.50 a bushel and his purchase to have been 5,000 bushels of May

[2] Springs *v.* James, 137 App. Div. 110 (121 N. Y. Supp. 1054).

wheat at $1.48 a bushel, the payment of 2 cents a bushel, or $100, by B to A would be the simplest method of settlement. This was the method of direct settlement. It could be effected whenever a sale or a purchase in any delivery month could be offset by a counter transaction in the same month between the same parties.

Under the practice of making direct settlements, only occasionally would purchases and sales between brokers balance exactly as to quantity. A might have bought 100,000 bushels of May wheat from B and sold him 110,000 bushels. The 100,000 bushels could be closed by direct settlement and the payment of differences, leaving A still short 10,000 bushels for delivery to B.

But while A might thus be obligated to deliver 10,000 bushels of May wheat to B, his books might show that as the result of a similar settlement of contracts with C, he was a net purchaser of 10,000 bushels. A's books show his position to be one where he has no real interest in delivery. He has sold to B and bought from C like quantities for delivery in the same month. If he can bring B and C together, so that C will deliver direct to B, he can withdraw completely from the transactions.

The method of clearing contracts which could not be offset by direct settlement was accomplished through the formation of "rings." If Smith owes Jones $10, Jones owes Brown $10 and Brown owes Smith a like amount, the three debts can be canceled if all three parties come together and agree to offset debt against debt. If all three parties were to pay their debts, each one would be a mere conduit for transmitting his debtor's $10 to his creditor. The simplification of procedure by all three parties coming together is obvious. Just as obvious was the need for some such system when the article to be cleared was not money, but wheat or cotton or any

other bulky commodity transferable not by manual delivery but by time-consuming and expensive loading and unloading and transportation by rail or water.

The old form of ring settlement did not differ in principle from the simple financial transaction just described. It involved one more element, since deliveries and prices were adjusted. An illustration of ring settlement, by the offset of contracts and the payment of price differences is given in the following typical transaction.

> . . . A sells 5,000 bushels of wheat to B for $1.01 a bushel, B sells to C for $1.03, C sells to D for $1.02, D sells to E for $1.04, E sells to F for $1.05 and F in turn sells to A for $1.00. Of course B could pay to A $5,050, the purchase price of 5,000 bushels at $1.01, and C could pay B $5,150 his purchase price, and so on. This would involve the passing of considerably larger funds than if checks were drawn simply to represent price differences. A in this case has a profit of one cent on each bushel, B a two cent profit, D a two cent profit, and E a one cent profit, the total profits of all being six cents. But C had a one cent loss and F a five cent loss, making the total losses six cents, the profits and losses being equal. All that is necessary for those who have losses is to pay the differences to those who have profits and settlement of the ring is made. The profits and losses, however, are calculated on the basis of an official settlement price, but it makes no difference in the profits or losses of all parties concerned whether settlement is made according to the contract prices or by an official settlement price.[3]

Those trades which could not be offset with other members were cleared through the ring. Ring settlements could be made only by a comparison of trades. After exchange hours, brokers' clerks would repair to the "ring room" to compare contracts which were open on their books. After rings were formed, offsets made and differences fixed, clerks ran about to other offices, delivering checks for balances owing and collecting payments for balances due.

However, as trading on exchanges assumed an ever-increas-

[3] *The Stock and Produce Exchanges,* Albert W. Atwood (Alexander Hamilton Institute, 1927), pp. 309, 310.

ing magnitude, it became apparent that this method of clearing was both cumbersome and inadequate. In order to facilitate the settlement of differences on direct settlements and rings, central associations were established to which payments, due from one exchange member to another, could be delivered and through which balances due could be collected.

In the case of coffee, for instance, the Corn Exchange Bank acted as the central clearing agency for the settlement of these differences, which automatically closed the contracts. Rings, however, were formed by the members. Representatives of firms met daily in a room of the exchange after the close of trading and endeavored to trace contracts through the various members present in order to complete rings.

This was a difficult operation in active markets, as there would be so many contracts outstanding, and not offset, that a seller attempting to trace a contract back might find that 15 to 20 firms were interested. If one of these firms had no representative present to initial the ring, it could not be formed. A firm which had a large position in the market and was short of funds, consequently, could conceal its position and prevent the formation of rings by not revealing all its outstanding contracts to other members, or simply by not sending a representative to the ring room. While the exchange rules permitted parties to a contract to call upon each other for margins to meet market differences, as well as original margins, it was customary to call for variation margins only. Financial requirements would have been so great that none but the most affluent houses could have done business, if both margins had been uniformly required. This indisposition to call for original margins not infrequently brought about disastrous losses through failures and bankruptcies. Furthermore, since the ring was the only means

the parties had of adjusting differences speedily and effectively, failure of a firm which would have been a link in the chain produced serious financial consequences.

At best, the proportion of contracts liquidated by direct settlements and rings was small, compared to the volume of outstanding contracts at any one time.

The cumbersome method of ring settlement has now been replaced by settlement through Clearing Associations. Instead of forming rings or making direct settlements, and sending clerks from commission house to commission house to make payments and collect differences, all transactions are now passed through the clearing house as an intermediary. Members no longer deal with each other after the trade across the ring has been made and contract slips have been exchanged. The member deals with the clearing association, which assumes the contracts of every member as against every other.

What Is a Clearing Association?—The modern clearing association is usually a corporation separate from the exchange and independent of it. It is usually a stock corporation, whose stock may be sold only to exchange members. Its business is under the management and supervision of a board of directors and officers. Its sole purpose, however, is to act as a central clearing agency for exchange members. Every member of the exchange is privileged to become a clearing member, subject to his compliance with certain conditions. These conditions generally include:

(1) The purchase of one or more shares of stock of the clearing house corporation.
(2) The deposit of a substantial sum of money in the Guaranty fund of the Association.
(3) Agreement by contract to clear all trades through the clearing house.

(4) The agreement to abide by the by-laws and rules of the clearing house and all amendments.

Firms having a partner who is an exchange member, and a stockholder in the clearing house, may enjoy clearing privileges on the same terms. On some exchanges where corporations are accorded recognition, they may obtain clearing privileges upon compliance with all of the foregoing conditions, and in addition posting an individual or a surety bond.

Having thus briefly outlined the legal status of the clearing house and the requirements for membership, let us proceed to consider its operation in clearing trades.

Reporting to the Clearing House.—In the previous chapter it was shown how, at the conclusion of the day's trading, brokers exchanged contract slips evidencing the purchases and sales made on the exchange floor. These slips then go to the offices of the dealer or the commission house on whose behalf the contract by the broker was made. All clearing members are required to file reports with the clearing house at the close of each day. The clearing house reserves the right, however, to refuse to accept any contract offered for clearance by notifying the parties in writing on or before eleven o'clock in the forenoon of the business day following. Upon filing these reports, all contracts made between clearing members are deemed to be assumed by the clearing house, which thereupon becomes the buyer from every seller and the seller to every buyer. To make this clearer: A has sold to B across the trading ring 10 contracts of May cotton. At the conclusion of the day's trading, contract slips are exchanged between A and B and on these slips are noted the names of the respective clearing members represented by the brokers who consummated the trades, or the clearing member through whom the trader proposes to clear the trade. When the clearing members named in these contract slips file re-

SILK

BOUGHT BY 12—J. Jones & Co.

AND CONTRACTS OFFERED TO
NATIONAL RAW SILK EXCHANGE CLEARING ASSOCIATION, INC.
FOR CLEARANCE IN ACCORDANCE WITH ITS BY LAWS AND RULES

NEW YORK, 8/2/28 192

FROM WHOM BOUGHT	CONTRACTS	MONTH	PRICE	SETTLING PRICE	DEBIT		CREDIT	
12	1	March	493	494				1
16	2		492					4
19	1		496			2		
26	4		496			8		
30	1		496			2		
30	1		495			1		
30	2		490					8
32	1		492					2
	13					13		15
2	1	July	494	498				4
6	2		491					14
8	1		494					4
	4							22
6	1	Aug.	498	499				1
7	1		498					1
	2							2
	19					13		39

CONTRACT AND POINT TOTALS FORWARD

SILK

SOLD BY 12--J. Jones & Co.

AND CONTRACTS OFFERED TO
NATIONAL RAW SILK EXCHANGE CLEARING ASSOCIATION, INC.
FOR CLEARANCE IN ACCORDANCE WITH ITS BY-LAWS AND RULES

NEW YORK, 8/2/28 192

TO WHOM SOLD	CONTRACTS	MONTH	PRICE	SETTLING PRICE	DEBIT	CREDIT
16	1	Jan.	492	491		1
19	1		494			3
22	1		494			3
	3					7
2	2	Mch.	493	494	2	
19	1		491		3	
26	1		496			2
	4				5	2
16	1	May	497	496		1
18	1		497			1
20	1		498			2
	3					4
26	1	July	497	498	1	
	1		498			
	1		499			1
	3				1	1
	13				6	14

CONTRACT AND POINT TOTALS FORWARD

ports of their transactions with the clearing house, the latter becomes the purchaser from A, the seller, and the seller to B, the purchaser. So far as A is concerned, B, the buyer, is eliminated as a party to the transaction. The clearing house assumes the contract and takes his place. So A is eliminated as the seller to B and the clearing house replaces him. The clearing house stands in the relation of buyer from every seller and of seller to every buyer. It becomes the other party to every contract cleared by a member.

The reports referred to are made on forms prescribed by the clearing house. There are two separate reports, one printed and ruled in red ink, setting forth a list of the sales, and the other, printed in black or blue, a list of the purchases.

On the report of sales, the firm's name is entered at the top of the sheet. On separate lines, each sale made during the day to a clearing member is listed, with the name of the member, the number of contracts sold, the delivery month, and the price. The settlement price, which is the figure to which all trades are adjusted at the conclusion of each day's trading, is noted and the amounts due to the clearing house, or from the clearing house, are carried out in the debit and credit columns. The debit or credit for each transaction is the difference between the contract price and the settlement price. The report of purchases is similarly made out.

In addition to these reports, a more elaborate one, known as the Clearing House Recapitulation Sheet, is required. This is a recapitulation of the purchases and sales reports and a tabulation of the clearing member's contract position and debit and credit positions with the clearing house on all trades for all months.

In order to have a comprehensive understanding of this report, it is necessary to have some familiarity with the margins required by the clearing house on each trade cleared.

STATEMENT OF 12 - J. Jones & Co.

TO THE NATIONAL RAW SILK EXCHANGE CLEARING ASSOCIATION, Inc. SILK

This memorandum must be delivered at the office of the Association as early as possible, but not later than 6 p. m. (Saturday 2.30 P M) with check or draft for net balance shown hereon, and also a separate check for original margin if required.

RECAPITULATION

NEW YORK, 8/2/ 1928

CARRIED OVER FOR TO-MORROW			TO-DAYS TRADING			CARRIED OVER FROM YESTERDAY			SETTLING PRICE		DEBIT			CREDIT		
LONG	MONTH	SHORT	BOUGHT	MONTH	SOLD	LONG	MONTH	SHORT	YESTERDAY	TO-DAY						
1	JANUARY			JANUARY	3	4	JANUARY		490	491						4
	FEBRUARY			FEBRUARY			FEBRUARY									
3	MARCH		13	MARCH	4		MARCH	6	492	494			18			
	APRIL			APRIL			APRIL									
3	MAY			MAY	3	6	MAY		494	496						18
	JUNE			JUNE			JUNE									
	JULY	8	4	JULY	3		JULY	3	496	498			6			
8	AUGUST		8	AUGUST			AUGUST									
	SEPTEMBER			SEPTEMBER			SEPTEMBER									
	OCTOBER			OCTOBER			OCTOBER									
	NOVEMBER			NOVEMBER			NOVEMBER									
	DECEMBER			DECEMBER			DECEMBER									
9	TOTAL	8	19	TOTAL	13	10	TOTAL	9	DIFFERENCES ON OLD CONTRACTS				18			16

TRANSFERABLE NOTICES			SETTLING PRICES	DEBIT	CREDIT
STOPPED	DELIVERY DATE	ISSUED			
			YESTERDAY		
			TODAY		
			TOTAL FORWARD		
	TOTAL				

ORIGINAL MARGIN MEMORANDUM

NET INT. 7 CONTRACTS @ 250 $1,750

" " " " "

" " " " "

" " " " "

STRADDLE 2 " 100 " 200

TOTAL REQUIRED $1,950

PREVIOUSLY DEPOSITED: BONDS PAR VALUE @ % $

CASH 2,000

TOTAL 2,000

CHECK FOR DEFICIENCY (IF ANY)

	DEBIT	CREDIT
BOUGHT SHEET	13	39
SOLD SHEET	6	14
¼ POINTS		
TOTAL POINTS	37	69
TOTAL MONEY	240.50	448.50
VAR. MARGIN		
NET	(208.00)	208.00

Original Margin Requirements.—The operation of the clearing house, in addition to facilitating the clearing of trades, is designed to guard against the remotest possibility of loss. When it stands in the shoes of the buyer, bound to fulfill his contract with the seller, and in the shoes of the seller, obligated to fulfill his contract with the buyer, it requires from each of its members a money deposit for each contract cleared, *and not offset* in an amount sufficiently large to provide it with full insurance against any loss.

For every contract listed by the clearing member on the report made to the clearing house (and not offset), there must be posted with the clearing house a deposit, the amount of which is prescribed by the rules of the clearing house and is known as an original margin. The by-laws of the clearing house usually establish the *minimum* amount which the clearing member is required to post and the board of directors from time to time fix requirements, subject to this minimum limitation. The Rubber Exchange Clearing House requires an original margin deposit of not less than $150 per contract unit. In the Cotton Exchange Clearing Association, the by-laws provide for an original margin of "not less than $3 per bale and not to exceed $25 per bale." Original margin requirements may also be graduated, in accordance with the size of the line carried by a member house. The Coffee and Sugar Exchange Clearing Association prescribes an original margin deposit of $250 per contract on the first 500 contracts; $500 per contract on all in excess of 500 and up to 1,000, and $750 per contract on all in excess of 1,000 contracts of coffee. For sugar, the original margin required is $250 on each contract up to 500; $300 per unit on the next 500; $400 per contract on the next 1,000; $500 on all contracts over 2,000 and not exceeding 3,000; and $600 on all contracts in excess of $3,000. The by-laws of the Cocoa Exchange Clearing Association require an original margin of

$300 on the first 500 contracts; $450 on the second 500 contracts, and $600 per unit on all contracts in excess of 1,000. The requirements of the National Raw Silk Exchange Clearing Association, Inc., are $250 per contract on a net interest of 500 contracts or less; $300 per contract upon a net interest exceeding 500 and not over 1,000, and $400 per contract on a net interest in excess of 1,000 contracts.

ORIGINAL MARGIN REQUIREMENTS OF CLEARING ASSOCIATIONS

Commodity	Clearing Association	Net interest (contracts)	Amount per contract	Straddle interest
Cocoa	New York Cocoa Exchange	1– 500	$300	$60 to
		501–1,000	$450	$240 per
		1,000–1,500	$600	contract
Coffee	N. Y. Coffee & Sugar Exchange	1– 500	$250	$50 to
		501–1,000	$500	$200 per
		1,000–1,500	$750	contract
Cotton	N. Y. Cotton Exchange		$300 to $2,500	$50 to $1,500
Cottonseed Oil	N. Y. Produce Exchange	1– 150	$200	$100 per
		151– 300	$300	contract
		301– 500	$400	
		501–1,000	$500	
		1,001–3,000	$1,000	
Rubber	Rubber Exchange of N. Y		$150 minimum	$25 minimum
Silk	National Raw Silk Exchange	1– 500	$250	$50 to
		501–1,000	$300	$200 per
		1,000–2,000	$400	contract
Sugar	N. Y. Coffee & Sugar Exchange	1– 500	$250	$50 to
		501–1,000	$300	$200 per
		1,001–2,000	$400	contract
		2,001–3,000	$500	
		3,001–4,000	$600	
Tin[1]	National Metal Exchange		$250 minimum	$50 to $250 per contract

Variation Margins. The board of directors of every clearing association is given full discretion as to when variation margins shall be called. Calls are made generally when from 30 per cent to 50 per cent of the original margin has been exhausted.

All of these are minimum margin requirements. Some clearing houses make it discretionary with the board of di-

rectors to fix the maximum within the limits prescribed by the by-laws. The directors may at any time, upon twenty-four hours' written notice delivered to the offices of clearing members, require additional original margins.

Original margins must be maintained upon a straddle position, but the requirement is less than that fixed for a net position. A straddle position is one where a long position in one delivery month is balanced by a short position in another.

ADDITIONAL MARGIN REQUIREMENTS AND NOTICE OF CHANGE IN ORIGINAL MARGIN

Commodity	Clearing Association	Additional Margins		Notice of Change in Original Margin
		Current Month	Premium Month	
Cocoa	Cocoa Exchange of New York	See coffee	Amount of premium	24 hrs.
Coffee	N. Y. Coffee & Sugar Exchange	Up to three times requirement on net interest	Amount of premium	24 hrs
Cotton	N. Y. Cotton Exchange	Up to $2,500 per contract	Amount of premium	24 hrs.
Cottonseed Oil	N. Y. Produce Exchange	Within discretion of the board	None	None stated Three days' customary
Rubber	Rubber Exchange of New York	Up to $600 per contract	Amount of premium	24 hrs.
Silk	National Raw Silk Exchange	See Coffee	Amount of premium	24 hrs.
Sugar	N. Y. Coffee & Sugar Exchange	See Coffee	Amount of premium	24 hrs.
Tin	National Metal Exch.	See Coffee	Amount of premium	24 hrs.

The calculation of these various margin requirements is made as follows: A & Co. appear on the books of the Rubber Exchange Clearing House as long 300 May contracts of rubber and short 300 May contracts. There is no net interest and no original margin requirement. If A & Co. appeared as long 300 and short 200, there would be a net

interest of 100 contracts, which would require a deposit of $150 per contract unit, or $15,000. If they were long 200 May rubber and short 200 contracts for July delivery, their position would be a straddle. They are long and short a like amount, but for delivery in different months. The straddle position totals 400 contracts, which would require a deposit of $25 per contract, for contracts long and short, or a total of $10,000.

Variation Margins.—As previously stated, each clearing member must accompany his report with a deposit of an original margin for each contract offered for clearance to the clearing house and not offset. In addition to the original margins, each clearing member must pay to the clearing house on each contract the equivalent of the difference between the contract price and the market price if the market price shows a loss on his trade. On the other hand, if the difference between the contract price and the market price reflects a profit on his trade, the clearing member has the right to draw upon the clearing house for the profit difference.

Each contract must be adjusted to a settlement price established by the clearing house from day to day. Should there be a substantial price fluctuation during the day, the by-laws of the clearing house provide that members may be called upon to meet variations in the market by certified check delivered to the clearing house within one hour after the delivery of a call. Should any member default in meeting a margin call, the clearing house may close out his open trades on the floor of the exchange. The method of computing the margin requirements may be further elucidated by returning to A and B, whom we left with their respective sale and purchase of 10 contracts of cotton which they had reported to the clearing house.

A is now 10 contracts short with the clearing house; B

is 10 contracts long with the clearing house. Assuming that the minimum original margin requirements are in force in the New York Cotton Exchange Clearing House, A would be required at the time he files his report to post $3 a bale with the clearing house. The Cotton Exchange contract is 100 bales. The original margin requirement would be, therefore, $300 for each contract, or a total of $3,000. B, the buyer of the 10 contracts, is required to post a like amount with the clearing house, $3,000. If the price of cotton should advance 1 cent per pound, A, the seller, would be required in satisfaction of his market variation to post $5,000 with the clearing house. There are 50,000 pounds of cotton in 100 bales; a variation of 1 cent per pound is $500 per contract. Ten contracts therefore call for $5,000. On the other hand, B could draw on the clearing house for $5,000 because his position with the clearing house entitles him to a credit for that amount; and as the price fluctuates from day to day, A and B must in like manner maintain their respective position with the clearing house.

The report containing a recapitulation of the member's trades and his debit and credit position with the clearing house is made up so as to indicate precisely not only his contract position with the clearing house, but also his position in respect to original and variation margins.

This detailed report is made up as follows: one column shows the position of the clearing member in each delivery month at the close of the previous day. The next column is for entry of the total purchases and sales in each month for the current day. The column "Carried Over For Tomorrow" gives the net position of the firm with the clearing house for each month. An illustration will make this clearer. J. Jones & Co. (see Recapitulation Sheet) at the close of Monday are short with the clearing house six contracts of March silk. On Tuesday, Jones & Co. sell four contracts and

buy thirteen. These entries under "Today's Trades," coupled with the position at the close of Monday, show six March short on Monday, thirteen bought on Tuesday, and four sold. Jones & Co.'s net purchases of March silk at the close of Tuesday are, therefore, three contracts, and this amount is entered under the "long" side of the column "Carried Over For To-morrow." The net position shown in this column establishes the amount of original margin required. A time certain is fixed when reports must be delivered, and the clearing member is subject to fine if his report is delayed. The reports of the members are entered in the books of the clearing house. The clearing house books always show an exact balance between long and short contracts of all members and an exact balance between the amounts due to the clearing house and amounts which it holds to the credit of members. The individual position of each member—his total net interest and his interest in each delivery month—is known. The recapitulation sheet reproduced shows the position of Jones & Co. in all months, their net position with the clearing association, and the calculation of margin requirements.

Guaranty Fund.—It would appear from the foregoing that the clearing house has ample protection by original and variation margins against any loss. These deposits, however, form only one element in an impregnable financial bulwark. As was noted in the early part of this chapter, before an exchange member may become a clearing member, he must contribute to the guaranty fund. The amount required of each clearing member on different exchange clearing houses is shown in the table on the following page.

In the aggregate, these funds form a substantial reserve. Thus the Rubber Exchange Clearing Association, with 48 members, has a guaranty fund of $480,000. When the deposit has been made, it cannot be withdrawn by the member until

GUARANTY FUNDS AND CLEARANCE FEES

Commodity	Clearing Association	Guaranty fund	Clearance fee per contract 1928	Originally
Cocoa	Cocoa Exchange of New York	$ 5,000	30¢	50¢
Coffee	N. Y. Coffee & Sugar Exchange	$15,000	5¢	20¢
Cotton	N. Y. Cotton Exchange	$15,000	3¢	10¢
Cottonseed Oil	N. Y. Produce Exchange	$ 1,000	10¢	
Rubber	Rubber Exchange of N. Y.	$10,000	20¢	40¢
Silk	National Raw Silk Exchange	$10,000	30¢	30¢
Sugar	N. Y. Coffee & Sugar Exchange	$15,000	5¢	20¢
Tin	National Metal Exchange	$10,000	50¢	50¢

nine months after he ceases to be a clearing member and all his fixed and contingent liabilities have been liquidated. Throughout the period of his membership, it stands as his share in the underwriting of the financial stability and integrity of the organization which is assuming and guaranteeing all contracts which it clears. The guaranty fund is not lodged with the clearing house, but the deposit of cash or government securities is made in an approved bank which issues a certificate to evidence the deposit. The cash or the bonds cannot be withdrawn for payment or delivery either to the clearing house or the clearing member except on an order bearing the signature of three of the clearing house directors.

Clearance Fees and the Surplus.—Still another financial resource of the clearing house, and one which is continually augmented, is the surplus which is accumulated from fees charged for clearing each contract. In comparison with the services which the clearing house renders, the fees are small; but small fees paid on many contracts cleared by all clearing members every business day of the year amount to impressive totals.[4]

A member of the Cotton Exchange Clearing House pays

[4] For scales of clearance fees prevailing on different commodity exchange clearing houses, see above table.

3 cents for each contract which he clears. If he clears 1,000 contracts in a day, he pays the clearing house $30 for the service. Other clearing members are paying various other amounts the same day on other trades. The surplus fund stands as a financial guaranty, but it has never been necessary in the history of any clearing house to draw upon it; consequently, in time the income from the surplus fund may become sufficient to meet the major part of the operating expenses, a factor which in itself operates to keep the clearance fee at a nominal figure. This is the reason for the comparatively smaller fees of the older clearing associations.

Careful Provision Against Loss.—Clearing house by-laws and rules prescribe the procedure in case recourse to the guaranty fund and the surplus should ever be necessary. If any deposit in the guaranty fund should be lost by failure of a depository bank or by defalcation, the fund must be restored by transfer of enough of the surplus to make up the deficiency. In the event of a default by a member on his contracts, the clearing house must close out all his contracts in six trading hours.

If the contracts of a failed member are closed out and a loss is sustained by the clearing house, recourse is had first to the member's original margin, then to his guaranty fund. If these are insufficient to make good the loss, the surplus fund is applied to such extent as the board of directors may determine. If the loss is so great as to exhaust the surplus, the guaranty fund stands as a second reserve. If the guaranty fund is drawn upon to make good losses caused by a default, it is immediately restored by assessment upon all clearing members. This assessment is levied on the equitable principle that those who have benefited most from the clearing house shall contribute most, when the failure of a co-member draws thus heavily upon its resources. The total

clearings for a specified number of months are taken; the total clearings of each member for this same period are taken. The member's share of the assessment will be in the same ratio that his cleared contracts bear to the total clearings. Thus a firm whose clearances for the period were equal to 10 per cent of all clearings would bear 10 per cent of the assessment.

Security of the Clearing House.—These elaborate safeguards indicate sufficiently the impregnable financial strength of the clearing house. The financial resources in the guaranty fund and the constantly growing surplus are strong; the right to call for margin deposits is the greatest possible insurance against drastic losses. With these elements of strength, it is not remarkable that no loss has ever occurred where recourse to the guaranty fund or surplus has been necessary. Failures of members have occurred from time to time, but the original margins on deposit have invariably been sufficient to absorb market differences and protect the clearing house against loss. Nor is the financial solidity of benefit merely to the clearing house as an institution. With the safeguards it provides, it is not only impossible for the clearing house to lose, but no clearing member can suffer loss through default on the part of any other member.

An Efficient Medium of Delivery.—Having now described the organization, the clearing of contracts, and the financial strength of the clearing house, we will turn to its service in facilitating deliveries. In the course of a trading day in November, a broker on the National Raw Silk Exchange sells 5 contracts[5] of raw silk for delivery in May. During all of the months that follow, the seller does not offset his contract by a purchase, and May arrives with the seller bound to

[5] One contract calls for the delivery of 650 pounds; 5 contracts therefore call for 3,250 pounds.

deliver 3,250 pounds of Japanese raw silk.[6] The seller has the option of making delivery at any time during the month. On May 5 he elects to deliver and he issues five transferable notices, one for each contract sold. These transferable notices are in this form:

Transferable Notice

New York 19

(10:29 o'clock)
To

Take notice that on ..... we shall deliver you 5 bales of Japanese Raw Silk (about 650 pounds) in accordance with the terms of our contract sale to you.

We pledge ourselves to deliver on the day specified for delivery, to the last holder hereof, a warehouse receipt or receipts, together with a certificate or certificates of grade or a validated notice of grade (as provided in Section 74 of the By-Laws), upon written notice of the holding of this notice, given to us by the last holder thereof before four o'clock P. M. on the next full business day following the day on which this notice is issued.

This notice is to be delivered to us simultaneously with our delivery of the warehouse receipt or receipts to the holder thereof.

Signed (L. Bros.)

Conditions

Each of the acceptors agrees that the last acceptor hereof will before 4 P. M. on the day of give written notice of the holding of this notice to (L. Bros.) and on the day of receive from (L. Bros.) a warehouse receipt or receipts, together with a certificate or certificates of grade, or a validated notice of grade (as provided in Section 74 of the By-Laws), for 5 bales of Raw Silk and pay them at the transferable notice price, i.e..... .....dollars.....cents per pound therefor, with additions or deductions as provided for in Rule 10, settling with them on the basis of Grade D, with allowances for variation in grade in accordance with the quotations established on the fourth business day prior to the date of delivery. It is further agreed that each acceptor hereof shall continue his (or their) liability to each other for the fulfillment of the contract

[6] For forms of the futures contract, see Chapter I.

until this notice shall have been returned to (L. Bros.) and a warehouse receipt or receipts for the Raw Silk to be delivered, received by the last acceptor hereof from (L. Bros.) at which time all responsibilities of intermediate parties shall cease.

Signed (H. Bros. & Co.)

Form of Transfer

New York, 19

Time Received	Accepted By	Transferred To
(11.37 A. M.)	(H. Bros. & Co.)	(G. & Co.)

The five separate notices are required because no notice can be issued to cover more than one contract. The clearing house is the recipient of the transferable notice. The delivery day which is filled in will be the third business day succeeding the date of the notice; that is, if the notice were issued on a Monday, the silk would be deliverable on Thursday, unless a holiday intervened. If it were issued on Friday, the silk would be deliverable on the following Tuesday.

The transferable notice price is the settlement price established by the clearing house at the end of each day. The price established for the last business day preceding May 5 would be the one inserted in this notice.

When the transferable notices are delivered to the clearing house, it ascertains from its books the names of those clearing members who are long of silk and distributes the notices among those clearing members who are long of May silk. A clearing member who does not intend to take delivery of the silk, will, as soon as the transferable notice is received, sell a May contract on the floor of the exchange and will immediately deliver the transferable notice to the buyer.

Each person to whom the notice is passed by sale has one-half hour in which to sell it. The silk is in the warehouse ready for delivery, and the time limitation is designed to bring the contract as soon as possible into the hands of a buyer who wants the silk. On the form of notice which has been given, it will be observed that there is space for endorsement and a column for noting the time when the notice was received. Each seller endorses the notice as he passes it on. If it remains in the hands of any party for longer than half an hour, he automatically becomes the acceptor of the delivery. The notice may circulate for not more than one day. It reaches finally a buyer who desires delivery. He is said to "stop the notice." Until final payment and delivery of the warehouse receipt, both buyer and seller must maintain their margin position in the clearing house.

Adjustments are made between buyer and seller in accordance with the grade of silk which is in the warehouse.[7] When payment has been received by the seller and he has delivered the warehouse receipt to the buyer, the contract is closed.

Contrast the simplicity of this procedure with the former roundabout method. Before formation of the clearing association, let us say A, an importer of coffee, sold five contracts against an importation already arranged for. He contemplated actual delivery. B, the buyer, in turn sold to C and so on, with fifteen other in-between parties, until R, a firm which desired delivery, was reached. The in-between parties' differences, debits or credits, would not be settled until the month of delivery arrived and a transferable notice was endorsed against the purchase and sale. In other words,

[7] Contracts are in terms of a basis grade of the commodity; but delivery of other grades is permitted with differences allowed to compensate for the variation in the quality of the goods from the standard grade. On the Silk Exchange contract referred to in the illustration, nine grades, in addition to the basis grade, known as grade D, may be delivered.

the only means of liquidating the contracts involved was by receipt of transferable notice and subsequent billing by in-between parties based on the transferable notice price.

The old method of settlement between parties, when delivery was made, is illustrated as follows: A, an importer of coffee, sells five contracts to B at a price of 15 cents; B, the "in-between" party, sells five contracts to C at 12 cents, C intending to take delivery. When A issues his transferable notices, the settlement price established by the exchange is 14 cents. C "stops" the notice. The exchange rules provided that the "Stopper" shall pay the "Issuer" at the transferable notice price, *i.e.*, in this case, 14 cents. The exchange rules further provided that any difference between the contract price and the transferable notice price shall be settled on the day following delivery.

Accordingly, A would collect from C 14 cents a pound on the day of delivery, and from B 1 cent a pound on the day following delivery. C in turn, having paid A 14 cents per pound, would collect 2 cents per pound from B on the day following delivery. B, by his payment of 1 cent to A and 2 cents to C, would have covered his loss in the transaction of 3 cents per pound.

The rules regarding delivery are strict. If the transferable notice is not issued before the last notice day in the month, not only will the seller be in default, but he will be liable for the damages suffered by the purchaser, in addition to a monetary penalty; and if his default should be willful, he may be expelled from both the exchange and the clearing house.

Limitation of Interest.—A rule is usually found in every clearing association limiting the net interest of a clearing member, his interest in any one month, and his straddle interest. Thus the net interest of a member of the New

York Cotton Exchange Clearing Association is limited to 4,000 contracts, while his interest in any month may not exceed 5,000 contracts. This affords a further safeguard against losses caused by squeezes, which might be large in extent if there were no such limitation. There is no limitation of interest on the grain exchanges.

The following table shows the limitation of interest in various clearing associations:

LIMITS OF INTEREST
PERMITTED MEMBERS BY CLEARING ASSOCIATIONS

Commodity	Exchange	Number of contracts		
		Net interest	Any one month	Straddle interest
Cocoa	Cocoa Exchange of N. Y.	1,500	1,500	2,500
Coffee	N. Y. Coffee & Sugar	2,500	2,500	4,000
Cotton	N. Y. Cotton Exchange	4,000	5,000	4,000
Cottonseed Oil	N. Y. Produce Exchange	None	None	None
Rubber	Rubber Exchange of N. Y.	3,000	2,000	3,000
Silk	National Raw Silk Exchange	2,000	2,000	3,000
Sugar	N. Y. Coffee & Sugar	4,000	1,500	4,000
Tin	National Metal Exchange	2,500	2,500	4,000

Confidential Relationship of the Clearing House and Members.—The strictest confidence is maintained between the clearing house and its members. The clearing house manager alone knows the individual position of each member. In referring to the position of the secretary-treasurer and assistant treasurer of the New York Cotton Exchange Clearing Association, it has been said:

> Into the possession of these officers there comes daily from each member of the New York Cotton Exchange, belonging to the Clearing Association, a complete report of his position in futures. The responsibility for strict regard for the confidence thus imposed rests jointly with these two officers. Though control of the policies of the clearing association and the decisions as to changes in the amount of original margin deposits required are entirely affairs of the board of directors of the clearing association, neither the president nor the directors have any authority to require or

receive from the Secretary-Treasurer or the Assistant Treasurer any information concerning the market standing of any member clearing through the association.[8]

Summary.—The advantages of the modern clearing houses may be summarized from the standpoint of their convenience to the clearing member. By the process of daily report, clearance, and settlement, each member (1) reduces the number of contracts on which he must maintain margins; (2) clears his contracts in each day of every month, leaving him only buyer or seller of the net amount which is not offset; (3) brings all his contracts up to the market daily, and (4) substitutes the clearing house as a buyer on every contract which he has sold and as a seller of every contract he has bought. The clearing house effects a saving in clerical labor, a saving in the use of credit, and a simplification of contract relations. Not only are the members' contracts cleared, but they are guaranteed, and the guarantee is fortified so strongly that the daily margin deposits have proven sufficient to absorb every loss ever shown by a contract which has been closed out, while in more than one case the clearing house has turned over a surplus to the trustees of a failed member's estate. The mode of trading on the floor of the exchange and the clearing of contracts have now been described. In the following chapter we shall take a typical transaction from the time the order is placed with the broker until the contract is finally closed in the clearing house.

[8] *The Cotton Trade,* Senate Document No. 100, 68th Congress, 1st Session, Part 1, p. 119.

Chapter IV

FOLLOWING A TYPICAL TRANSACTION ON THE EXCHANGE

We will now trace a few orders from the time they are given, to the time, perhaps months hence, when the transaction is closed. It is impossible to take as typical the progress of any one single order, for the disposition of transactions varies with the purposes which have dictated the purchase or sale. The transaction may be initiated by a speculator who neither owns the commodity nor has any intention of ever owning it; it may be a purchase or a sale made by a merchant as a protection against the risk of price fluctuations, commonly called a hedge; or, again, it may be a transaction initiated by a trader on the floor of the exchange and closed out before the end of the day. It will lead to a clearer understanding of the functioning of an exchange if we follow in detail different types of orders, proceeding from buyers or sellers whose motives in trading are of widely different character.

The Course of a Speculative Transaction.—Brown is a business man who speculates occasionally in commodities. He has been following for some time the course of the market in crude rubber. He has made some investigation of the demand and supply situation. He has kept in touch with price fluctuations and has estimated the general trend of prices. He believes that crude rubber will sell lower. If his judgment is sound, he can make a profit by selling a distant future at present prices and later buying this same future at a lower price. The first part of this transaction is known as

a "short" sale. He is a customer of Latex & Co., one of the many large commission houses who are members of the New York Stock Exchange, the New York Cotton Exchange, the Rubber Exchange, the Silk Exchange, the Chicago Board of Trade, and all of the other leading commodity exchanges.

It is now January 2. Brown picks up his telephone and calls Latex & Co. A customer's man receives the call, and Brown tells him to sell 10 contracts of May rubber for his account "at the market." Brown knows this order will be executed immediately. He has previously considered the use of a limited order but decided that the market was not active enough to make this desirable. His order, as given, is practically one to sell at the market; had he used a limited order, he would have named a price at or above which the sale must be made.

Brown's order is entered on a selling ticket in the office of Latex & Co., a number and the time of its receipt stamped upon it. The use of numbers instead of names saves time and aids in preventing mistakes in the transmission of orders to the exchange. Spreading out from the main office, direct wires connect Latex & Co. with all the exchanges of which they are members. The customer's man telephones to the Rubber Exchange. Around the floor of the exchange are rows of telephone booths which are leased to members. An attendant of Latex & Co. is standing at their booth, and when the telephone bell rings, he takes down the order to sell 10 May rubber. Brown's name is not mentioned—he has become a number. The floor broker knows only that he has a selling order; he does not know for what customer's account it is to be executed. As soon as the clerk has taken the order, he rushes across the exchange floor to the place in the ring where Latex, Jr., the firm's floor broker, stands. He gives the written order to Latex, Jr. At the ring, brokers are crying their bids and offers of rubber for various delivery

months. Latex, Jr., listens for a bid for May rubber. As the activity for the time being is centered in other months, and he hears no bids for May, he glances up at the blackboard which extends across one wall of the exchange floor. This blackboard is divided into twelve columns in which the prices of the day's transactions are recorded. At the head of each column is the name of one of the calendar months. As each transaction is made at the ring, the price and the number of contracts sold are indicated under the month traded in. Attendants, with telephone headpieces and earphones so attached that they can walk back and forth on a bridge in front of the blackboard, receive the price and number of lots as fast as trades are reported from the ring. Latex, Jr., looks at the column headed May to find out the price at which the last May sale was made, in order to ascertain at what price to make his present offer to sell. He then offers "Ten May" at 40.20. His offer is countered by a bid of 40.10 from across the ring. But Latex Jr. continues to call out his offer, hoping to make his sale at 40.20 and so to obtain the highest possible price for his customer. Having instructions to sell at the market, however, and receiving no bid at 40.20, he finally sells the ten lots at 40.10. The exchange rules provide that every offer to buy or sell must be closed with the broker who first accepts all or any part of it. No offers of "all or none" are permitted. If Latex Jr.'s offer had been accepted simultaneously by several brokers, the question of priority would probably have been settled among the brokers themselves. The floor committee is empowered to rule on the question of precedence when brokers are unable to reach an amicable agreement.

Latex Jr.'s sale was made to a broker representing Hevea & Co., another exchange firm. Latex Jr. carries cards printed and ruled in red on one side, and in black on the other. Each sale made on the floor is noted on the side ruled in red, and

each purchase on the side printed and ruled in black. One of these cards is reproduced below. The reverse is exactly the same, except that at the top of the card before the date line, the word "bought" appears instead of the word "sold" and the column for recording the name of the other broker is headed "from" instead of "to."

Latex & Co.

THE RUBBER EXCHANGE OF NEW YORK, INC

SOLD January 2 1928

To	Contracts	Month	Price	Account
Hevea	10	May	4010	I.
Vreeland	7	Dec	3990	II.
Stevens	3	Jan	3970	III.
Willis	8	Mar	3980	III.
McArthur	4	May	4000	II.
Rinehart	2	July	4010	IV.

Hevea & Co.

THE RUBBER EXCHANGE OF NEW YORK, INC.

BOUGHT January 2 1928

From	Contracts	Month	Price	Account
Latex	10	May	4010	VIII.
Dunn	4	Dec	3990	V.
Reid	3	Mar	3980	VI
Sexton	4	July	4010	VII.
Gamble	7	Jan	3970	V
Brown	2	Feb	3970	V

On the side printed in red, Latex Jr. notes "Hevea, 10, May, 40.10." Across the ring the broker of Hevea & Co., has noted on the side of his card printed in black, "Latex, 10, May, 40.10." Later Latex Jr. and Hevea & Co.'s broker will compare their cards to make sure that their notations as to lot, price, and month are in accord. Now Latex Jr., having

made the sale, instructs the attendant at the telephone booth to report to his office the price at which the sale was made. The attendant calls up Latex & Co. and reports the particulars to them, and Latex & Co. immediately notify Brown by telephone that they have sold 10 lots of May at 40.10. All of this has required much less time than is required to describe it—normally 30 to 40 seconds.

What Brown Sold.—When Brown receives notification that his sale has been made, he knows that he is under contract to deliver to a purchaser whom he does not know, and probably never will know, 56,000 pounds of rubber some time in the month of May. One contract calls for the delivery of 5,600 pounds, and he has sold 10 contracts. Every exchange has a standard unit in terms of which all transactions are made.[1]

Confirming the Sale.—Trading continues at the ring of the Rubber Exchange until the gong sounds at three o'clock. Then tables are brought out on the floor, and Latex Jr. joins the group of brokers who sit down to exchange contract slips confirming the trades of the day. One of these slips is filled in as follows with the particulars of Brown's sale:

New York, January 2.

SELLER .....Latex & Co. .....
BUYER .....Hevea & Co. .....

Subject to the Rules and By-Laws of the Rubber Exchange of New York, Inc.

Number of Contracts of Rubber	Delivery in	Price
10	May	40.10

LATEX & CO.
J. B. Latex Jr., Atty.

[1] For trading units on commodity exchanges, see Chapter I.

He hands this slip to Hevea & Co.'s broker and receives a similar slip from him. When these slips have been signed, they constitute a binding contract for the sale of 56,000 pounds of rubber by Latex & Co. to Hevea & Co. at the price named, to be delivered in the month of May.

Clearing the Trade.—Latex Jr., goes back to his office carrying these slips, among them the one signed by Hevea & Co.'s broker. Latex & Co.'s daily report to the clearing house is made up from these slips, as described in Chapter III; and the report, as soon as it is completed, is sent over to the clearing house. Hevea & Co. in the meanwhile have been likewise engaged in making out their report. The messengers of these two firms who take the reports to the clearing house carry checks for $2,000, the original margin requirement on purchase and on sale. Reports and checks having been delivered to the Clearing House, Latex & Co. and Hevea & Co. no longer have any dealings with each other on Brown's sale, although Brown remains a customer of Latex & Co. The Clearing House is substituted in place of Hevea & Co. as the purchaser of Brown's 10 May rubber, and in the place of Latex & Co. as the seller of Brown's 10 May rubber.

Brown's Margin with Latex & Co.—Brown is an old customer of Latex & Co. He has $4,000 on deposit with them, enough to take care of the margin requirement and to cover small fluctuations in price. Brown has already been notified by telephone of the execution of his order, but a written confirmation will be placed in the mails before Latex & Co.'s office closes for the day. This confirmation notice recites the number of contracts sold or bought for the customer's account, the delivery month and the price at which the order was executed. It is in the following form.

Latex & Co.
90 Exchange St.
New York City

January 2, 1928.

Mr. Robert Brown
94 Pine Place
New York City

Sir:

We have today sold for your account on the floor of the Rubber Exchange of New York, Inc., in accordance with the By-Laws and Rules of the Exchange and amendment thereto:
QUANTITY: Ten (10) Contracts—(56000 pounds) for delivery during the month of May 1928 @ 40.10¢ per pound.

Yours very truly,
LATEX & CO.

Commissions.—For executing Brown's order, Latex & Co. receive a commission of $75, the minimum commission on the Rubber Exchange being $7.50 for the sale or purchase of one contract of rubber. Brown has sold ten contracts. If he were a member of the exchange, the commission charged by Latex & Co. would be half of the above amount—$3.75 per contract, or $37.50 in all.[2]

Brown follows the course of rubber prices daily in the newspapers and he is an interested reader of statistical matter and news which has a bearing upon prices. Will the course of prices follow his anticipation? As the weeks go by, he finds that it does not. Instead of going down, the price of May rubber advances. By February 1, a month after he made his sale, the price is up to 41.10. At this stage of the transaction, Brown has a paper loss of 1 cent a pound on his sale, and if he were to close his trade by a corresponding purchase, he would actually sustain this loss. Since he has sold 10 contracts, or 56,000 pounds, his paper loss amounts to $560.

