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Commodity Exchanges
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AND

Futures Trading

PRINCIPLES AND OPERATING METHODS

Julius B. Baer
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and

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HARPER & BROTHERS ~ PUBLISHERS

COMMODITY EXCHANGES AND FUTURES TRADING

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Preface

The publication of this book with its comprehensive descriptions of the development, functions, and operating methods of Commodity Exchanges is most timely. Since the organization of the first Commodity Exchange shortly after the Civil War, these Exchanges have been the scapegoats of producers, consumers, and politicians. They have been held responsible both for inflation and for deflation. At the peak of every inflationary spiral, the Exchanges and speculative operations thereon are blamed for high prices. At the bottom of every deflationary period, they are charged with the responsibility for low prices.

Congressional Committees have from time to time held extensive investigations and public hearings with respect to these Exchanges. Recent activities in this field (in 1947 and 1948) have centered mainly around the grain Exchanges because of prevailing high prices of wheat, corn, and other cereals on both domestic and foreign markets. Yet, when one examines the facts objectively, it appears that only in the United States today do free markets, responsive to economic forces, prevail in grains and most other staple commodities. Since early in World War II there has been no free market for wheat in Canada where the Dominion Government has been the exclusive buyer at fixed prices of all wheat for export, selling it to the British Government on long term contracts at prices determined by the two governments. Likewise, the Argentine Government has become the exclusive buyer and seller of all wheat and many other products for export. In 1947, as a consequence, the Argentine Government was selling wheat at the equivalent of $4 to $5 per bushel and Canada, on a long-term five year contract, was exporting wheat to England at $1.80 per bushel, while the United States, the only free market, was shipping wheat to Europe at prices ranging from $2.40 to $3.20 per bushel. In other words, the Argentine farmer is forced to sell at *low,* arbitrary prices wheat which his government sells abroad at exorbitant profits, possible only in a starving world. Meanwhile in Canada, where

the government, with the wheat exchanges suspended, sold its farmers' wheat crops short over a five year period at fixed prices, the farmer receives prices 50 to 60% below those prevailing on the free markets in the United States. In fact, Canada is engaged in the most gigantic commodity speculation in history and has caused losses of billions of dollars to its farmers.

In the United States, on the other hand, the grain Exchanges, operating freely, have maintained the only undominated markets for cereals in the entire world during and since World War II. While prices have risen sharply as a consequence of extraordinary war demand, drastically disrupted production and transportation facilities, and short post-war crops in Europe, they have not been arbitrarily fixed by government. On the contrary, prices have been established solely through the interaction of economic forces, the prevailing supply and demand on uncontrolled markets where merchants, producers, converters, consumers, and speculators have been free to sell or buy at will under federal regulation to prevent abuses and unfair practices. The results have been free prices, fair to both producer and consumer in light of all existing circumstances.

In a world in which private trading is rapidly being replaced by State trading in all basic international staples, it is not too much to say that free commodity markets, properly regulated by government to prevent abuses, are the symbols of free societies. With many nations of the world now accepting State Socialism in some form, it is highly important that the people of the United States realize that State Socialism, whether Communist, Fascist, or Socialist, means the destruction of free markets and their replacement by governmental buying and selling monopolies —i.e., exclusive State trading such as is now being practiced not only in Communist countries, but also in England and various South American and European nations.

Commodity Exchanges not only are vital to a free economy, but they serve a much more important function than do Stock Exchanges. The latter are vital to the economic stability of a free society because they give liquidity to the billions of dollars of stocks and bonds that represent the capital investments of the American people in the nation's productive and distributive machinery upon which depend the general welfare, prosperity, and living standards of all the people. The Commodity Exchanges, however, not only provide constant liquidity for the basic staple commodities traded upon these Exchanges, but they also perform other vital economic functions which are not served by Stock Exchanges.

Both the state and federal governments are vitally interested in the regulation of Commodity Exchanges to prevent unfair trade practices and other potential abuses contrary to the public interest.