[2] For the commission law, see *supra*, Chapter II, Note 3. For commission rates on commodity exchanges see Appendix B.

Trading Room, National Raw Silk Exchange

Variation Margins.—The price of May rubber having advanced 1 cent a pound, Latex & Co. have paid to the clearing house $560. As Latex & Co. pay this $560 to the clearing house, it is credited to the account of Hevea & Co., subject to their draft.

Switching.—No further price change of any moment occurs. Before the month of May arrives, Latex & Co. send Brown a notice reminding him that he has until May 25 (the last delivery day for May rubber) to do one of two things—either to cover his contract by a purchase of 10 May or else to fulfill it by the delivery of 56,000 pounds of rubber of a grade tenderable on the exchange contract. Brown decides to cover his May contract. Nevertheless, despite the fact that the price of rubber has advanced 1 cent a pound since his sale, he is not yet convinced that his judgment of the longer-term trend of prices was wrong. He decides to get out of his unprofitable transaction, but to remain short 10 contracts of rubber. Accordingly, he directs Latex & Co. to buy 10 May rubber at the market, and to sell 10 October at the market. His purchase of the 10 May offsets the sale which he made in January and leaves him with no obligation to deliver rubber (he has sold 10 contracts and bought 10 contracts), but with a loss of $560. The May contract is covered at 41.10, and a new transaction is entered into by the sale of 10 October at 41.90. Brown has simply switched his position from one month to a more distant position.

Brown's Trade Closed.—Before October arrives Brown's judgment is vindicated. The price of October rubber has declined to 36.10 cents a pound. Brown now has a profit of 5.8 cents a pound, amounting to $3,248, on his sale of October rubber. Deducting the $560 which he lost on the sale of May rubber, he still has a net profit of $2,688, less commissions to Latex & Co. for the purchase and sale of the two lots. Brown now instructs Latex & Co. to buy 10 October.

The order follows the same course that his original selling order pursued, and when the confirmation notice of Latex & Co. reaches him, his trade is closed.

A Protective Sale.—Differing widely in type of transaction is the sale of Mr. Black, a merchant who deals in crude rubber. As the primary markets are abroad, Black is in constant touch with merchants in Singapore and Colombo. On April 1 he is in receipt of offers to sell rubber for April shipment from the exporters with whom he deals and he accepts 50 tons of crude rubber offered by a merchant in Singapore at a price of 38 cents a pound, c. i. f. New York for April shipment from Singapore. The Singapore merchant will prepare immediately to ship, and the rubber will be en route by the middle of April. Being a merchant and not a speculator, Black wishes to make certain that he will not lose money if the price of rubber declines below 38 cents. His shipment may arrive in June. He cannot deliver the physical rubber immediately, but he can sell a contract on the exchange to deliver rubber in June. He decides to do so and on April 1 he instructs Latex & Co. to make the sale. They execute his order at a price of 39 on the exchange floor. The difference between the c. i. f. price and the price of the future is represented by interest charges and other expenses. Black has now bought his rubber at 38 cents and sold it on the exchange for delivery in June at 39 cents a pound. By the time June 1 arrives, the price of rubber for immediate delivery has declined to 37 cents a pound.

If it were not for his sale on the exchange, Black would be compelled to find a purchaser for his rubber. But he has no such problem. When he sold the 20 June futures he had procured a purchaser of his physical rubber. It is now only necessary for him to make delivery in accordance with his contract. Black has avoided a loss in a declining market through his protective sale. He has been enabled to buy the

rubber, when, without means of protection, he might have deemed it unsafe to purchase. When his shipment arrives, it is sampled, inspected, and weighed. If the rubber in the shipment is of a grade tenderable on an exchange contract, he instructs Latex & Co. to issue transferable notices. He has sold 20 contracts, a contract being 2½ long tons, and his purchase abroad was 50 tons. Latex & Co. accordingly issue twenty transferable notices to the clearing house, one for each contract. The clearing house notes that Hevea & Co. are among the many clearing members who are long on June rubber; accordingly the transferable notices are sent to them. The transferable notices are similar in form and substance to the National Raw Silk Exchange transferable notice reproduced in Chapter III.

Hevea & Co. have one-half hour in which to decide what to do with the transferable notices. If they wish the physical rubber, they will "stop," that is, they will retain the notices and accept delivery. Having no instructions from any of their customers to accept delivery of rubber, the notices are sent immediately to the exchange where their floor broker sells them in the ring precisely as he would sell a June contract. Each succeeding transferee into whose hands the notices come has this same time limit of one-half hour for disposing of them. The time of transfer and the endorsement of each house are placed on the notice in the space provided for that purpose. The notices finally come into the hands of a broker acting for a purchaser who wishes delivery. The notices are then stopped. The delivery day on a transferable notice for rubber is the fourth business day succeeding the date of the notices. Both Latex & Co. and the buyer will maintain their positions with the clearing house, *i.e.*, they will adjust margins to the transferable notice price based on the settlement price established by the clearing house at the end of each day. They will do this until payment has

been made. When the buyer gives Black his check and receives the delivery documents, both will notify the clearing house. The contract then is closed.

The Central Market Place.—In these few transactions the work of the exchange as a great market place has been illustrated. The exchange itself has been likened to a telephone switchboard and the trading ring to the board's mechanism. The sale of Brown, the speculator, may find a buyer in the manufacturer who wishes to make sure of rubber at the price on which he had based his estimate for manufactured goods. Black, the merchant who sells to protect himself against the risk of price change while his rubber is en route from Singapore, may have his offering taken up by a floor speculator who sells the contract again before the day's trading closes. The commercial needs of merchant and manufacturer, the judgment of speculators, the shrewd buying and selling of floor traders, all contribute to make the market. Enough has been shown to indicate the impossibility of labeling a trade as wholly speculative or wholly commercial, unless one knows every step through which it passes. The speculator may be the maker of the market which the merchant needs, and the merchant in turn be the buyer of the speculator's offering.

Chapter V

HEDGING

In days when commodities passed quickly from producer to dealer and from merchant to consumer, relatively little risk of price change was involved. Expansion in the volume of dealing in wheat, cotton, coffee, and other commodities, and more than expansion, the tendency to extend time dealings, introduced an element of hazard which has already been referred to in describing the growth of the futures contract. This hazard was instrumental in bringing about the formation of organized commodity exchanges. It was to minimize these price hazards and to guard against wide fluctuations of prices in time dealings that the modern form of the futures contract was evolved. There is no more potent influence for price insurance for producers, dealers, and manufacturers—and the use of the futures contract for hedging represents the highest development of the machinery of the organized exchanges of today.

Risks of Dealer and Manufacturer.—It is only necessary to take at random familiar experiences in any commodity trade to find in them a wealth of illustration of risks of price changes which are inherent in these transactions. A cotton merchant in a Southern port receives an order from a spinner abroad for cotton of a specified grade and staple. The order specifies 1 inch staple; the grade, strict middling. The exchange basis grade is middling; strict middling is one grade higher than middling and sells "on" the price of middling. The United States Cotton Futures Act prohibits the delivery on an exchange contract of cotton which has less than a

⅞ inch staple. From the price prevailing for middling ⅞ inch cotton, the merchant estimates the price of strict middling inch cotton at 2½ cents per pound higher, adding freight and carrying charges and including his commission of 1 per cent. The merchant then agrees to sell cotton of the grade and staple wanted for delivery in December. The contract is made in the late spring or early summer at a time when the crop has not yet been harvested, and possibly at a time when some of it may not have been planted.

The risk to which this merchant has exposed himself by thus entering on an unqualified contract is sufficient under adverse circumstances to cause him heavy loss. He expects to earn a commission of 1 per cent on this sale. This is his livelihood, and his primary concern in business is the earning of these commissions. Yet if the price of cotton were to advance, say, 5 cents a pound between the time when he made his contract with the foreign spinner and the time when he must enter the market to buy the cotton for shipment, not only would his anticipated profit be wiped out, but he would suffer ruinous losses.

A country grain elevator operator buys 5,000 bushels of number 1 Northern wheat at a price of $1 per bushel. The price is based on the prevailing price in the terminal market. A week or more passes before the grain is shipped to the terminal market for sale. In that short time the price may have declined below the figure which the elevator paid to the farmer. The elevator is primarily interested in making a merchandising profit, yet the possibility of price fluctuation has subjected it to a speculative risk.

The flour miller contracts in midsummer to deliver 5,000 barrels of flour in the late fall at a price based upon prevailing prices for wheat. The price quoted is sufficient to cover costs and insure a milling profit. The month of October arrives and the miller, by reason of an advance in the price

of wheat, is compelled to pay 2 cents per bushel more than the price on which he made his estimate when he contracted to mill the flour. He will require approximately 25,000 bushels of wheat to make 5,000 barrels of flour. The advance in wheat prices has cost him $500.

Eliminating the Risk.—If merchants, millers, spinners, and manufacturers were compelled to face such hazards without any means of protection, many fields of enterprise would be left in the hands of speculators of iron nerve and tremendous financial resources. While the examples mentioned above differ in particular, the transactions are alike in kind. Each is a business transaction entered into by a merchant or manufacturer in the ordinary course of his business with the object of making his commission or his manufacturing profit. There are, of course, various ways in which the risk of price change might be minimized or eliminated. Taking the case of the Southern cotton merchant, it is apparent that there are three ways in which he could escape his risk: (1) as soon as he made his contract, he could buy spot cotton, (2) he could go out and buy the particular grade he needs for forward delivery, or (3) if he could not obtain the specific grade immediately, he could buy cotton of various grades, store it, and in the course of time obtain his specific grade of strict middling 1 inch cotton and sell or exchange his stored cotton which is not of the grade he desires.

None of these methods is calculated to appeal to a business man. To buy the cotton immediately would be undesirable because it would tie up his capital from late spring until the time for shipment. Interest on the "frozen" capital and carrying charges on the stored cotton would eat away his commission. It would be equally unsatisfactory for him to attempt to buy the specific grade, for he might have difficulty in finding cotton of the grade, staple, and amount desired, and the time consumed in prosecuting the

search for it would also eat into his merchandising commission. The second method, it is true, is open to none of these objections so far as the merchant is concerned, but it does not eliminate the risk of price fluctuation from the transaction; the risk is merely passed on to the person who contracted to make the forward delivery, and he would be faced with the same problem which confronted the cotton merchant.

The cotton merchant is not compelled to resort to any of the methods mentioned above, yet he will obtain protection against the risk of price fluctuation, a protection so eminently satisfactory in result that it has frequently been termed "price insurance." The merchant will hedge his contract to sell.

Operation of the Hedge.—A hedge is "a sale or purchase of a contract for future delivery against a previous purchase or sale of an equal quantity of the same commodity or an equivalent quantity of another commodity that has a parallel price movement, and where it is expected that the transaction in the contract market will be canceled by an offset transaction at the time the contemplated spot transaction is completed and before the future contract matures."[1] The hedge, then, entails the use of the futures contract on a commodity exchange as a means of offsetting the trade transaction.

It may be helpful to trace a typical hedging transaction. A flour miller makes a contract in July to deliver 5,000 barrels of flour in December. His contract is in reality a short sale of flour. He will need the wheat in November. At the time he makes the contract for the sale of the flour, he buys 5 December futures contracts through a commission house which is a member of the Chicago Board of Trade or the

[1] Alonzo B. Cox, *Cotton Prices and Markets*, U. S. Dept. of Agriculture Bulletin No. 1444, p. 27.

Minneapolis Chamber of Commerce. In the interval between the time when the contract for the sale of the flour is made and November when he will need the wheat to manufacture the flour, the price of wheat rises 2 cents a bushel. When November is at hand, he purchases wheat of the quality and grade he desires. He loses 2 cents a bushel by reason of the advance in the price of wheat during the intervening four months; but at the time he obtains his wheat, he closes out his hedge transaction by selling the December future. He has made a profit of 2 cents per bushel on his exchange transaction. This profit balances his loss on the purchase of the cash wheat and insures him his milling profit on the manufacture and sale of the flour at a small cost of ¼ of a cent per bushel for commissions.

The hedge is employed in like manner by those who buy commodities in order to protect themselves against a fall in the price. The elevator which buys 5,000 bushels of wheat will protect itself by selling a future contract for a like amount; then if the price of wheat declines, while there will be a loss on the sale of the wheat which goes to the terminal market, there will be a corresponding profit when the hedged transaction is closed by an offsetting purchase. In the words of Dr. Emery:

> He has made two equal and opposite transactions, and if the price moves either way he loses on one and gains on the other. In this way he makes himself largely independent of speculative fluctuations.[2]

Object of the Hedge.—The whole purpose of hedging transactions is to remove risk or to minimize risk. It is this purpose which has caused the hedge to be likened to insurance. Business men are careful to insure against such casualties as fire, employers' liability, explosion, and other contingencies which, while possibly remote, contain the pos-

[2] Henry Crosby Emery, *Speculation on the Stock and Produce Exchanges of the United States*, p. 160.

sibility of great loss to anyone who suffers the casualty. The risk inherent in price change is a less remote and sometimes more devastating risk than any of those properly defined as casualties. The profits of both dealer and manufacturer are affected by price changes in two markets. The dealer buys from the producer, and the manufacturer buys from the dealer; both are purchasing in producers' markets, and both are selling in consumers' markets.

> The trader is primarily concerned with getting a profit from differences of price in different markets. He buys in the producer's market and sells in the consumer's. In a sense the same is true of the manufacturer. He buys material and labor, and attempts to sell his product for something more than the cost of production. This difference between markets is constant and normal, and constitutes the reward for the services of the middleman and manufacturer. To insure such normal profits, their desire is to escape the risks of fluctuation within the *same* market.[3]

The hedge is used to insure dealer or manufacturer against loss due to price changes in commodities. Its purpose is to insure his profit or commission, it being always an integral part of the business transaction in which it is employed. Its object is not to return a speculative profit for the reason that any profit derived on the futures merely equalizes or offsets a loss which has been incurred on a cash transaction. The cash trade and the futures trade are complementary.

Classes of Hedges.—There are two broad divisions of manufacturers and dealers who employ the hedge for protection. First, those who are buyers or owners of the commodity; second, those who have entered into contracts for the forward sale of the commodity or a product manufactured therefrom, and who at the time of making the contract do not own the commodity to be delivered or necessary for the manufacture of the goods. The hedge is employed by both classes for the same purpose; the procedure is merely reversed to fit the case. The owner of a commodity

[3] H. C. Emery, *op. cit.*, p. 159.

is "long" of the physical grain or cotton or rubber. He obtains his protection by a short sale of an equivalent amount in the futures market. The dealer who contracts ahead, or the spinner or miller who contracts ahead for the sale of a commodity or its products prior to ownership, is "short" in the trade market. He protects his position by the purchase of a futures contract on an organized exchange for an equivalent amount.

In the first class are the various elevators in the grain trade which buy wheat from the farmer and forward it to the terminal market for sale, and the cotton merchant who buys cotton from the growers or who accumulates a stock of cotton for merchandising or manufacturing purposes. In the second class are flour millers, exporters, cotton spinners and local shippers. These classes in the different trades who use the hedge will be dealt with in more detail in the following chapter.

The Degree of Protection.—While the hedge is an efficient form of insurance, it is not complete insurance. Complete insurance would require that profit or loss on the cash transaction be balanced exactly by the corresponding loss or gain on the futures contract. To afford a full measure of protection to those who employ the futures contract for hedging, there must be maintained (1) a close parity between prices in the futures market and in the cash market; (2) a close price relationship between the basis grade and the grade of the physical commodity bought or sold.

The futures contract is employed to hedge the purchase or sale of the physical commodity because spot prices and future prices *tend* to move together; advances in the spot price tend to be paralleled by advances in the price of futures contracts, and vice versa. Similarly, the prices for various grades of a commodity *tend* to remain in a close and steady relationship. A material dislocation of the relation-

ship between spot prices and the prices of futures may make the hedge an imperfect protection, and in the same way a widening or narrowing of the price differential between grades may give imperfect protection or entail actual loss. It is these risks inherent in price movements, known as basis risks, which make the hedging operation far from the simple matter it may appear. To make clearer the effect of a change in parities between spot prices and future prices upon a hedge, the following summary is given from the *Report of the Federal Trade Commission on the Cotton Trade:*

> Assuming, however, that cotton or goods for forward delivery are sold at a price equal or equivalent to the cost of the future employed as a hedge, the rule may be stated thus: If at the time of the purchase of cotton to apply against a hedged contract for the sale of cotton or goods for forward delivery and of the hedge sale of the future, spot cotton is at a discount (*i.e.*, the future at a premium) as compared with the future used as a hedge, the merchant or manufacturer profits to the amount of the discount (expense of commission in placing and removing the hedge not considered); if the spot is at a premium (*i.e.*, the future at a discount) the merchant or manufacturer loses to the amount of the premium. Should the sale of cotton or goods for forward delivery be made at a given number of points off the future, the merchant's or manufacturer's profit is reduced or his loss increased by that much. If sold at a given number of points on the future, the profit is increased or the loss reduced by that much.[4]

Correlation Between Prices of Raw Material and Manufactured Goods.—The manufacturer employs the hedge in two ways. When he acquires supplies of his raw material, he sells futures in the endeavor to rid himself of the risk of price fluctuation in his raw material inventory. When he contracts ahead for a sale of his finished product, he buys futures in the endeavor to guard against paying a higher price for his raw materials. When the former type of hedge is employed, it is vital to the manufacturer that prices of the finished product and prices of the future move together.

[4] Senate Document No. 100, 68th Congress, 1st Session, Part I, p. 131.

If they do not—specifically, if the price of the future rises to a greater extent than the price of the finished product, the hedge will be imperfect because the manufacturer will lose more on his hedging transaction than he gains because of the advance in the finished goods markets.

From the manufacturer's standpoint, the effectiveness of the selling hedge as protection may be influenced by the proportion which the raw material cost bears to the total cost of the manufactured article. In "A Study of Cotton Hedging for a Grey Goods Mill, 1921-1926," the Harvard University Bureau of Business Research thus summarizes the difference between the problem faced by the cotton manufacturer and the flour miller.

(1) In the flour industry the net cost of wheat represents about four-fifths of the total cost of the flour, whereas in the case of the particular construction of grey goods considered in this study the net cost of the cotton represented only about two-thirds of the total cost of the sheeting.

(2) Flour is a strictly staple product, a so-called necessity of life, not in competition with other products in the same way that cotton goods are in competition with other fabrics. Also, there is no parallel in the case of flour to the changing style preferences which affect the sale of finished cotton goods.[5]

The argument is that the greater effectiveness of the hedge in flour milling may be attributed to this difference in the ratio of raw materials cost to the finished product. But while the study lends color to the argument, it does not follow that it is conclusive. As the study points out in summary:

Some weight attaches to these arguments; but also it is a fair question whether the price of cotton cloth might not tend to follow the price of cotton more closely if cotton mills on the whole did in fact hedge their cotton purchases. If a policy of protective hedging were followed by the cotton industry generally, then fewer mills would be in a position to

[5] "A Study of Cotton Hedging for a Grey Goods Mill, 1921-1926" (Bulletin No. 70, Bureau of Business Research, Harvard University, 1928), p. 19.

adjust their prices downward when for one reason or another they had been able to purchase cotton at prices lower than the current replacement cost.

In other words, the condition in the cotton industry revealed by the study may be the result of the causes named, combined with other causes, or the failure of some mills to hedge while others do hedge may be responsible for the imperfect correlation between raw material prices and the prices of the finished goods. The mill which acquires its materials at a low cost and does not hedge can cut its prices under the mill which acquires its raw materials at a higher price whether the latter mill hedges or not. Thus it is possible that the failure of many mills to hedge may be found to be a major contributing cause of irregular correlation between finished goods and raw material prices.

Shifting the Hedge.—When a purchase has been hedged by the sale of a future, it may be that the arrival of the month when the futures contract must be closed by offset or delivery will find the commodity still on the hands of the owner. The necessity of keeping it hedged, however, remains. The original futures contract must be closed out during the month. It will be closed by an offsetting purchase. At the same time, another future in a more distant month will be sold. It is one and the same hedging operation, although it has of necessity involved a shifting of the protective sale from one delivery month to another. As a matter of fact, it is unusual to permit this situation to develop. The hedger is usually alert to shift his hedge to a distant month before the month for delivery on the futures contract arrives, if he has any reason to anticipate that a shift will be necessary.

Hedging Applies Only to Balances.—It is not only possible, but it is a matter of actual occurrence, that a firm dealing in a commodity may have its purchases and sales in

exact balance. When this occurs, there is, of course, no necessity for hedging. Being long and short equivalent amounts, the firm's trade position is in itself a perfect hedge. It is only the excess of sales over purchases or of purchases over sales which requires hedging. Thus a hedger who owns or has contracted to buy 75,000 bales of cotton and who has contracts for forward delivery amounting to 65,000 bales has a net long interest of 10,000 bales. It is this net long interest which the dealer will protect by the sale of futures of an equivalent amount. As the net long interest increases, further hedges by offsetting sales will be made; and as the interest may be reduced, the hedges will be closed to an amount sufficient to bring them in balance with the smaller net long interest of the dealer.

Selecting the Market.—Hedging involves not only careful selection of the month, but it may involve selection of a market for the sale or purchase of the future. Normally prices in different markets move together. Differences in price between markets for one commodity equalize distance and the cost of shipping between the two points. Thus the price of cotton in Liverpool is normally always higher than the price in New York by the difference in the cost of shipping across the Atlantic and incidental charges and expenses. Similarly a difference in wheat prices exists between Chicago and Minneapolis. A market where prices rule lower may advance to a point where the spread between it and another market is materially less than the normal difference due to their distance from one another. Since the market which has thus bulged is for the time being abnormally high, it would be a natural market to select for selling a future contract which is used as a hedge. Conversely, a widening of the normal difference would indicate the desirability of placing a purchase hedge in the market where prices were

ruling abnormally low. The work of the arbitrageur will quickly restore normal parity between the markets.

Choice of the Month.—Selection of the delivery month in which to place the hedge will often be governed by considerations relating to the purchase or sale which is being hedged. For instance, if a miller makes a contract during the summer for the sale of flour to be delivered in December, he will require delivery of the wheat sometime during the month of November. Accordingly, when he makes the contract for the sale of the flour, he will purchase a December future as a hedge. The month in which to hedge in this case is dictated by the time when the miller will be in the market for the wheat. Since it is a fundamental principle of hedging that the future sale is closed as soon as the spot purchase is made, or vice versa, this practice of buying or selling the future which most nearly coincides with the anticipated need in the spot market is the general rule that is followed.

It may be that sales are being hedged which require delivery over an extended period. Here the futures contracts which are bought as hedges may be spread over consecutive delivery months. Thus, a manufacturer of cotton goods contracting for the sale of finished goods, who will need his raw materials in October, November, and December, buys hedges in all three of these months, closing separate hedge contracts as he covers his requirements in the cash market. The selection of the month, however, in which the hedges are placed, is largely determined by the judgment of the hedger.

Apart from synchronizing spot and futures transactions, some other considerations enter into the selection of the month for placing the hedge. On some exchanges there are months which are usually inactive. The merchant or manufacturer placing a hedge would naturally avoid placing it in one of these inactive months. Another consideration be-

comes of great importance as the delivery month for the futures contract approaches. Squeezes are most likely to occur in the current month; those who have placed selling hedges must observe the stocks of the commodity available for delivery and keep in touch with supplies which are headed for the market. Their interest in stocks and deliveries is to anticipate the possibility of squeezes. If such a possibility appears, the hedge will then be shifted to a more distant delivery month. The reason for this is that the hedge operates most effectively as insurance when the price of the future and spot prices maintain as nearly as possible the spread existing when the hedge was placed. A squeeze disturbs this relationship; and when the hedging transaction has been a sale, it may operate to destroy a large part of the protection sought by the hedger.

Practice Regarding Delivery on Hedges.—Futures which are bought or sold as hedges are covered in the vast majority of cases by an offsetting futures sale or purchase. Delivery is exceptional. This is a normal condition and in line with the purpose of the hedge. It has been explained previously that a variety of grades of a commodity in which there is future trading are made tenderable on a contract and the grade to be delivered is at the seller's option. Thus while the contract is based on a standard grade, the purchaser may receive any one of the number of grades made tenderable, or a number of the various grades. He has no choice as to quality, and for manufacturer or dealer quality is likely to be of prime importance.

> The spinner . . . purchases from the merchant cotton of a certain specified grade since he can use only fairly even-running lots. If he bought cotton on the New York Exchange with the expectation of using it in his mill, he would find upon receiving it that only a part was adapted to his needs. To be sure the payment is adjusted to the grade of cotton delivered, according to a scale of "ons" and "offs" arranged with reference to the price of middling cotton. But that does not help the spinner

to obtain immediately just what he wants and to dispose of the portion that he does not desire. Moreover the spinner is uncertain not only as to what grade of cotton he will receive, but also as to when it will be delivered.[6]

Accordingly the merchant or manufacturer who desires a specific grade of the commodity will purchase it in the spot market, obtaining the grade which exactly meets his requirements and closing his hedge contract. There is a consideration which militates against any large amount of receipt of deliveries on futures contracts. In the cotton textile industry, the manufacturing centers are mostly far removed from the exchange markets. Apart altogether from the matter of obtaining the exact grade desired is the fact that it would not be an economical procedure to accept delivery at the distant center and then to transport it to the mill, when requirements may be filled at points nearby. When delivery is tendered on a contract sold as a hedge, it is for a good business reason. For instance:

An exporter may buy cotton for delivery at Memphis, and hedge in New York. If he meets with a demand from some European spinner for that particular grade, he may sell to him at a good figure, while perhaps covering his New York contract at a low price for Middling. If there is no good market for his grade at the Southern ports, or abroad, he may find it better to ship to New York and deliver on what were originally intended for hedging contracts. Particularly is this true when his cotton proves to be of an inferior quality. In the same way, when elevator companies have sold against their wheat in the market where it is stored, they will either deliver on their sales, or cover and sell later for cash, according to the conditions of spot and future prices at the moment.[7]

Hedging by Transactions in Other Commodities.—Not only may a transaction be hedged by an offsetting purchase or sale of a future in the same commodity, but a future in another commodity may be bought or sold if there be a corresponding and dependable price relationship. Illustra-

[6] M. T. Copeland, *The Cotton Manufacturing Industry of the United States,* Harvard University, 1912, p. 186.

[7] H. C. Emery, *op. cit.,* p. 164.

tions have been given of the purchase of a future to hedge the sale of a finished product, as in the case of the purchase of wheat futures against the forward sale of flour. Unless prices are thrown out of relationship by differences in the size of the crops, futures for one grain may be employed as hedges against the sale or purchase of another. Prices of wheat and rye move with a fair degree of unison; hence a purchase of rye might have been offset or hedged by the sale of a wheat future before future trading in rye was established. Similarly, the sale of barley for forward delivery was occasionally hedged by the purchase of a corn or oats future.

Hedging as an Aid in Financing.—It is true in the commodity trades, as in the mercantile community at large, that the character and financial soundness of the borrower are of prime importance; but granted these essentials are satisfactorily met, the borrower of good credit rating is able to obtain loans to a much higher proportion of the value of his commodity if it has been hedged than if it has not been hedged. In England the banks customarily require any commodity which represents the security for a loan to be hedged, while credit is readily procurable on hedged commodities. All unhedged stock is considered a speculation. Thus the hedge limits the risk and removes to a large extent the speculative uncertainties of the commodity price. The hedge is advocated by the bank for its own protection. Its employment is an aid to the borrower by increasing his borrowing capacity and reducing the amount of his own capital which is tied up in each lot which he purchases.

. . . the fluctuations in the supply and in the average price of American cotton from year to year result in fluctuations in the aggregate values involved often amounting to many hundreds of millions of dollars from one year to the next, or several times the total combined capital of all the cotton merchants and firms engaged in the distribution of the country's production—such combined capital being generally estimated by the cotton trade itself at considerably less than $100,000,000. In

other words, were it not for the consistent use of the practice of "hedging," the cotton merchants as a body would be continually exposed to losses representing more than their entire combined capital by reason of the changes in the price and in the aggregate value of the commodity they distribute,—changes which no human mind has so far been able to predict with even an approach to accuracy. . . .

Thus in the months from November, 1926, to March, 1927, when the bumper American crop of 1926-1927 had forced prices some 50 per cent below the average for the preceding five years, European, Japanese and to some extent American manufacturers contracted with merchants for the delivery of great quantities of cotton—estimated by the trade at a minimum of 1,500,000 bales and probably over 2,000,000 bales—in future years from 1928 to 1931. These forward contracts were of incalculable assistance to the producers in this country, since the "hedges" purchased by the merchants relieved the market of the burden of a corresponding quantity of cotton from the superabundant present supply. Evidently, however, the merchants would have been unable to make the forward contracts on any terms if they had been compelled to assume the risks of fluctuating production and prices over the period of years in which the deliveries were to be made.[8]

One further phase of the influence of the hedge upon financing requires mention. The fact that speculative risk may be largely removed enables manufacturer and dealer to work upon a much narrower margin of profit than would be possible if they were compelled to carry highly speculative risks. As it is axiomatic that profit sought is commensurate with risk assumed, so is it true that the lower the cost may be reduced, the narrower will be the necessary profit margin of miller or spinner.

Summary.—The primary purpose of the hedge has been shown to be insurance against the risk of wide price fluctuations. The insurance is obtained by offsetting a purchase or sale in one market—the cash market—by a sale or purchase in the futures market. The protection may approximate complete insurance if prices of spots and futures main-

[8] Brief and Memorandum on Behalf of Taxpayer in the Matter of Gosho Kabushiki Kaisha, before the General Counsel, Bureau of Internal Revenue, Washington, D. C., by Charles E. Hughes of Counsel. Pp. 68-71.

tain an exact relationship from the time the hedge is placed until it is closed; or it may be imperfect if there is a dislocation of the relationship. Whether perfect or imperfect, the speculative risk is minimized. A further value of the hedge to the merchant or manufacturer lies in the increased borrowing power which is given him against his holdings of the raw material and the consequent lower margin of profit upon which he can work. Viewed from the standpoint of the bank, security of the loan on a hedged commodity is increased, for the hedger has made the transaction "independent of speculative risk."

Chapter VI

HEDGING—IN PRACTICE

If the spot market and the futures market were always moving together; if the market for manufactured goods and the futures market were always moving together, or if the price relationship between grades of a commodity remained constant, hedging would be an operation of the utmost simplicity. Moreover, the protection it affords would be practically complete. The familiar type of a hedging transaction is not difficult to understand. We refer to the hedge where the loss or gain on a cash transaction is evenly balanced by an equivalent loss or gain on the exchange transaction. But hedging, while a widely used and an efficient form of price insurance, is by no means the simple matter indicated by the hypothesis of markets moving in lines exactly parallel to one another. In practice the hedger must give careful attention to the selection of the market in which to place his hedge and the month in which to place it. These are only his preliminary considerations, for since the success of the hedge as insurance depends upon maintenance of the spread existing between the futures market and the spot market at the time the hedge is placed, the dealer or manufacturer must be alert to avoid being caught in a movement which changes this spread to his material disadvantage.

Not only may the relationship between spot and future prices or between future prices and the prices of manufactured goods alter, but the price relationship between different grades of the same commodity may undergo a change

between the time when the hedge is placed and the time when it is closed out. These risks of change in the relationship of spots and futures and of change in the relationship of different grades cannot be passed on to the speculator. They are inherent in the market and there is no escape from them except by unremitting alertness on the part of the user of the hedge. In this chapter the causes of some of these abnormal situations will be outlined and the problems they present will be pointed out. Then we shall be in a better position to consider the extent to which hedging is practiced in wheat, cotton, cottonseed oil, rubber, silk, and other commodities; the business interests which employ hedging as price insurance, and the way in which they operate.

Discounts on Distant Months.—The normal relationship between spot prices and prices of contracts for future delivery is usually stated to be that the future should sell above the spot or the far month above the near month by the difference in carrying charges, interest on capital, etc. This is theoretically correct for the futures applicable to any given crop. Both the summary of the price range for the week ending May 18, 1928, of active futures on the New York Cotton Exchange (see next page), indicates that there is some difference between theoretical and actual relationships.

This is by no means an isolated instance. The conditions indicated have been of frequent occurrence in recent years. We note that the May future is higher than that for any month following except the single transaction in the April, 1929, future; that the July future has ranged above December, January, and March; October has ranged above these three months, and the December future has ruled higher than the first two active months of 1929. The price range of the January and March futures has been practically parallel. What causes these abnormalities?

Option for—	Range for Week	
May 1928	20.88 May 14	21.56 May 18
June 1928	.....	.....
July 1928	20.62 May 14	21.32 May 18
Aug. 1928	.....	.....
Sept. 1928	.....	.....
Oct. 1928	20.54 May 14	21.37 May 18
Nov. 1928	.....	.....
Dec. 1928	20.42 May 14	21.23 May 18
Jan. 1929	20.37 May 14	21.13 May 18
Feb. 1929	.....	.....
Mar. 1929	20.38 May 14	21.13 May 18
April 1929	21.07 May 12	21.07 May 12[1]

The condition of a spread between spot prices and active futures equivalent exactly to differences in carrying charges is an ideal relationship, but it is one that is subject to dislocation by variations in demand and supply in both spot and futures markets.

A clear and succinct summary of the reasons that cause distant months to sell below near months is given by a distinguished agricultural economist:

> Several reasons are advanced in explanation of the frequent occurrence of discounts on the distant months: (1) A current short crop is most often stressed, because it causes a scramble for cotton by those who have sold for forward shipment. Each is ignorant of how much others sell, so together they may oversell the supply. Covering of these short sales raises the price abnormally on near positions, thus leaving distant months relatively lower. (2) The manner of placing the hedge has an important influence. The spinners are inclined to operate on a hand-to-mouth policy in fixing the price on raw cotton, especially if the advance in the price has been strong. On the other hand, they may buy heavily of call cotton on basis, to be sure to get the cotton they wish. Much of the cotton bought on call is hedged in a distant month. Thus, while there is a strong demand for spot cotton by merchants in anticipation of future needs, the weight of the crop in hedges may be placed in the

[1] *Commercial and Financial Chronicle,* May 19, 1928, p. 3156.

forward months rather than against the immediate demand. (3) These discounts in the distant months may be due partly to uncertain business conditions. (4) A declining price level may cause such discounts. (5) In the spring months, following a high-price crop, the prospects of the new crop may have an important influence in causing discounts in the later months of the year.[2]

Another important factor in the relationship between prices of spots and futures is the supply of the commodity certificated for delivery on the futures exchange. A low supply of the commodity available for delivery tends to advance the price of the futures contract over spot prices. Thus an abnormal relationship is brought about by a normal economic cause and effect. The same authority, summarizing the relationship between stocks of certificated cotton, future prices, and spot prices for 15 consecutive months in 1923-24 shows that "During the four months . . . when the stocks of certificated cotton in New York were more than 100,000 bales, the price of New York futures averaged 16 points below the price of Middling spot cotton in the 10 designated markets. On the other hand, the average price of New York futures was 36 points above the price in the 10 markets during the 11 months when the stocks of certificated cotton in New York were less than 100,000 bales."[3]

Effect of Change in Basis upon the Hedge.—The difference prevailing between spot prices and the prices of futures is known as "basis." Basis is a more important matter to the placer of a hedge than is the trend of prices. In fact, the latter is entirely immaterial if the spread between spots and futures is the same when the hedge is closed as when it was placed. Profit or loss on the hedge will exactly balance the loss or gain on the spot transaction, and complete

[2] Alonzo B. Cox, *Cotton Prices and Markets,* U. S. Department of Agriculture Bulletin No. 1444, p. 71.

[3] *Ibid.,* p. 74.

protection will be afforded. The problem created by a change in basis may be illustrated by the following example:

Upland & Co., cotton merchants, purchase 500 bales of cotton on August 1. They pay 20.80 cents per pound, a price which is 50 points "on" the October future. The hedge transaction is the sale of five October futures at 20.30. Upland & Co. later sell to a mill at 19.80, taking a loss of 1 cent per pound on their spot cotton. At the time they sell to the mill, the October future is 19.70 and they close their hedge by the purchase of five October contracts. The profit on the hedge transaction is 60 points or 3/5 of a cent per pound. The net loss on these transactions, therefore, is 2/5 of a cent per pound, or $1,000. Narrowing of the basis has given the merchants imperfect protection. Changing basis and changing parities between markets make the operation of hedging far from being the simple matter usually given in illustrations. Differences in parities between markets cause hedges to be shifted, with the object of making sales in markets which are temporarily too high and purchases in markets which are temporarily low in relation to others. Similarly, basis is watched for the purpose of shifting hedges to more remote months in order to avoid squeezes in the nearby positions.

The possibilities of gain or loss through changes in the relationship of cash prices and future prices, and through changes in price differentials between different grades, are so numerous that probably a series of illustrations will best bring out the intricacies of the hedging operation, supplementing the illustrations given above. Let us first take two illustrations of gain or loss because of a change in differentials. In order to make the illustration as clear as possible, it will be assumed that no change in price occurs in either the cash or the futures markets from the time the hedge is placed to the time it is undone, or closed out.

The December cotton future is selling at 20. A cotton dealer acquires a stock of Good Middling, a grade superior to the basis grade, Middling, at an average cost of 71 points, *i.e.*, 71/100 of a cent per pound above the price of the December future. He hedges this "long" cotton by a sale of the December future. He sells his good middling cotton a month later at a price averaging 45 points "on" December, and simultaneously undoes his hedge. The result of his transaction is as follows:

Cash Transaction		*Futures Transaction*	
Bought good middling at 71 on Dec.	20.71	Sold December future	20.00
Sold good middling at 45 on Dec.	20.45	Bought December future	20.00
Loss	.26		

The merchant loses 26/100 of a cent per pound by the narrowing of the price differential between middling, the basis grade, and good middling. If his merchandising profit is more than 26/100 of a cent per pound, it will be reduced by this amount. If it is exactly 26/100 of a cent per pound, it will be wiped out. If it is less than 26/100 of a cent per pound, the transaction will be an actual loss on his books. Had the price differential between good middling and low middling increased instead of narrowing, the merchant would have been benefited accordingly.

In the above transaction, the merchant was holding a premium grade. Let us say that the merchant is holding strict low middling, a discount grade, which has cost him an average of 94 points "off" the price of the December future. With the December future 20 cents, his strict low middling would cost 19.06 cents per pound. He hedges by

a sale of the December future. Later he is able to dispose of the strict low middling at a price averaging 38 "off" December, which is still at 20 cents. This transaction shows the following result:

Cash Transaction		*Futures Transaction*	
Bought strict low middling at 94 off December	19.06	Sold December future	20.00
Sold strict low middling at 38 off December	19.62	Bought December future ..	20.00
Profit	.56		

Here the merchant has gained 56/100 of a cent per pound by the narrowing of the price differential between middling and strict low middling. If the differential had widened, he would have lost. Note that the effect of a narrowing between the price of the physical cotton and the price of the future employed for the hedge is detrimental to the seller of a hedge if the physical commodity is a premium grade. It is favorable, if the commodity hedged is a discount grade.

These transactions have purposely been stripped of details such as commissions on the sale and purchase of the futures and the items of cost to deliver and merchandising profit in the case of the cash sale, to bring out as clearly as possible the influence of changing relationships in the prices of different grades. In the illustrations below, the transaction is likewise reduced to its simplest terms to bring out the effect of a change in the relationship between the cash and futures markets.

With the December cotton future selling at 21.60, A & Co. quote a price of 23 cents for delivery of middling cotton, the basis grade. This price includes cost of delivery and A & Co.'s expected merchandising profit of 40 points (40/100 of a cent) per pound.

The purchase of the December future as a hedge is made at 21.60. Between the time of making the forward contract and the time for delivery, A & Co. acquire the necessary cotton at an average cost of 20.10 cents per pound. This is 1½ cents less than the price of the December future at the time the contract was made. In the meantime, the price of the future has declined to 19.60, a full 2 cent drop. A & Co. close out their hedge transaction by selling the future when they have the cotton on hand. The transaction shows the following result:

Cash Transaction		*Futures Transaction*	
Sold cotton for delivery at	23.00	Bought December future at	21.60
Bought cotton at an average cost of	20.10	Sold December future at	19.60
		Loss	2.00
Gross profit	2.90		
Cost to deliver	1.00		
Net profit	1.90		
Loss on futures	2.00		
Net loss on transaction	.10		

Not only have A & Co. failed to realize their expected profit; they have sustained an actual loss because of the widening of the margin between spot cotton and the futures market. The decline in futures was greater than the decline in the price of spot cotton.

Now let us assume that the reverse of this situation occurs. A & Co. make their forward sale and place their hedge as before, acquiring their cotton at the same average cost—20.10 cents. But the price of the December future has declined only ½ cent—50 points—from the price prevailing when the hedge was bought. A & Co.'s books now show the following:

Cash Transaction		*Futures Transaction*	
Sold cotton for delivery at	23.00	Bought December future at	21.60
Bought cotton at an average cost of	20.10	Sold December future at	21.10
Gross profit	2.90	Loss	.50
Cost to deliver	1.00		
Net profit	1.90		
Loss on futures	.50		
Net profit on transaction	1.40		

Instead of making 40/100 of a cent profit per pound, A & Co. have made 1 cent a pound more. The spot and future markets have again been out of alignment, but the change has been to the advantage of all those placing long hedges in the December future.

Not only is the relation of spot and future prices and the spread between different months watched for the purpose of avoiding an unprofitable situation, but hedging interests are alert to shift their contracts in order to make an additional profit. Say the October cotton future has been bought as a hedge. October futures have risen 150 points since the buying hedge was placed. But December futures have advanced only 110 points. The October contract can be closed and the hedge shifted to December at a profit to the hedger. He retains his protection and profits by the difference between the price at which the October future is sold and the price at which the December is bought.

These illustrations of some of the difficulties that may attend hedging have been given to indicate that simple as the hedge appears in theory, it is by no means an automatic device nor does its likeness to insurance mean that the insured can ever rest wholly safe in the assumption that automatically with the placing of his protective transaction, all

his risk has been passed to other shoulders. Further reference to this phase of the hedge will be made, as we take up a survey of each of the large commodity markets in which hedging is employed.

Hedging in the Grain Trade.—Grain is bought from the farmer by country elevators. These organizations are of primary importance in the country market. While they do a warehousing business, their principal function is merchandising. They purchase grain outright for the purpose of resale in the intermediate and terminal markets. Three main types of country elevators exist—those which are controlled by farmers' organizations, known as cooperative elevators, single elevators owned by an individual or corporation, and line elevators. Line elevators are a chain of country houses owned and operated by one company.

In the report of the Federal Trade Commission on the Grain Trade, replies from over 8,500 country elevators indicated that 50 per cent of these houses customarily hedge their purchases.[4] This does not mean that 50 per cent of the elevators carry their purchases of grain unhedged. The use of the hedge varies with the type of company and with the method of selling. The line elevators are probably the most consistent users of the hedge. Operating from 50 to 150 elevators, the line company has a tremendous volume of grain in its hands during the marketing season. The great risk involved in carrying grain in such volume induces a consistent policy of hedging.

> The managers of line companies, especially the larger ones, recognize that the larger the total volume of grain purchased and held the greater the amount of risk involved from the fluctuations of world grain prices and the more serious the possibility of heavy losses. If they are willing to forego the opportunity for profits arising from the possibility of price advances, they can by the use of the hedging market protect themselves against serious losses. . . . As a result the

[4] Vol. I, p. 213.

large commercial lines tend to pursue a fairly consistent hedging policy, while even the smaller ones probably tend to hedge much more frequently than do the individual elevators, on the whole.[5]

Country elevators sell on consignment, on track, and "to arrive." A sale on consignment involves shipping to the terminal market, the country elevator bearing the risk of price fluctuations until the grain is sold. Consignment sales are generally hedged. When the grain is sold "to arrive" or on track, however, the same necessity does not exist. Sale of the grain in cars as it stands on the tracks removes the time element and hence the risk of fluctuating prices. Both sales "to arrive" and sales on track are often made the same day the grain is received by the elevator. The effect of marketing methods upon elevators' hedging policy is summarized by the Federal Trade Commission in tabulating the percentage of elevators hedging in different states with the percentage of consignment and direct sales: ". . . with some exceptions . . . the proportion of hedging tends to vary directly with the proportion of consignment business reported, and therefore inversely with the percentage of direct selling." [6]

Some considerations in the practice of hedging for the country buyer are outlined below:

Hedging on consigned grain is best done in the option month immediately following except when the grain will arrive and be profitably sold within the current option.