This book is not a trade manual or hand-book of technical terms; nor

is it an extensive analytical or theoretical treatise on the economic functions of the Commodity Exchange. Rather its primary purpose is to supply a simple, clear analysis of the economic functions, the methods of operation, the trading practices, and the regulation of these Exchanges by the Exchanges themselves and by the federal government. The objective of the authors has been to produce a book which will be useful to students in college courses on Marketing and, at the same time, meet the needs of the ever-growing users of the Exchanges—the producers, merchants, brokers, dealers, commission agents, converters, farm cooperatives, and traders, who are availing themselves of the Exchange facilities more extensively from year to year.

The authors are greatly indebted to Mr. George P. Woodruff, a member of the New Jersey Bar, who collaborated with Mr. Baer in the authorship of "Commodity Exchanges," first published in 1929 by Harper & Brothers, with several subsequent editions.

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Commodity Exchanges
and
Futures Trading

CHAPTER I

Historical Development of Commodity Exchanges

Ancient Markets. Long before the dawn of history, ancient civilizations of the world and even primitive societies had established market places where hunters, fishermen, herdsmen, farmers, artisans, merchants, speculators, consumers, and, at times, foreign traders from distant lands met and exchanged their products or stocks in trade—raw materials or finished goods. All trading at first was by barter—the exchange of one article for another—a condition which seriously limits the volume and efficiency of commerce. Barter is practiced only in or among nations which have not yet conceived of money—as a common denominator of values, a common medium of exchange, whereby the value of one article can be readily gauged in terms of another—or among nations whose media of exchange are no longer acceptable to one another or to their peoples.

To eliminate the obvious limitations of barter, even the earliest societies attempted to establish media of exchange, using cattle, furs, shells, tobacco, and the like as money or common denominators, measures of wealth, and standards of value. These early "moneys," however, were subject to various risks, such as destruction or deterioration and consequent loss of value. Such articles are bulky, costly to store, and generally imperfect media of exchange.

In time, man, in his eternal search for ways and means to reduce the innumerable risks to which nature subjects him, conceived of the idea of gold, silver, or copper as the best, most efficient, most stable, and most durable medium of exchange. These metals then had, and gold today still has, all the essential characteristics of a satisfactory medium of exchange, namely, relatively high value in small bulk, durability without risk of loss from shrinkage or deterioration, relative scarcity, and ready adaptability to storage or safe-keeping at small expense. When the ancient Romans were first given gold and silver coins to substitute for cattle, as a medium of exchange, with the bullion or metallic contents

of the coins determined by government, they called these moneys *pecunia* after the Latin word for herd, *pecus.*

The introduction of metallic money as the medium of exchange, especially where the metal was gold (which is and throughout all history has been acceptable in all organized societies as the best common denominator or measure of values yet devised by man), was a major step toward expansion of both internal and foreign trade throughout the world. Thereafter, production and distribution were no longer local, and producers and merchants had no fear of losses due to deterioration of the "hard" money taken in exchange for their own goods or services. They had, however, only eliminated certain risks to subject themselves to others—risks of fluctuations of the money *prices* of goods and services, as well as governmental control of the value of their money and the possibility that irresponsible governments (as they have done periodically throughout the course of recorded history) would defraud their own peoples by manipulation of the value of money. This process is accomplished by governments through the deliberate cheapening of the value of their moneys for political or fiscal reasons by various centuries-old devices which do not concern us at this time.

The use of money as a medium of exchange also encouraged the rise of the professional money lender and the banker—both vital economic forces. They furnish risk-bearing capital to enterprising producers and distributors of goods and services, stimulating increases in the supply and wider use of goods and services through lower costs to the people resulting from development of more efficient tools of production, more economical means of transportation and distribution, and more effective competition for consumer markets.