To obtain a carrying charge we hedge when the cash grain is at a sufficient discount to pay for the cost of carrying the grain to the best option for this purpose. Hedging when the cash grain is selling at a greater discount under the option than it takes to carry the grain to that option gives greater profit. On short crops when we have grain of uneven quality the better grain will usually sell at the option before the first day of that option.

It is necessary to check up the options in the futures markets tributary to your cash grain market, particularly where the freight rates are the same as in the case of Milwaukee and Chicago. In a

[5] Report on The Grain Trade, Vol. I, p. 218.

[6] *Ibid.*, p. 215.

narrow market like rye the option sometimes becomes congested. If you are tributary to two markets where the freight rates are different it is necessary to check up the cash and options in each, taking into consideration these rates.

Where we hedge for protection while grain is in transit unsold and the cash grain will arrive before the middle of the next option, then we use the nearest option, because the cash and the nearest option usually work hand in hand.

If the cash grain would not arrive before the last few days of that option then we use the next nearest option. We usually change over our hedges when the cash and the option in which the grain is hedged sell at the same price.

A few illustrations: On July 13, 1926, bids for No. 3 white oats for August and September shipment were 40¼. The September option was 40¾, the December 43¾. In this case if we were storing oats for a carrying charge we would use the December with its 3½ cent premium. If we were hedging consigned grain and the cash would arrive before the middle of September, we would hedge in the September option.

On the 13th of October the December has reached 44, so has the cash oats. Then we buy back the December option and sell the May in order to take advantage of a 4 cent premium, the May option selling at 48.[7]

Reasons for Spots Selling Above Futures in the Grain Trade.—In the grain trade the phenomenon of spots selling above futures occurs. This may be due to abnormal market influences such as a temporary scarcity of cash grain or a temporary demand in excess of current supply. A second reason is found in the fact that the grain tenderable on the futures contract may not be equivalent to grain of a corresponding grade bought in the cash market. The grain delivered on a futures contract is likely to be so mixed that while it qualifies as tenderable, under its proper grade it just passes inspection. Grain bought by sample is likely to be nearer the top of its grade in quality, and hence the cash grain commands a premium over the future. In the case of wheat, a considerable quantity sells at substantial premiums over the futures, due to its high protein content.

[7] From an address by J. C. Lyman before Western Grain Dealers Ass'n, *The Grain Dealers Journal,* May 10, 1928, p. 560.

Hedging by Terminal Elevators.—The country elevator, a buyer of cash grain, sells futures as a hedge. Other leading factors in the grain trade who sell futures as a hedge are the terminal elevators and buyers of "to arrive" grain. Terminal elevators are located in the large primary markets. As crops come to the market, millions of bushels of grain are handled by the large terminal companies. A terminal elevator is a buyer of grain, some of which it resells and some of which it stores for sale at a later time. In volume of grain handled, the situation of the terminal elevator is similar to that of the line elevators. Grain held in the terminals is uniformly hedged, although only the balance which the elevator is long requires protection in this way. Thus, an elevator which is long 800,000 bushels of wheat and which has sold ahead 200,000 bushels, will maintain a hedge only on its net long position of 600,000 bushels.

The buyer of "to arrive" grain hedges his commitment by a sale in order to protect himself against the risk of price fluctuation while the grain is in transit.

Users of the Selling Hedge.—Millers who contract ahead for the delivery of flour, exporters, and shippers, protect their commitments by the purchase of futures. The exporter who contracts to sell grain abroad or the dealer who contracts for the delivery of grain at a seaboard market or a point distant from the primary markets insures his ability to fulfill his contract by purchasing futures which are liquidated as the grain is picked up in the cash market for delivery on the contract. The extent of hedging by milling interests cannot be determined exactly. The larger mills, particularly in the Northwest territory, apparently make a practice of hedging their forward contracts by the sale of flour. The futures are placed in the month when the flour is needed or spread over successive months, being closed out as grain of the quality required is obtained. On the other

hand, mills which are located in close proximity to country markets may not hedge at all. They rely upon their ability to obtain the grain in the contiguous market when and as needed.

Hedging by Producers.—The hedge is employed chiefly by dealers and manufacturers and usually to a limited extent by producers. The reasons for the producers not using the hedge are: (1) relatively few producers raise crops which are large enough to warrant the hedge protection and (2) a good part of the producer's crop is usually marketed immediately. He bears the risk in price fluctuation during the growing season but when the crop is raised it passes quickly into other hands. That the hedge may be employed by producers, acting in concert, and that substantial protection may be obtained on growing crops is shown by the following transaction, described in *Commerce and Finance,* August 22, 1928:

Fifty wheat growers, all representative farmers in southwest Kansas and Northern Oklahoma, carried out a very successful hedging transaction this spring, press dispatches report.

Last April they were attracted by the highest level of prices reached in three years, due to conditions which at that time gave every promise of a very short wheat crop, particularly in the southwest.

They made inquiry of a country elevator dealer near Turon, Kans., as to the feasibility of using the futures market to obtain or insure the prevailing record price for their prospective wheat crop.

So rapidly did results of this discussion travel among wheat growers in that territory that soon the plan was being watched with great interest. The fifty farmers, who expected a total production of 200,000 bushels in about twelve neighborhood counties bordering the two states hedged their growing crop.

"Virtually the entire transaction was consummated in the closing days of April when the Kansas City July price reached $1.60¼, the highest in three years," says a Kansas City editor, commenting on the deal.

"The closing price of the market Saturday was $1.23⅜, giving the investors a profit of as much as 42⅝ cents a bushel more than their neighbors if the contract had been closed that day. The basis of the contracts offered a premium of 4 cents a bushel for No. 1 hard wheat,

with 11 per cent protein and 1 cent for each ¼ per cent variation in protein up or down.

"With virtually all arrivals here grading No. 1 hard wheat and using as an example 13 per cent protein, these farmers would receive $1.66¼ a bushel, basis Kansas City.

"The high price was assured through the short selling of 200,000 bushels of Kansas City wheat, in which contracts were made to deliver a similar amount of wheat from the new crop harvest now under way. The trade is known as hedging.

"Some of the country elevators active in encouraging the 200,000 bushel trade, included the Farmers Elevator Company of Castleton and Sterling, Kans.; the Pretty Prairie Co-operative Grain Company and the Turon Elevator Company. Many individual farmers also hedged their new crop wheat, in the peak of the market, but they are not included in the group of fifty.

"John R. Meister, Alida, Kans., farmer, hedged 2,000 bushels here and a 3,000 bushel prospective crop was hedged by C. D. Bruggeman of Wakefield, Kans.

"The increased farmer participation in the futures market is regarded by dealers here as an important step that will bring home to the grower the necessity of this important and basic cog in the century-old system of grain marketing."

Markets Used for Hedging.—The more widespread practice of hedging in the Northwest grain states makes Minneapolis the leading market for the hedging of country elevators. Unless prices between markets are out of parity, the practice is to make the hedging purchase or sale in the nearest futures market. While Minneapolis leads as a field for country elevator hedging, Chicago is the seat of operations for more diverse interests and of country elevators spread over a wider extent of territory.[8]

Summary of Hedging in the Grain Trade.—The largest handlers of grain—the line elevators, terminal elevators, and Northwestern millers—are apparently the most consistent employers of the hedge. There are indications that commission houses are a factor tending to increase the extent of hedging by country elevators. The commission house often

[8] See Report of the Federal Trade Commission on the Grain Trade, Vol. I, pp. 228-230.

finances the country purchaser and as a protection to its advance requires that purchases be protected by a hedge. The peculiar position is taken by some cooperatives that the hedge is a gamble, and therefore they do not hedge at all. This is based apparently upon the same type of reasoning which assumes that all card games are gambling, that all horse racing is evil, and that the theater is an institution dangerous to public morals. The futures market contains a body of speculators; therefore, any use of the futures contract is a gamble. It is true that some practices in hedging approach gambling, but these are misuses rather than normal uses. For instance, some elevators make a practice of hedging only when, in the judgment of the managers, the market is declining or is about to decline. They do not hedge when in their opinion the price trend is upward. Here the hedge is not used as price insurance at all. The elevator is speculating for the rise and using the hedge only as a stop-gap against the time when in its judgment it will be safe to speculate again.

Hedging in the Cotton Trade.—In the cotton trade, hedging is practiced to a large extent by merchants and to a varying extent by mills. It has been said that "nine-tenths of all the cotton shipped from America to the Mersey is sold against either in New York or in Liverpool."[9] The cotton merchant buys advantageously in that the price which he pays is based upon the shortest staple in the sample. Later, he may obtain a profit by grading the cotton and procuring a good quantity of a longer staple than that on which he based his purchase price. In the meanwhile, he protects his position by selling futures as a hedge. Another use of the hedge and one widely employed is to protect forward contracts. A merchant often contracts to deliver cotton of an exact

[9] J. G. Smith, *Organized Produce Markets* (Longmans, Green & Co., 1922), p. 95.

grade and staple to a buyer abroad. The price which is quoted the foreign buyer is based upon the price of the future for the month in which the merchant must have his cotton ready for shipment. This forward contract is protected immediately by a purchase of the future for that month. A merchant who accumulates cotton for export may employ the selling hedge as a protection against overpurchases made for his account by his agents in the field, or the buying hedge as a means of protection if their purchases have not been equivalent to the orders he has on hand.

Changed conditions in the cotton market and in the cotton trade have brought about a modification of hedging practices for mills. Hand-to-mouth buying has characterized the textile industry for many years. This has reduced materially the time covered by the forward contract for the delivery of the finished goods. Before the 1920–21 collapse, mills would sell finished goods as far as six months ahead, hedging the contract by a purchase of cotton futures. Now with the forward selling period cut in half, the tendency has been in evidence to fill the requirements by an immediate purchase of the spot cotton. If the size of orders is such that considerable time must be consumed in obtaining the cotton required, then the hedge protection will be employed regardless of the period covered by the forward contract. Another variant in the practice of mills is that some do not hedge purchases of spot cotton at all; they confine their use of the hedge entirely to the protection of forward sales of finished goods. Among the Southern mills, it is probable that use of the hedge has gained; but many mills make no use of it and some are avowedly opposed to it. Mills in the South which do hedge purchase cotton early in the crop-moving season. By thus anticipating the movement of the crop, they are able to effect a saving in the cost of handling and in the cost of transportation. They regard it as more

efficient to buy in a market close at hand than to wait and buy in the distant primary market. These purchases of spot are protected by sales of the future, and then, as orders are taken for manufactured goods, enough of the hedged sales are closed to leave only the "long" spot cotton protected; but "the buying policy of many mills, both North and South, but particularly the former, is to purchase according to the method which seems to avoid speculating in the largest possible degree, rather than to follow any one particular method or methods. Mills will be found which, depending on conditions, will employ either buyer's or seller's call or purchase outright without hedging, while under other conditions all goods sold will be hedged by the purchasing of cotton futures, and in yet other situations all cotton purchased will be immediately hedged by future sales." [10]

The arguments advanced by mills which do not use the hedge center around the proposition that the prices of finished goods and the prices of raw cotton do not move together. When the price of cotton rises, it is stated that it does not necessarily follow that there will be an appreciable advance in the prices of finished goods. On the other hand, finished goods may lie dormant on the market and their prices decline before any weakening in spot prices is in evidence. Hence, since finished goods' prices generally either lag behind or precede the movement of spots, it is urged that the hedge affords no satisfactory protection.

Hedging in the Sugar Industry.—In wheat and cotton, little hedging is done by growers. A fundamental reason for this, particularly in the cotton trade, is that the production of a large number of the individual growers is not sufficient to make one contract unit. In the sugar trade,

[10] Senate Document No. 100, Report of the Federal Trade Commission on The Cotton Trade, p. 53.

producers of both cane and beet sugar employ the facilities of the New York Coffee and Sugar Exchange for hedging. Dealers also employ the selling hedge as a protection against the raw sugar in their hands. A manufacturer who requires refined sugar and who cannot obtain his requirements immediately may safeguard his position by the purchase of futures. Then, as he obtains the refined sugar, he will close out his purchase of the futures. Canners and the manufacturers, bakers, and wholesale grocers, all large-scale users of sugar, have thus a use for the protection afforded by the hedge.

Hedging in the Coffee Trade.—The export movement of coffee has been controlled for many years by the Brazilian Government. So effective is the control exercised through its valorization scheme that price levels are to a large extent artificially maintained. This has tended to reduce interest in the market and to hamper its usefulness for hedging. The New York Coffee and Sugar Exchange, however, has endeavored to aid hedging by broadening its market. Until 1928 the contract traded in was a Rio contract, with Santos coffee deliverable at price differentials. This contract, known as Contract A, remains, but Santos coffee is no longer tenderable thereon; a separate Santos contract, known as Contract D, is now traded in. Trading in Rio and Santos separately insures a greater degree of accuracy in relative quotations and so makes the market more useful to the trade.

Hedging in the Rubber Trade.—Rubber is an import commodity, hence the majority of hedges placed by dealers constitute sales of the future against their takings in the primary markets in the Far East. The manufacturer of tires or other rubber goods, however, may employ both the buying and the selling hedge. A contract for the forward delivery of manufactured rubber goods, when the crude rubber is not on hand, is protected by a purchase of the future for the month or

months when the raw material will be needed. The price of the manufactured goods will, of course, be based upon the price of the future; on the other hand, a selling hedge is employed when large stocks of crude rubber are carried and are not offset by definite forward contracts for the manufactured article.

The Banker's Hedge.—The title of this section is chosen to point out the fact that, though bankers do no actual hedging, they employ the hedge in a real sense for their own protection. Let us say that a bank is applied to for a loan on the security of warehouse receipts for wheat. The prevailing price of wheat is $1.30 per bushel. The bank lends up to 85 per cent of the prevailing market price, or at the rate of, say $1.10 cents per bushel. Now the price of wheat declines to $1.20 per bushel. When the loan was made, the bank was protected to the extent of 20 cents per bushel; now its protection amounts to only 10 cents per bushel; and to maintain the same protection it had when the loan was made, it must require additional security from the borrower. But if the grain had been hedged at the time the bank made its loan, it would make not the slightest difference whether the price declined 10 cents or 50 cents per bushel. The hedge which protects the owner of the grain protects the bank's margin of safety on its loan.

Hedging in Silk.—Trading in silk futures has not been carried on for a sufficient time to provide data as to the extent of hedging or the technique of the market. An illustration of employment of the hedge to protect a trade transaction is as follows:

A dealer in raw silk is in receipt of an inquiry for an order of "crack double extra" from a silk mill, the silk to be delivered in October. The October future is then selling at $5.05. The dealer bases his price upon this figure, adding 10 cents for his profit and 10 cents for credit, interest, carrying

charges, etc., and quotes the prospective purchaser a price of $5.25. Upon acceptance of his offer, he buys October futures at $5.05. The price of silk advances both in the cash and futures markets, and as a result of the advance the dealer pays $5.10 per pound for his raw silk. When the physical silk is acquired, he closes his hedge by sale of the October future which is then quoted at $5.10. The dealer's transaction now stands as follows:

Cash Transaction		*Futures Transaction*	
Sold crack double extra @.	$5.25	Bought October future @	$5.05
Bought crack double extra @	5.10	Sold October future @ ..	5.10
Gross profit	.15	Profit	.05
Less carrying and other charges	.10		
Net profit on cash sale ..	.05		
Plus profit on future	.05		
Net profit on transaction .	.10		

By employing the hedge, the dealer has realized his anticipated profit. Without the hedge as protection, his profit would have been cut in half by the rapid rise in the price of raw silk.

Hedging in Cottonseed Oil.—Cottonseed, a highly perishable product, comes on the market in October and approximately 75 per cent of the crop is marketed within a period of three months. Crude oil mills, which crush the seed and sell the crude oil to refiners, are the purchasers of the seed. Although the seed crop is marketed within this short period, the mills may not crush some of their purchases until six months or a year later. In the meantime, they are subject to the risks inherent in the commodity and to risks of price fluctuation for crude oil. The mills protect the oil which is

in their tanks or which is still in the seed, unextracted, by sales of futures on the New York Produce Exchange. A large part of the market for the crude oil mills is furnished by the contra hedging operations of refiners. The refiner buys futures against his requirements, closing out his hedges later as the crude oil is bought from the mills.

Summary.—A significant feature of hedging is its use in different industries by large units which are subject to an exceptional degree of risk. In the grain trades, we find the line elevators and terminal elevators to be the consistent users of the hedge as price insurance. In the cotton trade the merchant, with less control over the selling price of his goods than the spinner, hedges more consistently. In no line does the producer appear as a leading factor in actual hedging. But this does not mean that he does not benefit from it. Because the grain elevator, the cotton merchant, the crude cottonseed oil mill and other middlemen who purchase from the producer can free themselves from risk of price fluctuation by hedging, they can do business on a narrower margin of profit than would be possible otherwise—and a narrower margin of profit means simply that the price to the producer is closer to the price for which the middleman sells than could possibly be the case if the middleman were compelled to take the full measure of price risk into account when quoting his offer to the producer.

Chapter VII

SPECULATION

Not infrequently futures exchanges are referred to as speculative markets, as distinguished from cash markets. The term is not incorrect if its application is understood. If it is used to imply that the futures market is solely a vehicle of speculation, the phrase is a mere demagogic catchword. If it is used and understood to mean that speculation is an integral part of the work of the futures markets, the definition is less faulty. The futures exchanges are of direct use to the commodity trades in affording facilities for hedging purchases and sales. Providing a medium for this class of transactions is their principal economic function. But, as will be shown later, hedgers as a class are not sufficiently numerous to make possible a broad market. Another group of traders must be present—the speculators. Speculative trades are made by outsiders, not members of the exchanges, who buy and sell through commission houses. Speculative trades are also made by floor traders in the pit or at the ring of the exchange. Methods of the outsider and of the floor trader may differ, but their objective is the same—to gain a profit by anticipating correctly the trend of prices, and to close their purchases or sales by an offsetting contract.

The distinction between the speculative trade and the hedging trade is to be found solely in the intention of the trader. If the intent is to protect a transaction in the cash market, it is a hedge; if the intent is to trade for a profit, it is a speculation. In this connection it should be noted that the number of deliveries on any exchange furnishes no indi-

cation of the relative volume of hedges and speculative trades; as has been shown, the hedger does not deliver nor does he take deliveries. To assume, as is sometimes done, that a small proportion of deliveries to trades necessarily indicates that practically all trades are speculative, is to proceed on a false premise. It would be as logical to reason that the same state of facts means that nearly all trades are hedges. It is our purpose in this chapter to ascertain the reasons for speculative activity in commodity futures; to examine attacks which have been made upon speculation and defenses which have been made, not with the purpose of proving a case for or against speculation as such, but for the purpose of considering the validity of attacks and defenses and of explaining the part which speculation plays in the workings of a futures market.

Attacks on Speculation.—Speculative activity on organized exchanges has been and is a subject of frequent attack. Paradoxically it comes under the fire of both producers and consumers—but the fires of the two groups are generally leveled at the opposite periods of the business cycle. When commodity prices are low, the producer is most vehement. It was no coincidence that the exchanges came under the heavy fire of producing interests in the nineties, the nadir of the last major downward cycle of commodity prices; nor is it a coincidence that agitation from producing interests became less intense and dwindled to a whisper as commodity prices swept upward in the next major cycle from 1896 to 1920. With the commencement of another downward cycle of commodity prices we may expect again to hear increased attacks upon organized speculation's depressing influence on commodity price levels.

Another angle of attack has been that speculation is gambling, and hence should be abolished as something morally pernicious. Coupled with attacks upon speculation as

gambling, but deserving consideration as a separate complaint, is the fact that speculators of small means lose large sums in ill-advised trades, and that the ill effect of these losses by those who cannot afford to lose must weigh heavily in the scale against the benefits which commodity exchanges confer.

Defenses of Speculation.—Speculation as an economic factor has been defended upon divers grounds. It is stated that speculation anticipates price changes. By bringing about a gradual adjustment to the contingencies which the speculator foresees, rises and falls in prices are cushioned and, therefore, less abrupt than they would be without speculative activity.

A second defense is that speculation steadies prices; that in nonspeculative markets price changes are wide and fluctuations erratic, whereas in speculative markets prices move within a much narrower range.

A third defense is that speculation welds markets together by keeping prices between different markets at a parity. Finally, it is advanced in defense of speculation in commodity markets that the risks incident to price changes may be shifted from the shoulders of grower, dealer, and manufacturer to the shoulders of an unorganized body of professional risk takers—the speculators.

Speculation and Gambling.—In considering any subject, it is well to have a workable definition at the start. When speculation is opposed as gambling, the contention is that speculation and gambling are the same; that the poker player is a speculator and the trader is a gambler, or vice versa. There is an obvious distinction between the poker player and the speculator which must occur at once to every fair-minded observer. The trader finds an economic condition of fluctuating prices and endeavors to take advantage of it. The poker player joins with others in creating a situation out of which

risks develop, for the express purpose of effecting a hazardous gain. Speculation thus differs from gambling in this important particular: that the gambler creates his own risk, while the speculator merely assumes risks. But this does not go far enough. If we were to stop with this as a distinction between speculation and gambling, we should be compelled to meet the serious objection of the person who drew his analogy from the race track rather than from the poker table. He would point out that the layer of a bet on a horse race creates no risks and merely endeavors to profit by the uncertain factor inherent in horse racing, the relative speed of a number of animals.

Wherein does the speculator differ from the man who bets and presumably bets scientifically on a horse race, considering carefully the comparative past records of the entries, the conditions of the track, the ability of the riders, and other known factors? A comparison of these two transactions suggests that it will be necessary to go further than merely to distinguish between creating risks and accepting risks. We must consider the nature of the risk. The contract which is entered into by every person who buys or sells a future is an obligation, enforceable at law, to deliver or to accept and pay for a stated quantity of the commodity. There is no difference between it and the legal obligation of the man who contracts to sell 10,000 bushels of wheat delivered at a distant point from his own elevator. The buyer or seller of a commodity future at the instant he makes the purchase or sale, is an integral part of the marketing machinery. He may actually deliver the commodity or receive it, or he may step out of the transaction and never handle a bushel or a pound of the commodity. Nevertheless, at some time and for a time, he is a part of the distributive system. The layer of a wager, on the other hand, has no place in the channels of distribution and no standing in courts of law. A speculator

acquires commercial rights and duties; the gambler acquires neither.

Also in every gambling transaction there are two or more parties; somebody must win and others must lose. Speculation, however, involves no necessity of like losses and gains. Let us say that from January to May the price of May cotton rises from 20 cents a pound to 28 cents a pound, advancing at the even rate of 2 cents a pound per month. Smith, a speculator, buys May cotton in January at 20 cents; he closes out his contract in February at 22 cents and the purchaser of his contract is Brown. Brown closes his contract in March at 24 cents, at which price Jones buys; Jones is led to accept a 2 cent profit in April, and Robinson buys at 26 cents as Jones sells, and closes out his trade in May. Here are four speculators, each one of whom has made a profit of 2 cents a pound. It is certain that only one person can possibly have lost in the course of this chain of speculative trades. If Smith's purchase had been made from a short seller, the short seller would have lost; but if Smith's purchase in January were made from anybody except a short seller, we would have a series of speculative trades with all profits and no losses.

What of the consumer—does he lose? He does not because in the delivery month, May, the price of the future and the price of spots come together and if the future were 28 cents in May, spot cotton would then be selling at that figure or very close to it.

After pointing out that distinctions between speculation and gambling cannot be made by law based on the subject matter of the transaction or on the form of the transaction, Dr. Hadley thus distinguishes between them:[1]

[1] Article by Dr. Arthur Twining Hadley on "Speculation" in the *Functions of the Legitimate Exchanges* (Chicago: Hartzell, Lord Co., 1910), p. 229.

The difference between legitimate speculation and gambling lies neither in the subject matter nor in the form of the transaction, but in its intent and purpose. Legitimate speculation involves anticipation of the needs of the market and a power to assume risks in making contracts to meet these needs.

Does Speculation Lower Prices?—Many complaints against speculation arise from agricultural producers, inspired by the inadequate prices their products bring when compared with the toil and risk involved. There is no intent to deal here with problems of farm depression. When speculation is attacked as an influence which lowers prices, there is too often an imperfect understanding of its rôle; there is perhaps more than a tinge of the fallacy that cost of production should determine the market price.

Phases of the Contention that Speculation Lowers Prices.—While the proposition is not capable of exact proof, it seems a reasonable supposition that if speculation is a depressing influence upon prices, prices should be lowest when speculation is rampant. An examination of price trends and of the volume of trading in different commodities shows no such correlation. One example cited by J. G. Smith [2] will be sufficient for illustration. In the year 1891, the price of wheat averaged $1.08. In that year, 1,604,450,000 bushels were traded in on the New York Produce Exchange. The following year the price of wheat averaged 89¾ cents, but the volume of trading had declined to 1,079,713,500 bushels. In 1893, when less than a billion bushels were traded in, wheat prices averaged approximately 17 cents lower. Such a comparison, of course, has only a negative value. It is probable that declining prices, coupled with the fact that in this particular case business was going through a severe depression, was of itself sufficient to restrict speculation. On the other

[2] *Organized Produce Markets* (Longmans, Green & Co., 1922), p. 129.

hand, it is equally clear that the volume of futures trading had no effect upon the price trend.

A more extended comparison of the volume of futures trading and the price movement was made in the *Report of the Commissioner of Corporations on Cotton Exchanges.* The following is reproduced from Chapter VIII, Part 4, of that Report: [3]

COMPARISON OF AVERAGE SPOT PRICES OF MIDDLING COTTON WITH VOLUME OF FUTURE SALES, NEW YORK MARKET, AND WITH COTTON CROP, 1871–1897

Year ended August 31 —	Future sales, New York [a]	Average spot price [a]	Cotton crop [b]	Relation of future sales to crop
	Bales	*Cents*	*Bales*	*Per Cent*
1871	3,000,000	16.95	4,352,317	69
1872	4,933,700	20.48	2,974,351	166
1873	5,299,700	18.15	3,930,508	135
1874	6,187,700	17.00	4,170,388	148
1875	8,358,000	15.00	3,832,991	218
1876	7,233,650	13.00	4,632,313	156
1877	10,735,400	11.73	4,474,069	240
1878	12,973,300	11.28	4,773,865	272
1879	25,410,600	10.83	5,074,155	501
1880	34,006,600	12.02	5,755,359	591
1881	28,800,900	11.34	6,605,750	436
1882	33,077,400	12.16	5,456,048	606
1883	26,543,600	10.63	6,949,756	382
1884	24,632,100	10.64	5,713,200	431
1885	20,889,700	10.54	5,682,000	368
1886	23,270,600	9.44	6,575,691	354
1887	26,482,100	10.25	6,505,087	407
1888	25,763,900	10.27	7,046,833	366
1889	18,764,800	10.71	6,938,290	270
1890	22,138,200	11.53	7,472,511	296
1891	24,885,900	9.03	8,652,597	288
1892	34,187,200	7.64	9,035,379	378
1893	53,245,400	8.24	6,700,365	795
1894	37,888,400	7.67	7,493,000	506
1895	39,368,500	6.50	9,901,251	398
1896	56,469,000	8.16	7,161,094	789
1897	36,113,000	7.72	8,532,705	423

[a] Compiled from Latham, Alexander & Co.'s *Cotton Movements and Fluctuations.*

[b] From Census Bulletin No. 100, on Cotton Production, 1908. The crop figures here given are for crops marketed in the season indicated in column 1. Thus the crop of 4,352,317 bales was grown in 1870, but marketed in the season 1870-71. The discussion in the following pages is on the same basis.

[3] P. 273.

. . . it will be seen that the first phenomenal increase in the ratio occurred in 1879, when the total sales of futures were 501 per cent of the actual crop, or, to use a common expression, the crop was "dealt in five times over" on the New York Cotton Exchange. In this year of exceptional activity the average price of middling fell to 10.83 cents, as compared with 11.28 cents in the preceding year. In the season 1878-79, however, for the first time in the history of the cotton trade, the crop exceeded 5,000,000 bales. In the next year, 1880, future sales were 591 per cent of a materially increased crop, yet the price rose from an average of 10.83 cents to 12.02 cents. Of course, it is not contended for a moment in this report that the heavy volume of future trading explains this great advance in price. It may be pointed out, however, that, other conditions being the same, an increase of about 700,000 bales above the previous year's record crop of 5,000,000 bales must have tended to produce a depression in the price. If the theory that a heavy volume of future trading depresses prices has any merit, a decided decline instead of an advance of over a cent might, therefore, have been expected in 1880. As a matter of fact, any depressing influences were evidently offset by other conditions. The chief of these probably was the marked improvement in general trade which followed the resumption of specie payments in 1879. In 1882 the crop was dealt in six times over on the New York Cotton Exchange, yet the price advanced from 11.34 cents to 12.16 cents. The explanation undoubtedly is to be found chiefly in the sharp reduction of the crop, which fell from about 6,600,000 bales for the season of 1880-81 to 5,456,000 bales for the season 1881-82. In 1893 the ratio of future sales was highest for any year shown in the table, the crop being traded in nearly eight times over. This great activity was accompanied by an advance of 0.6 cent in the average price of middling. However, the crop for the season of 1892-93 was short, falling 2,335,000 bales under that of the preceding season.

Thus it will be seen that pronounced activity in the future market has frequently been accompanied by an advance in the price of spot cotton instead of by a decline. Similarly, an inactive future market has frequently been accompanied by a decline. Thus in 1883, when the volume of future trading as compared with the crop was comparatively small, the price fell over 1½ cents. For this season, however, the crop showed an increase of nearly 1,500,000 bales, which brought the total up to nearly 7,000,000 bales, thus exceeding all previous records. Again, in the season of 1893-94, when the volume of future sales fell off sharply, the average price of middling showed a decline from 8.24 cents to 7.67 cents. For this season there was an increase of nearly 800,000 bales in the

crop. For the season of 1896-97 there was a heavy contraction in the volume of future trading, and again a fall in the price, namely, from 8.16 cents to 7.72 cents. The principal reason undoubtedly was the increase of approximately 1,350,000 bales in the crop.

The relationship between prices and volume of future trading may better be seen from the following summary:

Years in which volume of future trading increased	Price movement	Production	Years in which volume of future trading decreased	Price movement	Production
1877.....	Declined	Decreased	1881.....	Declined	Increased
1878.....	do	Increased	1883.....	do	do
1879.....	do	do	1884.....	Practically unchanged	Decreased
1880.....	Advanced	do			
1882.....	do	Decreased			
1886.....	Declined	Increased	1885.....	do	Practically unchanged
1887.....	Advanced	Practically unchanged			
1890.....	do	Increased	1888.....	do	Increased
1891.....	Declined	do	1889.....	Advanced	Decreased
1892.....	do	do	1894.....	Declined	Increased
1893.....	Advanced	Decreased	1897.....	do	do
1895.....	Declined	Increased			
1896.....	Advanced	Decreased			

From this summary it appears that of the thirteen years for which the volume of trading showed increases the average price advanced in six and declined in seven. In the eight years when the volume of future trading showed a reduction, there was only one in which the price of middling cotton showed an appreciable advance. It is not intended here to leave the impression that there was any necessary connection between these facts; instead, it is perfectly safe to say that the changes in price are chiefly attributable to the changes in production. Thus, out of the eleven years in which there was a decline in the price of middling, there was in ten years an increase in production and in only one year a decrease. On the other hand, of the seven years in which

there was an advance in the price, four showed a decrease in production, only two an increase, and in one production was practically unchanged. Of the three years for which the price was practically stationary, one showed a reduction in the crop, and one an increase, while in the third year the crop itself was practically unchanged. It will be seen, therefore, that a heavy volume of future transactions has by no means usually been accompanied by a decline in the price of cotton. Indeed, the table shows that an increase in the volume of future trading has frequently been accompanied by an advance in the price. In most such cases, however, there was a reduction in the crop.

What these figures really seem to show is that the volume of speculation is usually greatest in times of higher prices and that this increased volume probably is a result of advancing prices and not necessarily a cause. It is an accepted fact that the great mass of speculators are more active in times of high prices than in times of low prices.[4]

Another aspect of the effect of speculation upon prices is the question whether prices are unduly depressed in the crop-moving season and later raised so that the producer always obtains a low price. At the outset it must be emphasized that if speculative trading were unknown it would be a normal condition for prices to be lower in the crop-moving season than at a period six months hence. This is a simple example of the operation of the law of supply and demand. When the prices of representative commodities throughout the year are examined for a period of years, it is apparent that there is an evenness rather greater than might be expected in the case of commodities which move to markets within a few months, supplying the markets at one time, while demand is scattered throughout the year. In his book, *The Value of Organized Speculation,* H. H. Brace points out that in a ten-year period, the average difference between September and May prices was only 2.9 cents, so that, considering elevator charges, a farmer would have gained little or nothing by holding his wheat through the winter. A similar comparison is made in the *Report on the Winnipeg*

[4] Report of Commissioner, etc., on Cotton Exchanges, pp. 273-276.

Grain Exchange, a statement submitted by that body to the Royal Grain Inquiry Commission in 1921.[5]

The fallacy of the argument that when the farmer has wheat to sell the price is low, and that after he has sold his wheat the price is high, is shown in the following table:

RANGE OF PRICES AT WINNIPEG FOR ONE NORTHERN WHEAT IN OCTOBER AND MAY—1908 TO 1914

	October				May		
	High	Low	Av'ge		High	Low	Av'ge
	c	c	c		c	c	c
1908	100.00	96.18	98.09	1909	128.38	120.88	114.63
1909	99.75	94.50	97.12	1910	100.25	86.50	93.37
1910	100.25	91.75	96.00	1911	96.25	93.50	94.87
1911	102.00	97.50	99.75	1912	104.75	102.75	103.75
1912	94.00	88.00	91.00	1913	95.00	91.38	93.18
1913	82.62	78.00	80.31	1914	96.62	90.38	93.50
Pre-war period—six years			93.71				98.88

The comparison is between the cash closing price Fort William in the month of October as compared with the month of May, from 1908 to 1914, inclusive.

It would have paid the farmer to have held his wheat in 1908, as there was a difference between the average October price and the average May price of 16.54c. a bushel.

There were two reasons for the increase in the price for that year, one was the shortage of wheat in the United States, and the other was the influence of the "Patten corner."

In 1909 and in 1910 the average price in October was more than the average price in May. The farmer would have lost the difference, and also the carrying charges on his wheat, had he held it those two years.

In 1911 and in 1912 the average in October was a little lower than in May. Had the farmer held his wheat those years, the additional price that he would have gained in May would not have paid the carrying charges on his wheat.

In 1914 the average in the month of May was 13.19c. more than in the previous October.

Taking the whole of the six years, the average October price was

[5] Pp. 42, 43.

93.71c., and the average May price 98.88c., a difference of 5.17c. a bushel, which would not have paid carrying charges on the wheat.[6]

A comparison between mean prices for wheat at Chicago in October and in May for the period 1890-1927 has been made, using the figures of the Chicago Board of Trade. The average range of wheat in October, excluding the war years, was 94⅝-1.11¼ and the average range in May, 1.05½-1.27⅜. The spread between the mean of October and the mean of May was 13½ cents.

A comparison of cotton prices at New Orleans for the period 1827-1909 is interesting in the same connection. During the first forty-four years of this period there was no futures market, and from 1871-1909 there was organized futures trading in New Orleans and New York. During the first period, 1827-1871, the highest mean prices were recorded in September in ten years. There were seven years in which August prices were the highest, and five years in which July, and five years in which October, prices were highest. In only three years of the forty-four were May prices the highest, and in only two years were June prices the highest. During this same period, the lowest prices were reached in September in eight different years; in five years December prices were lowest, while March and November were the two months of lowest prices in four separate years. Lowest prices were not reached in October or June in any year of the forty-four.

In the period from 1871-1909, there were eleven years in which September prices were highest, six years in which August prices were highest, five years in which July saw peak quotations, and four years when May registered the peak. Only once in this period were April prices the highest

[6] The average price in the above report is really a mean between high and low and not an average of all prices for the month.

of the year, while the months of June and January were highest for three years each of the thirty-eight. Lowest prices were recorded in August for six years, and in November for seven years. There were four years in which September, October, and December prices were low.

These various price comparisons are suggestive rather of an evenness of price adjustment throughout the twelve months than of any marked rise at one season or decline in another. They suggest not that speculation operates to depress prices in the crop-moving season, but the reverse: that because the dealer anticipates demand at the time he buys, and because he can finance his purchase by hedging sales, the price realized by the producer is closer to the price paid by the consumer than would probably be the case if speculative markets were not in existence.

In referring to the influence of speculation upon prices, the conclusion appears justified that speculation as such is not a material factor in lifting or depressing price levels. Manipulation will be referred to later; we are referring here to legitimate speculation without considering the influences of concerted action taken for the ulterior purpose of controlling prices.

Does Speculation Steady Prices?—It is first necessary to define what we mean by steadying prices. In any speculative market, oscillations are more frequent than in a non-speculative market. There are more frequent changes of price. What is meant by steadying the market is that the range of these oscillations is less than it would be if speculation were not present. This question is one which does not lend itself readily to statistical proof. Various attempts have been made to support the contention that speculative trading steadies price movements. We shall comment upon these methods, but it is to be observed in advance that none is entirely satisfactory.

A frequently used statistical method is that of comparing price fluctuations in a commodity before and after future trading was inaugurated. The grave objection to this method is that it leaves out of account changed conditions of transportation and distribution. Sometimes the periods compared are so far removed as to be ludicrous. Wide price fluctuations of commodities in the Middle Ages have been compared with the relative steadiness of prices in our modern economic society; but of what value is a comparison of prices in a distributive system when railroads, steamboats, and even efficient wagon transportation were unknown, with modern conditions, when trainloads and shiploads move with a speed which makes the world a smaller place in 1928 than Western Europe was in the Middle Ages? Nor is there a parallel between conditions in the 1850's and any decade of the twentieth century. Cotton prices prevailing in the sixties cannot be compared with cotton prices prevailing today. The fast freighter has succeeded the clipper ship, and the fast freight and modern lake transportation have replaced the slow-moving railroad train and lake shipping. It may be remarked that comparisons which have been made almost invariably indicate a narrowing in the range of price fluctuations. In this narrowing of the range it is possible that future trading exerts an influence; but regarding the method as inherently unsound, such comparisons will be dismissed simply with the observation that their conclusions are rather favorable to future trading as a steadying influence than adverse to it.

A more valid method is a comparison of fluctuations in commodities in which futures trading is carried on with commodities which have no futures markets. Here again the method is imperfect. Growing and marketing conditions for different commodities are so dissimilar that fluctuations in

potato prices cannot be compared with fluctuations in wheat prices and a valid conclusion reached that, because the latter are narrower, organized future trading is the sole cause. One such comparison is that made between the prices of wheat, barley, and oats for the period 1899-1916 by Professor James E. Boyle. Wheat and oats were subject to futures trading, and barley was not. The comparison for the period shows a higher degree of fluctuation in barley than in the other two commodities.[7]

Year	*Wheat*	*Barley*	*Oats*
1899	24.2 per cent	57.1 per cent	46.7 per cent
1900	42.6 " "	97.6 " "	25.0 " "
1901	26.6 " "	73.2 " "	107.5 " "
1902	41.0 " "	93.3 " "	103.4 " "
1903	32.5 " "	72.2 " "	44.0 " "
1904	50.3 " "	103.3 " "	62.9 " "
1905	59.2 " "	57.1 " "	38.0 " "
1906	42.9 " "	52.7 " "	48.0 " "
1907	71.8 " "	175.0 " "	68.6 " "
1908	31.4 " "	130.4 " "	31.5 " "
1909	61.2 " "	91.9 " "	72.2 " "
1910	44.7 " "	114.3 " "	64.7 " "
1911	40.5 " "	152.6 " "	65.8 " "
1912	43.5 " "	233.3 " "	93.4 " "
1913	43.1 " "	102.4 " "	37.1 " "
1914	70.1 " "	79.5 " "	52.6 " "
1915	70.4 " "	87.5 " "	68.2 " "
1916	207.3 " "	120.6 " "	52.5 " "

Another comparison between a commodity, the subject of futures trading, and other commodities is that of prices of wheat, onions, potatoes, and apples contained in *Orderly Marketing,* a publication of the Minneapolis Chamber of Commerce. Prices of all of these commodities are averaged for each month of the crop year for a period of twenty-nine

[7] *Speculation and the Chicago Board of Trade* (Macmillan), p. 123.

years. The average fluctuation in wheat prices from low to high was 5.36 per cent. On the other hand, onions fluctuated more than 10.9 per cent, and apples went through a price fluctuation of almost an even 100 per cent. The change in potato prices is shown to be 68 per cent. Recalling again that this method of proof is not positive, it is, nevertheless, to be observed that it is one of the best methods available, and the evidence points strongly to the conclusion that there is more than a casual relationship between futures trading and price stability.

Speculation Levels Prices Between Markets.—With modern methods of communication, in all probability the price of cotton in New Orleans, New York and Liverpool would be maintained in fairly close relationship whether or not futures trading were carried on. But the adjustment is far more rapid with the arbitrageur ready to act instantly to take advantage of a situation when prices on the different markets get out of parity. The futures markets are sensitive, and hence respond with rapidity to news received from other great market places. Without advancing the proposition that futures trading is the only means of leveling prices between markets, it may be stated without reservation that it is an important contributory influence.

The Speculator's Assumption of Risk.—Possibly all of the other services performed by the speculator may be regarded as unimportant in comparison with his work as a risk taker. Let us imagine a market in which there are no speculators, but only commercial interests placing hedges. We will assume that this condition exists in the wheat market. Elevators buy wheat as it comes to the market in the fall months, and they are then engaged in selling futures as a hedge. Now when the hedger offers to sell a future, he must be assured of a ready purchaser—one who will take his

future at but a narrow price difference from the level at which the hedger calculated he could sell. The large buyers of futures as hedges are the millers; but the millers do not concentrate their hedge purchases in one trading month. Their contracts of flour are spread throughout the year, and their hedges are likewise distributed. The flood of hedge selling from the elevators would meet with but a partial response. The sales would overwhelm the demands from purchasers and the elevator owners' market would sink beneath it. In every market the hedger depends upon the speculator. A speculator is present, ready to assume the risk regardless of season. He buys the elevator's hedging contract; he sells at other times of the year when the miller is buying, and he is performing a function of genuine value. He has been likened to an insurer and the likeness, while not exact, is apropos. An efficient market—that is, one where abnormal price fluctuations cannot be produced by seasonal selling or buying—cannot carry on with only commercial interests represented. The presence of the speculator is imperative to the making of a broad market.

Speculators Provide a Broad Market.—The term "broad" market means a market which is capable of absorbing all offerings in the course of the normal trading day without the price of the commodity being affected by mere volume of sales. Perhaps a more descriptive term would be a "solid" market. The volume of speculation in a market contributes greatly to its breadth or solidity. On the Chicago Board of Trade, 5,000,000 bushels of wheat have been traded in without depressing the price more than ⅛ of a cent per bushel. A broad market is essential for successful use of the hedge and because his presence makes a broad market, the speculator is a necessary aid to the hedger.

While speculators act for themselves, they may be said to

act in a representative capacity when we consider the effect which their combined operations exert upon prices. The bulls are in the market representing the producer. Their efforts are to make profits for themselves, but the force of their buying contributes also to higher prices for the grower. The bears, on the other hand, represent manufacturers and consumers. While the aim of each individual short seller is a profit for himself, every user of the commodity benefits from whatever effect he may exert toward making the price of the commodity low.

In every market a fair part of the speculative trading is done by the floor trader. The volume of his purchases and sales contributes greatly to make a broad market; but the very nature of his operations, *i. e.,* buying or selling for a quick turnover, makes him a negligible factor in influencing prices. "But the scalper exercises no influence on the exchanges. He is trading for the next fluctuation; that is all he is doing. What he buys this minute it is known that he is going to sell in the next two or three minutes, and when a man has bought a thing and is going to sell it again immediately, and he buys it and sells it back and forth, it cuts no figure and has nothing to do with disturbing values from either the farmer's or consumer's standpoint." [8]

Short Selling.—Perhaps the use of a futures contract as a medium for short selling has subjected it to as much criticism and attack as all other factors combined. The purpose here is neither to uphold nor to condemn, but to examine the mechanism and uses of a short sale, with a view to showing how it is made and the legitimate functions which it serves.

[8] Statement by John C. F. Merrill before the Scott Committee, quoted in *The Functions of Legitimate Exchanges,* Hartzell, Lord Co., Chicago, 1910, p. 251.

The most quoted adage about short selling declares that

> "He who sells what isn't his'n
> Must buy it back or go to prison."

The best that can be said about it is that the law is as bad as the quality of the verse. Unless a statute should make short selling a penal offense, no short seller is in any danger of prison because of that act alone. The mechanics of the short sale of a commodity are much simpler than those of a short sale of stocks. A person who believes that the price of General Motors is too high in relation to its earning power may sell it short. Now there are no time contracts on the Stock Exchange. He makes his sale and he must deliver the following day. Not owning any stock of General Motors, he must borrow in order to make delivery. The lender will not part with his stock without security; consequently, he receives cash to indemnify him for the loan. The short seller now has the lender's stock; the lender has the short seller's cash. The short seller delivers the lender's stock on his contract. Until he returns the stock, which he will do when he covers his short sale, he pays the lender any dividends which are declared. On the other hand, the lender pays the short seller interest on the cash which forms the security for the loan of the stock. If the demand for a stock is great and the supply limited, the rate which lenders will pay goes down. Demand may be so great in relation to supply that the lender will pay no interest at all. The stock then lends "flat." If there is a squeeze, it lends at a premium, *i. e.*, the borrower not only has to give cash as security but he has to pay a premium to the lender for the use of the stock.

The short seller of a commodity faces none of this complicated procedure. He makes his sale on a time contract. He sells for delivery in some distant month; consequently,

until the arrival of the delivery month he is only required to keep his trade margined to the market price. When the delivery month arrives, he must cover his sale or make delivery.

Short selling is most frequently attacked on the ground that it artificially depresses prices. When a price decline occurs in any commodity dealt in on futures markets, the short seller alone is usually given credit for bringing the debacle about, unaided by conditions of demand and supply or anything except the alleged all-powerful weapon of the short sale. The following declaration by Senator Capper announced the proposed introduction of a bill to limit trading interests and prohibit short selling:

Inasmuch as selling, and nothing but selling, forces a decline, and inasmuch also as 90 per cent of the selling is done by gamblers selling short to force a decline, it follows logically that speculative selling is the dominant factor in forcing a decline in the wheat market. The market's two great abuses are short selling and excessive speculation.

In the first three days of the "bear raid" which started in May the futures transactions were 97,400,000, 90,300,000 and 93,700,000 bushels, respectively, or almost as much wheat as the entire crop grown this year in this country's premier wheat State. This hammering was continued until on July 23 wheat closed at $1.18½, about where it remained through the balance of the month, as compared with $1.70½ April 30—a decline of 52 cents a bushel.

Naturally the gamblers took advantage of all the technical conditions in the market, especially the ancient stunt of "touching off" stop-loss orders placed behind their operations by the optimistic chaps who were hoping for an advance. And they made full use, too, of bearish propaganda. Finally, there was a thorough "shaking out" of the last of the "longs" who had bought at above $1.30.

I am wondering if there is anyone left who will have the hardihood to pull that time-worn shibboleth about the wheat market responding solely to the "law of supply and demand." That explanation had whiskers on it before the present generation of gamblers was born, and when a market rigger can artificially increase the supply of wheat 10,000,000 bushels overnight, what is the use of prattling about a law of supply and demand? (*The Journal of Commerce,* New York, Aug. 13, 1928.)

Now, let us grant the premise, that short sales increase the supply of the commodity. For every sale there must be a purchase—for every seller, a buyer. If demand is not strong enough to absorb the volume of selling, prices recede. But if buying power is sufficient to absorb the selling, the ensuing price movement will not be a decline, but an advance, and an advance to which the covering of the shorts will contribute. Six days before the date of Senator Capper's announcement, the *Journal of Commerce,* in a Chicago dispatch, told of the establishment of settlement prices for shorts who were trapped in July corn and defaulted on their sales. Evidently selling was taking place in corn at the same time that the selling in wheat was being carried on. But the short selling in corn was ineffectual to stem the rising trend of prices. Thus in the same market, short selling in different grains, carried on at the same time, resulted in diametrically opposite price movements. What is the reason for this?

Let us trace the development of the world wheat crop in 1928. About the middle of May, the winter wheat crop was expected to be 486,000,000 bushels, or 12 per cent under the 552,000,000 bushel crop of 1927. The outlook was also for a spring wheat crop smaller than that of the preceding year. A month later, the Government estimate placed the winter wheat crop at 512,000,000 bushels, an increase of 26,000,000 bushels over the preceding estimate. Private estimates at this time placed the spring wheat crop at 252,000,000 bushels and growing conditions in Canada were known to be favorable. By the middle of July, the Government estimate of the winter wheat crop had been raised to 544,000,000 bushels, an increase of 32,000,000 bushels over the June estimate, and the spring wheat crop was placed at 256,000,000 bushels, a 4,000,000 bushel increase. By the

middle of August, the total United States crop, which, in May, was expected to be smaller than that of 1927, was estimated to be 891,000,000 bushels, compared with the 1927 total of 873,000,000 bushels. Unofficial estimates were placing the Canadian crop at 500,000,000 bushels. The total of the United States crop was again revised upward in September to 901,000,000 bushels, and in October to 904,000,000 bushels. The Canadian crop, in September, was placed at 550,000,000 bushels, compared with 440,000,000 in 1927. Accordingly, in October, the expectation was for a crop in North America of 1,454,000,000 bushels, compared with 992,000,000 bushels the preceding year, and an exportable surplus of 680,000,000 bushels, compared with 538,000,000 the year before. In addition to these increases, there was a carry-over of 100,000,000 bushels from 1927, and by October it was known that the crop in 21 European countries would approximate 1,374,000,000 bushels, against 1,235,000,000 bushels in 1927—with Australia and the Argentine yet to be heard from.

The foregoing résumé of the statistical position of wheat in 1928 indicates that there was only one direction in which prices could possibly have moved—and that was downward. The exportable surplus of the United States and Canada was greater; the import requirements of Europe were smaller.

To take one more aspect of the question: On August 18, before the first official estimate of the Canadian crop was out and before European estimates were out, December wheat was selling at $1.16⅞ per bushel. The price later touched $1.13⅝, but on October 17, two months later, with the full extent of North America's and Europe's bumper crops realized, the price was $1.15¾. The speculators who sold wheat early in the summer had forecast conditions correctly.

A declining market in which heavy short sales have been made, has had its fall cushioned in advance. Every short seller is a potential buyer. As the price declines, the buying of short sellers who cover their trades tends to offset panicky selling of bulls who bought at higher prices.

The following analyses of short selling, written many years before the 1928 wheat crop suffered from falling prices, present the reasoned judgment of two economists whose opinions deserve attention:

Nine-tenths of the people are by nature "bulls," and the higher prices go, the more optimistic and elated they become. If it were not for the group of short sellers, who resist an excessive inflation, it would be much easier than now to raise prices through the roof; and then, when the inflation became apparent to all, the descent would be abrupt and likely unchecked until the basement was reached. The operations of the "bear," however, make excessive inflation extremely expensive, and similarly tend to prevent a violent smash, because the bear to realize his profits, must become a buyer when he covers. . . . Short-selling, instead of unduly depressing prices as many would have us believe, is often the most powerful support which the market possesses. It is an ordinary affair to read in the press that the market is sustained or put up at the expense of the "shorts" who, having contracted to deliver at a certain price can frequently be driven to "cover." Short-selling is thus a beneficial factor in steadying prices and obviating extreme fluctuations. Largely through its action, the discounting of serious and unfavorable events does not take the form of a sudden shock or convulsion, but, instead, is spread out over a period of time, giving the actual holder of produce ample time to observe the situation and limit his loss before ruin results.[9]

The familiar argument is, that short selling is a selling of products that do not exist, in addition to those that do, and so furnishes a corresponding increase of supply, which necessarily depresses prices; and figures representing enormous sales are brought forward as statistical proof. These sales, however, are also purchases, and the question of their amount is of no importance. They represent a speculative demand as well as a speculative supply, and the real question is whether the speculative forces on the short side are stronger than those on the long

[9] S. S. Huebner, "The Functions of Produce Exchanges" in *American Produce Exchange Markets* (American Academy of Political and Social Science, 1911), pp. 19, 20.

side of the market, and whether the speculative supply or demand is warranted by actual conditions. It is the fact that they sometimes are not, which gives rise to the idea that speculative prices are "independent of demand and supply." . . .

Perhaps the most potent influence in preventing wide fluctuations is the much maligned short-seller. It is he who keeps prices down by his short sales, and then keeps them strong by his covering purchases. This is especially true in the case of inflation followed by panic. If it were not for strong short selling when the market becomes inflated, prices might rise to almost any extent before the final crash. Now the rise tends to be checked by the efforts of shrewd operators to take advantage of the inflation. On the other hand, when prices begin to tumble, they are kept from going as low as they otherwise would by the purchases which the shorts have to make to cover their contracts. Thus prices at both ends of a panic are less extreme than they would be without short selling.[10]

So well is the cushioning effect of a short interest recognized on the Stock Exchange that when a rapid run-up in price has driven shorts out of a stock, it is considered in a technically dangerous position. A market without short selling, if speculation enters at all, is bound to be a market of wide and violent price swings. The Florida real estate bubble is sufficiently recent to lend point to this principle. Reckless speculation pushed prices of Florida land up to levels which had no economic justification. When the inevitable end of the boom came, prices collapsed. Nothing had happened to affect the value (not the price) of Florida land. The market had simply disappeared. If it had been possible to make short sales of real property, undoubtedly they would have been made in abundance as prices mounted. Some premature short sellers would have been trapped; others would have remained short until the decline set in. Their covering purchases would have afforded the best market for realty at the time.

[10] H. C. Emery, *Speculation on the Stock and Produce Exchanges of the United States*, pp. 119-121.

Regulating Speculation.—Speculation often bears the brunt of attacks which are really directed against manipulation. By speculation is meant the buying or selling of traders who expect to profit by a rise or decline in prices, but who are not acting in concert or attempting to gain control of supply. By manipulation is meant concerted or concentrated buying or selling with the object of forcing prices materially higher or depressing them inordinately through the volume of such sales. Manipulation for higher prices may result in corners or squeezes. A corner is a condition where one operator controls so much of the supply that contracts to deliver cannot be fulfilled except at prices which he dictates. A "squeeze" is a little corner, occurring in futures for some one month.

It has been many years since a corner has occurred on any commodity exchange. The spectacular corners of past years were not always successful, nor were some of the reputed corners effective at all. Some brought ruin upon the operators who engineered them. The by-laws and rules of commodity exchanges today are framed designedly to prevent the occurrence of corners.

The squeeze is less spectacular than the corner and it is still possible on a small scale. By-laws have been adopted, however, designed to prevent a squeeze from being effective if the price is forced above the fair market price for the commodity in cash markets. The following by-law of the National Raw Silk Exchange is illustrative of this phase of exchange regulation:

Sec. 79. Where a member who is obligated to deliver raw silk on a future delivery contract fails to deliver at maturity, he shall pay to the buyer as damages the difference between the contract price and the true commercial value of the raw silk at maturity. Such damages shall be assessed by a committee of three members appointed by the President and approved by the Board. The true commercial value of the raw silk shall be determined in the light of its value in other established

markets, its value for manufacturing or consumption purposes, and such other facts as may properly be considered. The committee shall also assess against the seller as additional damages between one and ten per cent of such fixed value. The entire award of damages shall be payable immediately after its assessment.

By exchange legislation such as this; by the elimination of the bucket shop; by the adoption of by-laws limiting the extent of price fluctuations in a single trading day—the exchanges have put forth efforts to make their speculative machinery reasonably free from abuse. It is more than possible —it is probable—that other reforms will be made as the occasion arises. To the extent that the exchanges are alert to exercise leadership and to effect reforms, when necessary, from within will their position as great market places and valuable elements in the distribution and financing of commodities be strengthened.

Chapter VIII

CROP REPORTS AND MARKET PRICE STATISTICS

Commodity exchanges have been aptly termed clearing houses of information. It is of the highest importance to members that the exchanges collect information; and in making public data bearing upon supplies, movements, and withdrawals of the commodity and the current prices of contracts for future delivery, they perform a service of value to producer, merchant, and manufacturer. Modern methods of communication link markets closely together. There are no commodities traded in on organized exchanges whose prices are not subject to influence by developments in widely separated parts of the globe. Approximately one-half of the world's wheat crop is produced in Europe and Asia (exclusive of India), and is consumed by the producing countries. Approximately one-half is produced in the United States, Canada, India, the Argentine, and Australia, which are normally exporting countries. A short crop in any one producing country does not mean a high price, for an increased output in other countries may offset the shortage. The price of wheat futures represents not the outlook for production and consumption in the United States and Canada, but it is a price based upon every known factor affecting supply and demand throughout the world. A bumper crop in the Argentine, with a prevalence of black rust in the Northwest states, will be reflected in prices long before the crop comes to market. So damage to the cotton crop in one area of producing territory is reflected in the price paid for every pound of cotton which comes on the market.

Since the exchanges are markets for dealing in futures, their members must have accurate, complete, and up-to-the-minute information in order to enable them and their customers to discount events months ahead. If commodities grown in widely separated territories were marketed locally, prices in each area would reflect local conditions only. They might have no relationship to worldwide supply and demand. The exchanges accordingly gather information from all over the world, relating to (1) the production of the commodity, (2) the percentage of the crop which has moved to export points, (3) supplies afloat or on the way to primary markets, (4) arrivals in primary markets, (5) exports from this country (in the case of an export commodity), (6) the total visible supply, (7) demand or "takings" if statistics are available, and (8) certificated supplies in licensed warehouses available for delivery on futures contracts.

Not only is information regarding the commodity assembled, but every exchange maintains the closest touch with the prices in markets abroad and on other exchanges in the United States. Prices prevailing in spot markets and other futures markets are transmitted by telegraph and cable. Not for an instant of its existence is a commodity exchange a market standing by itself. It is part of a closely related and interconnected worldwide market.

Information about the commodities in which it trades and the record of prices which prevail on its floor is made available to the public by the exchange in daily, monthly, and yearly reports.

Importance of Reports and Statistics.—The value of the exchange's work as a compiler and publisher of commodity data and price records is summarized by Professor S. S. Huebner as fourfold:

(1) It makes possible the discounting of the future, *i. e.*, it enables dealers and speculators to exercise their best judgment at once in the

form of actual transactions, and thus to reflect this current information in the quotations long before it would otherwise be impressed upon the general public. Thus, the effect of a short or bumper crop upon prices is reflected, *i. e.*, discounted, weeks in advance. . . . (2) It steadies prices. The daily discounting of current events makes unnecessary, except in rare instances where manipulation has interfered with the smooth working of the organized market, a sudden decline or rise in price upon the wide publication of events which have been slowly developing. . . . (3) It helps to regulate the rate at which the year's crop is consumed. . . . It is a well-recognized fact that the exchange quotations for contracts which call for delivery in the new crop months depend not entirely on the prospects of a new crop, but are vitally influenced by the smallness or largeness, as compared with previous years of the old crop yet unsold, as reflected by the "visible supply," or by statistics relating to holdings which have not yet left the producer's hands. (4) It serves to "level" prices between different markets. Reference is had here to the practice of "arbitraging" between markets.[1]

In some commodities the exchange statistics are the best and most widely used of all sources of information. This is so in the coffee trade. The New York Coffee and Sugar Exchange publishes information regarding growing conditions in Brazil, the movement of coffee in vessels from Brazil to import points, stocks on hand in different primary markets, the receipts and deliveries daily, weekly, and monthly, and the prices prevailing in Rio de Janeiro and European markets. The records of the Coffee and Sugar Exchange of the movement and supply of the crop are of the utmost value to dealers in this country and abroad.

The Importance of Price Quotations.—The machinery for reporting the prices at which transactions are made on the exchange floor has been described elsewhere.[2] Through the ticker service, the prices prevailing in every trading month are a matter of public knowledge almost immediately after the trade has been executed. In evening and morning papers, summaries of the prices prevailing for each future are pub-

[1] "The Functions of Produce Exchanges" in *American Produce Exchange Markets* (American Academy of Political and Social Science, 1911), pp. 17-21.

[2] See Chapter IV.

Quotation Board, National Raw Silk Exchange

lished on the financial page—the high, low, and closing quotations being usually given. Prices prevailing for commodity futures are not only available to the public, but they become a matter of public record in the daily press. No individual interested in the commodity need be in the dark as to the price prevailing on the exchange for contracts for immediate delivery or contracts for delivery months hence. In commodities where organized futures markets exist, the prices of futures contracts serve manufacturers and merchants as a basis for estimating the prices they will pay the producer or the prices they will ask from their customers. The miller who requires wheat in October for flour to be delivered in December bases his price for the flour on the prevailing price of the December wheat future. Prices paid the wheat or cotton producer are based upon the prevailing cash prices in organized markets. The price which the producer receives may or may not be satisfactory to him; but if it is inadequate, it is so because the world market is glutted, a factor entirely beyond his control. The price which he receives is the best obtainable at the time he brings his crop to market.

Contrast this with situations that may exist when there is an insufficient record of prices or where prices for future delivery are altogether wanting. The futures exchange is not necessary in order that the producer obtain a fair price. If there is sufficient competition for his product, he will obtain a fair price regardless of whether a futures market exists. But the exchange is always an instrumentality making for the probability that the price paid the producer will be fair. Tobacco was once sold at local markets where numerous buyers competed with one another. Then, following the domination of the tobacco industry by the "trust" early in this century, its buyers dominated local markets, and competition died out. Then occurred the spectacle of night

riders burning barns and destroying parts of the tobacco crop. It was their endeavor to produce an artificial shortage as a desperate counterstroke against what they regarded as the artificially low price paid for the crop in a non-competitive market.

Some time ago, the project of organizing futures trading in an agricultural commodity was under consideration. In order to sound out opinion in the industry, a questionnaire was sent out to producers, merchants, and manufacturers. The preponderance of sentiment among a large number of dealers in the commodity was adverse to the establishment of futures trading. One dealer in this community returned his questionnaire with "no" inscribed upon the face of the document in enormous letters. In order to discover reasons for the opposition, a member of the group responsible for the questionnaire made a trip to the center of adverse sentiment to call upon the merchant whose emphatic negative had impressed itself upon him. After the conversation, there was no doubt in the mind of the caller that the merchant's reply had been dictated by a genuine self-interest, but that same self-interest is more eloquent of the value of price information made public by exchanges than any abstract summary could possibly be. Said the merchant: "I have many men traveling to buy up the commodity direct from the grower. They pay cash. Now, when they go to the grower and offer him a certain price per pound spot cash, the grower is tempted to sell without investigating prevailing prices. He often does so. But if there were an exchange in existence, its prices would be telegraphed all over the country and would appear in every newspaper of any size and circulation, and the seller would know just how closely the price he was offered approached the prevailing market price. Our buyers work to purchase the commodity under the prevailing market, and they will make excellent purchases below

the market. If the exchange were established, I would probably have to pay current market prices for all I buy."

This situation is no isolated instance. Great though the advance in business morality has been, we have not reached the millennium where the buyer will always pay a fair and just price, no matter how superior his knowledge, his resources, or his bargaining power. A knowledge of current prices, coupled with the financial resources to pay cash to the relatively needy producer, gives the buyer an incalculable advantage over the grower and seller of the commodity. The need for widespread dissemination of prices is stated clearly by Professor L. D. H. Weld as follows:

> It is of extreme importance that price quotations be determined with accuracy and impartiality. Country shippers have to rely largely on the published quotations in order to gauge the value of their commodities and to know when to ship. It is therefore necessary to have some system of determining and issuing quotations which represents a trade as a whole, rather than individual firms or cliques of firms having a common interest. Wholesale receivers, for example, might naturally like to have the market underquoted so far as quotations sent to the country are concerned; and jobbers might prefer to see the market overquoted so that they may exact as high prices as possible from retail stores. In other words, there are conflicting interests within every market, and it is highly important that a well-established and generally accepted as well as impartial system of obtaining quotations be devised so that no one will be misled concerning actual market conditions.[3]

To the same effect is the comment of Alonzo B. Cox:

> The primary function of price quotation service is to give the buyer a chance to obtain his cotton in the cheapest market and the seller a chance to sell or bargain in the highest market. It is the best protection available against malpractices by shrewd buyers or sellers who may happen to have more information about prices in different markets than the persons with whom they trade.[4]

[3] *The Marketing of Farm Products* (The Macmillan Company, 1924), pp. 286, 287.

[4] *Services in Cotton Marketing,* U. S. Dept. of Agriculture Bulletin No. 1445, pp. 34, 35.

Not only does the exchange's record of its price quotations indirectly benefit those engaged in the trade or in production, but it constitutes a valuable permanent record for business men, economists, legislators, and others who have occasion to delve into the history of price fluctuations in years gone by. "The reports of the Grain Exchanges are the best sources of detailed information with regard to price movements of grain in detail for the year under review and summarized statements and averages for previous years." [5]

Sources of Information.—The inexperienced speculator, who takes a flyer in some commodity future on a tip or on the basis of random items of news he has read or heard, would be astonished at the range of information deemed desirable for a commodity exchange to procure for the benefit of its members. In the process of preparing to open the National Raw Silk Exchange, a committee composed of men of long experience in the silk industry was appointed to look into the question of what information was desirable and necessary for the exchange to obtain and distribute in order to serve the silk manufacturers, merchants, and others who might make use of its facilities. Producing, shipping, and trading markets in areas of consumption were analyzed. Markets in which silk was regularly quoted were tabulated, and a summary prepared showing the information available, its nature, whether authoritative or not, its timeliness, whether prompt or not, and information which it was deemed desirable to have but which was not then available. The outline submitted will give the reader an idea of the manifold factors affecting prices of this important commodity, the kind of information obtainable, and the world-wide linking of markets.

[5] *The Marketing of Farm Products,* L. D. H. Weld: The Macmillan Company, 1924, p. 280.

GENERAL OUTLINE OF INFORMATION

Broad Geographical Subdivision:

(a) American Market. (Consuming information purely)
(b) Asiatic Markets. (Producing information chiefly)
(c) European Markets. (Producing and consuming information)
(d) International Markets. (Foreign exchanges)

Broad Statistical Subdivision:

(a) Production..... Japan
–Canton
–Shanghai
–Italy
–France, Syria, etc.

(b) Consumption..... America
–Europe
–Japan

(c) Stocks..... America
–Japan
–Shanghai
–Canton
–Milan, Lyons, etc.
–In Transit

(d) Transactions..... New York spot market
–Yokohama spot market
–Yokohama Bourse
–Kobe spot market
–Kobe Bourse
–Shanghai spot market
–Canton spot market
–Milan spot market

Broad Price-Fluctuation Subdivision:

(a) Cocoons..... Japan
–Milan
–Shanghai
–Canton

(b) Raw Silk..... New York
–Yokohama
–Kobe
–Canton
–Shanghai
–Milan

(c) Futures..... Yokohama
–Kobe

(d) Exchanges..... Japanese yen
–Shanghai tael
–Canton Mexican dollar
–Italian lira
–French franc

AMERICAN MARKET

Information Available:
(a) Consumption as indicated by warehouse withdrawals.
(b) Stocks in warehouse 1st of each month.
(c) Stocks at mills (approx. 50% trade reporting).
(d) Stocks in transit Japan to America.
(e) Imports monthly by sorts.
(f) Broad loom activity (by percentage).
(g) Narrow loom activity (by percentage).
(h) Spindle activity (by percentage).
(i) Foreign Exchange quotations.
(j) Production and stocks of hosiery.

Information Not Available (confidential statistics):
(a) Production of broad silks.
(b) Stocks of broad silks.
(c) Percentage of coverage of raw requirements for our months.
(d) Consumption bales per year per loom owned.
(e) Consumption bales per year per loom operated.

Information Desirable to have:
(a) Daily Transactions in New York.
(b) Spot Market prices.
(c) Average price of Georgette 80-2 two thread in Grey.
(d) Average price of Hosiery five thread chiffon all silk per dozen.

JAPANESE MARKET

Information Available:
(a) Arrivals from the interior.
(b) Returns to the interior.
(c) Stocks at Yokohama and Kobe.
(d) Daily transactions in Yokohama and Kobe.
(e) Daily prices in Yokohama and Kobe.
(f) Nariyuki settlements in Yokohama and Kobe.
(g) Yokohama Bourse quotations—High, low and closing.
(h) Transactions on Yokohama Bourse.
(i) Exports to America and Europe.
(j) Dollar exchange.
(k) Chief buyers daily.

Information Available but Not Promptly:
(a) Egg-card distribution, Spring and Autumn crops.
(b) Size by Kwamme of Spring, Summer and Autumn crops.
(c) Percentage of white and yellow cocoons.
Information Not Authoritatively Available:
(a) Weather conditions as affecting early mulberry leafage.
(b) Prices paid for cocoons in various districts.
(c) Quality and yield of cocoons.
(d) Estimates of total crop (and by crops) in boxes.
(e) Estimates of total available for export by bales.
(f) Estimates of home consumption requirements.
Information Desirable to Have:
(a) Interior carry-over of cocoons and reeled silk each season.
(b) Monthly reports of volume of forward business at fixed and Nariyuki prices.
(c) Periodical reports of quantity of cocoons carried in co-operative warehouse and held by cocoon dealers.

Information is gathered from government reports and agencies, sometimes from private commercial agencies which serve exchanges and from special correspondents of the exchange in markets throughout the world. More detailed description of the sources of information for each commodity follows.

Reports Issued.—All exchanges publish a daily report for the benefit of their members. A number of exchanges publish more comprehensive reports monthly. Nearly all issue yearly publications ranging in importance from brief but useful compilations to volumes containing exhaustive statistics of commodities and prices, such as the Annual Report of the Chicago Board of Trade.

Daily Report, New York Cotton Exchange.—The cotton exchanges receive reports from the government on weather conditions prevailing in cotton-growing territory, the condition of the crop at stated intervals throughout the growing season, the ginnings, etc. Reports from the Weather Bureau come into the exchange daily describing temperature and rainfall in each important cotton-growing district. These

weather reports, as they are received, are posted on the bulletin board of the exchange. Forecasts of the coming crop are issued monthly. Formerly, these estimates commenced in July; but the agitation provoked by disputes over their accuracy has led to deferring the first crop estimate until August. From August throughout the remainder of the year, the Census Bureau publishes semi-monthly statements of ginnings, and these reports are continued monthly throughout the winter, the last one being in March following the crop year.

The form in which current information is made available by the New York Cotton Exchange is shown in the reduced copy of its daily market report. Receipts of cotton at twenty ports are given day by day for the past week, with a comparison of receipts for the corresponding day last week and last year; and total receipts for the week and that part of the week preceding the day of the report are given with similar comparisons. A similar daily and cumulative record of exports portrays the movement of cotton from seaboard and gulf terminals. Telegrams from Southern markets sent by the exchange's correspondents give the destination of exports, sales in the market with prices, and the "tone" prevailing. The consolidated movement is a summary of the entire fluctuations in the supply of cotton in this country. The visible supply, receipts, and exports are summarized, and the stocks in New York and in all ports of the United States are given with comparisons with the corresponding week of last year and cumulative totals since the beginning of the movement of the crop. From other markets prices are received by wire and by cable. Cables from Liverpool give prices, sales, and receipts in the spot market, and prices of futures contracts at 12:15, 2, and 4 P. M., with the high and low for each delivery month. The tone of the market at 12:15 and at the closing is given. Other markets whose prices

New York Coffee and Sugar Exchange, Inc.

RAW SUGAR

January 1st, 1929

SALES OF RAW SUGAR FOR FUTURE DELIVERY DURING THE PAST SIX MONTHS

For Delivery in Months	SALES IN DEC.			SALES IN NOV.			SALES IN OCT.			SALES IN SEPT.			SALES IN AUG.			SALES IN JULY		
	Tons	Highest	Lowest	Tons	Highest	Lowest	Tons	Highest	Lowest	Tons	Highest	Lowest	Tons	Highest	Lowest	Tons	Highest	Lowest
January	128,750	2.11	1.92	105,500	2.12	1.93	53,800	2.11	1.93	100,400	2.33	2.05	69,400	2.51	2.31	37,650	2.71	2.34
February																		
March	132,200	2.16	2.00	151,000	2.17	1.99	115,650	2.16	2.00	112,750	2.32	2.11	176,700	2.56	2.33	178,600	2.68	2.35
April																		
May	154,700	2.23	2.08	179,750	2.24	2.06	103,200	2.23	2.06	150,300	2.37	2.18	81,250	2.57	2.40	101,700	2.73	2.41
June																		
July	99,200	2.31	2.14	188,400	2.32	2.14	89,450	2.32	2.15	128,000	2.43	2.26	183,250	2.65	2.47	1,950	2.81	2.16
August																		
September	158,150	2.35	2.19	359,250	2.39	2.21	274,050	2.40	2.21	51,000	2.71	2.00	357,300	2.37	2.13	374,850	2.63	2.18
October	500	2.35	2.20				100	2.03	2.03	4,200	2.19	1.93	2,500	2.42	2.20	1,450	2.39	2.30
November																		
December	43,450	2.13	1.99	366,500	2.11	1.91	204,500	2.11	1.94	299,600	2.32	2.08	339,200	2.50	2.26	345,250	2.74	2.30
July 1929																221,750	2.60	2.48
Sept. 1929										241,900	2.52	2.34						
Dec. 1929	100,550	2.44	2.24															
Totals	817,500			1,373,400			842,750			1,158,150			1,208,600			1,382,000		
Against Last Year	983,500			1,201,700			788,300			1,118,150			1,318,300			1,020,100		
Spot-Cuban Centrifugals 96 degrees test		2.20	2.07		2.20	2.01		2.20	2.07		2.33	2.17		2.51	2.26		2.60	2.32
Last Year		2.68	2.76		2.95	2.82		2.98	2.82		3.10	2.95		2.88	2.70		2.88	2.69

The Highest and Lowest Prices at which Sales of Each Month were made, covering the entire trading period—Also the Price of the First and Last transaction.

1926

Delivery Month	First Sale	Highest		Lowest		Last Sale
January	3.14	3.36	Mar. 1925	2.01	Oct. 1925	2.32
February						
March	3.15	3.15	Mar. 1925	2.13	Oct. 1925	2.18
April	2.24	2.58	Feb. 1926	2.18	Mar. 1926	2.16
May	3.03	3.07	June 1924	2.24	Oct. 1925	2.43
June						
July	2.94	2.99	Aug. 1925	2.30	July 1926	2.34
August	2.78	2.78	Nov. 1925	2.31	July 1926	2.31
September	2.75	2.86	Nov. 1925	2.27	July 1926	2.76
October	2.80	2.90	Oct. 1926	2.80	Oct. 1925	2.80
November						
December	2.87	3.33	Dec. 1926	2.53	July 1926	3.31

1927

Delivery Month	First Sale	Highest		Lowest		Last Sale
January	2.83	3.35	Jan. 1927	2.58	Mar. 1926	3.06
February						
March	2.80	3.39	Jan. 1927	2.60	July 1926	2.97
April						
May	2.79	3.48	Jan. 1927	2.58	July 1926	2.97
June						
July	2.90	3.52	Jan. 1927	2.56	July 1927	2.58
August	3.38	3.38	Feb. 1927	2.60	July 1927	2.60
September	2.88	3.57	Jan. 1927	2.61	Aug. 1927	2.96
October	3.53	3.53	Jan. 1927	2.58	Aug. 1927	2.95
November						
December	3.43	3.43	Jan. 1927	2.70	Nov. 1927	2.73

1928

Delivery Month	First Sale	Highest		Lowest		Last Sale
January	2.41	3.41	Jan. 1927	2.58	Jan. 1928	2.58
February						
March	2.97	3.00	April 1927	2.36	Feb. 1928	2.78
April						
May	2.93	3.07	Sept. 1927	2.44	Feb. 1928	2.65
June						
July	2.62	3.14	Sept. 1927	2.18	July 1928	2.36
August						
September	3.13	3.21	Sept. 1927	2.00	Sept. 1928	2.02
October	2.78	3.07	April 1928	1.93	Sept. 1928	2.03
November						
December	2.09	3.17	Dec. 1927	1.91	Nov. 1928	2.00

1929

Delivery Month	First Sale	Highest		Lowest		Last Sale
January	2.11	2.11	Jan. 1928	1.52	Dec. 1928	
February						
March	2.90	2.90	Mar. 1928	1.59	Nov. 1928	
April						
May	2.86	2.95	May 1928	2.06	Oct. 1928	
June						
July	2.28	2.80	July 1928	2.14	Nov. 1928	
August						
September	2.49	2.52	Sept. 1928	2.19	Dec. 1928	
October	2.34	2.35	Dec. 1928	2.20	Dec. 1928	
November						
December	2.43	2.44	Dec. 1928	2.28	Dec. 1928	

CUBAN STATISTICS

(H. A. HIMELY)

(TONS)

	1928 RECEIPTS		1928 EXPORTS		1928 STOCK		1927 RECEIPTS		1927 EXPORTS		1927 STOCK	
	Six Ports	Out Ports	Six Ports	Out Ports	Six Ports	Out Ports	Six Ports	Out Ports	Six Ports	Out Ports	Six Ports	Out Ports
Jan.-Nov.	1,511,625	2,281,131	1,342,295	2,059,315			1,732,428	2,502,901	1,460,588	2,304,113		
December 3rd	1,523	18,175	12,854	40,384	177,912	187,553	1,887	11,587	24,555	25,411	190,770	178,610
December 10th	992	25,495	9,752	51,996	95,533	160,851	5,806	18,317	18,347	21,101	184,507	173,677
December 17th	3,264	13 262	20,552	41,115	81,845	150,592	2,455	10,147	15,586	19,226	164,263	164,441
December 24th	12,765	13,250	12,932	41,382	84,974	102,831	3,842	22,440	24,523	56,756	147,572	130,128
December 31st	9,459	28,484	10,572	51,851	33,339	77,377						
Total December	34,647	98,667	66,993	230,762			13,014	60,491	83,421	122,454		
Total Jan./Dec.	1,546,273	2,379,798	1,409,288	2,290,077			1,745,442	2,563,392	1,550,009	2,426,607		

DISTRIBUTION OF EXPORTS

	1928 JAN.—NOV.	1928 DECEMBER	1928 TOTAL	1927 JAN.—NOV.	1927 DECEMBER	1927 TOTAL
Atlantic Ports	1,725,132	206,404	1,931,536	2,051,811	133,151	2,184,762
Gulf Ports	604,128	14,664	622,792	853,255	14,908	868,203
Interior	54,524	21,855	76,789	53,178	3,386	66,564
Total United States	2,384,195	248,923	2,631,118	2,958,084	151,445	3,109,529
Europe	969 646	36,590	1,006,638	665,861	57,314	723,175
Canada	44,224		44,224	47,350		47,350
Japan and China		13,600	13,600	67 256	1 156	68,412
Other Ports	3,453	42	3,497	26,150	2,000	29,150
Total	3,401,520	297,755	3,699,275	3,764,701	211,913	3,976,616

January 2nd, 1929

C. B. STROUD, Supt.

appear are the spot market in New York, closing prices on the New Orleans Cotton Exchange, opening and closing prices in Havre and Bremen, closing prices in Alexandria, and noon prices and Indian spot quotations from Liverpool, and the tone for yarns and cloths in Manchester.

Ocean freight rates of the twenty leading cotton import ports are recorded, together with demand and cable exchange for sterling, francs, Belgian francs, marks, and lire.

The exchange's price record is given for each delivery month. Prices at the three calls—high, low, and closing—and yesterday's closing summarize the day's fluctuations. A complete record of prices for contracts in each delivery month is given. This record is the same as that which appears on the financial record of the exchange. The supply of cotton certificated for delivery on futures contracts is given for each grade. Pursuant to requirements of the Cotton Futures Act for the determination of price differences on grades above or below middling, the average differences on ten spot markets for all grades of cotton deliverable and nondeliverable are published together with a notation of the day on which these differences will prevail on deliveries on a futures contract. Finally, the days when transferable notices may be issued and the date of delivery on transferable notices issued on any given day are presented. The report notes when trading in the current month will cease, the first day for deliveries in the following month, when trading in that month will cease, and the first notice day for deliveries on contracts in the succeeding month.

Daily Market Report, New York Coffee and Sugar Exchange.—The record of prices of coffee and sugar futures on the exchange does not differ materially from that of the Cotton Exchange. It will be noted that the world's visible supply, which is computed from figures gathered by representatives of the exchange, is given in considerable detail.

Stocks of coffee in the principal European centers and in South America are given in detail, together with the amount afloat from Brazil. These figures bearing on the world supply are followed by figures detailing the movement and the stock on hand in the United States and in the two large centers, New York and New Orleans. A statistical history of arrivals, deliveries in the United States, and the world's visible supply month by month is given in separate tabulations. Other markets quoted are Santos and Rio futures.

The section devoted to sugar, in addition to the usual summary of the day's trading, details the stock of sugar in the warehouses in which stocks are carried in New York and receipts, exports, and summaries of the new and old crop movements. Other markets quoted are London, Paris, and Hamburg. The weather occupies a place in the sugar section, whereas it is omitted in the cotton market report and in the coffee section. Thus the sugar broker knows that the day was fine and warm in Germany and Czechoslovakia, but that yesterday's prediction in Havana had been for a continuation of the light rain then falling.

Crop Statistics in the Grain Trade.—The grain futures exchanges compile and issue reports, similar in nature to those which have been described for other commodity exchanges. The information is gathered by the exchanges, operating through their committees on information and statistics and valuable data is obtained from Broomhall's Agency, an internationally known organization whose lines of information spread over the world. The agency is a large specialized reporting bureau, publishing the *Corn Trade News* and supplying information to those who subscribe to its service. All of the world exchanges which trade in grain are subscribers.

Annual Reports.—All exchanges publish annual reports, similar to the operating statements of other business organi-

zations. Some exchanges, in addition, publish statistical annuals which contain a wealth of data on prices, supplies, and crop movements for years past and constitute a valuable source of information. The Chicago Board of Trade issues yearly a bound volume of 200 or more pages, containing a review of the year and statistical information regarding all commodities dealt in on the exchange.

Price Quotations.—A field where the commodity exchange is the sole source of information is the record of price quotations made on its floor. The record of prices prevailing daily is made available to other exchanges by direct wire and cable; to the public, by the ticker service which carries quotations to the offices of commission houses and dealers throughout the country, and by publication in the daily papers. This publicity of exchange prices serves a most valuable economic purpose. By affording a basis for arbitrage operations, all of the markets of the world are linked together. Although prices in one market may occasionally get out of parity with other markets, in the long run wheat prices at Liverpool, Winnipeg, Chicago, and Minneapolis will be at a substantial parity; cotton prices at New York, New Orleans, and Liverpool will be in alignment and the same condition will hold true for the prices of other commodities on other exchanges. Thus, for the commodities of worldwide production and consumption there is not a mere local market or a mere national market. There is a world market, brought about by the close interchange of price quotations and the alertness of arbitrageurs to make a profit by bringing prices together whenever an opportunity for operation appears.

Control of Quotations.—Different arrangements prevail on exchanges for disseminating quotations. They are sent out both by ticker service and by telegraph, and in the customers' room of the commission houses the quotations are posted promptly on the quotation board. The law has been

well established that the exchanges have complete control of their own quotations—that is, the exchanges may establish rules to be observed in transmitting news and they may also refuse to supply quotations to non-members if such a step appears desirable.[6] Allowing the telegraph company to take the quotations has been held not to amount to a publication such as would debar the exchanges from exercising discrimination over recipients from the distributing companies. This control of quotations has been of inestimable value in contributing to the suppression of bucket shops. The bucket shop, whether masquerading as a commission house or an odd lot exchange, must obtain its price quotations from some source. The clauses of the customer's contract with the Western Union Telegraph Co. for continuous quotations of the New York Cotton Exchange, reproduced below, are illustrative of the control maintained by the exchanges. By shutting off quotations from any recipient known to be "bucketing orders," his business is struck a deathblow. The courts have upheld this right, and the commodity exchanges have taken a leading part in the extirpation of gambling houses posing as legitimate commercial enterprises.

1. That our place of business is and shall be at No..... .....Street, City or Town of.....State of ....., and that our business is and shall be the business of.....and that said business is conducted under the firm name and style of..... and that notice of any change of the name, nature or place of said firm or business shall at once be given to the said Western Union Telegraph Company; and that we are not keeping or causing to be kept, and will not keep or cause to be kept, or be in any wise interested in, or in any way assist or promote, any bucket-shop or bucket-shop business, or any office, store or other place wherein is conducted or permitted the business of making, or offering to make, contracts, agreements, trades or transactions, either orally or in writing, respecting the purchase or sale (or the purchase and sale) of cotton, or any stocks, bonds

[6] For the law regarding control of quotations see Chapter XIII.

or other securities or commodities wherein both parties, or the party maintaining such office or place or conducting such business, or the undersigned, contemplate or intend that such contracts, agreements, trades, or transactions shall, or may be, closed, adjusted or settled according, or with reference, to the quotations of any Exchange, Board of Trade, or market place, upon which cotton, or stocks, bonds or other securities or commodities are dealt in; or otherwise than by an actual bona fide transaction or purchase or sale; or wherein both parties or the party maintaining such office or place or conducting such business or the undersigned contemplate or intend that such contracts, agreements, trades or transactions shall, or may, be closed or terminated when the quotations of some such Exchange, Board of Trade, or market place respecting the cotton, or stocks, bonds or other securities or commodities specified in such contracts, agreements, trades or transactions shall reach a certain figure; and we agree that we will not use, or allow anyone else to use, such quotations or any of them for any such purpose or in any such bucket-shop, office or place.

2. That said quotations are to be received by us only for our private and individual use in our said business at the office or place above designated; and that we will not communicate or otherwise furnish or permit to be communicated or otherwise furnished, said quotations to any news distributing company or telegraph company, or any person or corporation, nor to any other place than that above designated, nor allow any person or corporation whatsoever to take directly or indirectly said quotations from said office. If the undersigned shall furnish, or permit to be furnished, said quotations, or any of them, to any person, firm or corporation, the undersigned hereby agrees that the Western Union Telegraph Company may sue the person, firm or corporation to whom said quotations or any of them are thus furnished to prevent the receipt or use thereof by said person, firm or corporation without making the undersigned a defendant thereto, provided the undersigned does not, or in case of a partnership all the members thereof do not, reside within the jurisdiction of the Court in which said suit is brought.

3. That the office or place above designated shall not be connected by any private telegraph or telephone wire, or other wire connection, or other means of communication with the office or place of business of any person or persons, or corporation, engaged in the business of making contracts, agreements, trades or transactions respecting the purchase and sale of cotton, or stocks, bonds or other securities or commodities, or with any place where such business is conducted, unless the New York Cotton Exchange shall have been notified of such connection and shall not have disapproved the same.

. . . . .

5. That the furnishing of said quotations to the undersigned shall be discontinued whenever the Western Union Telegraph Company or the New York Cotton Exchange shall require the discontinuance thereof.

. . . . .

Newspaper Reports.—The financial pages of daily papers carry detailed reports of price changes on the principal commodity markets. Official prices are made public by the Quotations Committee, which establishes official quotations for inactive months and gives the "tone" of the market.

Market Letters.—Another source of information consists of the market letters issued by dealers and commission houses. These letters or bulletins are sent out to the house's customers to acquaint them with the price trends prevailing in the market. They frequently contain news bearing upon the supply of the commodity or upon the demand for it and other information deemed of importance as affecting prices. The exchange, however, possesses the power of censoring news material which is sent out; and the publication of rumors, insufficiently supported reports, or other matter tending to influence prices is discountenanced, as well as advertising matter which might invite "incompetents to undertake a hazardous enterprise."