The trading markets of the classical civilizations of Greece and Rome, after the development of the use of hard money, capital savings, commercial credit, and the consequent expansion of commerce by sea and land routes, attained a high degree of organization for the distribution of not only foreign, but also domestic products. Both Greece and Rome became substantial exporters, as well as importers, of international staples and manufactured products. In Athens the *Agora,* which later became the political center of the maritime power of the Athenian Empire, originated as a commercial market place. The famous *Forum* of Rome, from which that city for centuries ruled the major part of the known world, likewise was first established as a trading center. In the heyday of Roman dominion and power by land and sea there were in Rome nineteen such trading markets, called *fora vendalia* (sales markets), which specialized in the distribution of specific commodities, many of them brought from the far corners of the earth by caravan and galley.

In Rome there were also other *fora* where bankers and money lenders met to do business with one another, with merchants, and with the public.

The domestic and foreign commerce of Rome, organized and protected by Roman law and Roman legions throughout the Roman world, was extensive and vital to the economic, social, and political life not only of the capital city and the entire Empire, but also of the rest of the known world. Roman citizens transacted a large annual volume of world-wide business through the medium of Roman currency, which, in effect, for centuries became a world currency, acceptable everywhere.

Many of the trade customs, legal concepts and principles, and commercial practices which today govern our intricate modern economic life had their origins in the operations of the Greek *agorae* and the Roman *fora,* which, in turn, had benefited from the experience of traders of the more ancient empires that had risen earlier to power and fallen into decay over the centuries. The concepts of the modern corporation, the law of contracts and sales, and the principles of negotiable instruments were first developed or expanded by these classical civilizations after adoption from the earlier empires of Assyria, Persia, Egypt, Carthage, and other powers.

Markets in the Dark Ages. With the decline and final disruption of the Roman Empire (whose legions for centuries had maintained a stern, but far-reaching and effective Roman peace, under which domestic trade and foreign commerce had flourished as never before) came the stark and dismal centuries of the Dark Ages, when political, economic, and social chaos swept over the entire continent of Europe, the Middle East, Africa, and the British Isles. All currencies were disorganized. International trade and most domestic commerce dwindled to near the vanishing point. The Empire was broken up into hundreds of petty kingdoms, states, principalities, baronies, and independent cities or towns. Large sections were overrun by Asiatic hordes who looted, retired, and returned in waves to loot again. There was no common law and no central political enforcement agency, and local agencies were small, weak, and generally incompetent. Transportation by land and sea broke down with the closing of centuries-old land and sea routes. Internecine struggles, seemingly endless, among the small states and principalities, hampered production and distribution, with drastic consequences to the standards of life in all areas.

All organized markets, except for strictly local distribution, disappeared. The common man, seeking some degree of protection for himself and his family in a world of political turmoil and economic chaos, either voluntarily or from necessity became a serf to the "strong man" of his community; as a consequence, the feudal system in time shackled and

enslaved the greater part of the population of Europe and the British Isles. Only in the cities did men still contrive to remain relatively free, preserve the germ of specialized production for free markets, and nourish the knowledge of trade skills and commercial practices and principles of distribution and finance, handed down from earlier and more prosperous generations.

Yet, as the Dark Ages slowly merged into the Middle Ages, the European continent and Britain laboriously regained by degrees some semblance of stability, order, and peace on the economic, social, and political fronts, as small political units were merged by force or consent into larger units—states and principalities—while independent cities and towns organized defensive leagues to maintain their freedom and encourage trade. These larger units, the forerunners of the present national states of Europe, were more successful in enforcing law and order within their limited, but expanding jurisdictions, thereby making it possible for trade and commerce to become once again more than strictly local and for producers to produce again for more than strictly local markets. Ancient trade routes by land and sea were reopened. Travel and transportation became safer. Merchandise again began to flow across local and state borders, the merchants peddling their wares from town to town and door to door.