The Work of the Arbitrageur.—The arbitrageur (frequently designated in commodity exchange operations as a "spreader") is an operator who takes advantage of an abnormal price relationship between markets or between futures for different months or even between different commodities by making a sale in the higher market or higher month or commodity and buying in the lower. He makes his profit when prices return to normal parities. The operation will be clearer if each operation is considered separately.

The difference which should prevail in the prices of the same commodity on different exchanges is sometimes stated to be the cost of transporting and handling the commodity

from the one market to the other. This is true if normal marketing involves a shipment from the first market to the second or vice versa. Otherwise the normal difference may be the difference in costs of handling at the point where shipments from the two markets come into competition. In the case of wheat, both Canada and the United States are exporting countries. Grain shipped from Fort William or Port Arthur comes into competition with grain moving from Chicago or Minneapolis at the Atlantic seaboard. Let us say that it costs 1½ cents more per bushel to move grain from the Canadian points than from Minneapolis. Furthermore, due to differences in grading, etc., assume that the purchaser of a future in the Minneapolis market would pay 8 cents more than for a corresponding future in Winnipeg. The normal spread between the markets would then be 9½ cents. Now, the price of the May future at Winnipeg, let us say, is quoted at 10¼ cents higher than the May future in Minneapolis. The arbitrageur notes this abnormality. He sells futures in the dearer market, *i. e.*, in Winnipeg, and he buys futures for a like amount in the cheaper market, *i. e.*, Minneapolis. He assumes a definite risk and he performs a definite service. He will be paid for his risk by a profit on both purchase and sale when the normal parity is resumed. When prices again show a spread of 9½ cents between the two markets, the arbitrageur can close out his short sale at Winnipeg and his purchase in Minneapolis, making ¾ of a cent profit per bushel without taking into account commission charges. The course of the market is immaterial, so long as prices come together at a spread less than the one prevailing when he made his arbitrage transactions. For instance, prices in both markets might rise. He would lose on his short sale in Winnipeg, but if Minneapolis prices caught up to the assumed 9½ cent spread, he would make a greater amount on his purchase in Minneapolis. Similarly,

if prices in both markets decline, while he will lose on the purchase in Minneapolis, he will clear a profit if the Winnipeg future declines further and makes the spread less than 10¼ cents.

The same opportunity for arbitraging exists between futures for different delivery months on the same exchange. The operator may judge that the December cotton future is cheap in comparison with November. He will "straddle" the market by buying the month he deems underpriced and selling the future he believes is overpriced, making his profit in the same way when the price range narrows.

A less familiar operation is that of arbitraging between different commodities. A certain correlation may exist between the prices of wheat and corn, wheat and rye, or oats and barley. The arbitrageur may believe rye is selling unduly high in relation to the price of wheat. He sells rye futures and buys wheat futures, profiting or losing in accordance with whether or not his judgment is vindicated.

The arbitrageur, in the course of his operations for his own profit performs an economic service in maintaining a normal price relationship between markets. His selling in the high priced market contributes to the lowering of prices there and his buying in the depressed market is an aid in lifting prices.

Regulation of Consumption.—The low or high price of an article controls its consumption, the one stimulating and the other retarding. This is so whether the price is of wheat or of caviar—of cotton or of shoes—of spots or of futures. But the hourly and daily publication of the prices of futures, reflecting the consensus of trained opinion as to the course of prices months ahead, provides the dealer or manufacturer using a commodity in which futures trading is carried on, with a peculiarly sensitive governor. The miller does not have to wait until October to ascertain what he will have to pay for his wheat then. He can anticipate—and so with the

spinner, the silk manufacturer, the tire manufacturer. The regulation of consumption is a more orderly and certain process and one attended with less uncertainty and anxiety. If cotton prices work so low that it appears certain the consumption of finished goods will be stimulated, the manufacturer can take advantage of the low prices to insure his requirements months ahead. It will not do to say that futures quotations are indispensable. But it is not overstating the service rendered by the exchanges to say that continuous quotations of futures are a most valuable contribution to modern industrial society.

Chapter IX

GRADING, STANDARDIZATION AND INSPECTION

Commodity exchanges perform an economic function second only in importance to their function of providing a means of price insurance. They render the commodity liquid. By liquidity is meant (1) that the commodity may be sold readily, instantaneously and in any amount, without the necessity of bargaining or searching for a buyer; (2) that title to the commodity may be transferred from seller to buyer through a standardized contract which involves no attention to its details on the part of either party to the bargain, and (3) that the commodity may be transferred by delivery of a document of title which passes from hand to hand and is everywhere accepted as the representative of the stored commodity which it represents.

The futures contract, in conjunction with the warehouse receipt and grade certificate, makes the physical commodity liquid.

In order to impart the full measure of liquidity to a commodity, it is necessary that a warehouse receipt shall be recognized as the equivalent of the commodity itself. Before a system of delivery by means of warehouse receipts can be established, it is necessary that definite grades be established so that every person who buys or sells may know with certainty what he may receive if he accepts delivery or what he must tender if he makes delivery. When grades are established, it is necessary to provide for a system of inspection, so that lots of a commodity intended for delivery may be properly graded and certificated. As an integral part of the

system of grading and inspection, the exchange licenses warehouses in which such lots, intended for delivery, may be stored. These lots are inspected, classified into proper grades, and a grade certificate issued. The warehouse receipt certifies to the existence of the commodity in the warehouse; the grade certificate certifies to its quality and its weight.

Advantages of Inspection and Grading.—The benefits of standardization won early recognition in those trades in which futures trading was first carried on. The following summary of the reasons for the adoption of the system and the benefits of its operation appeared in the *Origin, Growth and Usefulness of the New York Produce Exchange,* about ten years after the establishment of an inspection and grading system:

> The year 1874 was also rendered memorable by the changes in the methods of handling and dealing in grain, and which have proved so beneficial to buyers and sellers and the commerce of the port. The grain trade was rapidly growing, and many of the shipments came from far Western points. Naturally more or less delays and confusion occurred in conveying the grain so far, and the business of the Exchange was much disarranged by the rule that the various railroads had to deliver to consignees the identical lots of grain shipped by the Western producers. Many suggestions as to the most effectual remedy were made, and special committees weighed the subject for a long period, until finally the present system of grading grain was adopted. . . .
>
> Grades of all kinds of grain were then established, standard samples of such grades being kept in the Exchange, and the Committee on Grain also appointed an inspector-in-chief, who in turn was empowered to appoint deputies to promptly and reliably inspect each car of grain upon its arrival at the Hudson River terminus of the railroads. . . .
>
> The Inspectors supervised the weighing of the grain and kept books in which they recorded accurately the number of each car, the kind, grade, and quantity of grain therein inspected and weighed, the date of such inspection, and the name of the consignee. . . .
>
> These certificates were to be properly dated and numbered consecutively, and were to state in detail the kind, grade, and quantity of the grain represented by them. Upon surrender of certificates to the railroad company issuing the same, with an order directing the delivery of the grain, the company was to give proper receipts for them and promptly deliver the quantity and grade of the grain specified therein

at any customary place of delivery in the port of New York. Strict rules governing the duties of the Inspectors were also adopted, and, as thus formulated, the system of handling graded grain has proved a grand success, reflecting credit on all concerned in its adoption.

Mr. Forrest H. Parker thus graphically refers to the struggle which resulted in the above great and beneficent change: "The contest was sharp and bitter, the opponents of the grading of grain were among the most able members of our Exchange; the friends of the movement, however, were determined that the system should be inaugurated. It was my good fortune to be in the Board at that time, and I can testify that it was believed that the result would draw us nearer to the producers and dealers of the West, and would be beneficial to them as well as ourselves. Grain in car lots was no longer to be burdened with the heavy charges incident to its being sold and handled by itself, but was to be inspected by the New York Produce Exchange and a certificate issued by the railroad company stating that the receiver was entitled to —— bushels of equal quality, thus materially lessening the cost of handling car grain in the port of New York. The result of this compact with the railroad companies has proved the wisdom of its promoters and it is safe to say that the handling of car grain by the method in vogue prior to the establishment of the grading of grain system would now be almost a physical impossibility."

Establishment of well-defined grades and adherence to the standards established is of benefit to the producer, distributor, and consumer. If, in addition to having established grades, the machinery is provided for inspection and classification to insure that each lot of the commodity conforms to the grade standard, there is no longer any practical application of the principle of *caveat emptor*. Without standards or grades, a purchaser must necessarily inspect carefully every lot of a commodity which he buys; but once grades are recognized in the trade, purchases may be made (1) by sample, (2) by description.

Establishment of Grades and Methods of Classification. —In every commodity trade wherein the futures exchanges operate, they have played a pioneer part in establishing grading systems. At present, commodities may be divided into two broad classes: (1) those in which standards or inspec-

tion, or both, are provided for by a Federal or State statute, and (2) those in which standards and methods of sampling and inspection are provided for by the exchange. In the former classification are cotton, wheat, and other grains. In the latter are coffee, sugar, rubber, cocoa, silk, tin, butter and eggs, and cottonseed oil.

Standards in the Cotton Trade.—Grades in the cotton trade are classified and established pursuant to the Cotton Futures Act passed in 1916. The grades set up had prevailed previously in the industry. The Act, beyond prohibiting the delivery on a futures contract of any cotton of a grade poorer than low middling, made no material changes in standards. It did (1) prescribe a method of determining differences,[1] (2) provide for a system of sampling, weighing, and grading by officials of the United States Department of Agriculture, and (3) provide for the issuance of class certificates by the inspectors certifying the weight and grade of the cotton.

The owner of cotton intended for delivery on a futures contract must first store it in a warehouse licensed by the exchange. The Cotton Exchange maintains a staff known as the Inspection Bureau, charged with the duty of sampling and weighing cotton to be tendered on a futures contract. The owner of the cotton gives the chief inspector of the bureau a written order to sample and weigh. The order states where the cotton is located, and the number of bales in the lot. A sampler and an inspector are then detailed by the chief inspector to obtain the samples and supervise the weighing. Two sets of samples are taken from each bale in the lot, marked, and given an exchange lot number. One set of samples is retained by the inspection bureau, which also records the return of the weighers and compares it with that of the inspector who supervised the weighing. The

[1] See Chapter X.

other set of samples goes to the government officials for classification. Branch offices of the Department of Agriculture are maintained in New York and in New Orleans where cotton futures markets are located; and in each of the branch offices is a board of cotton examiners. When his cotton has been weighed and samples drawn, the owner addresses a request to the board of examiners to class his lot. This request is made on a form established by the Department of Agriculture. The location of the cotton, the number of bales, the weight,—compressed or uncompressed,—the tag numbers, are stated in the request. The board of examiners, on the basis of the samples submitted, classes the cotton in its proper grade. The grade may be one which is tenderable on futures contract or one which is not tenderable. The certificate in either case contains the same information. If the cotton is of a nontenderable grade, a pink certificate is issued; if the grade is tenderable, a green certificate, setting out the location, the lot number, the marks, grade, and length of staple in each bale, is issued to the owner. From the board of examiners an appeal may be taken to the Cotton Board of the Department of Agriculture.

The owner now has his certificate of grade from the government board, and his warehouse receipt. He may present the latter to the Inspection Bureau of the exchange to have the weight noted. As noted elsewhere, delivery of the receipt to the buyer effects a transfer of the title.

The class certificate is good for an indefinite period. The weights determined by the official weighing, however, are not. Cotton in storage is subject to loss of weight, and this is a condition which must be taken into account if delivery is made more than a month after the official weighing. The owner of the cotton in this case may either have the lot reweighed or he may deliver, making an allowance, however, to the buyer of one-half pound per bale for each month

that has passed since the cotton was weighed. It may be noted also that inspected and certificated cotton may be transferred from one licensed warehouse to another. In case such a transfer is made, it is carried on under the supervision of the Inspection Bureau's staff.

The characteristics of inspection and grading in the cotton trade, then, are (1) sampling and weighing by an inspection bureau under direct control of the exchange; (2) grading and certification by the United States Department of Agriculture.

Inspection and Grading in the Grain Trade.—The Grain Standards Act was passed in 1916, the year in which the present Cotton Futures Act became operative. Prior to the adoption of the Grain Standards Act, each futures exchange had its own standards. The Grain Standards Act empowered the Secretary of the Department of Agriculture to prescribe grades and standards for the grain trade and, furthermore, to exercise jurisdiction over the inspection and grading of grain. The grades, accordingly, are established by authority of the Act; but all futures exchanges do not deal in every established grade of their commodity.[2] Passage of the Act found the machinery of an efficient inspection and classification system already in existence, with a staff of inspectors, weighers and graders operating under State authority or directly under the exchange. This machinery was made a part of the government inspection system by means of licensing. The actual sampling and grading, accordingly, is done by the State or by the exchange staff. In the case of appeals, however, the question of grade is decided by the Department of Agriculture instead of by the authority making the initial inspection.

Grain reaches the terminal markets by rail or water. Upon arrival, samples are taken by the regular inspection staff, and the grain is weighed by licensed employees of the ware-

[2] See Chapter I.

house, the exchange or the State. On the basis of the samples taken, the grain is classified in accordance with the standards established by the Federal act and certificates are issued. The inspection certificate, showing the grade, and the weight certificate are delivered to the warehouseman, and his receipt embodies the grade and weight so established. The certificate of grade covers no specified time; grain in storage, however, is subject to deterioration in quality. In case the grain deteriorates so that it does not correspond to the grade called for in the certificate, a notice is posted on the exchange. The requirements of the exchange make it necessary for the grain to be immediately removed from the official warehouse.

The general procedure of inspection and classification of grain and cotton has been separately treated inasmuch as in each case they are subject to the rules of the Department of Agriculture. A description of the methods followed in classing and grading commodities which are not subject to government regulation would involve much unnecessary repetition if the commodities were taken up one by one. Instead of considering other commodities separately, the principles by which exchanges are guided in establishing inspection and grading systems will be considered.

Standards in the Silk Trade.—The inspection, grading, and certification of raw silk are provided for in the by-laws of the National Raw Silk Exchange, Inc. Prior to the opening of the exchange, an exhaustive investigation was carried on to obtain the experience and opinion of the silk trade as to deliverable grades and the most satisfactory methods of classifying raw silk. As the result of responses to questionnaires and conferences with leaders in the industry, ten grades were made tenderable and a series of quality tests and auxiliary tests was prescribed.

The visual tests prescribe grading for quality according

to the evenness of the silk, its cleanness and neatness. Auxiliary tests determine its tenacity, its elongation (elasticity), the average size variation and the degree of variation, and its winding quality.

Silk is sampled by drawing four skeins from each bale of the 5 bale lot of raw silk—20 skeins in all. The visual test precedes all others and the silk may be rejected if its appearance shows it to be unsatisfactory in quality. The auxiliary tests for size deviation, tenacity, elongation, etc., may indicate that the silk is one grade lower than that shown by the visual tests without affecting its classification, but a greater variation results in the certification of the lot as one grade below that indicated by the visual tests. The following excerpts from the by-laws of the National Raw Silk Exchange show the thorough provision made for determining the quality of silk tendered for delivery:

Sec. 51. The Size Deviation Test shall be made as follows: sixty sizing test skeins of 450 meters each shall be reeled, 3 from each sample skein of the 20 skeins of the 5 bale lot. The number of occurrences of each size in deniers shall be multiplied by the difference between that size and the average size of the lot. The results shall be totaled and divided by the total number of sizing skeins (60). The final result will show the degree of size deviation.

The record shall show a chart of the frequent distribution of the individual sizing test skeins, in a progressive order. Each sizing skein shall be weighed on a quadrant balance to the nearest half denier and the record shall show the average size for the test.

Sec. 53. Tests for Tenacity and Elongation shall be made by Serigraph according to Article IV of the R. S. C. C. of the Silk Association of America.

Sec. 54. The Winding test shall be made on the 20 sample skeins and shall show the number of breaks occurring in one hour. One half of the sample skeins shall be wound from the outside of the skeins and the other half from the inside of the skeins at a speed of 150 yards per minute for 13/15 deniers and 180 yards per minute for 20/22 deniers. The period of winding shall be seventy minutes and after omitting the first ten minutes the breaks occurring during one hour are counted and recorded.

Sampling.—The first problem in the establishment of a system of inspection and grading is that of sampling. Every commodity dealt in on an organized futures market is graded by sample. Sampling is the only practicable method of grading; yet each commodity presents its own difficulties. In the grain trades a sampling apparatus is employed because of the fine distinction as to quality between different grades. Cotton is sampled by cutting into both sides of a bale and drawing a pound or more from the opening. Sampling from different sides is done in order to detect any admixture of inferior cotton which might not be discoverable in a sample drawn only from one side. Sugar may harden and coffee may deteriorate or be damaged, so that a large part of the bag must be taken as a sample. Rubber is subject to mold and to freezing, and a given lot may contain a mixture of ribbings, making it difficult to obtain samples which are representative. This brief statement will give some idea of the difficulties inherent in the process of obtaining samples which are fairly representative of the lot.

The actual sampling may be done in one of four ways. (1) Representatives of the buyer and seller may act together in drawing samples. (2) Sampling may be done by employees of the licensed warehouses, or (3) by inspectors acting under license from the Federal government or from the exchange, or (4) by the staff of the exchange. The first of these methods has defects which are at once apparent. Since the object of grading is to secure such uniformity that a warehouse receipt for a lot of the commodity of a given grade will be recognized by all in the trade as representing goods of a known and definite standard, sampling by private parties would strike at the very root of the desired condition of uniformity. There is lacking a central authority lending its reputation and sanction to the process. Sampling by employees of the warehouse is open to the same objections with

attendant differences in grades. It is also objectionable because the warehouseman has a financial interest in the grading process. Since he delivers not any specific lot but any goods of a given grade, his interest lies on the side of grading low (hence, securing the poor samples) rather than in grading high. If sampling is done by licensees of the exchange, their compensation is derived from fees. As in both of the methods mentioned above, the want of centralized control makes it possible if not probable that uniformity will be lacking. The further objection attendant upon the fee system is a possible tendency on the part of the licensed sampler to hurry the work at the expense of careful sampling in order to handle more jobs and earn more fees. The most satisfactory results are obtained by having the sampling handled by a bureau or an inspection staff employed by the exchange under the direction of a competent inspector directly responsible to the governing board of the exchange. Uniformity in method and a single purpose to build a reputation for the integrity of the certificates are best assured by this plan.

Grading.—With the establishment of methods for uniform sampling, the problem of grading next arises. Grading from the samples may be undertaken (1) by graders acting under license from the exchange, (2) by a committee of the exchange or members of the exchange authorized to perform this function, (3) by a staff of graders employed by the exchange and under its direction, or (4) by graders employed under State authority. The objection to grading by licensees is the same as that mentioned above for sampling by licensees, although in a trade where a buyer and seller can both inspect the lot and agree upon samples, it has proved feasible and is now in operation on the Coffee and Sugar Exchange. Sampling, grading, and weighing are all carried on by persons bearing licenses from the exchange.

Licensed samplers and graders have their applications endorsed by two members of the exchange, and application for a weigher's license is endorsed by two weighmasters of the exchange. A special committee investigates the qualifications of the applicants, and upon its favorable report a license is issued by the Board of Managers.

The seller who intends to deliver on a coffee future names a licensed grader to represent him, and the buyer likewise names his representative. If a decision cannot be reached by the original graders, the question comes before the Board of Coffee Arbitrators composed of eight or ten graders designated by the board of managers. Three members of the arbitration board are chosen by lot to decide the question. An appeal from the decision of the three arbitrators to the whole board is provided in case one of the original graders is dissatisfied with the decision of the committee. The certificates of grade accordingly represent either agreement on the part of the original graders or else a decision of the board of arbitrators.

In the cocoa trade, a similar system of grading and certification is found.

Grading by an exchange committee or by members of the exchange under license presents two other problems. Exchange members are usually men whose business affairs do not permit them to take much time for the performance of exacting work of this sort, and uniformity may also suffer under a committee-grading system.

The primary object to be sought in grading is uniformity —an object which is best achieved by (1) control by the exchange, (2) a single policy firmly administered to build up and maintain the reputation of the certificates, and (3) responsibility for grading as well as sampling and weighing centered in one administrative body.

Warehousing.—The warehouse stores and preserves the commodity, and its receipts are collateral against which banks make advances to the owners of the commodity. Since the warehouse receipt makes it possible for the owner of goods to borrow readily, it contributes directly to reducing marketing costs. More business can be done on the owner's capital. In summarizing the services performed by warehouses in the cotton trade, Alonzo B. Cox, former agricultural economist, Division of Cotton Marketing, Bureau of Agricultural Economics, says:

> The considerations which determine the value of warehouse receipts are: (1) The structure and location of the warehouse, (2) the facts set forth on the receipts, (3) the kind and amount of supervision received from disinterested parties, (4) the net free assets of the company, (5) the size and nature of the bond furnished, (6) the kind and amount of insurance carried on the cotton in the warehouse, and (7) the integrity and standing of the officials responsible for the operation of the warehouse.
>
> There is such a wide difference between the values of individual bales of cotton that a receipt calling merely for a bale of cotton is of indefinite value. The most desirable receipt shows the grade and staple of the cotton, its condition, the weight of the bale, the tag number of the bale, by whom the cotton has been classed, whether the cotton is insured, and a statement as to the negotiability of the receipt.
>
> The paper upon which the receipts are written and the way they are marked and issued should be designed to make the counterfeiting of receipts extremely difficult. The United States Department of Agriculture has worked out a plan which tends to throw around the federal warehouse receipt restrictions similar to those observed in the issuance of bank notes.
>
> Just as inspection has given confidence in national banks, so proper supervision and inspection strengthen confidence in warehouse receipts. Inspection by a disinterested government official has demonstrated its value, and many banks are insisting upon a federal receipt.
>
> A knowledge of the value of the net free assets of the company operating the warehouse is important, especially if the receipt is to be used at distant points. A periodic statement of the assets and liabilities adds much to the standing of a warehouse company.
>
> Insurance to cover the cotton in the warehouse, based on the class and weight shown on the receipt and on the daily market price is usually

required when receipts are offered as security for loans. The policy on the cotton may be carried either by the warehouseman or the owner, but when a loan is desired the banker's conditions must be met. In the small country warehouse it is frequently carried by the warehouseman and paid for as a part of the warehouse charge. The cotton merchants and the large cooperatives carry their own insurance on their cotton, because they can obtain better rates and a policy broader in scope. . . .

In markets where cotton is tendered for delivery against future contracts, a proper system of warehouse supervision and inspection adds greatly to the value of the contract and facilitates a freer movement. The improved system of warehousing, coupled with a better cotton classing service and means of identification of bales, is doing much to eliminate waste and shorten the marketing route.[3]

[3] *Services in Cotton Marketing*, U. S. Department of Agriculture Bulletin No. 1445, pp. 23, 24.

Chapter X

GOVERNMENT REGULATION

Legislation, both federal and state, affecting commodity exchanges falls into two broad divisions: efforts to cripple or destroy the speculative machinery of the exchanges and laws directed against certain abnormalities, such as corners, or against rules and practices which it has been deemed desirable to regulate or change in the interest of business welfare. Efforts of the former sort have taken the form of laws to prohibit trading in futures or in general prohibitions of "gambling" transactions; and to the proponents of such legislation a futures contract was always a gambling device and the futures exchange a rendezvous of gamblers. It is worth noting here that in the older states in some of which laws prohibitory of futures trading were passed before the West was settled, there has been little or no attempt in modern times to interfere with the legitimate workings of commodity exchanges. Public opinion as interpreted by the legislatures has been confined to correcting abuses where they have existed rather than directed at prohibitory legislation. The subject of state laws affecting exchanges will be considered in the chapter dealing with the legal aspects of commodity exchanges. In this chapter attention will be given to the broader question of Federal regulation and supervision.

Reasons for Government Regulation.—Active attempts at regulation have been leveled against exchanges on many counts: (a) That speculation on the exchanges is a means of raising prices and is, therefore, detrimental to the consumer; (b) That speculation on the exchanges depresses

prices and is therefore harmful to the producer; (c) That all speculation is gambling and wrongful; (d) That the speculative machinery of the exchanges is abused and prices are manipulated to the detriment of producers or consumers of the commodity; (e) That rules or by-laws of the exchange regulating price differences, grading, deliveries, and other matters are not in line with the best interests of the particular trade. These criticisms have been the motivating influences in all of the legislation proposed or laws passed affecting commodity exchanges. Before taking up the subject of legislation in more detail, it will be well to give attention to the circumstances which have inspired it.

Influence of the Exchange on Prices.—A single incident is illustrative of one body of thought about commodity exchanges. In the spring of 1928, announcement was made of the formation of the National Raw Silk Exchange. The announcement was read by a lady whose interest in the silk industry is entirely that of a consumer. She inquired: "Does that mean that we will pay higher prices for silk goods?" In her mind, the existence of an exchange was synonymous with high prices. At this same time a Congressional Committee was engaged in the investigation of affairs of another commodity exchange, their investigation having been started by the charge made by producers that the exchange machinery was a factor in depressing prices. This is merely a modern example of a situation that has existed before. The classic example is the one of the two sets of resolutions, one passed by a farmers' meeting, condemning futures contracts because they depressed wheat prices, and the other adopted three weeks later by the Association of American Millers, condemning futures because they raised wheat prices.

Each man's belief must be determined by his individual viewpoint. We are not considering now the use made of exchange machinery, but the natural effect of that machinery

upon prices. The exchange provides a wide, ready market and makes that market accessible to both buyers and sellers. The streams of opinion regarding the course of prices converge on the exchange floor. Numerous investigations of exchanges and their practices have been undertaken, but not one has borne out the contention that the exchange machinery *as such* is a factor tending to elevate or to depress the prices of commodities.

The heaviest attacks made upon exchange trading were launched in the nineties. It is significant that this was a period of agricultural depression. Farmers were hard pressed to eke out a scanty subsistence, and they sought relief in any measures, sound or fanciful, which seemed to promise an alleviation of their condition. This was the era of free silver agitation. It was an era, too, of widespread attacks upon futures exchanges engendered by a belief that somehow and in some way these institutions must be responsible for some of the farmers' ills. In 1890 the forerunner appeared in Congress in the shape of the Butterworth Anti-Option Bill [1] which never came to a vote. Two years later a number of bills were introduced which were combined finally in one measure, the Hatch Bill. It has been noted that producers were vitally concerned about low prices; hence we find the Hatch Bill prohibiting short selling because of the belief that short selling was a factor tending to depress prices. This measure was passed in both houses of Congress, but amendments were introduced in the Senate requiring further concurring action by the House of Representatives. Congress adjourned before the bill could be taken up in due course, and the motion to suspend the rules and give preferred consideration to the bill lacked the necessary majority. The following year the bill

[1] In legislative proposals and in some literature the word "option" is loosely used when futures contract is meant. In its proper usage, an option is a put or a call; but references in this chapter to anti-option bills mean bills directed against futures trading.

which passed the lower house did not come up for action in the Senate.

The effect of increased gold production in South Africa and the Klondike and the stimulus afforded gold production by discovery of the cyanide process now began to have a silent influence upon agitation against the exchanges. Agricultural prices rose and bills directed against short selling and futures contracts disappeared for nearly a decade. Beginning with 1903, there was a revival of bills directed against short selling, speculation, and various other phases of exchange operation, including a comprehensive measure which, if enacted, would have occasioned consternation among supporters and adversaries alike, since it was designed to prevent anyone from gaining or losing sums of money from fluctuations in value of products of the soil. The number of bills increased, but most of them were buried and never came to a vote.

It is impossible to criticize agriculturists who complain because they find months of hard work poorly recompensed when their crops bring low prices. It is possible, however, to question the vision of those who adopt the farmers' ills and attempt to make capital of them by legislation directed not at a cause but at machinery which is not a fundamental factor in price making. The agitator, seeing only the Chicago market for wheat or the New York market for cotton, may be entirely ignorant of the fact that it is generally accepted that wheat prices are made in Liverpool, or that the New York market for cotton is bound by very close ties to the markets of Liverpool and Manchester. With a commodity of world-wide production and consumption, the prices of which are determined on closely related and sensitively attuned world markets, no single market can exert an appreciable effect upon normal price trends.

The German Experiment.—The most heroic experiment in the separation of exchange activities was that of Germany in 1896. A law was passed, effective the first of the following year, which, in addition to provisions affecting the stock markets, prohibited all dealings for future delivery in grain unless such contracts and the names of both parties were registered. The law was directed against short selling, believed by the agrarians to be responsible for low agricultural prices, and it was designed to stop speculation by the general public. With short selling eliminated, the effect was a one-sided market. Theoretically, everybody had to be a bull or else stay out of the market altogether; and as a result bull movements were more accentuated and reactions more severe. Local markets assumed an increasing importance; but buyers and sellers in the local markets were deprived of an important aid in arriving at a fair price, because prices in a national market were no longer available. The proviso for registration of contracts proved a fiasco, and the law achieved the unintended and unforeseen result of promoting "welching" on contracts. Speculative trades were made, but if the result was adverse to a speculator who had no high regard for a moral obligation, the other party was left without redress. The contract not being registered, no legal action upon it could be maintained.

Recent Regulatory Acts.—In recent years, legislative activity has been concerned not with abolishing trading in futures, but with regulation and control, in order to eliminate practices detrimental to the trade and to remedy existing abuses. While efforts to abolish futures trading have been misdirected, it is equally true that legal regulation has been brought about frequently by the failure of exchanges to correct conditions which it lay within their power to remedy.

The two most important laws affecting commodity exchanges are the United States Cotton Futures Act and the

United States Grain Futures Act. The importance of these Acts makes it necessary to note the reasons for their passage —the conditions which they were designed to remedy and how those purposes have been accomplished.

The Cotton Futures Act.—The Cotton Futures Act, passed by Congress in 1915, imposed Federal regulation upon trading in cotton futures after the New York Cotton Exchange had failed to adopt recommendations made by the Bureau of Corporations. The matter had its genesis in 1906. According to the rules of the New York Cotton Exchange, price differences between the basis grade and other grades deliverable on the futures contract were established periodically by a committee of the exchange known as the Revision Committee. This committee met twice a year, in September and November. At the September meeting it established differences which prevailed for settlements until the November meeting, while the differences established in November prevailed until September of the following year. This method was known as the "fixed difference" system. It was open to the natural objection that the differences established were arbitrary and were not "commercial" differences. Obviously a scale of differences fixed twice a year by a committee would not bear a close relationship to actual price differences prevailing in spot markets. In 1906 an extraordinary crop situation, coupled with a failure of the revision committee to appraise properly its effect in the spot market, brought about a chaotic condition. The revision committee met on September 12 and established price differences, making little change in the prevailing schedules. Before the end of the month, storms of great violence swept from the Gulf over the cotton states, not only destroying crops but doing tremendous damage to the quality of the growing cotton. Open bolls were stained by the downpour of rain and filled with sand by the high winds. Nor did the weather improve after the

storm. A continuance of rainfall aggravated the damage which the storm had accomplished, and the cotton crop of 1906 was one of the lowest in average quality which has ever been marketed.

The damage came at a time when there was a heavy demand for high-grade cotton. The prevalence of the heavy demand and the damage wrought by the storm caused an immediate and widening spread between middling cotton and lower grades in the spot markets. Commercial differences, *i. e.*, differences in cash markets, widened so that, to take one grade alone, low middling, a discount grade, was quoted 1.13 cents below middling by the time the revision committee met in November. It was the expectation in the trade that the fixed differences would be greatly increased. The changes, however, were relatively slight. Whereas low middling was 1.13 cents below middling in the spot markets, the revision committee established a difference of 0.50 cents below; and whereas good ordinary was 1.94 cents below middling in the spot markets, the fixed difference established by the committee was 1.25 cents. The effect of these inadequate revisions was to depress the prices of all futures. The holder of low-grade cotton (of which there was a plethora) could deliver it on a futures contract at a price far in excess of that which he could command in the cash market. Since the commercial demand was for high-grade cotton, and since the inadequate scale of differences established was an invitation to dump low-grade cotton on the New York market, the spread between spots and futures widened materially after the adoption of these differences. The value of the market as a medium for hedging was largely destroyed.

The dissatisfaction produced by this unfortunate combination of circumstances led to an investigation of cotton exchanges by the Commissioner of Corporations, the particular subject of inquiry being methods of fixing differences. As

a result of the investigation, recommendations for correcting the evils inherent in the system of fixed differences were made. The New York Cotton Exchange did not take favorable action. Accordingly, some years later the government proceeded to impose regulations by law. The Cotton Futures Act compels the use of commercial differences; that is, price differentials between deliverable grades must be based upon those prevailing in the spot markets. In order to insure that price data from spot markets will be adequate, the Act provides that if a spot market exists on the exchange, differences on futures shall be those prevailing in the spot market. If a spot market does not exist, the differences prevailing in at least five spot markets named by the Secretary of Agriculture are to be used for fixing differences on the exchange contract. The Act also provides for the use of standards established by the Department of Agriculture, and establishes a system of inspection, grading, and labeling of bales under the supervision of officials of the Department.

The Grain Futures Act.—This Act, passed in 1922, is a reenactment of an Act of the same tenor passed the previous year which was held unconstitutional. By the terms of the Act, trading in grain futures is limited to contract markets located at important grain terminals, designated by the Secretary of Agriculture. The principal purposes of the Grain Futures Act are summarized in the Report of Grain Futures Administration, United States Department of Agriculture, September 9, 1924 (page 2).

(1) To obtain for the use of Congress and the enlightenment of the public authentic and comprehensive information regarding trading in grain futures. As some writer expressed it, Congress intended "to remove the mystery" from grain futures. To accomplish this object, the law contains provisions requiring the making of adequate original records of cash and future transactions on boards of trade, the keeping of such records for a sufficient length of time, and the rendering of reports based thereon. Such records must show all the details and terms of all such

transactions. They must be kept for three years or longer, if required by the Secretary of Agriculture, and must be open to inspection by properly authorized representatives of the Departments of Agriculture and Justice. Proper safeguards are provided against the unauthorized publication of information which would separately disclose the business transactions of any person or trade secrets and names of customers.

(2) To prevent the dissemination by boards of trade or their members of false or misleading reports concerning crop or market information or conditions that affect the price of grain.

(3) To prevent the misuse of facilities of grain futures exchanges in ways which result or tend to result in "sudden and unreasonable fluctuations in prices" or in the cornering of grain.

(4) To make the contract markets open markets for producers by preventing the arbitrary exclusion of properly formed and conducted cooperative associations of producers engaged in the cash grain business which act for their members on a patronage dividend basis.

(5) To limit trading in grain futures to boards of trade located at terminal cash grain markets where there are available official inspection service and satisfactory grain marketing conditions.

Abuses Overcome.—State legislation and vigorous action by commodity exchanges have combined to remove three matters from the purview of present legislation. Bucket shops have been effectively driven out of business as much through the vigorous crusades waged by exchanges as through legal action. Bucket shops were found in two forms. A firm purporting to be a commission house might receive orders which it "bucketed." It would make a purchase and simultaneously execute an offsetting sale for its own account, or vice versa. To all intents and purposes, the customer's order was never executed. The part of legitimate commodity exchanges was played also by the existence of odd-lot exchanges which were in reality simply bucket shops. Legitimate trading was not carried on upon the floors of these exchanges; they existed merely as devices for attracting the business of the small speculator whose orders were generally bucketed. Deprived of the quotation services of the legitimate exchanges, the odd-lot bucket shop exchange has passed

away. Puts and calls are expressly prohibited by the by-laws of many of the commodity exchanges. Legislation exists in Illinois designed to penalize corners, and the Chicago Board of Trade has adopted rules likewise designed to prevent cornering the market in any commodity traded in on its floor.

Other Regulatory Proposals.—During the Congressional session in the winter of 1927-28, other proposals for the regulation of futures markets were brought forward. Bills were introduced to provide for Southern deliveries on futures contracts made on the New York Cotton Exchange. The position of the proponents of the bills is that New York is not a natural cotton market and that requiring cotton to be shipped to New York for delivery on a futures contract is an unnatural and uneconomic regulation, when spot markets are to be found scattered throughout the cotton-growing states. The proposal was also advanced to limit the amount of a single speculative interest in any one delivery month as a measure to guard against price manipulation. The Rankin Bill provided for the confiscation of cotton withheld from the market with intent to manipulate prices, it being the allegation of proponents of this bill that large stores of cotton were accumulated by important interests and withheld from the market for the purpose of influencing prices.

Evils—Supposed and Real.—The trend of legislative thought regarding commodity exchanges has apparently been toward regulation rather than the prohibition of futures trading. It is a salutary change. By directing attention to those matters which are objectionable and remediable, Congress and the exchanges may be instrumental in furthering the economic services rendered by the latter, instead of indulging in ill-advised agitation fraught with the danger of killing the good for the sake of removing the evil. The legislation which would abolish futures trading would destroy institu-

tions which are of vital aid to every link in the distributive system from producer to consumer, removing the opportunity to hedge; and straightway, in the grain and cotton trades where hedging is largely employed, the spread between the price received by the producer and the price paid by the consumer must be readjusted. The only way in which the distributor can be paid for his increased risk is by obtaining an increased profit. To attempt to abolish short selling is the same thing as attempting to abolish futures markets. An instrument which now tends to cushion the velocity of declining prices would be removed, increasing the violence of fluctuations and making markets less valuable for hedging purposes. A distinguished economist sums it up in this way:

> So great has been the extent of this evil [market manipulation] that many have desired to see an entire prohibition of contracts for future delivery of things which a man does not possess at the time; but this is obviously out of the question. It would prevent operations like those of the cotton broker or the lumber merchant, which economize the capital of the community and have become a necessary feature in modern business life. It would be attended by great and disastrous irregularity in prices. Any legislation of this kind, in order to be successful, must be so contrived as to affect the gambling transactions and leave the legitimate ones comparatively untouched.[2]

On the other hand, the aims of the legislation, both passive and proposed, for the last decade have been salutary. As indicated, the Cotton Futures Act and the measures introduced during the winter of 1928 were designed to improve the distributive system in the commodity trades to which they applied. An artificial method of fixing differences has been supplanted by a system making those differences representative of prevailing prices in spot markets. Inspection and grading in the grain trades and the cotton trade have been standardized and improved. One prime objection to the cottonseed oil futures contract on the New York Produce

[2] Arthur Twining Hadley, *Economics,* p. 108.

Exchange was that delivery was required in barrels, and that the quality of oil called for by the rules of the exchange did not conform to the needs of the industry. Matters of this sort are properly the subject of regulation. The exchange must serve the best interests of the trade if it is to accomplish its purpose, and the one thing perhaps most desirable is that exchanges should take the initiative in adapting their contracts to accepted trade practices, rather than by their own inertia to bring about the necessity of legal regulation.

Exchanges Act to Prevent Abuses.—The grain exchanges have given wide and plenary powers to their Business Conduct Committees in recent years. The scope of the control possessed by this committee of the Chicago Board of Trade is shown by its Rule 82:

82. Business Conduct Committee.—The President, with the approval of the Board, shall appoint from the general membership, three members of a business conduct committee, who are not serving as directors or officers of the Association, one for a term expiring October 1, 1926, one for a term expiring October 1, 1927, and one for a term expiring October 1, 1928, and thereafter at the first meeting of the Board in September of each year, the President, with the approval of the Board, shall appoint one member of such committee for a period of three years, dating from October 1 in such year. In case of a vacancy, the President, with the approval of the Board, shall fill the vacancy for the unexpired term. The three members thus appointed, together with the President of the Association and the President (or if there be no President, the Treasurer) of the Clearing House shall constitute the business conduct committee. Five members of the Committee shall be required to constitute a quorum, but in the absence of one or more members from a particular meeting, the members present may fill the Committee by temporary appointments for that particular meeting. All regular members of the Committee shall pledge themselves to the Association that they will not speculate for their personal account in any commodity which is traded in on the Chicago Board of Trade during the period of their service. The Committee shall be charged with the duty and authority to prevent manipulation of prices as provided in Section 5 (d) of the Grain Futures Act and shall have general supervision over the business conduct of members, particularly insofar as such conduct affects (1) non-member customers; (2) the public at large; (3) the state govern-

ment; (4) the federal government; (5) public opinion, and (6) the good name of the Association. The Committee may investigate the dealings, transactions and financial condition of members, and may examine their books and papers upon request. The Committee may employ such auditors and other assistants as they may deem necessary, and all expenses incident thereto shall be payable from the funds of the Association. Members under investigation shall be advised of the nature of the investigation, and may appear before the Committee and offer such testimony, explanation or justification as they may wish. If as the result of any investigation, the Committee finds that a particular course of conduct is, or thereafter would be, unfair or unjust, or in violation of the law or the rules of the Association or calculated to impair the good name of the Association, the Committee shall notify the member in writing of its conclusions, and direct such member to desist from such past or proposed conduct. The findings and conclusions of the Committee in the premises shall be final and without appeal. Any member who fails to appear before the Committee pursuant to its request, or to submit his books and papers to the Committee for their examination, or who conducts himself in violation of any order of the Committee after having been duly notified thereof, shall be charged with an offence against the Association, and if found guilty shall either be expelled or suspended for any specified period by the Board.

The creation of a committee with these powers is regarded as "undoubtedly a most far-reaching progressive step and this plan of preventing wide and unwarranted price fluctuations and excessive speculative trading and manipulation should be given a fair trial before resorting to more drastic regulatory measures."[3] The best regulation is that which proceeds from within the trade itself, and since the exchange is an important part of the trade, the consideration of governing bodies should be given constantly to methods of making exchange practices not only conform to those of the trade, but toward making exchange prices as free as possible from artificial manipulation.

Report of the Royal Grain Inquiry Commission.—The grain trade in Canada was investigated by a commission appointed in 1923. In the course of its investigation, the com-

[3] *Fluctuations in Wheat Futures,* Senate Document 135, 69th Congress, First Session, p. 13.

mission had occasion to inquire into complaints against the Winnipeg Grain Exchange. The complaints embraced charges made against commodity exchanges in the United States. Having indicated the fields in which regulation has been beneficial, we may conclude with the findings of the Commission regarding matters which should not be the subject of legislative interference.

The first of the general charges was that the Winnipeg Grain Exchange was under the control of the grain handling interests, and consequently it was an institution detrimental to producers. In the language of the commission,

> In so far as the exchange, therefore, is an organization to provide for the maintenance of a market place, it forms, without undue restriction, a necessary and beneficial link in the marketing of western grain. The Exchange does not of itself buy or sell grain. It does set up the machinery under which grain can be conveniently bought and sold. It does not appear, then, that there are any undue restrictions placed either upon obtaining membership in the exchange, or upon making use of this machinery in the buying and selling of grain.[4]

A second allegation was that speculation is injurious to the community in general and to farmers in particular. The conclusions of the commission, which may well be considered in connection with the chapter on "Speculation," were as follows:

> (1) That a futures market permits hedging and that hedging by dividing and eliminating risks in price variations reduces the spread between the prices paid to the farmer for his produce and those obtained for it upon the ultimate market.
>
> (2) That hedging facilitates the extension of credit and thereby reduces the cost of handling grain by making it possible for grain dealers to operate on less capital than would be the case otherwise.
>
> (3) That for the same reason hedging makes a larger degree of competition possible in the grain trade, on a given amount of capital.
>
> (4) That hedging is of advantage to exporters so that even in instances where grain is handled under a pooling organization where the initial risk is carried by the farmer himself, in order to handle suc-

[4] P. 130.

cessfully the export trade such organizations find it desirable to make use of the futures market.

(5) That a competent speculative element in the market ensures a continuous and searching study of all the conditions of supply and demand affecting market prices.

(6) That speculative transactions tend to keep prices as between the contract grades and as between present cash prices and cash prices in the future in proper adjustment to each other and to future conditions of supply and demand.

(7) That prices thereby tend to be stabilized and fluctuations reduced.

(8) That a speculative element is necessary in an exchange to ensure a continuous market so that when a crop is dumped upon the market in the fall the farmer will not suffer loss by a heavy drop through absence of demand for immediate use.

(9) That individuals who engage in speculative transactions without adequate knowledge or capital not only usually lose heavily but also are a disturbing element upon the market. Their transactions become mere gambling.

(10) That it does not seem possible to legislate effectively so as to eliminate such individuals without disturbing the general and genuine usefulness of the exchange; but that legislation should be directed towards preventing the incompetent from being lured into speculation.