The Medieval Fairs. During the Dark Ages all progress in commerce and finance had been practically suspended on the Continent and in the British Isles. Few constructive developments had taken place for many generations. It is surprising that the old concepts, principles, skills, and practices were not lost in the chaos of those centuries. In the Middle Ages, however, in response to the gradual return to law and order and the consequent growing economic pressures of rising populations and increasing productivity of the people, inter-city, inter-principality, and inter-state commerce slowly revived and expanded.

At first the wandering merchants, traveling from town to town and country to country, on foot or horseback, in caravans or singly, peddled their wares individually from door to door. In time, in response to their own needs and the steadily growing demands of all peoples for the exchange of local products for those of other areas, these wandering merchants with *"pieds poudrés,"* or dusty feet, working in co-operation with local merchants, finally induced the constituted political authorities of the towns and cities to permit them to organize formal trading centers where for a specific time each year they could display their foreign merchandise for inspection and sale and buy local products for resale elsewhere. These centers, in time, developed into periodic *fairs,* and the

foreign merchants were authorized to move from town to town and country to country, operating exclusively through the fairs.

Merchant Associations. In due course, the medieval fair of the Middle Ages became a highly organized and efficient institution for the marketing of domestic and foreign products throughout all Europe and the British Isles. Foreign and domestic merchants, co-operating together, with the consent of the town, city, or state authorities, organized themselves into assemblies or associations of merchants, with fixed dates for their fairs periodically scheduled each year at particular places, usually on various saints' days.

In England these fairs reached a high degree of organization and flourished extensively between the eleventh and the fourteenth centuries, when they attained their peak of prestige and importance in the economic life of the Western world. In some instances they operated under royal charters or decrees; in others, under grants from local bishops, princes, barons, and officials of cities and towns throughout the British Isles.[1] They obtained specific rights and privileges, but in return assumed various obligations and duties to the constituted authorities.

The British fair, held annually at Stourbridge, became the center of English trade with Flemish merchants; the Winchester fair was the center of commerce with French, Italian, and Spanish merchants; and other fairs specialized in the products of various foreign countries or British domestic areas.[2]

To assure speedy, orderly, and efficient operation and management of the fairs, without conflict with local or state laws and regulations, the merchant assemblies—acting on their own initiative, but with the consent of the constituted authorities—established, promulgated, and enforced their own rules and regulations governing the conduct and transactions of all who participated in the sale or purchase of merchandise at the fairs. This was essential to make certain that their customs and principles relating to contracts, sales, bills of lading, warehouse receipts, letters of credit, negotiable bills of exchange, and other trade practices of international commerce—many of which had been handed down over the centuries, carefully preserved and improved upon, and finally developed into a fairly definite code of law and ethics—would not be overridden by totally different local or national laws and regulations.

[1] The right of foreign merchants freely to enter and leave England with merchandise was confirmed by Magna Carta (Sec. 41), on June 15, 1215, when King John was forced to sign that fundamental charter of Anglo-Saxon freedom.

[2] A. S. Dewing, *A Study of Corporation Securities* (New York: Ronald Press, 1934), pp. 19*ff*.

The "Law Merchant." Consequently the fairs, by custom and long usage, preserved, improved, and expanded their trade practices into a generally accepted code of international mercantile law, known as the "law merchant," which was acknowledged, respected, and enforced voluntarily among their merchants in all countries throughout Europe and the British Isles. Any merchant who violated any provision of the code could be ostracized by the trade.

The codes of the fairs were practical rules and regulations for the ethical and equitable conduct of all business at the fair and were binding on both domestic and foreign participants. They defined terms of contracts of sale, as well as methods of sampling, inspecting, weighing, and delivery. They established principles for the grading of merchandise. They regulated not only the methods of sale, but also the terms of settlement and payment. Although the vast majority of the trading was in merchandise on "spot," ready for immediate delivery, nevertheless the fairs at times made contracts to sell merchandise "to arrive" or "for delivery" at some future time, the quality to be equal to samples submitted to the buyer by the seller.

Courts of the Fair. Finally, the merchant assemblies so organized the fairs as to avoid conflicts with local and state courts. They demanded and secured from the authorities, either local or national, the right to enforce their own rules and regulations through their own "courts of the fair," as they were called in Britain, or courts of the *"pieds poudrés"* (dusty feet) on the Continent, to arbitrate disputes among merchants and all purchasers or sellers at the fairs, and to enforce their decisions on the spot by their own sanctions and penalties.

The members of these courts of the fair were chosen from those of the assembled merchants who were experienced in the particular trade involved and its rules and practices. They rendered rough-and-ready, but fair justice in all disputes, basing their decisions on their own trade customs and practices and carrying out their decisions summarily by their own methods, without recourse to or interference from the local courts.

Those trade customs and practices—in fact, an international code of ethics and law—were at last recognized officially in England by royal decree, which authorized the merchants to establish "merchant courts" to administer the "law merchant." These courts superseded the jurisdiction and authority of local courts in disputes arising out of transactions at the fairs.

In due course, when the fairs had served their major purposes in the economic life of their time and had become less important under changing economic, social, and political conditions, the *common law* courts of England incorporated the "law merchant" into the British common

law of contracts, sales, and negotiable instruments. Thus the "law merchant" became the "law of the land."

The "Law Merchant" Becomes the Common Law in the United States. With the colonization of America, the common law of England was transplanted to North America in the seventeenth century and after the American Revolution became the common law of all the individual states of the United States except those which had inherited French or Spanish law. The fundamental concepts and principles underlying the bulk of our present common law of commercial contracts, sales, negotiable bills of exchange, letters of credit, bills of lading, and warehouse receipts—the very life blood of orderly trade and commerce in our highly organized modern economic life, as enforced today in both our state and federal courts—are those of the "law merchant," based on international practices handed down over the centuries from the days of ancient Greece and Rome, developed by the courts of the medieval fairs, and improved or expanded as new conditions developed from time to time.

The medieval fairs were also the source of other institutions and practices commonly found in our modern civilization. The stock and commodity exchanges of the United States—as well as the trade associations in those fields which operate without exchanges—with their principles of self-regulation, their methods of arbitration and enforcement of decisions, and their clearing house systems, are the direct or indirect outgrowth of the medieval fairs. Today, these modern institutions establish, improve, and continue to enforce their own trade practices and customs and to expand their self-regulation to meet ever new and changing conditions, both economic and social.

Development of the Modern Commodity Market. After the decline in the economic importance of the fair in Europe and England, hundreds of local market centers, called *bourses* on the Continent and *exchanges* in Great Britain, sprang up rapidly to serve more effectively the functions performed by the fair. They were at first general market places, where buyers and sellers could freely exchange their many kinds of merchandise at any time during the year. These developments were forced by economic necessity. The earlier bourses or market places dealt in all types of commodities. They usually operated in the open—in public squares or on the town common. As economic conditions improved, with greater political stability and the consolidation of the present national states of Europe, and as transportation and communication facilities expanded, the volume of trade in each commodity grew larger and larger and in due course led finally to the organization of specialized markets for particular staples.

This development evolved out of specialized posts or stalls for trading

in individual commodities in the original general markets. As the volume of such business grew still further, specialized markets to trade in particular commodities grew up in all countries. In time, these special markets, previously conducted in the open streets, were officially housed and began to establish or re-establish their own special rules and regulations and improve trading conditions for each commodity and all who traded in it. This special type of local market was called a *bourse, boerse, beurs, borsa,* or *bolsa* in various languages on the Continent and an *exchange* in England and the United States, although nowhere did it perform the highly specialized functions and services of the modern commodity exchange.

In the United States the earlier markets for international staple commodities, with which we are primarily concerned here, were developed in tobacco and cotton and, later, in the major cereals—wheat, corn, oats, and rye. Thousands of local markets, scattered over the various agricultural states, sprang up in the areas producing each commodity, and central distributing markets were organized in New York, Chicago, Savannah, New Orleans, and other cities.