(11) That Parliament should not at present enact restrictive legislation in the expectation of tempering fluctuations on the exchange, or of improving and stabilizing prices, but that time should first be taken to allow the new American law on this subject to demonstrate its efficacy.

(12) That the penalties and precautions against rigging the market, or dishonorable trading, seem calculated to make such practices rare and unprofitable.[5]

[5] Report of the Royal Grain Inquiry Commission, Dominion of Canada, January 7, 1925, p. 139.

Chapter XI

COMMODITIES ADAPTED TO FUTURES TRADING

Why are some commodities the subject of futures trading on organized exchanges, while no organized futures markets have been established for trading in other commodities equally important? Why is it that wheat, cotton, coffee, corn, oats, rubber, silk, cocoa, tin and other commodities are singled out for futures trading on organized markets, while steel, brass, potatoes, coal, petroleum, lumber, etc., are not the subject of such trading? The reason cannot be found in relative importance or value of the commodity or in the generality of its use. The money value of steel products far exceeds that of cocoa imports, and potatoes are in more extensive use than coffee. In examining the reasons why some commodities have futures markets and others do not, we must center attention upon the nature of the commodity itself.

Units Must Be Homogeneous.—It is a condition precedent for futures trading that units of the commodity be interchangeable. The speculator or the hedger does not buy or sell any specific or identified units of a commodity, but he sells according to established grades and descriptions. Hence, a commodity whose units are not homogeneous would be an impossible one for futures trading. Under the Torrens System, real estate titles may be made readily marketable by registration. No two lots, however, can have the same location, and so it is mere chance if they have a like value.

Looking at the commodities in which futures trading is carried on, it will be found that all answer this requirement

of homogeneity. Some commodities are known as fungible goods. Wheat is an example of a fungible commodity. An elevator may contain thousands of bushels of Number 1 Hard spring wheat belonging to several owners and it is entirely immaterial to the buyer what lot or whose wheat he receives. The stocks of the various owners are admixed, and purchases and sales made with no thought of identity. On the other hand, cotton, silk, and rubber are not fungible, but they are homogeneous. While cotton and rubber are not mixed, they are capable of being graded so that one lot of a given grade is just as acceptable to buyer or seller as any other lot of that grade.

The Commodity Must be Susceptible of Grading.—If the units of a commodity are homogeneous, it follows, as a corollary, that the commodity must be susceptible of division into standard grades. There is no commodity whose units are exactly alike. Differences in grade arise from a multiplicity of causes. One lot of cotton will differ from another in length of staple, in its cleanness, and in the color of the staple. Rubber in the course of production may come out in the form of a clean sheet of amber-colored translucency, or it may accumulate dust, bark, and other foreign substances. Two bales of raw silk may vary in evenness, cleanness, and neatness of the threads; there may be variations in size, in tenacity, and in elasticity. Conditions of this sort affecting every commodity according to its nature make it impossible for every unit of the commodity to be regarded commercially as the equivalent of every other. If, however, standards can be established so that by inspection and classification the commodity may be divided into well-defined grades, readily identified by the trade, the units of each grade are homogeneous.

Supply and Demand Must Be Large.—The necessity of a broad market for futures trading has been pointed out.

Even if every other element of futures trading were present, alligator pears would not be a commodity for which a satisfactory futures market could be maintained. The supply, compared with staple commodities, is small, and the demand is small; consequently, speculators with large financial resources might readily obtain control of an alligator pear futures market, and it would soon cease to be a natural market but become merely a battleground for contending speculative factions.

Some authorities hold that the commodity must be in worldwide demand. As a matter of fact, most commodities which are the subject of futures trading are in worldwide demand, although in widely different degree. It is questionable, however, if this is indispensable. The requirement may be best summarized by stating that supply and demand should be large enough so that the futures exchange will function as a market place and not merely as an arena for contending speculators.

The Supply Must Flow Naturally to Market.—Not only must a supply of a commodity be large, but its flow to world markets must be substantially free and unhampered by artificial restraint. An impossible condition would exist if organized futures trading were attempted in a market where the supply was under effective control and could be increased or diminished at the will of any government, group or individual. The market would then function not as a piece of price-making machinery, but merely as an adjunct to the will of the controller of the supply.

The term "effective control" has been used advisedly. The Rubber Exchange of New York commenced operating at a time when the Stevenson plan for restricting production and export of rubber from British Malaya was in effect. The purpose of the plan was to control the price of rubber by periodically increasing or reducing the exportable supply.

Nevertheless, the Rubber Exchange functioned effectively in registering price movements in rubber from the time of its organization. The reason is that the control was not effective. Had the price of rubber been brought under complete control, every user of rubber, whether manufacturer or consumer, would have been compelled to pay prices dictated by the British government. But high prices produced the inevitable economic effect of increasing the supply from other sources; consequently, control was only partially effective.

Supply and Demand Must Be Uncertain.—Uncertainty of supply and demand is essential for a commodity to be the subject of futures trading. If supply and demand are both certain, prices are readily adjusted without the intervention of any organized market machinery. Again, if either of the factors is certain and the other uncertain, while the problem of adjustment is more difficult, no elaborate market machinery is required to bring it about, and there is not sufficient uncertainty to engage the attention of a large body of speculators. When supply and demand are both uncertain and subject to wide change, a condition exists where the relationship between the forces of supply and demand is constantly changing. This play of economic forces produces the constant fluctuations in price which must exist in any broad market. Nobody would call United States Government Bonds or Atchison, Topeka and Santa Fé General 4's or United States Steel Preferred speculative footballs; yet prices of these gilt-edged securities fluctuate from day to day and week to week and over a period of years. The upward or downward price changes may assume large proportions. Shifting demand and changing market supply operate to make the constant oscillation in prices. It is shifting demand, coupled with the fact that supplies can never be

estimated with exactness, that causes oscillations in the prices of commodities.

The Commodity Must Not Be Perishable.—The futures contract may call for a delivery of units of the commodity many months hence. Consequently, the commodity must be capable of being stored in times of glut to meet requirements of the market in times of scarcity. A commodity subject to rapid deterioration does not meet this requirement. The dealer who makes a contract to deliver the commodity months hence, having the commodity in store at the time he makes the contract, must have assurance that it will remain unchanged in quality until the delivery date. The commodity should lend itself to the warehouse's economic function of providing time utility, and the supply of the present should be capable of continuing as the supply of the future.

Commodities in Which Futures Trading Is Carried On.—The cereal grains—wheat, corn, oats, rye, barley—all are the subject of futures trading. In addition to these domestic agricultural products flaxseed and grass-seed are dealt in on futures exchanges. Cotton is the principal textile commodity traded in on futures markets; silk has been the subject of futures trading on the Yokohama Bourse for many years, and futures trading was inaugurated in 1928 on the National Raw Silk Exchange, Inc., in New York. Sugar and coffee are dealt in on the New York Coffee and Sugar Exchange; cocoa, on the New York Cocoa Exchange; pork products such as lard, short ribs, and mess pork are traded in on the Chicago Board of Trade. Cottonseed oil has an active futures market on the New York Produce Exchange and the New Orleans Cotton Exchange. Butter and eggs are the subject of futures trading on the Chicago Mercantile Exchange. Rubber futures have been traded in on the Rubber Exchange of New York since 1926. The National Metal

Exchange provides for trading in tin futures. Contrasted with this group, there are commodities which obviously do not lend themselves readily to futures trading.

Commodities Not Adapted to Futures Trading.—Gold, as the standard of value, stands at the opposite end of the scale from wheat and cotton. As long as any country is on a gold basis, the price of gold in terms of the monetary unit does not change. For an example of what happens when a country is not on a gold basis, it may be noted that during the time of greenback inflation from the Civil War period to the resumption of specie payments in 1879, gold was the subject of constant speculation and of wide price changes. Uncanned fruits and vegetables do not lend themselves to futures trading. We need go no further than to note the fact of their perishability. Brass is a manufactured commodity. Its demand may vary, but the supply is capable of close coordination with the demand.

Any product whose value is influenced by style change is again obviously unfitted for futures trading. The demand in this case would be as capricious as the supply is artificial in the case of a commodity of a monopolistic or semi-monopolistic nature. Sulphur is an outstanding example of a commodity unfitted for futures trading because of the restricted sources of supply. Known sulphur deposits abroad have been greatly depleted and the world's chief supply of sulphur is now in the United States. Furthermore, it is controlled principally by two producers. Sulphur prices do not fluctuate, but they are established by contract, and the producers exercise a fair measure of control over the price.

Since coffee and cocoa are both the subject of futures trading, the question may be raised why tea is not also traded in on futures markets. The difficulty here is with grading. The establishment of commercial grades for this commodity is a matter involving not only expert opinion but taste,

and the human factor enters into tea classification to so great an extent as to make it a difficult subject for futures trading.

A consideration of the nature of a commodity and of the breadth or narrowness of the demand for it will give an answer to why futures trading has not been carried on and is not likely to be carried on in many products. Some will obviously be debarred because of perishability; others are known to have a comparatively narrow market. Some, as potash, will fall in the same category as sulphur—unadaptable because of restricted sources of supply, as well as having a comparatively thin market. Manufactured articles are capable of ready adjustment to market needs. Of more importance is the fact that in proportion as the art of the manufacturer contributes to the form, shape, color, and make-up of the article, individual units of the article will vary widely. The element of homogeneity will be lost, and buyers making their purchases only from inspection would not be aided by a market whose contract could not possibly reflect the manifold differences in the goods.

It is sometimes laid down that manufactured articles are not adapted to futures trading. A line must be drawn between articles which pass through an elementary stage of manufacture to prepare them for the commercial market, and commodities which have passed through more advanced stages of manufacture. The test of adaptability is not whether the articles are manufactured, but whether the process of manufacture is uniform and the products similar.

Commodities Adapted to Futures Trading.—But the foregoing review of reasons which debar some commodities from being suitable mediums for futures trading leaves one question unanswered. What of copper, lead, iron, tobacco, petroleum, jute, wool, coal, hides, skins, and similar commodities which are durable, possess uniformity, are in a world-

wide demand and yet are not found dealt in on futures markets at all, or, if trading is carried on, only in limited volume? Are these commodities suitable for futures trading, and if so, what is the reason for the absence of organized markets?

A commodity may possess all the inherent characteristics that make it adaptable for futures trading and yet be without such a market owing to conditions in the industry or because the trade has not come to a realization of the usefulness of futures trading. It requires more than inherent characteristics to make a futures market. The inherent characteristics must be present, but they must be coupled with a condition in the industry which makes a futures market a logical and natural step in the development of distributive methods. We may take a few of the commodities mentioned and inquire further into their market possibilities.

The Metals.—The London Metal Exchange has long been a leading factor in futures trading in the metals. In fact, London's control over tin prices has been ascribed as due in no small measure to the presence of an organized futures market in that center. Trading is carried on in the four principal nonferrous metals—copper, tin, lead, zinc. Instead of having separate pits, or rings, and trading in the four metals simultaneously, they are taken up, one by one, for a short period during each day. The secretary of the exchange announces from the rostrum the metal in which trading is to begin (they are taken up in the same regular order) and then, at the end of a short time—ten minutes—trading in that metal is ended by the ringing of a gong, and trading in another metal commences.

These four metals, then, are not only adapted to futures trading, but they have been the subject of trading. The recent reorganization of the National Metal Exchange in New York was pursuant to an effort to restore vitality to the metal

futures market in this country. The National Metal Exchange, opened in December, 1928, and began with active trading in tin. As the usefulness of the market increases, the other nonferrous metals will find a ready acceptance for futures dealing.

Iron.—Dealing in iron warrants preceded modern futures trading. Scottish ironmasters, to keep their furnaces in blast, were wont to manufacture iron for stock during periods of dullness in the industry. This process naturally involved financing, which was accomplished by borrowing against the iron in store. As the practice developed, a central store came into being, to which iron was sent and which issued its own warrants. These warrants served as highly acceptable banking collateral and dealing in them had much of the aspect of modern futures trading. The market, however, was not serviceable to the trade, although the warrants were valuable as instruments of financing. There was little or no recourse to the market for hedging and the output of iron being regulated in a general way by the fluctuations of the business cycle and in no way seasonal, the occasion for hedging did not exist. The growth in recent years of integrated units in the iron and steel industry—combinations which assure the source of raw materials, iron furnaces, steel mills, and mills devoted to specialized forms of manufacture such as rails, plates, etc.—has been a factor making the need for a futures market for hedging purposes unnecessary for these vertical combinations. Pig iron is subject, however, to wide fluctuations in price, and the risk incident to these price changes remains a hazard in the business of the user of pig iron in manufacture.

Other Commodities.—There are, on the other hand, commodities not having futures markets which may grow into such markets. In the evolution of every commodity market, problems of grading assume great importance, conditions in

the industry must be carefully considered and there is always a considerable degree of inertia to be overcome. Commodities in which futures trading would be of benefit to the industry include wool, petroleum, jute (and the manufactured product, burlap), tobacco, hides and skins,[1] sisal and hemp, potatoes, onions, apples and, possibly, coal. In all of these lines of trade, violent price fluctuations have wrought considerable disturbance. Wool has suffered both from a varying supply and from changes in demand; the petroleum industry has hanging over its head the ever-present threat of overproduction from the discovery and exploitation of new fields; the coal industry has suffered for years from overproduction. It is possible that futures markets will evolve as instruments of price protection in fields where they have not been hitherto known.

Wool.—The value of the world wool crop approximates that of cotton. The chief difficulty which has been considered as standing in the way of futures trading in wool is that of grading. The principal wool-growing areas are Australia, New Zealand, the United States, Great Britain, South Africa, and South America. Differences naturally exist in wools which are the product of different climes. However, approximately 85 per cent of the domestic wools fall into eight grades—four being fleece wools, raised east of the Mississippi River, and four being territory wools, raised in the trans-Mississippi states. Considerable study has been given to the problem of wool classification and grading, and the work accomplished by the United States Department of Agriculture indicates that this is probably a less formidable obstacle than it formerly appeared to be.

Wool at present is the one important textile trade where dealers and manufacturers are without the benefits of futures

[1] The New York Hide and Skin Exchange, Inc., is in the process of organization (February, 1929).

trading. Fluctuations in the price of domestic and foreign wools have been sharp and extensive, and under present conditions the man in the trade must depend upon his acumen alone. He has, perforce, to carry on his business in part as a speculator. Yet wool is admirably adapted to futures trading. The wide fluctuations in price brought about by changing demand and supply varying because of droughts, disease, and competing demand for animals as food, unite with the elements of worldwide use, homogeneity, and durability to make it eligible.

Petroleum.—Few industries have passed through such frequent periods of feast and famine as the petroleum industry. The prosperity generated in war time was terminated in 1921, and since then the market has become largely a struggle against oversupply, with new areas opening and pouring flush production on the market to depress prices at frequent intervals. The development of large production in California, coupled with cheap transportation through the Panama Canal, served to unsettle markets in 1925. After a brief recovery, markets again became demoralized as the flush production from the Seminole field poured forth in 1926-27. Cooperation within the industry has arisen from necessity, in the effort to regulate production.

It would appear that the petroleum industry might benefit greatly from hedging facilities. When overproduction exists, oil goes into storage. But the stored oil represents capital locked up, and storage is an expensive process. Could refiners and producers benefit from a futures market?

It is necessary here to note the manner in which oil is marketed. The producer receives a price fixed by purchasing agencies and one which corresponds generally with the condition of supply and demand. Price schedules are established and they move upward or downward in accordance with changes in the relationship of consumption and pro-

duction.' Similarly, price schedules for refined products are fixed.

If conditions in the industry were such that prices quoted by different purchasers in the same territory differed to an appreciable extent, the usefulness of a futures market would be apparent. As it is, the close competition in the industry causes prices of different refiners in the same territory to move upward or downward with considerable uniformity. Under present conditions, petroleum may be classed as a commodity adapted to futures trading with the marketing problem, the principal difficulty in the way of the efficient working of a free futures market.

Coal.—Both the anthracite and bituminous branches of the industry have also had their ups and downs in recent years, with the "downs" being uncomfortably prevalent. Competition of fuel oil has been felt and the country's productive capacity for bituminous is far in excess of its needs.

Difficulties exist here in grading. Size, condition, and heat values are all matters to be taken into consideration. Coal mined at the same pit is likely to show considerable variance. Assuming coal could be scientifically graded, it possesses durability, a demand which fluctuates to some extent with the length of seasons and to some extent with the business cycle, and a supply which may be estimated but which is fairly uncertain. The principal problem in connection with coal, as with petroleum, lies in the market. There is no such thing at present as a national coal market. The ability and willingness of producers to contract for deliveries far into the future make the need of a hedging market less apparent.

Conclusions.—The qualities of uniformity, imperishability, uncertainty of demand and supply, must be inherent in the commodity or connected with its use, if it is to lend itself to the organization of an exchange. Importance attaches,

secondly, to the conditions under which it is marketed. It is evident that adaptability of the commodity and adaptability of the market must coexist before futures trading in a commodity can take place. A commodity which may be scientifically graded and whose price is subject to wide and frequent fluctuations is admirably adapted to futures trading. Unless its market is restricted or under close control, in the course of time trading in futures may arise from one of two reasons or from both combined. The fluctuating prices may give rise to so much speculation that an exchange will be a natural evolution to bring this speculation under control. On the other hand, the price fluctuations may bring so much difficulty into the business affairs of those in the industry that a futures market will be fostered in order that they may obtain insurance against their one otherwise uninsurable risk.

Chapter XII

THE ECONOMIC FUNCTIONS OF COMMODITY EXCHANGES

Fairs and market places existed in the Middle Ages. The difficulties of travel made it impossible for goods to be vended from door to door. Not until fairs were established in England and on the Continent did trade between nations spring into full flower. The fair, changed in form, has continued to the present day. Its great function was to contribute to place utility; that is, it constituted a center to which goods flowed from far-distant lands—goods which, without the fair, would never have been shipped.

The modern commodity exchange is not a direct outgrowth of the fair, but it serves the same purpose with regard to time that the medieval market served with regard to place. In medieval society goods were manufactured largely for custom. In modern industrial society the manufacture is for a large market. Manufacturing for the market introduced risks arising chiefly from time. When any commodity, however durable, is purchased for later sale or for manufacture months hence, there is an inevitable risk of unfavorable price change during the time the goods are held.

The growth of modern commodity exchanges has been contemporaneous with the advent of modern methods of communication and transport. The oldest of the exchanges is the Chicago Board of Trade, formed in 1848. The New York Produce Exchange followed two years later; the Liverpool Corn Trade Association was formed in 1853. Futures trading commenced on the Board of Trade after the Civil War, and

in 1870 the New York and New Orleans Cotton Exchanges were formed. Now futures markets exist for dealing in wheat and the other cereal grains, cotton, coffee, sugar, cottonseed oil, tin, silk, rubber, cocoa, jute, alfalfa seed, butter, eggs, provisions and other commodities.

Place of the Commodity Exchange in Distribution.—The commodity exchange is not a direct link in the distributive system. In the flow of goods from the fields of the grower to the table of the consumer and from the producer to the manufacturer the exchange does not serve as a conduit. It is rather an auxiliary organization, designed to facilitate the operation of the distributive system in various important details. The chief services of the commodity exchange lie in its affording a means of insurance against the risk of price fluctuations, and in making stocks of commodities mobile, thereby rendering financing easier and costs of distribution lower. It performs these services by affording a broad and continuous market, upon which the commodity may be bought or sold for future delivery at a moment's notice. The linking together of principal markets by telegraph and cable focuses all influences bearing upon prices in these central market places. The breadth of the market and the close inter-relationship of markets make it certain that every known factor or factors which can be reasonably anticipated will be reflected in the price of the commodity. Prices made upon futures exchanges reflecting the best opinion of dealers serve as a guide in the establishment of spot prices; while the wide range of grades traded in upon an exchange makes its prices representative, and their trend indicative of the current of opinion regarding the future outlook. Finally, the exchange regulates speculation and insures that it will be carried on under just and equitable rules. Its standards of grading, weighing, and inspection promote uniformity in trade dealings; and where spot markets exist, the regula-

tory influence of the exchange is reflected in their rules and regulations.

These functions may be summarized broadly under five heads. It would be possible to go further and tabulate the advantages of exchanges to producer, to consumer, and to manufacturer; but to do so would be simply to repeat. A description of the economic functions of the exchange is a sufficient indication of the advantages which producing and consuming groups obtain from its existence. The economic services of the futures exchange may be outlined as follows:

1. *The insurance function:*
   (a) The exchange provides a broad market;
   (b) The exchange provides a continuous market;
   (c) The machinery of the exchange provides a means of offsetting and protecting spot transactions by contra purchases or sales of futures.
2. *The financing function:*
   (a) A continuous market and the ready transferability of commodities by means of warehouse receipts give the commodity a high degree of liquidity;
   (b) Liquidity of the commodity is an encouragement to larger loans by bankers, and it is a safeguard to the banker;
   (c) Ability to finance commodities readily enables dealers and manufacturers to operate successfully on smaller profit margins.
3. *The price registration function:*
   (a) Joinder of markets by wire and cable focuses all price influences on the commodity exchange;
   (b) All futures markets are thus linked together and made one broad market;
   (c) The presence of a volume of speculation insures that every known influence bearing upon prices will be given weight;
   (d) Interpretation of news by dealers, manufacturers, and traders assures a degree of anticipation of future events that would not otherwise be possible.
4. *The informative function:*
   (a) The exchanges gather and make public statistics of supply, transportation and demand, useful in estimating price changes;

(b) The daily record of prices informs all interested not only of present prices but of the anticipated future trend;
(c) On the basis of future quotations, dealers and manufacturers are enabled to make their purchases and sales with a high degree of certainty.

5. *The regulatory function:*

(a) Exchanges regulate speculation and provide for its conduct along orderly lines;
(b) Exchanges' standards of inspection, weighing, and grading contribute to certainty in the trade.

The Risks of Modern Industrial Society.—The growth of a maritime trade, attended by the manifold perils of the sea, led to the establishment of marine insurance by Genoese merchants in the Middle Ages. This is the oldest form of insurance as we know it today and the marine policy still bears traces of its historic origin in the quaint language of its clauses. As industrial society has increased in complexity, so risks have increased and the insurance field has spread. Casualties which were too remote to be considered as subjects for insurance a generation ago are within the realm of probability to such an extent that prudent merchants and manufacturers would not think of carrying on their enterprises without protection. Insurance against the fire peril is old; but now we have employers' liability insurance, the outgrowth of employers' liability laws; hail insurance, plate-glass insurance, accident insurance and protection against explosions, theft—whether by robbers from without or defaulters from within. Credit risks are insurable. Every one of these subjects of insurance may occasion loss; none of them is so likely to occur as two other forms of business risk—the risk of a decline in price, entailing a loss on inventories, and the risk of being unable to sell goods which are held on the manufacturer's shelves.

The commodity exchange is not an insurance company, but its facilities provide a means of protection against both of

these ever-present risks. The most important of its functions is the provision of facilities for hedging purchases or sales of a commodity. The subject of hedging is discussed elsewhere. Its sole function is to insure a normal trade or manufacturing profit. This can be done by stabilizing the price of the commodity bought or sold for forward delivery as soon as the transaction is made. There would be no risk of price change in manufacture if the raw material were to stay always at a uniform price. The manufacturer who buys raw materials and promptly hedges his purchase keeps the price uniform so far as he is concerned, and the same thing is true with the manufacturer who contracts to sell his finished product and forthwith insures that he will get his raw material at the proper price by buying a future.

Successful hedging is possible because the exchanges provide a continuous market and a solid market. In any market where prices might be subject to great change, hedging would be difficult. If a market were so thin that a single large order influenced the price, the placer of a hedge would operate always under a handicap. Because prices change constantly but in small gradations, and because futures markets focus so large a volume of trading that large operations exert little influence on price, the hedge can be used successfully. The fact that the market is continuous is, furthermore, an insurance against the risk of unsold inventories of raw materials. A dealer in wheat, cotton, rubber, sugar, cocoa, etc., may not be able to sell at a profit; but his goods need never be left unsold. He has an ever-ready market functioning daily which will absorb as large a stock of goods as he wishes to unload, and which affords him the facilities for delivering the goods on his sales contract.

The growth, the handling, and the storage of cotton, and the equalization of the supply to meet mill requirements from month to month between crops, involve a protracted period of financing with many varia-

tions of price and changes of ownership. During this carrying period the anticipation of future prices is of almost as much importance to the cotton and textile world as are current prices. The person whose business, as merchant, as manufacturer, as banker, or whatsoever, necessitates a direct or indirect financial interest in spot cotton at current prices may wish to find a means of protecting himself against a change in price before his commitment terminates. The person whose business necessitates the making of engagements involving the procurement of cotton at some future time is likely to be even more interested in the future price of cotton than in its present price, and such a person may be eager to protect himself at once, for example, because of the sale of textiles for forward delivery, as regards the price at which his future supply of cotton is to be obtained.[1]

Exchanges Make Commodities Liquid.—A distinguished authority upon produce markets has aptly described this phase of the work of commodity exchanges in saying that they give commodities the element of mobility.[2] The establishment of fixed and definite grades introduced greater certainty in commodity trading. The existence of licensed warehouses, which store the goods and issue their receipts, provides buyer and seller with an instrument which passes from hand to hand as representative of the goods. A large market to which dealers and speculators converge makes a contract unit of a commodity dealt in on a futures market comparable to a stock certificate or a coupon bond in the readiness with which title can be transferred.

The commercial banks naturally lend to a greater proportion of value on liquid stocks of commodities than on stocks which are nonliquid. Their comparative value as security for a loan is much the same as the relative value of 100 shares of United States Steel and 100 shares of a small and little-known manufacturing company. The small corporation may be as sound financially as the industrial

[1] Senate Document No. 100, Report of the Federal Trade Commission on *The Cotton Trade*, p. 103.

[2] S. S. Huebner, *American Produce Exchange Markets* (American Academy of Political and Social Science, 1911), p. 11.

giant; but because its shares do not possess a ready market, the owner of United States Steel would be able to borrow to a higher proportion of its value than would the owner of the local corporation's stock. Another parallel is found in the real estate field. Loans on apartment houses, business buildings in good location, and residences ordinarily are made to a higher proportion of value than loans on theaters, garages, clubs, or similar special-purpose buildings which have a more limited and restricted use.

Profit Margins in Distribution Are Reduced.—In any field of business, the risk element is always represented in price. In corporation finance the first-mortgage bondholder assumes little risk and obtains a 5 or 6 per cent return. The preferred-stockholder shares the risk of ownership, but he enjoys precedence over the common-shareholder in the payment of dividends and the distribution of assets, and he is paid by a 7 per cent return. The common-shareholder assumes the highest degree of risk, and his profits—if the enterprise is a successful one—are unlimited. Second-mortgage money involves a greater risk to lender than first-mortgage money, and commands a larger return. Now in the commercial field, the greater the risk of the dealer, the wider must be his margin of profit. Let us assume that in business A, experience has shown that an average of 25 per cent of goods stocked will remain unsold by the end of the season and must be cleared out at cut prices. In enterprise B, 100 per cent of goods bought are sold. It requires no mathematical demonstration to indicate which proprietor must obtain a larger margin of profit on each unit he sells. In every mercantile field, the margin of profit on perishable goods or goods affected by style change must be wider than the profit margin on staple articles.

The dealer who can rid himself of the risk incident to price change can afford to do business on a far smaller margin

of profit than the dealer who must assume that risk. In every part of the commercial field where hedging is employed, this condition exists; the elevator owner and miller can protect himself by hedging his purchases of wheat and forward sales of flour. There is a smaller spread between the price paid by the consumer for bread and the price paid the wheat farmer than is to be found in any line where hedging is not possible. Similarly, the price received by the cotton grower is nearer the price paid by the textile manufacturer than would be possible if dealers and exporters could not relieve themselves of the risks of price change.

Exchanges Expedite Marketing.—The influence of the commodity exchange upon orderly marketing is manifest particularly in the case of the cereals, cotton, cottonseed oil, and commodities whose production is seasonal. The wheat crop is harvested and moved to market within a few months' time. Cotton is picked and ready for the market in the fall of the year. Now to bring out clearly the economic function of the commodity exchange, it is but necessary to suppose a society with no such institutions in existence and with no facilities in any way parallel to those which they offer. The crop comes to market, pouring into the terminals by trainload and shipload in millions of bushels or in millions of pounds. The supply is concentrated, but the demand is spread throughout the year. The country does not eat its bread solely in the fall as it eats its cranberries; and the cotton goods reach the peak of demand nearly a year from the marketing time. Some agency must store the raw material. It must be producer, dealer, or manufacturer. Whichever one stores, it must be financed. Moreover, there is the risk of price change until the accumulated stocks are sold. Without a means of protection against price fluctuation, and without a means of making stored commodities liquid, it would be virtually a financial impossibility for crops to be

absorbed at anything but ruinous prices to the producer. The warehouseman or dealer, in fact, could buy only so much of the commodity as his own capital permitted, and the price risk would cause him to pay as low a price as possible to the producer.

Under conditions as they exist, the dealer who can finance himself readily can turn his capital far more quickly than he could otherwise, and carry on business with a smaller capital. Under the hypothetical régime we have imagined, it is probable that if price stability was introduced at all, it would be by the growth of huge financial institutions comparable in resources to the greatest of our industrial corporations. The small dealer would disappear, and while prices would be stabilized, they would be stabilized in favor of the monopolist. Now the world's harvest flows to market in a comparatively short time, is absorbed in orderly fashion, stored, and distributed in accordance with the needs of consumption; and the spread in price between the season when the crop is marketed and the seasons when it is consumed is so slight as to be negligible.[3]

The use of hedging in the cottonseed oil trade to permit the orderly absorption of the seed as it comes to market was told very simply and clearly in the testimony of William A. Storts before the Committee on Agriculture and Forestry of the United States Senate at a hearing held April 11th, 1928. In response to a question as to how the speculative business helped the cottonseed oil market or trade, Mr. Storts said:

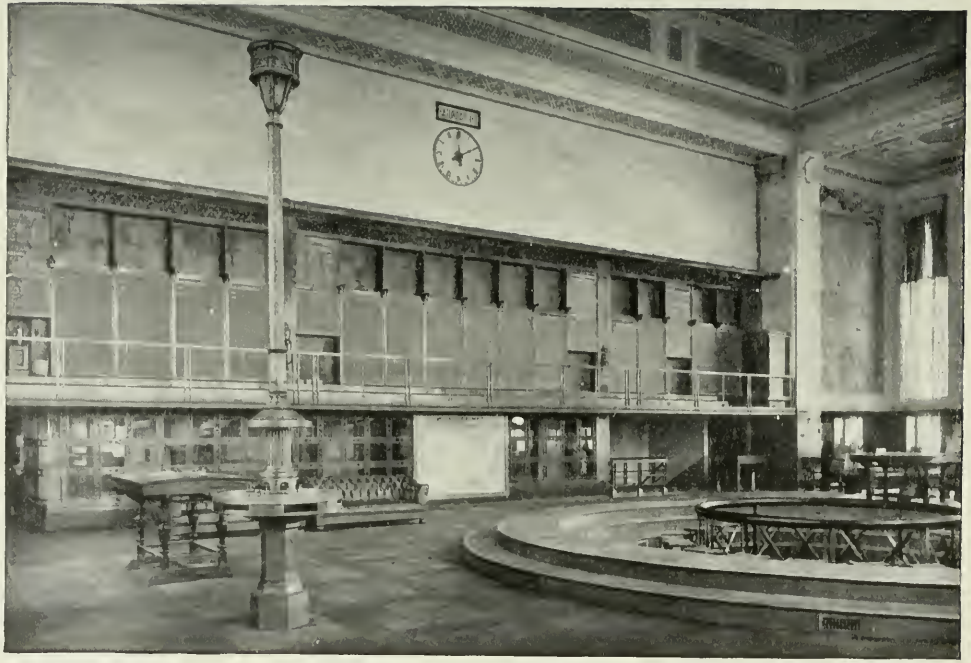
> It helps it the same as any other commodity. The movement of seed in the fall of the year is very heavy for three or four months. Nobody would buy that seed if you did not have a market where you could hedge against it. The seed moves, as you know, during the busy cotton season. A vast volume goes on the market. If you did not have a hedge market to protect you, or insure you against loss, that seed would

[3] For data regarding seasonal fluctuation in price, see Chapter VII.

remain with the farmer. It would not be bought by anyone, unless it was at a very, very low price. But with the refiner having a speculative market, or the crude mill having a speculative market, to buy that seed to produce the crude, and the refiner buying the crude and hedging it with the future contracts, we have established a market which permits the movement of this seed at comparatively high prices in comparison with what formerly prevailed. Many of the crude mills do not use the market as a hedge. Some of them do. The proper operation of a crude mill, in my opinion, when the market is used for insurance purposes, is to sell the market when he buys his seed. That is his hedge.[4]

Exchanges Form a World Market.—The linking together of exchanges makes for a uniformity of price that would otherwise be difficult if not impossible of attainment. Over a year's trading, prices on the Cotton Exchanges at Liverpool, New York, and New Orleans move together and, except for differences due to cost of transportation and handling from market to market, they are uniform. So the price of wheat at Liverpool and Chicago, at Minneapolis and Winnipeg, rules the same under normal conditions; with differences incident to the cost of transporting the wheat from inland centers to the seaboard. The commodity exchange is not so much an individual market as it is a division or department of a countrywide or worldwide market. Throughout every hour of the trading day, news from every quarter of the globe having a direct or indirect effect upon prices is being received and weighed by traders who are expert in analysis and prediction of the future. The mere presence of such a body of men gives an assurance that so far as it can be accomplished by human foresight, the events of the future will be reflected in the price movement before the events have come to pass. Superior financial resources or superior knowledge of conditions do not avail to give the buyer an advantage over the seller, or seller an advantage over buyer, in fixing prices in commodity trades where futures exchanges

[4] Regulation of Cottonseed Oil Futures. U. S. Govt. Printing Office, Washington, 1928, p. 9.



Blackboard and Part of Trading Floor, New York Cotton Exchange

exist. The price movement is greater than the knowledge of any one buyer or seller. It epitomizes all the knowledge, all the beliefs, all the hopes, and all the fears of thousands, including the best brains in the world's markets. Could this function be discharged in any other way? It is an ideal subject for conjecture. It will perhaps be best to rest with the opinion of a governmental body on this phase of the commodity exchange's activities:

> . . . Only the futures market possesses the facilities for bringing all the transactions of the country into focus at but two small or closely connected trading rings. In the very nature of things the spot market is unable to develop any such highly unified institution of price-making and price registration—spot trading necessarily being conducted at a vast number of scattered points, wherever actual cotton is to be bought and sold. Thus it becomes clear why the highly developed futures market must tend to have a very considerable influence in determining cotton prices, whatever the locality in which spot cotton is bought and sold. General market conditions, expressing themselves in a broad market, rather than the conditions prevailing in the particular locality, largely determine the value of cotton in that locality, as well as elsewhere.[5]

Exchanges Level Prices between Markets.—The focusing of all factors influencing prices means necessarily that the prices of commodities in different markets will be kept in alignment. Transportation, storage, and costs of handling add to the price paid for any commodity or article of manufacture. Where the commodity is one for which there is a worldwide demand, prices in different markets should be uniform except for the inclusion of such cost items. To illustrate: Cotton is in worldwide demand and hence the price in New Orleans and the price in Liverpool for American-grown cotton should be the same, except for the ocean freight and other costs incident to shipping cotton from the Southern states to England.

[5] The Cotton Trade. Senate Document 100, 68th Congress, 1st Session, Part I, pp. 103-104.

The continuous price quotations made on the floors of futures exchanges afford a ready means of determining when prices in different markets are out of alignment. When such a condition exists, the operations of arbitrageurs serve to accelerate a return to parity. The arbitrageur is an operator who, when prices between markets work out of normal parity, buys in the cheaper market and sells in the dearer, making his profit not from the direction of the price movement, but from a narrowing of the spread in prices between the two markets. The operations of the arbitrageur are a factor in bringing about this return to the normal, for his buying in the cheaper market is an influence in raising prices there, while his sales in the dearer market add to the pressure against prices in that center.

In the same way, the presence of a body of speculators alert to take advantage of opportunities to arbitrage aids in keeping the prices of all futures in alignment. Should the price of futures for one month rise above parity with other futures or should the price of one future become depressed below the level of others, the same arbitraging (or straddling) operation contributes to lift the price of the abnormally low future or to exert pressure upon the month which is temporarily too high.

Buyers May Anticipate Requirements.—The existence of markets where buyers may obtain a commodity in any quantity and at prices which will not be dislocated by the execution of large orders is of great benefit to manufacturers who wish to anticipate their needs. In the fall of the year, for example, the miller may wish to make certain of a supply of wheat for the flour he will produce in the spring. To buy the wheat and store it would be undesirable for two reasons. In the first place, the miller's capital would be locked up for a period of months in his inventory. Then, in addition to the loss of interest on his capital, there are storage charges

and deterioration to be considered. The machinery of the commodity exchange provides the manufacturer with a means of anticipating requirements without locking up his capital or warehousing the actual commodity. At any time of the year he may buy contracts for the delivery of as much of the commodity as he wishes in whatever month or months he wishes. When the delivery month arrives he may receive the commodity he has bought by delivery on his contract, or—which is more likely—he may in the meantime have bought the exact grades he wishes in the spot market, simultaneously closing out his future. This is a hedging operation, but a hedge which performs the service of permitting requirements to be anticipated.

Continuous Prices a Factor in Fair Dealing.—*Caveat emptor* is one of the most widely known of legal maxims. It presupposes that the buyer realizes that the seller will present his goods in the most favorable light and that he will not voluntarily reveal circumstances which would discourage the buyer. But there is no reason for attaching any obloquy to sellers as a group. They are usually better informed than buyers—hence the maxim in this form. But where the knowledge or the bargaining power of the buyer is superior, the maxim may well be *caveat vendor.* In an unorganized market, or in a line of business where there are no price records available or where markets are local, fair trading depends upon how well buyer and seller are matched with regard to information as to conditions and financial resources—how well bargaining power is equalized.

Futures markets provide a continuous, day-to-day record of prices, available to all. The buyer has no advantage over the seller nor the seller over the buyer in so far as knowledge of present prices or prices for future delivery is concerned. This, of course, does not insure that prices will always be satisfactory to producer or dealer or manufacturer. But it

does insure that prices paid will be representative and based upon the actual, worldwide market at the time, rather than dictated by whatever group in the chain of production and distribution happens to have the strongest bargaining power.

Does the Exchange Steady Prices?—It has come to be accepted as almost axiomatic by writers on commodity exchanges that the machinery of the exchange tends to steady prices. This subject is considered at length elsewhere. It may, however, be noted here that the machinery of organized markets gives ample scope for operations on both sides, and the breadth of the market—*i. e.*, the existence of a large number of buyers and sellers—is a condition which appears to insure against violent upward and downward swings. This, of course, is relative. Price changes of great extent occur upon the floors of organized exchanges. The question is, if no large group of sellers were ready to combat an advancing market or if a large group of ready buyers were not present to take advantage of price declines, would not the movements be more severe and prolonged? The matter is difficult of proof, on either the affirmative or the negative side. A conservative summary at this point would be that there is some evidence in support of the contention, although not of the most satisfactory sort, and the balance of probabilities leans toward support of the contention rather than the reverse.

Price Movements Discount the Future.—Experienced operators on the stock market know that stock prices always discount the news, weeks and sometimes months before favorable or unfavorable news is made public. Stocks, accordingly, often sell off when good news comes out and not infrequently they hold firm when unfavorable news is published. The development has been discounted.

Commodity prices can never discount the future with the same precision. Experienced traders may analyze factors

bearing upon the course of profits of a single company much more readily than they can appraise the course of supply and demand for a commodity in worldwide use. But as news comes to hand, which aids in forming opinions, prices move correspondingly and the adjustment to a higher or lower level is made long before crops commence to reach the market. In this way the more distant futures serve as a guide to opinion as to what prices will be months in the future and contracts in the spot market are made upon the basis of these expectations. Early in the summer of 1928, although the wheat crop in the United States gave no promise of being large, reports came forth of a bumper crop in Canada, of a large production in the Argentine, of larger yields in Europe and Australia. Europe, the great market for exports, would evidently be able to fill more of its own requirements, while, at the same time, larger export surpluses would be available. Prices commenced a downward trend, reflecting the expectation of lower prices before the crop-moving season was at hand.

On all organized exchanges—security or commodity—there is always an ascertainable trend of prices. They are moving upward or downward or are halting, oscillating in a narrow area, preparatory to a major or minor movement. The effect of favorable or adverse developments is thus spread out over a period of time. Both advances and declines are more orderly than would be possible in a "thin" market—one in which there were few buyers or sellers. While the discounting of future events by price movements in the commodity markets may not approach the exactness of the stock market, the fact remains that opinion is never unanimous. The mere presence of a group of traders who have formed opinions as to the future of prices and who will buy or sell in accordance with their beliefs, is a constant assurance of orderly adjustment of prices to the probable.

The Exchange as a Source of Trade Information.—Commodity exchanges gather news from every part of the world bearing upon the existing supplies, shipments to terminal markets, production, prospects of production, prices in other world markets, and similar material of value to members and to the trade. The statistics gathered are published daily, and summarized in detail in monthly or yearly reports. In seeking out new sources of information and in registering promptly the news which comes to the exchange by wire and cable, the commodity markets go further than acting as clearing houses of information for the trade. They act as barometers for the trade, publishing the news and simultaneously interpreting it in the price movement. The record of quotations is given out by the exchanges daily for the benefit of the press, and throughout the day each transaction and the price at which it is made is flashed immediately by private wire and ticker system all over the country. The price record, in addition to being of value to those who deal in futures, is an aid to the trade in general. With the market's appraisal of the price for which a contract to deliver a unit of the commodity at some time in the future should sell, forward prices may be made more intelligently, and the course of prices for futures thus serves as a guide in the establishment of cash transactions.

Exchanges Regulate Speculation.—In every field of business where buying and selling is done, speculation plays a part. The builder who puts up a house which he expects to sell at a profit is a speculator. The man who sold the builder the lot may have bought it because he foresaw the extension of residential building to this section and wished to gain by his anticipation of the event. The dealer who purchases stocks of a commodity in the cash market assumes a speculative risk. Speculation exists upon every organized exchange. It differs from speculation in unorganized markets

in that it is regulated by the exchange and must be carried on in accordance with established rules designed to make speculators equal as nearly as possible in opportunity, however they may differ in ability and resources.

Not only is speculation regulated, but it is localized. In the description of the hedge, emphasis is laid upon its primary purpose—removal of the speculative risk from dealer or manufacturer. The hedge lifts the risk from the shoulders of the man in the trade, but it does not abolish it. Somebody else must assume it, and the chance of gain or loss through price fluctuation usually passes to the speculator. It is he who makes the hedging transaction possible. He is an underwriter of the risks inherent in price fluctuations. Organized speculation insures that there will always be a market for every purchase and every sale, and hence a market ready at any time of the trading day to assume the risk which the hedger wishes to pass on. It has been pointed out that the protection afforded by the hedge is not absolute or certain. The value of the hedge varies in the degree to which it affords protection, but the possibility of some measure of protection is ever present.

Exchanges Promote Uniformity in the Trade.—In the course of its operations, the commodity exchange must establish its own standards of inspection and grading or adopt those fixed by law. Where there are no legal standards, the effort of the exchange is to adopt grades and units which are in the greatest use in the trade and to make its practices conform with trade practices. Not infrequently the exchange is able to play a leading part in the improvement of trade practices. Its efforts are always directed toward securing uniformity in rules and customs. Standards of weighing, inspection, and grading established or adopted by the organized futures exchanges insure orderly dealing in the futures

markets and create a close contact between the futures and the cash markets.

Exchanges as Regulators of Consumption.—Price is the prime regulator of production and consumption. High prices stimulate production and tend to discourage consumption, while low prices operate conversely. This regulatory effect of prices is in evidence in any phase of economic life, whether or not there are organized markets. So it cannot be said that the commodity exchanges function as regulators of the rate of consumption or production. They do, however, exert an important influence. Prices on the organized exchanges are highly sensitive. They register almost immediately the force of factors which influence prices. Because prices thus are brought into close relationship with supply and demand and because the price movement discounts to a greater or lesser degree what the future holds in store, it may be said that the machinery of the exchanges enables prices to function as regulators of the rate of consumption and the volume of production more efficiently than would be the case without organized futures markets.