As early as 1752 an exchange was established in New York, at the foot of Broad Street, to trade in domestic produce. Another market was organized at the foot of Wall Street for the sale of merchandise imported by sailing vessels from abroad. The development of the New York Stock Exchange began with out-of-door meetings of stock brokers, trading on the curbs of Wall Street in securities of domestic corporations. The first attempt at formal organization of the New York stock market was in 1792,[3] although its first constitution did not become effective until 1817.

The Board of Trade of the City of Chicago, at present the largest and most important commodity exchange in the world, was officially organized in 1848, although it did not function until 1865 as an "organized commodity exchange" in the sense in which that term is used today. It did, however, provide a market for organized trading in "spot" lots, ready for immediate delivery, and in contracts for forward delivery of grain. In due course, similar grain exchanges were developed in other trading centers, such as Kansas City, Minneapolis, and Duluth.

The New York Produce Exchange was organized in 1862. Then came the New York Cotton Exchange in 1870, followed by the cotton exchange in New Orleans. The Coffee Exchange of the City of New York was incorporated in 1885. Trading in raw sugar was inaugurated by this exchange in 1914. In 1916 the name of the exchange was changed to the New York Coffee and Sugar Exchange, Inc. After the First World War

[3] J. E. Meeker, *The Work of the Stock Exchange* (New York: Ronald Press, 1922), pp. 63–64.

the development of exchange trading in various commodities was rapid. Exchange trading in the following commodities was inaugurated subsequent to 1920: cocoa, rubber, tin, copper, soy beans, black pepper, soy bean oil, wool tops, grease wool, onions, hides, potatoes, soy bean meal, zinc, cottonseed meal, silver, lead, mill feeds, and silk. Prior to the Second World War trading was suspended (and has not yet been resumed) in tin, lead, silver, and silk.

It should be made clear, however, that many commodity markets, in the United States and elsewhere, were organized centers for specialized trading before the institution of the modern commodity exchange (which is primarily and fundamentally an *insurance* device, supplementary to such markets) was conceived and developed to its present state of efficiency and vital importance to our modern economic life. In order that the economic necessity for and the various functions and intricate methods of operation of the modern commodity exchange may be more fully appreciated, it is advisable to review the functions and methods of operation of specialized commodity markets before the development of exchange services—an American development which originated after the Civil War in grain trading on the Chicago Board of Trade.

A brief examination of trading methods (on the physical markets), which preceded the development of the commodity exchange and still prevail in each commodity trade, whether or not there is an exchange, will not only facilitate understanding of the exchange and its relation to the physical market, but also emphasize the importance of the vital contributions which exchange trading have made to the economic life of the world today.

Organized Commodity Markets. In many quarters it is customary to speak of exchange markets as the only organized markets. This practice ignores the specialized physical markets for particular staples and the slow, tedious, and evolutionary processes through which, over the years, operators in these physical markets gradually, by trial and error and by patient co-operative efforts of all elements in each trade, developed highly organized centers and efficient trading techniques before the idea of the exchange was conceived. In fact, the commodity exchange is merely the newest addition, the latest development in this evolutionary process.

Exchange trading was an American development, though the use of the institution had become world-wide before the outbreak of the Second World War. Undoubtedly this process of evolutionary improvement of trading methods and operating practices will continue, as economic, political, and social conditions change, as new ideas are conceived, and as new techniques are developed. In fact, the modern commodity exchange

itself has become a highly organized and efficient institution only because of such evolutionary processes.

The exchange was conceived and established as a new instrument to perform *insurance* functions in commodity markets and offer protection against various risks which market operators could not secure through the regular insurance companies or otherwise.

Not All Commodity Markets Have Exchanges. Some commodities, even those which have highly organized physical markets for dealing, i.e. petroleum, coal, burlap, and other staples, do not lend themselves to exchange operations. The reasons for this are inherent in the commodities themselves or in the conditions, such as monopolistic controls by governments or private cartels, under which they are produced or distributed. In some commodities which are readily adaptable to exchange trading, many operators, producers, dealers, and converters, whose full co-operation is essential to successful exchange operations, have been opposed to the development of the exchange, largely because of their lack of appreciation of the long-term advantages of the exchange (to themselves and to the public) and their failure to understand the valuable economic benefits rendered by an exchange. Consequently there are many markets, highly important to the economic life of the nation and the world, which do not now (although they could) enjoy the benefits of a commodity exchange. There are others, also effectively organized, which do not and cannot have exchanges because of defects inherent in the commodities themselves. Finally, there are those which have developed exchange trading centers where producers, dealers, converters, and consumers can, if they so choose, insure themselves against various market and credit risks inherent in their functions and operations and can transfer these risks to others who are willing and able to assume them.

Organization of Markets Before Exchanges. In every staple commodity, whether or not there is an exchange, there is a physical market in which there will be found certain types of institutions, associations, and agencies, each of which performs various economic functions essential to these markets.

For every staple commodity there are two main classes of *physical* markets: the *primary* or *local* markets and the *central* markets. There are hundreds or even thousands of primary markets in some commodities—such as cotton, wheat, and other cereals. They develop in all producing areas and center around the local rail or water shipping points from which the commodity is forwarded to the large central markets of the world, such as Chicago, Buffalo, Minneapolis, Kansas City, Winnipeg, and Buenos Aires for grains, and New Orleans, Galveston, Savannah,

Houston, New York, Liverpool, Cairo, Calcutta, and Rio de Janeiro for cotton.

During the Second World War many nations disrupted these trades and trade channels by "bulk purchases" of entire crops (wool, sugar, wheat, and so forth). Other nations adopted various restrictive devices to control inflation. Since the war *state trading* in many commodities has continued, either as an emergency activity, with the avowed purpose of preventing inflation, or as the normal function of a communistic state, as in Russia and eastern Europe, or of a socialistic state, as in England. The British government is now the sole buyer of sugar, cotton, wheat, and other commodities for Great Britain, and in West Africa it is the sole exporter of cocoa beans. The commodity exchanges have been banned in all those countries in which state trading prevails and free physical markets have been destroyed in those commodities. We shall therefore describe conditions as they existed before the Second World War and as they are today in those markets which have not been preempted by state trading.

Brokers. In each primary market, as well as in the large central markets, there are individuals, partnerships, and corporations all of which are organized to act as *agents* for the purchase and sale of the commodity among the thousands of risk-bearing producers and local merchant *dealers* who constitute the local or primary markets, as well as among the hundreds of dealers and manufacturing converters who make up the large central markets.

These brokers are go-betweens who offer on behalf of producers or dealers specific grades and quantities of commodities to other dealers or to manufacturers; on the consummation of each contract they earn a fee or brokerage. They do business with all comers. Their activity, as a rule, is confined to their own local or central market, in which they operate primarily by telephone or telegraph or by personal calls upon customers in order to display samples of the spot lots which they have for sale.

Brokers are experts in grades, qualities, trade terms, and contract terms, as well as in warehousing and transportation problems. They buy and sell specific quantities of specific grades of a commodity for the account of others who assume all market, credit, transportation, and other risks. In the primary markets they do business for their customers not only in spot merchandise, ready for immediate delivery, but they also make sales at definite negotiated prices for forward delivery, the contracts for which call for delivery of definite quantities of *specific* grades, known as *standard* grades and commonly accepted as such in each trade.

Commission Agents. In each primary and central market other in-

dividuals, partnerships, or corporations are organized to act as buying or selling agents of producers and dealers, or manufacturers who convert the commodity into consumer goods. Like the brokers, so long as they operate within the laws of agency, they do not assume market, credit, or other risks. They also work for a fee or commission, which is fixed by contract with their principals and is based upon the volume of business they transact.