Chapter XIII

THE LAW OF COMMODITY EXCHANGES—RELATIONS WITH THE STATE AND ITS MEMBERS

Legal Nature of the Organization.—Modern commodity exchanges are usually organized under Membership Corporation Laws. Older exchanges, such as the New York Cotton Exchange and the Chicago Board of Trade,[1] were organized as corporations by special act of the legislature. They differ in this respect from stock exchanges which are usually voluntary associations. The legal distinction between a corporation and a voluntary association is that the former is recognized by law as an entity separate and apart from the individual members; the members consequently are not individually responsible for the debts or acts of the corporation. In the second place, the corporation deriving its powers from the Membership Corporation Law is subject directly to regulation and control by the state, while the unincorporated association, although amenable to the general body of law, does not derive its powers direct from the state and is consequently not subject to direct control.

For the purposes of the exchange, there is little inherent advantage in either form of organization. The law governing exchanges, whether incorporated or voluntary, is the same. It has in fact been held that an exchange, even though incorporated, is essentially a voluntary association. "The board of trade, so far as we can see, is only a voluntary

[1] The Chicago Board of Trade was at first unincorporated but became a corporation in 1859. Its corporate title is "The Board of Trade of the City of Chicago."

organization, which its charter fully empowers it to govern in such mode as it may deem most advisable and proper." [2]

Although formed under membership corporation laws, commodity exchanges are in large measure organizations *sui generis*. They differ from voluntary associations, such as clubs, fraternal bodies, and religious societies, in that they are formed to serve a commercial purpose. They differ from stock corporations in that they possess an extensive control over the admission of members and a far-reaching disciplinary control. In this they resemble voluntary associations more than corporations.

Although the exchanges are formed for a commercial purpose, they are not organized for profit. The exchanges derive their revenue from the dues paid by members, and these are usually fixed at amounts sufficient merely to cover operating expenses. The exchange itself engages in no trading; it affords facilities for its members to engage in business and establishes rules and regulations for the conduct of trading, the settlement of disputes between members, and in other ways contributes to the maintenance of an efficient market place. It is thus an organization which fills an important place in the business world but which neither profits nor attempts to profit from its activities, thereby differing from the vast majority of stock corporations and copartnerships.[3]

When we come to the relationship between members, the exchanges, and third persons, the resemblance to a corporation becomes more pronounced. Every partner possesses authority to bind his firm, but only the officers or authorized

[2] Peo. v. Chicago Board of Trade, 80 Ill. 134 (at p. 137); see also Thomson v. Thomson, 293 Ill. 584, and Turner v. Board of Trade, 244 Fed. 108.

[3] Belton v. Hatch, 109 N. Y. 593, 17 N. E. 225, 4 Am. St. Rep. 495; Leech v. Harris, 2 Brewst (Pa.) 571; Albers v. Merchants Exch., 138 Mo. 140, 39 S. W. 473; Moffatt v. Kansas City Bd. of Trade (Mo. Ap.), 111 S. W. 894.

representatives of a corporation have this power. The same rule applies to commodity exchanges; a member of an exchange, unless elected to a representative office, has no authority whatever to bind it; nor can officers make the exchange responsible if they exceed their actual or implied powers. The members of exchanges and stockholders of corporations thus stand upon the same footing.[4]

The death of a member has no effect upon the legal life of an exchange, nor has his bankruptcy or retirement. The exchange as a corporation continues its existence independent of changes in the identity of its members. The legal title to all real and personal property owned by the exchange is vested in that body. But upon dissolution the resemblance of an exchange to a voluntary association is closer than its resemblance to a corporation. When a corporation dissolves, its assets remaining, after paying all debts, are sold and the proceeds distributed among the stockholders according to the number of shares they hold. When an exchange is dissolved, however, the net proceeds must be apportioned equally among its members. They share more as partners than as stockholders. The member who paid $30,000 for his seat will receive no more than the member who paid $3,000.[5] But while assets are thus distributed equally upon dissolution, a member who withdraws is not entitled to any share of the corporation's property.

The exchange, being a membership corporation, does not issue stock, but its shares are certificates of membership. This difference in nomenclature represents a fundamental difference between the stock corporation and the class of corporations to which commodity exchanges belong. "A membership corporation means a corporation not organized for pecuniary profit." [6]

[4] On Partnerships and Corporations, see those titles in Cyc-Corpus Juris.
[5] Belton v. Hatch, 109 N. Y. 593, 17 N. E. 225, 4 Am. St. Rep. 495.
[6] New York Laws of 1926, ch. 722, Chap. 35 Cons. Laws. sec. 2.

Control Over Membership.—The only requisite for becoming a stockholder of a stock corporation is to purchase shares and have them transferred on the books. Exchanges, however, as membership corporations, possess as complete a control over admission of members as do copartnerships. The purchase of a certificate of membership in an exchange confers no privilege whatever upon the purchaser. He can be admitted to the enjoyment of privileges only by permission of the exchange itself.[7] Furthermore, unlike the stockholder of the ordinary business corporation, the member of an exchange may be disciplined to the extent of fine, suspension, or expulsion.

Corporate Powers.—As a corporation, the exchange may hold title to real and personal property in its own name and convey title. The exchange may sue and be sued as an entity.[8]

The foregoing points of differentiation between the commodity exchange and corporations and partnerships indicate its unique legal character. It resembles a partnership but it is not a partnership. It is an incorporated body but in many respects it bears no resemblance to stock corporations. It is perhaps closest in its legal incidents to voluntary associations; yet, as has been indicated, there are numerous respects in which it differs from unincorporated societies, clubs, or associations.

The Dissolution of Exchanges.—Exchanges may be terminated either by act of the members or by act of law. The control of the courts is sufficient to enable them to decree the winding up of an exchange. But this is naturally a power not to be exercised on slight cause. Another means of

[7] McCarthy Bros. Co. v. Chamber of Commerce, 105 Minn. 497, 117 N. W. 923, 21 L. R. A. (N. S.) 589.

[8] McHenry v. Board of Trade, 131 Ill. App. 275.

involuntary dissolution may be found in the right of the state to forfeit the charter for sufficient cause.

The right of exchanges to dissolve voluntarily is usually provided for in the laws under which they are formed.[9] Actual dissolutions have been so rare that little occasion has arisen for the courts to pass upon questions which might arise in the process of winding up. There is no doubt that the courts possess the power to dissolve an exchange when a majority of its members consent and petition the court to decree a dissolution because the exchange is no longer functioning. It has also been held that when discord prevents efficient conduct of the affairs of the exchange, the court may order a dissolution upon petition "because the object of its corporate existence cannot be attained. . . . Under such circumstances it is better for all that the minority may reincorporate upon some practicable basis, if they so desire, and the majority may no longer be forced to keep up a feeble and useless organization in which they take no interest and from which they derive no benefit." [10]

The state as the creator of corporations possesses the general power to void franchises when they are abused to the detriment of the public.[11] An illustration of such abuse is an attempt unlawfully to restrict trade and commerce. In an Illinois case it was found that the exchange was dictating to its members the number and kind of traveling solicitors to be employed, and the method of their remuneration. These acts were held to be in restraint of trade, and the Court said: "Public policy requires that corporations, in the exercise of powers, must be confined strictly within their charter limits. . . . The State provides for the creation of corporations. The corporation is its creature, and must always conform to its

[9] Membership Corp. Law, N. Y., sec. 55.
[10] Hitch v. Hawley, 132 N. Y. 212, 30 N. E. 401.
[11] 14 A Corpus Juris 1094, sec. 3687.

policy. This duty on the part of corporations to do no acts hostile to the policy of the State, grows out of the fact that the legislature is presumed to have had in view the public interest when a charter was granted." [12]

When an exchange dissolves, the marshaling and distribution of its assets are closely analogous to the procedure for dissolving partnerships. The creditors have first claim upon the assets and the surplus remaining after payment of the creditors is to be divided equally among the members in good standing.[13]

Commodity Exchanges and the State.—Statute and case law affecting commodity exchanges covers a period of sixty years. Through legislation and judicial interpretation, a body of law has been built, defining the regulatory powers of the state. The important phases of regulatory power which have been defined relate to the position of the exchange in interstate commerce; the exchange as a factor in restraint of trade and the limits within which these organized markets, chartered by the state, are subject to control by exercise of the state's police power. In this section, the subject of regulation by public authority will be considered, leaving for treatment elsewhere actions brought against exchanges by members and by private individuals, nonmembers of the exchanges.

Running throughout the current of judicial opinion is a recognition of the usefulness of the commodity exchange. An exchange "is regarded by the courts, not only as a valuable and efficient aid to commerce, but as a potent agency for elevating the standard of business ethics and honor. Such beneficent aims deserve approbation, and courts of equity, recognizing their worth, have abstained from subjecting such

[12] Peo. v. Chicago Live Stock Exchange, 170 Ill. 556, 48 N. E. 1062, 62 Am. St. Rep. 404, 39 L. R. A. 373.

[13] Hitch v. Hawley, Peo. v. Chicago Live Stock Exchange, *supra*.

associations to visitation or correction when their declared objects and practices are kept in harmony with the spirit of the general law." [14]

The closing words of the above quotation are significant. Legislation and adverse decision have intervened to control exchange activities which have not been in harmony with the spirit of the general law, but adverse decisions have not been frequent.

Efforts to brand the exchanges as combinations in restraint of trade or monopolies, in violation of the Sherman Anti-Trust Law have been unsuccessful. The former question was decided in a comparatively recent case brought by the attorney-general against the New York Coffee and Sugar Exchange; the latter in an action against the New York Cotton Exchange.

The attorney-general's petition for an injunction against the New York Coffee and Sugar Exchange alleged that operations in futures during a certain month, the contracts calling for actual delivery, but which were cleared by offset and substitution in the clearing house, were, in effect, a conspiracy to interfere with the free working of supply and demand. The result of the transactions was alleged to have increased the price of sugar in February, 1923, and sugar, being an article of interstate commerce, the restraint was alleged to be in violation of the Federal anti-trust laws. The opinion of Chief Justice Taft, denying the injunction, draws a clear line between conspiracy on the part of individuals and the exchange as affording a market place for trading.

It is true that spot sales are not encouraged and that less actual deliveries take place in this Exchange than in some of the Exchanges for sales of other commodities, but actual deliveries are provided for in every contract and may be lawfully enforced by either party. The usefulness and legality of sales for future delivery, and of furnishing an exchange where under well-defined limitations and rules the business can be car-

[14] Moffatt v. Kansas City Board of Trade, 111 S. W. 894.

ried on, have been fully recognized by this court in Board of Trade v. Christie Grain and Stock Co., 198 U. S. 236, 246. Those who have studied the economic effect of such exchanges for contracts for future deliveries generally agree that they stabilize prices in the long run instead of promoting their fluctuation. . . . The machinery of such an Exchange has been at times made the means of promoting corners in the commodity dealt in by such manipulators and speculators, thereby restraining and obstructing foreign and interstate trade. In such instances, the manipulators subject themselves to prosecution and indictment under the Anti-trust Act. United States v. Patten, 226 U. S. 525. But this is not to hold that such an Exchange with the facilities it affords for making contracts for future deliveries is itself a combination and conspiracy thus to restrain interstate and foreign trade. There is not the slightest evidence adduced to show that the two corporate defendants, or any of their officers or members entered into a combination or conspiracy to raise the price of sugar. . . . The mere fact that the defendants were operating the Sugar Exchange and Clearing Association, even if we concede that some persons not identified, combining and conspiring with criminal intent, used the Exchange and Clearing Association to cause the rise in sugar prices,—concessions which there is no testimony to support,—furnishes no reason for enjoining defendants from continuing the Exchange or for a mandatory injunction to reframe the rules of the Exchange and Clearing Association. . . . The Government in effect asks this court to enforce rules and regulations for the conduct of the Sugar Exchange which shall prevent the future abuse of its lawful functions. This is legislative and beyond our power.[15]

In Moore etc. v. New York Cotton Exchange, the contention was advanced that the usual contract between the exchange and a telegraph company, binding the latter to transmit quotations only to such persons as the Exchange first approved, constituted a monopoly, violating the Sherman Law. The process of reasoning back of this contention was as follows: The futures contract calls for delivery of an article of interstate trade and hence its fulfillment tends to constitute interstate commerce. Hence to control price quotations was, in effect, a restraint of trade.

But the court held that contracts made on the exchange were "purely local in their inception and in their execution"

[15] U. S. v. New York Coffee and Sugar Exchange, 263 U. S. 611 (at pp. 619-621).

and consequently did not constitute interstate commerce. The object of the contract with the telegraph company was thus described and approved, the court holding that "the evident purpose of the contract was to further and protect its business. The terms are entirely appropriate and legitimate to that end. The effect of the making and execution of the contract upon interstate trade or commerce, if any, is indirect and incidental. Neither in purpose nor effect does it directly or unreasonably restrain such commerce or operate to create a monopoly." [16]

But while no court has ever held that an exchange, in the course of its ordinary operations, is operating a monopoly in restraint of trade, nevertheless, members may become amenable to criminal prosecution under anti-monopoly laws for engineering "corners." [17] In addition to this, on all exchanges, the member guilty of such misconduct is subject to disciplinary action. The corner, in short, is prohibited by exchanges, regarded with disfavor by courts, and made a subject of civil and criminal liability.

The customary rules and by-laws of exchanges, prohibiting members from dealing with those who have been suspended or expelled, from dealing with bucket shops or trading outside of regular hours, have all been sustained as valid and not in restraint of trade. Rules or by-laws establishing uniform rates of commission have likewise been under attack as tending to restrain trade. While some opinion has tended to sustain this view, the weight of authority is distinctly the other way. The opinion in a Minnesota case pointed out that "public policy requires that such charges shall be definite, certain, and uniform, and this seems equally true as to commissions for sales, when made under the peculiar condi-

[16] Moore etc. v. New York Cotton Exchange, 270 U. S. 593 (at p. 606). See also Board of Trade v. Christie etc. 198 U. S. 236.

[17] U. S. v. Patten, 226 U. S. 525.

tions under which the grain business is conducted. A board of trade which requires its members to treat all its customers exactly alike in the matter of charges for services no more destroys competition than does a railroad when it charges all shippers the same rate for conveying freight." [18]

It is not easy to establish clearly the line which separates acts which fall under the ban as being in restraint of trade from those which have been held free from that design. Regulations prescribing the number of solicitors to be employed by members, or limiting their salaries, or restricting the employment to exchange members, have been held objectionable. The current of opinion seems best summarized as follows: courts will not interfere with regulations designed to further the purposes of the exchange unless they are clearly adverse to public interest.[19]

Pursuant to the power of Congress to pass laws to regulate interstate commerce and the right of the state to exercise police power over its creations—or in guise of that right—a host of bills have appeared both in Congress and in state legislatures designed to regulate or throttle exchange activities. By the police power is meant the state's prerogative of regulating private enterprise in the interest of public health, safety, morals, comfort, or general welfare. Determination of the limits of the exercise of the power is a matter for the courts; determination of when and how to exercise the power within these limits is a matter for the legislative body. The right, in other words, must be exercised, subject to judicial determination of its legality. While the legislature "may determine when the exigency exists for the exercise of the police power, it is for the courts to determine what are the subjects for the exercise of this power,

[18] State v. Duluth Board of Trade, 107 Minn. 506 (at p. 551), 121 N. W. 395, 23 L. R. A. (N. S.) 1260.

[19] See 41 Corpus Juris, Monopolies, sec. 157, 158, for examples and cases.

and it is necessary that the act should have some reasonable relation to the subjects of such power. The court must be able to see that the act tends in some degree to the prevention of offenses or the preservation of the public health, morals, safety, or welfare." [20]

The legislative branch thus may not regulate private enterprise at its pleasure nor may it regulate any and all activities. To be subject to the police power an activity or subject of legislation must be affected with a public interest. But "this phrase . . . furnishes at best an indefinite standard. . . . Certain properties and kinds of business it obviously includes, like common carriers, telegraph and telephone companies. . . . A business is not affected with a public interest merely because it is large or because the public are warranted in having a feeling of concern in respect of its maintenance. Nor is the interest meant such as arises from the mere fact that the public derives benefit, accommodation, ease or enjoyment from the existence or operation of the business. . . . And, finally, the mere declaration by the legislature that a particular kind of property or business is affected with a public interest is not conclusive upon the question of the validity of the regulation. The matter is one which is always open to judicial inquiry." [21]

The Cotton Futures Act and the Grain Futures Act were passed by Congress in the exercise of its power to regulate interstate commerce. The United States Supreme Court held in the Board of Trade of the City of Chicago v. Olsen, that "the Board of Trade conducts a business which is affected with a public interest and is, therefore, subject to reasonable regulation in the public interest." [22] The purpose and scope of these acts are discussed in Chapter X.

[20] Peo. v. Steele, 231 Ill. 340, (at p. 345).
[21] Tyson v. Banton, 273 U. S. 418 (at p. 430).
[22] Board of Trade of the City of Chicago v. Olsen, 262 U. S. 1, 40.

Legality of By-laws and Rules.—The statutes under which exchanges are formed usually give express authority for the adoption of by-laws and rules.[23] Even in the absence of specific authority, the power to regulate its internal affairs by proper by-laws is inherent. The general requirements for the validity of by-laws and rules are: (1) that they shall not contravene the general law or be contrary to public policy; (2) that they be clear and definite, and (3) that the procedure prescribed for adopting or amending by-laws and rules shall be followed. On the question of inherent authority to regulate its internal affairs, the Court said in the case of Evans *vs.* Chamber of Commerce: "This corporation derives its authority to act from the statute, and in no manner can it exceed this authority, but, inherently, it possesses the power to make all necessary rules and regulations for its government and operation, although such power may not be expressly conferred in its charter, in the creating statute or in any other statute. This, because inherent power is an incident to all corporations, and is independent of the conferred statutory right to adopt rules not opposed to the law under which they are organized."[24] When the method of making or amending by-laws and rules is prescribed either by statute or in the charter, the procedure must be strictly followed. Usually the by-laws provide for their own amendment, as shown in the chapter on "Government and Operation of a Commodity Exchange."

There have been few cases in which by-laws have been held invalid. Those which have been found invalid because opposed to public policy or at variance with the general law of the land have nearly always been found so on the ground that they tended to restrain trade or create a monopoly.[25]

[23] Membership Corporation Law, New York, sec. 20.

[24] 86 Minn. 448 (at p. 450), 91 N. W. 8.

[25] See Par. "Commodity Exchanges and the State."

Thus a rule providing that claims due from members to a defaulting member might be collected by the exchange and applied to debts due other members was held invalid on two grounds: first, as contravening the Bankruptcy Law and, second, as being opposed to public policy.[26]

Similarly, there have been few cases where by-laws have been held invalid because of being *ultra vires*. Where, however, the matters regulated have been clearly outside the scope of the exchange's business, the courts have not hesitated to intervene. In one such case the Court said: "The by-laws under which the Board purposes to hear the charges against the plaintiff, and to disfranchise him in case he refuses to pay such fine as it may impose, are wholly outside of anything authorized by the articles of incorporation. There is nothing in the articles to suggest power in the corporation to interfere with, regulate, or control the stockholders in the conduct of their separate, individual business. Because the by-laws we have referred to assume to do this, they are beyond the scope of the purposes of the corporation expressed in the articles of incorporation which are its constitution, and set the limit to its power, and are void." [27] In the case of People *vs.* Chicago Live Stock Exchange,[28] a by-law was attacked as tending to restrain trade. The by-law regulated the number of solicitors to be employed by members, fixed their salaries and required that they must be members of the exchange. On the trial, the by-law was held invalid as being beyond the purposes of the exchange, as being unreasonable, and furthermore as being in restraint of trade.

Requirements that members submit controversies to arbitration are found in the by-laws of all exchanges. In a Mis-

[26] Cohen v. Budd, 103 N. Y. Supp. 45, 52 Misc. (N. Y.) 217.
[27] Kolff v. St. Paul Fuel Exchange, 48 Minn. 215 (at p. 217).
[28] 170 Ill. 556, 48 N. E. 1062, 39 L. R. A. 373, 62 Am. St. Rep. 404.

souri case,[29] such a regulation was held invalid; but this is contrary to the present weight of authority.[30]

A general requirement of by-laws and rules is that they be clear and explicit. This is particularly essential when they relate to penalties and forfeitures. An offense for which a member may be punished by expulsion or suspension must be outlined with sufficient exactness so that all members may know with certainty the particular acts that will subject them to this severe penalty. In the chapter on "Government and Operation of a Commodity Exchange" it was noted that a member may be expelled for any conduct detrimental to the best interests of the exchange. A member of the New York Cotton Exchange was suspended under this by-law. The grounds of his suspension were that telephone boys in his office were giving out continuous quotations of exchange prices, a practice also forbidden. When the case was taken to court it was held that the misconduct of employees should not subject the member to discipline and that the by-law referred to personal acts and conduct of the exchange member.[31] In the great majority of cases, however, where the validity of a by-law or rule has been attacked, the decisions have sustained the regulation in question.[32] An invalid by-law or rule does not bind the members. In a case involving a member of the Coffee Exchange, the member refused to accept delivery of coffee on the ground that it appeared to be adulterated. Adjudicators were appointed and their finding was that the coffee was of tenderable grade. The member still refused to accept delivery and in consequence was suspended.

[29] State v. Merchants' Exchange, 2 Mo. A. 96.

[30] Albers Commission Co. v. Spencer, 205 Mo. 105, 103 S. W. 523, 11 L. R. A. (N. S.) 1003.

[31] Lamborn v. N. Y. Cotton Exchange 203 App. Div. (N. Y.) 565. As a result of this decision the by-laws were amended specifically making a member responsible for the acts and omissions of his employees and partners. (The court indicated that such a rule would be unobjectionable.)

[32] See 23 Corpus Juris p. 246, notes, for numerous examples.

The court in this case held the suspension to be wrongful on the ground that dealing in adulterated food products was contrary to law and that regardless of the tenderability of a product under exchange by-laws a member cannot be punished for refusing to violate the general law.[33]

Contract of Membership.—The rights, duties, and obligations of members of a commodity exchange are to be found in the charter, by-laws, and rules. When a new member is admitted he subscribes to the by-laws and rules and agrees to be bound by them and by all others subsequently passed. Accordingly, the charter, by-laws, and rules are held "to express the contract by which each member has consented to be bound, and which measures his duties, rights and privileges as such. It seems most clear to me that this constitution and the by-laws derive a binding force from the fact that they are signed by all the members, and they are conclusive upon each of them in respect of the regulations of the mode of transaction of his business, and of his right to continue to be a member."[34] And since all members are thus bound together by contract, a single member has no complaint if any rule or regulation is enforced against him. He entered upon the contract voluntarily at the time of his admission and "a member of a corporation may so hedge himself in by agreement as to yield the protection which one seeks in the ordinary affairs of life and enlarge the authority that may be used against him."[35] The member is bound in the same way by by-laws and rules subsequently adopted, with this exception, however: he cannot

[33] In re Lurman, 35 N. Y. Supp. 956, 90 Hun 303, aff'd 149 N. Y. 588; and see Moffatt v. Kansas City Board of Trade, 250 Mo. 168, 157 S. W. 579.

[34] Belton v. Hatch, 109 N. Y. 593 (at p. 596); 17 N. E. 225, 4 Am. St. Rep. 495; also Pacaud v. Waite, 218 Ill. 138, 75 N. E. 779, 2 L. R. A. (N. S.) 672; O'Brien v. South Omaha Live Stock Exchange, 101 Nebr. 729, 164 N. W. 724; Hyde v. Woods, 94 U. S. 523, 24 L. Ed. 264.

[35] Peo. v. N. Y. Cotton Exchange, 8 Hun (N. Y.) 216.

be deprived of property rights without his consent. Thus an amendment the effect of which would be to impair existing contracts would be invalid, and an amendment diverting or destroying a gratuity fund established for the benefit of widows of deceased members was held illegal.[36]

The validity of any by-law or rule may be subject to attack by the state if it contravenes public policy or violates the positive law; or it may be attacked by a member whose rights are infringed. Non-members of the exchange, however, have no standing in court to assail any rule or regulation. In a case which involved a by-law which was admittedly invalid,[37] the Court said: "A voluntary association, whether incorporated or not, has, within certain well-defined limits, power to make and enforce by-laws for the government of its members. Such by-laws are ordinarily matters between the association and its members alone, and with which strangers have no concern. If the association, or a majority of its members pass by-laws which are unreasonable, or contrary to law or public policy, and attempt to enforce them as against a dissenting or unwilling minority, such minority may undoubtedly, in proper cases, appeal to the courts for relief against their enforcement. But mere strangers have ordinarily no right to interfere. As to them such by-laws are matters of no concern. They do not apply to and are not binding upon them." This rule applies, even though the outsider may suffer pecuniary loss by virtue of the by-law. In a case involving the Chicago Board of Trade, the Court said: "It is insisted the Board of Trade, by holding out to the public that a broker is a member, encourages and invites the public to buy produce on its Exchange through that member, and when the public have acted on

[36] Parish v. N. Y. Produce Exchange, 169 N. Y. 34.

[37] Am. Live Stock Commission Co. v. Chicago Live Stock Exchange, 143 Ill. 210 (at p. 233), 32 N. E. 274, 36 Am. St. Rep. 385, 18 L. R. A. 190.

such invitation, by the expulsion of such member the board would prevent the carrying out of contracts which customers of the expelled member have made in good faith, and such customers would be remediless. . . . The existence of such contracts affords no ground for interference to prevent a trial under the rules of the Board of Trade. If it could be held it did, then a member could always have outstanding contracts, and effectually prevent being tried for a violation of the rules of the Board of Trade. Aside from this, customers of a member of the Board of Trade dealing with him as such member must be conclusively presumed to have dealt with him with reference to the rules of the board, which provide that their broker could be suspended or expelled for misconduct." [38]

The Admission of Members.—Exchanges possess plenary powers over the admission of members. The method of obtaining admission is prescribed in detail in the by-laws, and the prescribed procedure must be followed strictly by an applicant. Requirements for admission may be arbitrary or unreasonable, but as long as they are not contrary to public policy or in contravention of positive law, they are sustained by the courts.[39] By far the greater number of cases involving admission apply to the transfer of memberships. Admission when the exchange is organized presents no difficulties. In the first place, let us review briefly the procedure required for admission. The applicant must (1) purchase the seat of a person who is a member, and (2) he must be elected to membership by the exchange. Compliance with either of these requirements is of no avail without the other. A person who purchases a seat obtains no privileges of the exchange until his election; while in

[38] Green v. Board of Trade, 174 Ill. 585 (at p. 593), 51 N. E. 599, 49 L. R. A. 365.

[39] Moffatt v. Kansas City Board of Trade (Mo. A) 111 S. W. 894.

the case of the election of an applicant who has no seat, his admission to privileges is held in abeyance until he acquires a seat. While the purchase of a seat gives the purchaser the right to apply for admission, it is no assurance that he will obtain it. "Under the charter and by-laws of the appellant only such persons as have been regularly elected to membership therein may receive certificates of membership. The plaintiff never was elected to membership in the appellant. . . . To compel the appellant, therefore, to issue a certificate of membership to the plaintiff or to its nominee, would be requiring the appellant to do an act in violation of the provisions of its charter and by-laws, and in effect be forcing a new and additional member upon the appellant. . . . A court of equity will not undertake to force upon a corporation of this character a member or compel the issuance of an extra membership certificate against the will of those whose duty it is to pass upon applications of membership or to issue such certificates." [40]

The same plenary power that exists over original applications for admission extends to applications for reinstatement.

Suspension and Expulsion.—The powers of the exchange in disciplining its members by suspension or expulsion are somewhat less broad than its powers over the admission of members. Nevertheless, a high degree of control over the conduct of members is possessed by the exchanges and the exercise of that control within reasonable limits has been sustained by the courts. The attitude of the courts toward discipline of this character is well stated in the leading case of Matter of Haebler *vs.* New York Produce Exchange: [41]

[40] Garrigues Co. v. New York Produce Exchange, 213 App. Div. (N. Y.) 625 (at 627); see also Hyde v. Woods, 94 U. S. 523, 24 L. Ed. 264; Board of Trade of the City of Chicago v. Johnson, 264 U. S. 1; American Live Stock Commission Co. v. Chicago Live Stock Exchange, 143 Ill. 210, 32 N. E. 274, 36 Am. St. Rep. 385, 18 L. R. A. 190.

[41] 149 N. Y. 414 (at p. 428), 44 N. E. 87.

"The purpose of the appellant's incorporation is not the transaction of business for gain, but to elevate and maintain the business standard of its members. This can be accomplished only by requiring them to adopt and follow just and equitable principles in all their commercial transactions and dealings. To secure that end the appellant has the right to insist that their dealings shall be conducted upon principles of integrity, honesty and fairness. Any dishonest or unfair transaction by a member is in direct contravention of the purpose and intent of the appellant's organization, and it is authorized to censure, suspend or expel a member who thus offends. If its members are not required in all their commercial dealings and business transactions to adhere to those principles, an essential purpose for which the appellant was organized will be subverted, its reputation and the reputation of its members for honest dealing lost, and its usefulness and importance greatly diminished if not totally destroyed." On the other hand, "it by no means follows that a member may be arbitrarily suspended or expelled upon insufficient grounds or through the caprice of its officers or other members, with no proof of conduct upon his part which was in contravention of the charter or by-laws of the corporation."

The reason that powers of discipline are less broad than powers exercised over admission is the general legal principle that courts do not favor forfeitures.[42] Hence, as has been noted, by-laws which are contrary to law or public policy, *ultra vires,* indefinite, unreasonable, or uncertain will not be enforced; but unless the by-law is objectionable on some one of these grounds, the courts will sustain the right of exchanges to punish members either by permanent or temporary suspension of privileges.[43] Consequently, discipline by

[42] White v. Brownell, 4 Abb. Pr. N. S. (N. Y.) 162.

[43] See 23 Corpus Juris, p. 250, note 11, *et seq.*

suspension or expulsion has been held proper in the following cases: failure to pay dues or assessments; breach of contract; dishonest conduct; circulation of false reports about the affairs of the exchange; making or reporting false or fictitious sales or purchases; practices inconsistent with just and equitable principles of trade; acting in antagonism to a board of the exchange; operating or dealing with bucket shops; charging commissions lower than the rates established by the exchange; refusal to submit to arbitration; fraud; obtaining goods under false pretenses; insolvency and resorting to tribunals other than those of the exchange.[44]

Disciplinary Proceedings.—The procedure to be followed in the case of suspension or expulsion is provided in detail in the by-laws; and this procedure must be strictly followed.[45] The committees and boards of appeal which are empowered to determine questions involving suspension or expulsion and report to the board of governors are recognized by the courts as quasi-judicial bodies. They are consequently not subject to an action for damages if their findings are erroneous. "We think the board of directors of a corporation organized under this statute, when acting upon charges preferred against a member, is a quasi-judicial tribunal, and that the directors, individually and collectively, when so acting, are protected by the rule, that a civil action for damages does not lie against one whose acts, however erroneous they may have been, were done in the exercise of judicial authority clearly conferred, no matter by what motives such acts may have been prompted."[46] The implication of the latter part of the decision is possibly too broad. If, for instance, it were shown not only that a decree was without proper cause but that the action was inspired by

[44] 23 Corpus Juris, title Exchanges, sec. 18 and numerous cases cited.

[45] State v. Milwaukee Chamber of Commerce, 47 Wis. 670.

[46] Melady v. South St. Paul Live Stock Exchange, 142 Minn. 194 (at p. 196), 171 N. W. 806.

malicious motives, both the exchange and the members of the disciplining body may be severally liable.[47] The measure of damages to a wronged member is based upon the theory that the wrongful expulsion constitutes a conversion: "The value of the right of which that certificate was the evidence of title with interest from the time of conversion to the time of trial."

The procedure in suspension or expulsion requires that the member have due notice of the hearing and an opportunity to defend himself. Witnesses and documentary evidence may be produced, and cross examination must be allowed; but the proceedings are conducted free from the technicalities and rigidity of actions at law. It will be remembered that the employment of legal counsel is also forbidden. This rule is valid.[48]

Right of Appeal to the Courts.—We have previously examined that phase of the state's control over exchanges which has to do with actions initiated by the law-enforcement officers.[49] In this connection the question of a member's right to obtain redress from the courts for what he considers wrongful acts on the part of the exchange will be considered.

One condition may be laid down as prerequisite to an appeal to the courts. The member who would resort to the courts must show that he has exhausted all of the remedies which are afforded by the by-laws and rules of the exchange. "It is the settled law that a member of such an association as the Cotton Exchange, against whom proceedings are in-

[47] Albers v. Merchants' Exchange, 138 Mo. 140, 39 S. W. 473; Lurman v. Jarvie, 82 App. Div. (N. Y.) 37; Olds v. Chicago Open Board of Trade, 18 Ill. App. 465.

[48] Green v. Chicago Board of Trade, 63 Ill. App. 446, aff'd 174 Ill. 585, 51 N. E. 599, 49 L. R. A. 365.

[49] Commodity Exchanges and the State, *supra*.

stituted under its by-laws, must first exhaust his remedies within the association before he may invoke redress from the courts. . . . The question of the jurisdiction of the defendant exchange to try the charges against the plaintiffs is clearly one which must first be determined by the exchange itself through its appropriate committees. The same rule applies to plaintiff's demand that the court shall practically take charge of the trial by directing how it must be conducted. Here again we are not called upon to interfere to prevent an injury which is purely anticipatory. . . . It is the duty of the exchange, in the first instance, to pass upon his claims. If he is given all to which he is entitled he will have no grievance. If he be denied rights which should have been accorded to him, and injury follows, it will then be open to him to seek redress in the courts." [50]

The law, however, does not require impossibilities or futilities. Consequently, if resort to the exchange's tribunals would be useless because of open hostility exhibited toward the member, or if delays or other acts make it appear that the member's rights will not be protected at the hands of the exchange committee having jurisdiction, he need not wait before appealing to the courts.[51] Furthermore, the suspended or expelled member is not required to exhaust all means of reinstatement before he will have a standing in the courts. He must have carried his case to the highest tribunal in the exchange before suspension or expulsion; but once action has been taken, the necessity for further resort to the exchange is at an end. "An application for reinstatement would not in any way involve a review of the question deter-

[50] Moyse v. New York Cotton Exchange, 143 App. Div. (N. Y.) 265 (at p. 268), 128 N. Y. Supp. 112; and see Board of Trade v. Riordan 94 Ill. A. 298.

[51] Leech v. Harris, 2 Brewst. (Pa.) 571; Quentell v. N. Y. Cotton Exchange, 56 Misc. 150, 106 N. Y. Supp. 228.

mined on his expulsion. It would be a matter of grace and not a reversal of the determination." [52]

When a member obtains a standing in the courts for review of the proceedings by which he has been ousted, there is a definite limit to the matters into which the court will inquire. It will review the entire record to determine (1) whether the proceedings have followed the requirements of the by-laws; (2) whether the member had notice and an opportunity to defend himself; (3) whether the by-law which he contravened was valid, and (4) whether the decision was honestly rendered. If the court is satisfied on these points, it will not substitute its opinion for the decision of the tribunals of the exchange either as to determination of matters of fact or the merits of the case. "It is well settled that when a person becomes a member of an association and its charter provides a method for adjusting difficulties and settling conflicting demands, he assents to the scheme adopted; and in the absence of fraud or imposition or gross injustice, he will not be heard to impeach in the courts the validity of the decision against him, and the courts cannot examine the merits of the controversy." [53] If it appears, however, that the proceedings were irregular, unfair, not within the jurisdiction of the exchange tribunal or totally unsupported by evidence, the court will intervene.[54] Courts differ as to their right to go further and compel reinstatement. On the one hand, it has been held that a person who becomes a member of an exchange agrees to be bound by all of its by-laws and rules, whether valid or not, and consequently he cannot invoke the aid of the courts to regain a membership he has lost by enforcement of such a by-law or

[52] Lamborn v. New York Cotton Exchange, 203 App. Div. 565 (at p. 571), 197 N. Y. Supp. 57.

[53] National League of Commission Merchants v. Hornung, 148 App. Div. (N. Y.) 355 (at p. 360), 132 N. Y. Supp. 871.

[54] Albers v. Merchants' Exchange, 39 Mo. A. 583.

rule.[55] The weight of authority, however, is probably to the contrary.[56] If the by-law is invalid, the member will be entitled to invoke the aid of the court in recovering his privileges. The aid is extended, in the case of incorporated exchanges, by a writ of mandamus.[57] This is a peremptory order made by the court directing the exchange to restore the suspended or expelled member to his privileges. If the matter has been taken into court before suspension or expulsion and the court intervenes, it will do so by injunction forbidding the threatened action or a continuation of steps leading to the threatened action.

Nature of a Membership.—The exact legal nature of a seat on an exchange is somewhat difficult to define. A member of an exchange, in common with his associates, has an equity in the property of the exchange; but he is a member of a body which has a wide latitude of powers over him and to which he gained admission not alone by purchase, but by purchase and election. The question which has been the subject of conflicting decisions by the courts is this: Is membership a mere license to enjoy the privileges of the exchange or is it a property right? The question is often important in connection with such matters as taxation, inheritance, bankruptcy, and creditors' rights. It is not the purpose here to examine exhaustively a question on which the courts are not unanimous. On the one hand, California courts have held that a seat is only a personal privilege;[58] on the other hand, the courts of Minnesota[59] have held that an exchange seat is personal property. A brief review of the authorities may be quoted from *Illinois Law Review,* Vol. XIX, p. 469:

[55] Greer v. Stoller, 77 Fed. 1.

[56] See American Livestock Commission Co. v. Chicago Live Stock Exchange, 143 Ill. 210; 32 N. E. 274, 36 Am. St. Rep., 385, 18 L. R. A. 190.

[57] Matter of Haebler, 149 N. Y. 414, 44 N. E. 87.

[58] San Francisco v. Anderson, 103 Cal. 69, 42 Am. St. Rep. 98, 36 Pac. 1034.

[59] State v. McPhail, 124 Minn. 398, 145 N. W. 108.

"Nearly all courts call a membership in an exchange 'property'; Hyde v. Woods, 94 U. S. 523, 24 L. Ed. 264. They differ, however, in their definition of the interest represented. Some call it a mere personal privilege or license: Zell v. Baltimore Stock Exchange, 102 Md. 489, 62 Atl. 808. Others call it property without qualification: State v. McPhail, 124 Minn. 398, 145 N. W. 108. But most courts say that, though a membership is property in some of its aspects, it is not such in the concrete and broad sense of the term: Weaver v. Fisher, 110 Ill. 146. By the great weight of authority a seat is an asset in bankruptcy: In re Page 107 Fed. 89. It may be assigned or pledged by the holder: Nashua Savings Bank v. Abbott, 181 Mass. 531, 63 N. E. 1058. It is subject to inheritance or transfer taxes: In re Hellman's Estate, 174 N. Y. 254, 66 N. E. 809. Nevertheless it has been uniformly held that membership in an exchange, because of its intangibility, is not subject to levy and execution. Thompson v. Adams, 93 Pa. St. 55. But the majority of courts have held that such membership can be made the subject of the claims of creditors through creditors' bills, or their equivalent proceedings supplementary to execution: Eliot v. Merchants' Exchange, 14 Mo. A. 234; Rittenband v. Baggett (N. Y.) 4 Abbot. N. C. 67; Habenicht v. Lissack 78 Cal. 351, 20 Pac. 874."

If an exchange were to be dissolved, its assets remaining after satisfying creditors would belong pro rata to its members. It would seem from this that a seat is something more than a license. "The membership has a use value and a buying and selling or market value. It is bought and sold. . . . There is a lien upon it for balances due members. . . . It passes by will or descent and by insolvency or bankruptcy. . . . It is true that there are certain restrictions in the ownership and use of a membership. These may increase or decrease its value, probably in the case of a board

of trade membership greatly enhance it. They do not prevent its being property." [60]

Bankruptcy of a Member.—Since the Bankruptcy Law is uniform and administered by the Federal courts, the line of decisions as to the nature of a membership is much more uniform. The nature of a seat comes into question in this fashion. A trustee in bankruptcy becomes vested with title to all the property of the bankrupt. If a seat is property, it passes to the trustee and is applied by him with other assets to liquidate the claims of creditors. The weight of authority holds that an exchange seat is property, title to which will vest in the trustee. In the case of Page *vs.* Edmunds,[61] a member of the Philadelphia Stock Exchange had become bankrupt and the trustee in bankruptcy asserted a claim to his seat on the exchange. After sale of the seat and liquidation of claims due members of the exchange, the surplus would be paid over for the benefit of general creditors. The bankrupt contended that the seat on the exchange was not property, pointing out the fact that it cannot be transferred so as to confer any privileges on a purchaser until the purchaser is elected to membership. The Court held "That consequence in our judgment affects the value of a seat in a stock board but not its existence as property. The contingencies which may defeat or affect its title or its enjoyment will be reflected in its price and if, notwithstanding them, a seat has a vendable value of from $5000 to $8000, it would seem that the law should have some process to reach it for the benefit of creditors. And the Bankruptcy Act supplies the process. The trustee of a bankrupt's estate is the bankrupt's assignee, and we only repeat the statute when we say the trustee is vested with whatever the bankrupt can convey."

[60] Rogers v. Hennepin County, 240 U. S. 184 (at p. 189).
[61] 187 U. S. 596, 47 L. Ed. 318.

The trustee, being vested with title to the seat as property, can accordingly compel the bankrupt to transfer the certificate either to the trustee or to the trustee's assignee. The rights of a trustee have been more clearly defined and the law more explicitly settled by a recent case decided by the United States Supreme Court. In Board of Trade of the City of Chicago *vs.* Johnson, 264 U. S. 1, the contention of the bankrupt was that the seat was only a *chose in action, i.e.,* something which the trustee could not reduce to manual possession and hence it was not subject to summary jurisdiction. The opinion of the Court given by Chief Justice Taft said in part: "Membership on the Board of Trade is different from a mere chose in action, like a simple claim or debt asserted against another and only to be enjoyed after its satisfaction or enforcement. It is a continuously enjoyed 'incorporeal right.' Hyde v. Woods, 94 U. S. 523. The Board of Trade is the member's trustee while it maintains and holds all its facilities for his use and enjoyment. As long as he has these, he may properly be said to be in possession of them. That creditor members may assert a mere restraint of alienation to enforce their claims does not oust the member's possession or enjoyment. By operation of the bankruptcy law, the membership passes, subject to the rules of the exchange, to the trustee, for his disposition of it. The trustee does not become a member, but he does come into control of the bankrupt's right to dispose of the membership; and, with the aid of the bankruptcy court, can require the bankrupt to do everything on his part necessary under the rules of the Board of Trade to exercise this right. The membership is property, in a way attached to the person of the bankrupt and disposable only by his will. It follows him, therefore, into the bankruptcy court, which is given full equitable jurisdiction over his conduct in respect of his estate, and, therefore, it comes into the

custody of the court to be administered by it as part of his estate."

From the foregoing it is evident that the trustee may compel sale of the seat by the bankrupt or its transfer, subject to the rules of the exchange.

In connection with bankruptcy, it will be recalled that the exchange by-laws provide for suspension of a failed member and for the sale of his seat to satisfy claims which other members have against the bankrupt. The legal question here is whether such by-laws constitute exchange members preferred creditors, the preference of some creditors as against others being contrary to the Bankruptcy Law. The leading case on this question is that of Hyde v. Woods, 94 U. S. 523. Holding that a seat on an exchange is property, the court nevertheless recognizes it as a property "encumbered with conditions when purchased without which it could not be obtained." Consequently a by-law providing that claims of member creditors are to be paid out of the proceeds of the sale of a seat "entered into and became an incident of the property when it was created and remained a part of it into whose hands soever it may come. As the creators of this right—this property—took nothing from any man's creditors when they created it, no wrong was done to any creditor by the imposition of this condition." The agreement to limit or bind a membership thus constitutes no preference within the purview of the Bankruptcy Law. "It is said that it is against the policy of the Bankrupt Law, against public policy, to permit a man to make in this or any other manner a standing or perpetual appropriation of his property to the prejudice of his general creditors; and it is to this point that the numerous authorities of counsel are cited. They all, however, relate to cases where a man has done this with property which was his own —property on which he himself imposed the direction, or the

incumbrances which impeded creditors. It is quite different where a man takes property by purchase, or otherwise, which is subject to that direction or disposition when he receives it. It is no act of his which imposes the burden. It was imposed by those who had a right to do it, and to make an accompaniment of any title which they gave to it."

Members of an exchange may have claims against a bankrupt member arising from transactions on its floor or arising from matters not connected in any way with the exchange. This gives rise to the question whether all claims of members are to be satisfied from the proceeds of the sale of a bankrupt's seat, or only those claims which arise from trading on the exchange. The recent law sustaining the validity of the by-laws already referred to is that members dealing on the floor of the exchange "have in view the security which arises from the fact that beyond the personal credit of every member is the security furnished by his membership in the association." [62] This recent law clearly does not apply to other than exchange transactions and apparently there is no sound reason for giving priority to the private claims of members over the claims of general creditors. The reasoning of the court in the case of Bernheim *vs.* Keppler [63] is in point. The matters under review were analogous, although the exact question mentioned above was not raised. The Court said: "The claims of members that are to be satisfied out of the proceeds of the sale of a decedent's seat are, ... not all claims of whatever nature and description. To give full effect to the construction contended for by the defendant would be to include claims arising in tort from matters entirely unrelated to the business of the Exchange, claims derived through assignments from

[62] Legg, *Law of Commercial Exchanges,* p. 126.

[63] 34 Misc. (N. Y.) 321; see also In re Hayes, 37 Misc. (N. Y.) 264, and Cochran v. Adams, 180 Pa. St. 289, 36 Atl. 854.

third persons who happened to have demands against a member; in fact, any and all rights whatsoever which one may have against another, irrespective of the time and mode of their creation or acquisition, and dependent solely on the circumstances that both should be members of the Exchange when one of them dies."

It has been held, however, that loans made from one member to another of a business character, although not pursuant to dealings on the exchange, fall within the purview of such a by-law. In other words, it does not embrace merely loans between members for the account of clients.[64] It is a question whether this principle will be extended further so as to include claims which are not related to transactions on the exchange or which are in some way related to the business of members on the exchange.

In addition to the value of the bankrupt's seat, he may have balances due him at the clearing house. A question which arises is whether these balances are applicable to the claims of creditor members, or whether they belong to the trustee in bankruptcy for the benefit of the general creditors. The law on this point is not clearly defined, the decisions being few and opinion being divided. The transactions giving rise to the balances at the clearing house having taken place on the exchange, Federal courts have held that a by-law giving a preference against clearing house balances is valid and enforceable. This Federal rule would probably be controlling.[65] An earlier New York case containing implications to the contrary can be distinguished in that the debt arose prior to the insolvent's membership.[66]

In the distribution of the estate of a deceased member, a seat is likewise treated as property. After the claims of

[64] In re Fisk & Robinson, 185 Fed. 974.
[65] Re Gregory, 174 Fed. 629.
[66] Cohen v. Budd, 52 Misc. (N. Y.) 217, aff'd 117 App. Div. (N. Y.) 922.

members against the deceased member are satisfied from the proceeds of the sale of the seat, the balance is administered by his personal representative.

Attachment and Execution.—Attachment is a process whereby a creditor may levy directly upon property of the debtor in cases permitted by law, thereby being protected until his case is decided.[67] There has been no recent case involving attachment of an exchange seat. In some old cases it was held that a seat was not subject to attachment, the courts leaning to the theory that membership is more of a license or *chose in action* than a property right.[68] The trend of judicial opinion in recent years makes it impossible to accept without question this doctrine as the law of today.

Execution is the process by which a creditor enforces a judgment which he has obtained. The weight of authority has been adverse to the right of a creditor to levy upon an exchange seat in the ordinary process of execution. In some jurisdictions this has been extended so far as to deny any remedy because of the intangible nature of the seat.[69] But the weight of authority is that while the seat may not be subject to levy by execution, it may be reached by a creditor in two ways: by a creditor's bill or by the appointment of a receiver in supplementary proceedings. "We think the right of the judgment debtor to a seat on the Cotton Exchange was property. That it had value was proved and is conceded; and that it could be transferred to a certain class of purchasers under prescribed rules and conditions is also established . . . Although of a character somewhat peculiar, its use restricted, its range of purchasers narrowed and its ownership clogged with conditions, it was never-

[67] See Corpus Juris, title "Attachments."

[68] Pancoast v. Houston, 5 Week. Notes Cas. 36; Evans v. Wister, 32 Leg. Int. 354.

[69] 23 Corpus Juris, p. 333 note 12, but see Press & Co. v. Fahy, 313 Ill. 262 and same case below in 231 Ill. App. 193, 202.

theless a valuable right capable of transfer and correctly decided to be property." Accordingly the seat passed to a receiver appointed in supplementary proceedings.[70] The title of the receiver is analogous to the title of the trustee in bankruptcy. He obtains no privileges of membership on the exchange, but he may sell the seat and compel its transfer by the judgment debtor.

Transfer, Pledge and Assignment.—The transferability of an exchange membership, subject to the by-laws governing the admission of new members, has already been considered.[71] A seat may be assigned or pledged as security for a debt. Such an assignment or pledge would confer upon assignee or pledgee, a lien enforceable against the proceeds of the sale of the seat after the satisfaction of claims due to members. It would not confer any right upon assignee or pledgee to sell the seat.[72] The pledgee or assignee is furthermore subject to the by-laws and rules of the exchange relating to presentation of claims within time limits prescribed and relating to remedies on appeal.[73]

In the case of a voluntary assignment for the benefit of creditors, however, the position of the assignee is similar to that of the trustee in bankruptcy.[74] Title to the seat passes to the assignee. The matter is not important because such an assignment is made a ground of bankruptcy, and the latter proceeding is likely to supervene.

Taxation.—The question of whether an exchange seat is property has come squarely before the courts in cases in-

[70] Powell v. Waldron, 89 N. Y. 328 (at p. 331), 42 Am. St. Rep. 301, and see cases cited in 23 Corpus Juris, p. 333, note 13.

[71] See The Admission of Members, *supra,* also Keyer v. Memphis Cotton Exch., 135 Tenn. 414, 186 S. W. 593.

[72] Nashua Savings Bank v. Abbott, 181 Mass. 531, 63 N. E. 1058; Smith Flynn Commission Co. In re: 292 Fed. 465.

[73] Shannon v. Cheney 156 Cal. 567, 105 Pac. 588; Gartner v. Pittsburgh Stock Exch. 247 Pa. 482.

[74] McClain v. Pittsburgh Stock Exch. 219 Pa. 435, 68 Atl. 1031.

volving taxation. Cases have arisen involving the right of the taxing authority to levy on exchange memberships as personal property. If the seat were specifically named as an object of taxation, no question would arise; and interpreting local tax laws in different ways, the current of judicial opinion has not been sufficiently clear to enable a general rule to be formulated.

The United States Supreme Court has decided that an exchange membership may be taxed. "Of course, there is nothing in the Federal Constitution which prevents the memberships here involved from being taxed, and the question whether they were in fact taxable under the statutes of the state was a matter of local law with which we are not concerned. It was the province of the state court to determine what the terms of the taxing statute authorized. . . . "[75] In another case the same court held that whether a seat owned by a resident of one state on an exchange in another state was taxable under the laws of the former was a question to be decided by its courts.[76]

These decisions simply affirm the jurisdiction of state courts to determine what interests are taxable under local statutes. In two states, Minnesota[77] and Ohio, the courts have held squarely that an exchange membership is personal property within the meaning of tax laws and consequently subject to levy. The Ohio decision further held that an exchange membership, being property of an intangible nature, had its *situs* (or legal location) at the member's place of residence. The decision affirmed the right to impose a tax in Ohio on a seat on the New York Stock Exchange owned by a resident of Ohio.[78]

[75] Rogers v. Hennepin County, 240 U. S. 184 (at p. 189).
[76] Citizens National Bank v. Durr, 257 U. S. 99.
[77] State v. McPhail, 124 Minn. 398, 145 N. W. 108.
[78] Anderson v. Durr, 100 Ohio St. 251, aff'd in Citizens National Bank v. Durr, *supra*.

The intangible nature of the property in an exchange seat has influenced courts of other jurisdictions in deciding that exchange seats are not property. It is pointed out that a membership is "clogged with conditions" as to transferability and that the member's interests and privileges are not absolute and unrestricted in character. California, Maryland, and New York [79] join in holding memberships not taxable as personal property; but, because of a broader definition of the term "property," used in the inheritance tax law in New York, the courts of that state have held that a seat is subject to inheritance tax.

The fact that in all cases involving taxation decisions have turned upon construction and interpretation of the language of the statute makes it impossible to derive a general rule from this group of decisions, although individual findings have been clear-cut and explicit. In summary, an exchange membership has the attributes of property in bankruptcy proceedings and in suits brought by creditors; it resembles property in the fact that it may be transferred, assigned, or pledged. Under taxing statutes it has been held property or a *chose in action* chiefly in accordance with the language of the statute under construction.[80]

The Exchange's Control of its Quotations.—The right of a stock exchange or commodity exchange to exercise a full measure of control over its quotations—to decide what persons shall receive them and what persons shall not—and to revoke the privilege when in the opinion of the exchange it is being abused, has been a source of extensive litigation. The method of collecting and transmitting continuous quotations has been described elsewhere. The contract with the

[79] San Francisco v. Anderson, 103 Cal. 69, 36 Pac. 1034; Baltimore v. Johnston, 96 Md. 737, 54 Atl. 646, 61 L. R. A. 568; Peo. v. Feitner, 167 N. Y. 1, 60 N. E. 265.

[80] And see Weaver v. Fisher, 110 Ill. 146, which treated the interest as subject to a resulting trust.

distributing agency limits the telegraph companies' right to transmit quotations. The exchange reserves the right to approve or to disapprove any particular recipient. The many efforts which have been made to break the control of exchanges over their quotation service emphasize the value of this phase of the organized market's activities. Without access to legitimate quotations, the bucket shop cannot exist, for its prices, of course, must correspond with the prices made on the recognized exchanges.

The earliest question in point of time to be decided was whether quotations are property. News is intangible, yet the character of intangibility is no bar to legal protection. Consequently the decisions on this point are clear—that market quotations are property, and as such subject to control by the exchange on which they originate.[81]

But while the quotations are property, are they property impressed with a public use? The exchanges are great market places in which there is great public interest, and their importance in the various commodity trades is recognized. The contention advanced was that because of this public interest the exchange should not be allowed to curtail the distribution of quotations or to deprive persons from access to them. This contention was sustained in Illinois where the courts held that the quotations of the Chicago Board of Trade were affected with a public interest and consequently subject to a measure of public regulation; and the courts "would forbid that a monopoly should be made of them by furnishing them to some and refusing them to others who are equally willing to pay for them and be governed by all reasonable rules and regulations, and would prevent the Board of Trade or the telegraph companies from unjustly discriminating in respect to the parties who will be allowed

[81] See cases in following notes.

to receive them." [82] This view, however, is contrary to the opinion expressed by most courts; and in a very recent case the courts of Illinois affirmed the right of the Board of Trade to refuse quotations to individual enterprises which desired to use them for radio broadcasting and for advertising purposes. The decision further held that the by-law of the Board of Trade prohibiting broadcasting of quotations was reasonable and not in restraint of competition (the presiding justice concurred on the ground that the plaintiff, who as a member of the exchange had subscribed to the by-laws, had no right to raise the question).[83]

The question whether quotations are affected with a public interest has come before the Federal courts and their decisions have been contrary to the Illinois opinion quoted above.[84] " . . . I am of the opinion that courts cannot by their decrees assume the initiative in declaring private property to be impressed with a public use. There should first exist that condition of growth or expansion of a private business or of its relation to the public service or public necessity which justifies the assertion of a public interest therein and the accompaniment of public control, followed by legislative recognition or declaration of such condition." [85] In pursuance of the holding of the United States Supreme Court that the determination of whether or not a business is affected with a public interest is a legislative function, Congress declared in the Grain Futures Act that exchanges trading in grains are affected with a public interest. Subsequently the Federal Trade Commission, in an order, forbade the Minneapolis Chamber of Commerce to interfere with

[82] New York and Chicago Grain and Stock Exchange v. Board of Trade, 127 Ill. 153, 19 N. E. 855, 2 L. R. A. 411.

[83] Bowles Live Stock Co. v. Chicago Live Stock Exch. 243 Ill. App. 71.

[84] Board of Trade of the City of Chicago v. Christie, 116 Fed. 944 (at page 946).

[85] See Par. "Commodity Exchanges and the State."

the telegraph company which furnished its quotations to the St. Paul Grain Exchange and to the Equity Cooperative Exchange. This ruling was held invalid by the Circuit Court of Appeals of the Eighth Circuit.[86] Pointing out that the question arose between competing bodies, the Court said: "It would be a strange situation, logically or legally, where one could be compelled to furnish its own property to a competitor to be used as a major weapon of its own destruction. . . . The Exchange was formed by the Equity as its instrument for destroying the Chamber. That was the expressed purpose of its formation. Competition is by no means legally free from proper restraint, and it is beyond all reason to require any one to furnish the means of his own destruction to another who is bent upon accomplishing such destruction. We think the order of the Commission respecting the furnishing of market quotations is invalid because it is not, under the circumstances, conclusively shown by this record, an unfair method of competition for the Chamber to refuse to supply such quotations to these parties covered by the order." The decision of the court was that, while legislation may possibly declare quotations to be affected with a public interest, this decision cannot be made by another branch of the government.

An effort to cause the courts to label exchanges as gambling institutions and to characterize exchange trading as gambling transactions, illegal and beyond the pale of the court's protection, was made in the case of the Board of Trade *vs.* Christie Grain and Stock Company.[87] The Christie Grain and Stock Company was surreptitiously obtaining the quotations of the Chicago Board of Trade. The Board of Trade brought action to enjoin the defendant from ob-

[86] Chamber of Commerce v. Federal Trade Com. 13 Fed. (2nd) 673 (at p. 688).

[87] 198 U. S. 236.

taining and distributing its quotations. The defendant struck back with a counterattack that the Board of Trade was the greatest of all bucket shops; that the transactions in futures were mere wagering agreements and bets on price fluctuations; and hence, the entire machinery of the Board of Trade being permeated with illegality, its quotations were not entitled to the protection of the law. Holding that transactions on the Board of Trade were not illegal, the court ruled that "the plaintiff's collection of quotations is entitled to the protection of the law. It stands like a trade secret. The plaintiff has the right to keep the work which it has done or paid for doing to itself. The fact that others might do similar work, if they might, does not authorize them to steal the plaintiff's." And the right to complete control of its own quotations was made still stronger by the determination that even if quotations concerned illegal transactions, they would nevertheless be entitled to protection, for "the statistics of crime are property to the same extent as any other statistics, even if collected by a criminal who furnishes some of the data."

The latest effort to assail the right of exchanges to control their quotations was founded on the contention that this control amounts to restraint of trade. This argument was brought forth in the case of Moore *vs.* New York Cotton Exchange.[88] The action was brought because the Odd Lot Cotton Exchange and its members were denied ticker installation and continuous quotations. A decree was sought from the courts to cancel the contract between the Western Union Telegraph Company and the New York Cotton Exchange, and to adjudge the exchange to be a monopoly in restraint of trade. The plaintiff contended that the exchange had "a monopoly upon the receipt and dissemination of cotton price quotations, through which quotations and

[88] 270 U. S. 593.

prices of cotton, both spot and for future delivery, are influenced, guided and fixed in the exchanges and markets throughout the United States; that the contract with the Western Union [to distribute quotations only to such persons as the exchange approved] is in restraint of interstate trade and commerce in cotton and was entered into for the purpose of monopolizing and restraining that commerce." But the court held there was nothing except the contract with the telegraph company to show that the New York Cotton Exchange was engaged in interstate commerce. "It is equally clear that the contract with the Western Union for the distribution of the quotations to such persons as the New York exchange shall approve does not fall within the reach of the Anti-Trust Act. Under that contract, the exchange at its own expense collects the quotations and delivers them to the telegraph company for distribution to such approved persons. The real distributor is the exchange; the telegraph company is an agency through which the distribution is made. In effect, the exchange hands over the quotations, as it might any other message, to the telegraph company for transmission, charges to be collected from the receivers. . . . In furnishing the quotations to one and refusing to furnish them to another, the exchange is but exercising the ordinary right of a private vendor of news or other property. . . . So far as the exchange is concerned the evident purpose of the contract was to further and protect its business. The terms are entirely appropriate and legitimate to that end. The effect of the making and execution of the contract upon interstate trade or commerce, if any, is indirect and incidental. Neither in purpose nor effect does it directly or unreasonably restrain such commerce or operate to create a monopoly."

Summarizing these decisions as to the scope of exchange control over quotations, it has been well established (1) that quotations are property over which (2) the exchange

may exercise exclusive control and this control (3) is not in restraint of competition nor in violation of the anti-trust laws. The weight of authority also is that quotations are not impressed with a public use and that, barring their classification as affected with a public use by Congress, quotations are the exclusive property of the exchange.

Thus the law seems to be clear on the matter of control; but where does the control end? At what point, if any, in the transmission of price quotations has there been such a broad publication as to end the control of the exchange? When quotations are "published," they are "dedicated to the public," and exclusive control ceases. The all-important question, then, relates to the time of publication. Various schemes have been worked out to copy posted quotations and make use of them without permission of the exchange, the telegraph company, or the subscriber from whose bulletin board they were taken. In a case involving this question,[89] it was contended that "the posting of quotations by those who rightfully receive them is a general publication, and instantly operates as a surrender or dedication to the public of the proprietary rights of the appellee [the exchange]." This contention overlooks the fact that the boards on which the quotations appear were in brokerage offices which are not public places; and recognizing the importance of this phase of the matter, the court pointed out that "the publication relied upon consists altogether in the posting of the quotations by those who subscribe for them. This is done in places which, by reason of their ownership and use, are private. Its controlling purpose is that of stimulating and facilitating trade with the subscriber, and not of conferring a benefit upon the public. It implies, of course, a permission that in dealing with the subscriber his patrons may use the information which the quotations contain, but

[89] McDearmott Commission Co. v. Board of Trade, 146 Fed. 961.

not that they may be copied and taken away or reproduced and used elsewhere. It does not make knowledge of them general, or make them accessible to the public as of right, or render them of no further value. In short, it is so restricted as to be consistent with the retention by the appellee [the exchange] of its proprietary rights, and does not indicate an intent to surrender or dedicate them to the public."

To constitute publication it is necessary either (1) that there be voluntary assent, or (2) that the circumstances of publication imply assent, *i. e.*, publication in newspapers. To constitute publication it needs be shown that there has been a voluntary assent thereto or that the circumstances negative any intent not to do so, as publication in the newspapers, for example.

Chapter XIV

THE LEGALITY OF CLEARING HOUSE OPERATIONS

The purposes of the clearing house and its operations have been described in Chapter III. The machinery of clearing associations is designed to provide the most expedient method of settling contracts (1) by offset and substitution, or (2) by delivery. The fact that a large proportion of transactions are settled by offset and substitution has given rise to cases in which the legality of clearing house operations has been brought into question. The line of argument pursued has been this: Wagering agreements are illegal; bets on prices (the familiar bucket shop operation) are illegal, unenforceable between the parties, and in some states in contravention of the penal law as well. Those who have attempted to attack the legality of clearing house operations have done so by attempted analogy. When contracts are cleared by offset and substitution, the financial settlement is made by the payment of price differences. It is in this that likeness to the operations of a bucket shop has been sought; but sought wholly without success. The one feature of the transaction on a commodity exchange which cannot be evaded or overlooked is the fact that every future contract is a binding contract to deliver, enforceable at law by both buyer and seller. Whether delivery is made or not is beside the point. "A man may lawfully sell goods or stocks for future delivery, even though he has none in his possession, if he really intends and agrees to deliver them at the appointed time. Such a transaction constitutes a valid contract, which is enforceable in the courts. But a man may

not, under the guise of such a contract, enter into a naked speculation upon the rise or fall of prices, in which there is to be no delivery of property, and no payment except such as may be necessary to provide for differences arising purely from market fluctuations. Such a transaction is a mere wager, which is condemned alike by statute and public policy." [1] Substantially the same language has been used by the United States Supreme Court.[2]

It is impossible to separate the functions and machinery of the clearing association and the binding legal application of the contract, and to say that the one is illegal, while the other is legal. Buyer and seller both contract with reference to the by-laws and rules of the exchange, the one agreeing to take delivery and the other to make delivery. The speculator may buy, having in his own mind no intent of taking delivery; or he may sell with no intention of making delivery. It is not his unexpressed mental attitude which determines legality or illegality; it is the fact that he may be compelled to deliver if he does not offset his contract, when he is the seller; or he may be compelled to receive delivery if he is the buyer. A far-reaching opinion delivered by Mr. Justice Holmes of the United States Supreme Court in the case of Chicago Board of Trade *vs.* Christie [3] put the stamp of legality on clearing transactions by offset. The opinion contains so lucid an exposition of the question that excerpts from it are given in some detail.

It appears that in not less than three-quarters of the transactions in the grain pit there is no physical handing over of any grain, but that there is a settlement, either by the direct method, so called, or by what is known as ringing up. The direct method consists simply in setting off contracts to buy wheat of a certain amount at a certain time, against contracts to sell a like amount at the same time, and

[1] Weld v. Postal Telegraph Cable Company, 199 N. Y. 88 (at p. 103), 92 N. E. 415.

[2] Clews v. Jamieson, 182 U. S. 461.

[3] 198 U. S. 236 (at p. 246).

paying the difference of price in cash, at the end of the business day. The ring settlement is reached by a comparison of books among the clerks of the members buying and selling in the pit, and picking out a series of transactions which begins and ends with dealings which can be set against each other by eliminating those between—as, if A has sold to B 5,000 bushels of May wheat, and B has sold the same amount to C, and C to D and D to A. Substituting D for B by novation, A's sale can be set against his purchase, on simply paying the difference in price. . . .

We must suppose that from the beginning as now, if a member had a contract with another member to buy a certain amount of wheat at a certain time and another to sell the same amount at the same time, it would be deemed unnecessary to exchange warehouse receipts. We must suppose that then as now, a settlement would be made by the payment of differences, after the analogy of a Clearing House. This naturally would take place no less that the contracts were made in good faith for actual delivery, since the result of actual delivery would be to leave the parties just where they were before. *Set-off has all the effect of delivery.*[4] The ring settlement is simply a more complex case of the same kind. . . . The fact that contracts are satisfied in this way by set-off and the payment of differences detracts in no degree from the good faith of the parties, and if the parties know when they make such contracts that they are very likely to have a chance to satisfy them in that way, and intend to make use of it, that fact is perfectly consistent with a serious business purpose, and an intent that the contract shall mean what it says.

Referring to hedging contracts, Justice Holmes declared that "it is none the less a serious business."

Finally, referring to the fact that contracts settled by offset and substitution far outnumber those on which there is actual delivery, and in fact call for a much greater amount of grain than is actually received in the Chicago market, Justice Holmes said: "The fact that they can be and are set-off sufficiently explains the possibility, which is no more wonderful than the enormous disproportion between the currency of the country and contracts for the payment of money, many of which in like manner are set off in clearing

[4] Italics are authors'. No more important legal pronouncement affecting exchanges has ever been made than these seven words of Justice Holmes.

houses without any one dreaming that they are not paid, and for the rest of which the same money suffices in succession, the less being needed the more rapid the circulation is."

The principles enunciated in the Board of Trade *vs.* Christie case were followed in a recent decision of the United States Supreme Court. Chief Justice Taft, in handing down the court's opinion, said: "The petition charges that the Exchange and Clearing Association are machinery for the promotion of gambling, that though its contracts for futures on their face are for actual delivery, they really are not intended or expected by either party to result in delivery, that the Exchange rules discourage delivery, that when in fact actual delivery is sought, purchases are not made on the Exchange but elsewhere, that the Exchange thus puts in the hands of gamblers the means of influencing directly the prices of sugar to be delivered and thereby of obstructing and restraining its free flow in trade between Cuba and the United States and between the States. . . . It is true that spot sales are not encouraged and that less actual deliveries take place in this Exchange than in some of the Exchanges for sales of other commodities, but actual deliveries are provided for in every contract and may be lawfully enforced by either party. The usefulness and legality of sales for future delivery, and of furnishing an exchange where under well-defined limitations and rules the business can be carried on, have been fully recognized by this court in Board of Trade *vs.* Christie Grain and Stock Co., 198 U. S. 236, 246." [5]

The stamp of legality has been placed not only upon direct settlement and ring settlement, but upon the modern method of clearing contracts whereby the clearing house becomes seller to the buyer and buyer to the seller, substituting for one party on every contract cleared.[6] The contracts pro-

[5] U. S. v. New York Coffee and Sugar Exchange, 263 U. S. 611 (at p. 617).
[6] Clews v. Jamieson, 182 U. S. 461.

vide for actual delivery, and "set-off has all the effect of delivery."

The contention has sometimes been advanced that while settlement by offset and substitution is legal among exchange members, the method would not be binding upon customers of members. This question involves the broad question of how far the outsider is bound by rules of the exchange and its associated clearing house, a subject deserving of more extensive treatment.

Chapter XV

THE EXCHANGE AND THIRD PARTIES

Two propositions are clear with regard to the relationship between exchanges and non-members. First, the non-member has no standing to attempt to enforce any rules of the exchange for his benefit. Not being a member of the exchange, he is not a party to the contract between the members.[1] In the second place, by-laws and rules relating to matters of discipline and internal administration cannot affect third parties. The non-member comes into touch with exchange by-laws and rules because, when he buys or sells, the contract is made on his behalf by an exchange member who is subject to the by-laws and rules.

Exchange members who deal directly with one another act as principals.[2] The member who executes an order on the Exchange for his customer is the principal in the transaction so far as the member from whom he buys or to whom he sells is concerned. He is also the principal so far as the clearing house is concerned. Nevertheless he is acting as agent for his customer. His position thus apparently has a dual nature; on the one hand, he is looked to as the principal, and on the other hand, he is unquestionably an agent. We are not concerned with the general principles of the law of agency,[3] but with those phases of it which are pertinent to the relationship between the member and his customer. Accordingly, it is to be noted at the outset that customs and

[1] See Par., "Contract of Membership," Chap. XIII.
[2] Jemison v. Citizens' Savings Bank, 122 N. Y. 135.
[3] See Cyc., title Principal and Agent.

usages of a trade or market which are well established and well known are implied parts of contracts made in that trade or on that market, unless express provisions in a contract negative the usage or custom.[4] This being the general rule, the question that follows is whether by-laws and rules of an exchange to which its members subscribe are such customs and usages of the market as to bind customers of the broker-member.

The general rule on this question was stated in Bibb *vs.* Allen.[5]

> It is settled by the weight of authority that where a principal sends an order to a broker engaged in an established market or trade, for a deal in that trade, he confers authority upon the broker to deal according to any well-established usage in such market or trade, especially when such usage is known to the principal, and is fair in itself, and does not change in any essential particular the contract between the principal and agent, or involves no departure from the instructions of the principal; provided, the transaction for which the broker is employed is legal in its character, and does not violate any rule of law, good morals, or public policy.

The most interesting illustration of the application of this principle was afforded by a war-time transaction in corn. A customer of a member of the Chicago Board of Trade bought corn for future delivery. Extraordinary conditions brought about by the exigencies of war forced the prices of corn up to $2.40 a bushel. The directors of the Board of Trade, acting within the powers conferred upon them by the by-laws and rules, suspended corn trading and fixed a settlement price of $1.65 per bushel for all contracts. The customer brought suit against his broker, assailing the validity of the settlement price and advancing the contention that he was entitled to the market price and could not be bound by the price established in accordance with the by-

[4] See Williston on Sales, sec. 618, and Williston, Contracts, secs. 648-662.
[5] 149 U. S. 481.

laws and rules. The broker pointed to the legend appearing upon order blanks that "all orders for the purchase and sale of any article are received and executed with the distinct understanding that actual delivery is contemplated and in accordance with and subject to the rules, regulations and customs of the Exchange upon which the order is to be executed and the requirement of its Board of Directors and all amendments made thereto, and that the party giving the order so understands and agrees."

The customer pleaded ignorance of the exchange by-laws and rules and contended that he was not bound. But the Court said: "Having been notified by Williams & Monroe [the Exchange members] that the contracts in question were made in accordance therewith, it was his duty to ascertain what such rules, regulations, by-laws and requirements were, and if he did not then desire to be bound thereby, to repudiate the contracts. Not having done so he is as fully bound thereby as if he had full knowledge thereof." [6]

An express agreement between broker and customer might relieve the latter from the binding force of any particular by-law or rule. Such an agreement, however, would subject the broker to disciplinary action by the exchange. The whole question relating to this phase of the relationship between member and third party is well summarized in a New York case:[7]

> The general rule is that where a customer gives an order to a broker to be executed on a board of trade or exchange, he contemplates conformity to the rules and customs that prevail there (Wilhite v. Houston, 200 Fed. Rep. 390); and if he knows that the broker is a member of a particular exchange and is bound by its rules adopted to facilitate business, he may be bound by its rules although not fully informed concerning them (Springs v. James, 137 App. Div. 110; aff'd., 202 N. Y. 603).

[6] Thomson v. Thomson, 315 Ill. 521 (at pp. 528-531), 146 N. E. 451.

[7] Ford v. Snook, 205 App. Div. (N. Y.) 194 (at p. 197); 199 N. Y. S. 630.

But there is no direct evidence in this case that the defendant knew plaintiffs were members of any particular exchange or that the sale was to be made in any particular market. A custom or usage to be available against a party must be so notorious as to affect him with knowledge of it and raise the presumption that he dealt with reference to it; or he must be shown to have actual knowledge. The fact that a person is engaged in trading through brokers is not sufficient of itself to affect him with knowledge of a peculiar custom (Blake v. Stump, 73 Md. 160). Where a principal does not know of a rule or custom of an exchange or that the broker is a member of any exchange, he is not bound by a rule or custom that the broker invokes for his protection when he has departed from express instructions given. . . . Customs and usages which vary or contradict the contract entered into, or change the legal relations of the parties, or which are contrary to law, are of no effect and will not be allowed to control the broker's express instructions. . . . Therefore, unless the defendant had actual knowledge of the custom or the knowledge that may be implied from information that his agent would trade in a certain market where he would be bound by its rules, defendant was not bound by a custom which works a substantial and material change in his rights. (Irwin v. Williar, 110 U. S. 499.)

We are now in a position to consider the question mentioned at the conclusion of the last chapter—whether a customer is bound by the method of clearance and substitution employed by the clearing house. The question is "not whether, in a given case, without the assent, express or implied, of the principal [customer], this change of his rights and obligations can be effected (for that proposition is not doubtful), but whether the fact of his transacting business through a member of the Exchange, without other knowledge of the custom, makes it part of his contract with the broker." [8] The point was not directly involved, and the court's opinion evidently decided in the negative. The case of Bibb *vs.* Allen,[9] however, previously cited, and others appear to overrule this *dictum,* and the rule may be expressed as follows: if the customer has actual knowledge of the rules of the exchange or knows that his agent, the broker, can

[8] Irwin v. Williar, 110 U. S. 499 (at p. 514).

[9] 149 U. S. 481, and see also Clews v. Jamieson, 182 U. S. 461.

only carry out the order to purchase or sell on an exchange where the broker is subject to rules and by-laws, the rules and by-laws become a part of the customer's contract and he is bound by them.

Legality of Dealings Between Member and Customer. —This question arises when the customer is attempting to evade responsibility for balances due the broker. Sometimes the customer has contended that his transactions are bets, and hence the debt is unenforceable. Contentions have been made that exchanges are bucket shops and that the transactions are gambling ones. These allegations have been readily overcome according to the lines of reasoning followed in decisions previously cited.[10]

A slightly different situation is presented when the customer contends that he and the broker both understood that the transaction was not intended to bring about any actual delivery or receipt of the commodity, but that a settlement of differences was to be made, based on market price fluctuations. A learned writer[11] has stated this proposition in the following terms:

> The party called a broker is in reality much more than that. He does not bring his customer in contact with a principal but contracts on the Exchange himself as principal. He advances in speculative transactions ordinarily the greater part of the capital needed to finance them on the Exchange. He knows frequently that the customer's resources are insufficient to enable the latter to pay in full either immediately or within any probable time in the future the full cost of the stock or produce purchased on his account, or to furnish the full amount of anything sold "short" for his account.
>
> The ordinary method of carrying on the business will, therefore, involve the making of new transactions on the Exchange of the converse kind to those first made, and a settlement of differences between broker and customer. No agreement to this effect is ordinarily made and none is needed, for the Exchanges being in constant operation, the customer always has it in his power to order the settlement of his account

[10] Springs v. James, 137 App. Div. (N. Y.) 110, aff'd 202 N. Y. 603.
[11] Williston on Sales.

by new transactions on the Exchange, and if the customer's margin becomes insufficient, the broker similarly has power to close the account by making the necessary transaction on the Exchange, and applying whatever credit or securities of the customer he may have towards the balance. This being the ordinary situation, two questions arise:

(1) May the contract between broker and customer be invalid, though the contracts or sales entered into in the Exchange for the customer's account are valid?

(2) Assuming that the first question is answered in the affirmative, is the contract between broker and customer invalid under such circumstances as are stated above?

Turning now to the decisions of the courts, we find it stated that "a man may lawfully sell goods or stocks for future delivery, even though he has none in his possession, if he really intends and agrees to deliver them at the appointed time. Such a transaction constitutes a legal contract which is enforceable." [12]

The intent to deliver or to receive delivery is thus vital in determining whether or not the transaction is legal. The by-laws of commodity exchanges do not leave this question open to argument or dispute. The exchange contract provides for delivery or acceptance of delivery and neither broker nor customer has any choice in the matter. It is as certain as anything can be that a party who buys or sells a future contract and does not offset it by a contra transaction will receive the commodity or be called upon to deliver. Nor is the matter left here. The confirmation slips and notices in use by brokers usually give notice that all orders are received and executed in contemplation of actual delivery and that the customer so understands and agrees. The customer who assails the validity of a transaction faces this burden of proof: "It must be shown by him who attacks it that it was not intended to deliver the article sold. . . . In order to invalidate a contract as a wagering one, both parties must intend that instead of the delivery of the article there

[12] Weld v. Postal Tel. & Cable Co., 199 N. Y. 88, 92 N. E. 415.

shall be a mere payment of the difference between the contract and the market price . . . the burden of proving that it is invalid, as being a mere cover for the settlement of 'differences' rests with the party making the assertion." [13]

It makes no difference whether or not the broker expects that a transaction will be offset because "the mere fact that the client had bought with the expectation in case the market were favorable, of reselling before the time of delivery should arrive, and that the broker knew this, would not render the transaction illegal. The law does not prohibit a man from entering into a contract for the purchase of property to be delivered to him in the future or from ordering an agent to enter into such a contract, even though he may expect under certain contingencies, to sell his rights before maturity and to take his profit or suffer his loss. Such a transaction is a legitimate business speculation." [14]

The same rules apply as to the legality or illegality of "short" sales, "hedging," and margin transactions. None of these transactions are illegal if at least one of the parties intends that a bona fide contract of purchase or sale is to be executed on the exchange, and clearly the broker at least always intends to make and does make such a contract on the floor of the exchange. Under the rules he cannot do otherwise.

Broker and Customer.—One more phase of the relationship between customer and broker remains for consideration. This is the reciprocal rights and duties of the parties in margin transactions. The subject is broad and questions have been extensively litigated. It cannot be covered completely in a book of this type. Some of the leading principles, however, may be given.

[13] Clews v. Jamieson, 182 U. S. 461 (at p. 489).

[14] Nash-Wright Co. v. Wright, 156 Ill. App. 243 (at p. 252) and see Cleage v. Laidley, 149 Fed. 346.

The rights and duties as between broker and customer are summarized in the leading case of Markham *vs.* Jaudon.[15] Although the case involved a transaction on the Stock Exchange, the principles laid down by the court apply in large measure to commodity exchanges as well. Paraphrasing the language of the court, it appears that the broker undertakes to do the following acts when he accepts an order to buy or sell on margin:

(1) At once to enter into the contract on the exchange for the sale or purchase of the commodity according to instructions from the customer.

(2) To carry the contract for the benefit of the customer so long as the margin is kept good, or until notice is given by either party that the transaction is to be closed out.

(3) To advance all money required beyond the margin furnished by the customer.

(4) To deliver such contract to the customer when required by him, upon receipt of the advances and commissions accruing to the broker.

On the other side of the contract with the broker, the customer undertakes:

(1) To pay the margin required.

(2) To keep good such margin according to the fluctuations of the market.

(3) To take the contract executed on the exchange whenever required by the broker, and to pay the difference between the percentage advanced by him and the amount paid therefor by the broker. The customer is always bound, of course, to pay the commissions.

The requirement that the broker must carry the transaction so long as the margin is kept good or until notice of closing the transaction has been given has been the subject of litigation. When price movements are violent and rapid,

[15] 41 N. Y. 235; and see Richardson v. Shaw, 209 U. S. 365.

changes may imperil margins within a comparatively short time. The broker could protect himself from loss if he had unlimited discretion as to closing out accounts, but he may not do this at his pleasure. He has first a duty of demanding from his customer additional margin; and not until the customer has failed or refused [16] to put up the margin required may the broker proceed to close the account.

This is the general rule, but like most rules, it is subject to exception. If broker and customer have agreed to dispense with notice, then none need be given. "The general rule . . . is subject to such other or different agreement relating thereto as may be made by them. They may agree upon a prescribed notice or dispense with any notice relating thereto. Such agreement may be express, or it may be found in the surrounding circumstances as in the course of dealing of the parties." [17]

This is clear as to express agreements. It leaves unanswered, however, the effect of notice obtained from statements or confirmation slips stating that the broker reserves the right to close transactions without notice when margins are exhausted.

The mere notice, however, is not conclusive of an agreement. The customer may have had no knowledge of the notice until after the execution of his order. If this is so, the notice would obviously not bind the customer, for no party can be bound by a condition which the other seeks to impose after the contract is made. It might appear that where such notices are in use, all contracts after the first one would be subject to the implied agreement indicated by the notice. But the mere continuous receipt of such notices is not conclusive. "The statements with the printed notices thereon, received by the plaintiff after each purchase

[16] Thompson v. Bailey, 220 N. Y. 471.

[17] Smith v. Craig, 211 N. Y. 456 (at p. 461).

and sale, did not conclusively establish a contract between the plaintiff and defendants in their marginal dealings in cotton, but they were evidence to be considered in connection with the testimony of the plaintiff—the history of the transaction between the parties before the summer vacation—and the facts connected with the particular transactions out of which the plaintiff's alleged cause of action arose, for the purpose of determining the intention of the parties in connection with such marginal dealings." [18]

Whether or not the right to close out the transaction without notice to the customer is a part of the contract between customer and broker is a question of fact in every case. "That depends upon the intention of the parties which must be gathered from all the circumstances." [19]

In the absence of any such agreement, the broker is required to give notice and to give the customer a reasonable time in which to furnish additional margin.[20]

The question of what time is reasonable depends upon circumstances of each particular case. Thus, according to the location of the parties, an hour, a day, and a week have been held reasonable time; and the condition of the margin account, the state of the market, etc., have also influenced decisions on this point.

It is quite clearly established that upon the broker rests the burden of proof that he made every effort to give notice of a margin call to the customer. He should inquire at the home or the office of the customer for an up-to-the-minute address of the customer if the customer does not respond to request-for-margin notices sent in the ordinary way. If, however, the broker has made every reasonable effort to communicate the demand for additional margin without re-

[18] Smith v. Craig, *supra*.
[19] Thompson v. Bailey, *supra*.
[20] Markham v. Jaudon, 41 N. Y. 235.

sult, or if after notice has actually been received by the customer, he defaults, the broker may then close out the transaction.[21]

If the broker has lawfully closed out the transaction, he is entitled to sue the customer for damages for losses sustained. On the other hand, if he wrongfully closes out the transaction, he is liable to the customer. In the latter case the measure of damages is, besides the price realized on the sale, the difference between that price and the highest market price in excess thereof within such reasonable time after notice of closing out has been given to the customer as would have enabled him to replace the contract lost to him. Reasonable time in which to replace the contract is such time as will give the customer opportunity to consult counsel, to employ other brokers, to watch the market for the purpose of determining at what price the replacing transaction is to be made and to raise the money with which to finance it.[22]

[21] See above case for authorities.

[22] Minor v. Beveridge, 141 N. Y. 399; Content v. Banner, 184 N. Y. 121.

APPENDICES

APPENDIX A

NUMBER OF MONTHS TRADED IN, TRADING LIMITS, NUMBER OF GRADES TENDERABLE AND UNIT OF TRADING.

Commodity	Exchange	Number of months traded in	Daily trading limits*	Number of grades tenderable	Unit of Trading
Cocoa	New York Cocoa Exchange	13	2¢	Over 25	30,000 lbs.
Coffee	N. Y. Coffee & Sugar Exch.	13	2¢	13†	32,500 "
Corn	Chicago Board of Trade	††	None**	9	5,000 bushels
Cotton	N. Y. Cotton Exchange	12	2¢	17	50,000 lbs.
Cottonseed Oil	N. Y. Produce Exchange	8	None	1	40,000 "
Rubber	Rubber Exchange of N. Y.	12	8¢	5	5,600 "
Silk	National Raw Silk Exchange	8	50¢	10	650 "
Sugar	N. Y. Coffee & Sugar Exch.	13	1¢	***	112,000 "
Tin	National Metal Exchange	6	5¢	24	11,200 "
Wheat	Chicago Board of Trade	††	None**	17	5,000 bushels

* Above or below previous close. The by-laws of some Exchanges further provide "below the highest price of the day and above the lowest price of the day."

** Board may limit in case of an emergency.

*** Within polarization outturn limits fixed in By-Laws.

† Two contracts. Five grades tenderable on one and eight on the other.

†† No limit—trading usually confined to eight calendar months.

APPENDIX B

MINIMUM COMMISSION CHARGES TO NONMEMBERS*
ROUND TURN (PURCHASE, SALE OR PURCHASE AND SALE)

Commodity	Exchange	Price range	Domestic	Foreign	Floor brokerage**
Cocoa	N. Y. Cocoa Exchange	Under 10¢	$25	$30	Under 10¢–$1.50
		10–14.99¢	30	35	10–15¢ –$1.75
		15¢ up	40	45	Over 15¢ –$2.00
Coffee	N. Y. Coffee & Sugar Exchange	Under 10¢	25	30	Under 10¢–$1.50
		10–19.99¢	30	35	10–19.99¢–$1.75
		20¢ and up	40	45	20¢ & over–$2.00
Cotton	New York Cotton Exchange	Under 25.01¢	25	30	Under 25¢–$1.25
		$5 additional for each five cents or part thereof over 25¢	35	40	and 25¢ additional for each 5¢ or part thereof over 25¢
				45	
Cottonseed Oil	N. Y. Produce Exchange		25	25	$2.00
Rubber	Rubber Exchange of N. Y.		15	20	$1.00
Silk	National Raw Silk Exchange	Under $6	25	30	Under $5–$1.25
		$6–$7	30	35	$5 to $6 –$1.50
		Over $7	36	41	$6 to $7 –$1.75
					Over $7 $2.00
Sugar	N. Y. Coffee & Sugar Exchange	Under 4¢	25	30	Under 4¢ $1.50
		4– 9.99¢	30	35	4– 9.99¢ 1.75
		10–12.99	35	40	10–12.99¢ 1.85
		13–17.99	40	45	13–17.99¢ 2.00
		18¢ up	50	55	18¢ up 2.50
Tin	National Metal Exchange	Under 50¢	$25	$27	Under 50¢–$1.50
		50–60¢	$30	32	50–60¢ –$1.75
		Over 60¢	$36	38	Over 60¢ –$2.00
Wheat, Corn	Chicago Board of Trade		12.50	18.75	$0.75

* Commissions paid by domestic members, one-half of above rates. For foreign members, the domestic member rate plus the differential between the domestic and foreign rates above stated (except cottonseed oil, on which member rate is $15 round turn.

** Absorbed in the commission charge.

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