Dealers. In every primary market—as well as in the central markets of the world—for practically every staple commodity, the merchant dealer in commodities has been for centuries, and, to a great extent in most markets still continues to be, the great *risk bearer* of the physical markets. These dealers are the backbone or the wheelhorses of the markets where commodities are bought and sold either for spot (immediate) or for forward delivery. They are relatively few in number as compared with the hundreds or thousands of converters and the millions of producers in the various trades.

Dealers act as principals, buying and selling commodities at their own risk merely for a *chance* of a profit. By selling to them, the producers of all commodities—whether farmers or miners or cattle ranchers—can shift some of the risks of loss which nature and their occupations impose upon them; by buying from such dealers, the converting manufacturers can transfer to them certain of their hazards.

Risk-Bearing. Throughout the entire history of the economic life of man runs the never-ending story of his struggle to eliminate or minimize, when possible, the many and varied risks to which he is subjected by nature. As civilization has developed, ways and means have been devised for protection against certain kinds of hazards by transferring them from those who do not want to assume them to those who are willing and able to do so. Slowly, more and more types of risks are being brought under control so that their burden may be shifted, when desired.

Insurance against the risks of marine casualties—loss of or damage to ships and cargoes at sea—was first developed on a highly organized and efficient scale; in time, its use became so widespread as to permit marine insurance at more or less nominal rates to cover practically every hazard of transportation by land, sea, and air. In turn came various forms of highly organized protections called fire and life insurance. Still more slowly developed other forms of casualty insurance—protection against theft, burglary, and embezzlements, and, later, against hurricane, tornado, and other risks from the elements.

In time, insurance against many types of hazards, growing out of war, evolved. Then came workmen's compensation laws, requiring protection against the hazards of industrial accidents, and, finally, social legislation

in the form of old age, health, and unemployment insurance, imposed by the states and the federal government. Efforts more recently have been made to develop crop insurance against risks of drought, boll weevils, grasshoppers, beetles, and the like. Credit insurance in the retail trades is now extensively carried in certain lines and in a *limited* manner is possible in certain staple and wholesale trades. Certain paternalistic governments in the years between the two world wars even offered credit insurance to their exporters as a subsidy to expand their foreign trade.

Insurance of risks, however, in whatever form, is merely the transference of a risk from one party to another—from one who desires to be freed from it to another who is willing and able to assume it.

Risks of Commodity Dealers. The risk bearers of the physical markets are the producer, the converter, and the dealer. They assume the risks of their profession when they voluntarily become farmers or sheep growers or mill, factory, or mine operators or dealers in the products of the world. The producer, the dealer, and the consuming converter, as a rule, carry insurance protection with the established fire insurance companies; when their commodities are in transit from one point to another, they can insure against most of the transportation and storage hazards through the regular casualty companies.

As will be developed later, the commodity exchange itself is an intricate insurance device to permit the transfer of certain market and credit risks by those who desire to do so. Operators in commodity markets cannot obtain through the regular insurance companies insurance against the risks of adverse market fluctuations or credit losses. The farmer risks the possibility of a sharp decline in the price of wheat or cotton between the time of planting and sale of his crop. The flour miller, who sells flour to the bakery trade, runs the risk of a sharp rise in the price of wheat between the time of the sale of the flour for forward delivery and the time when he must buy and grind the grain to produce the flour. Losses due to market fluctuations—losses to which all commodities are necessarily subjected both by their nature and by the operation of the laws of supply and demand, except in totalitarian or socialistic countries where free markets are outlawed and prices are fixed and enforced arbitrarily by governments—in the aggregate each year are many, many times the normal losses resulting annually from the more spectacular fire, marine, and similar casualties.

The commodity markets of the world, both before as well as after the development of the exchange, have for centuries attempted to develop ways and means of minimizing the various risks inherent in the trades. The development of the dealer—the risk-bearing middleman between the producer and the converter and between the latter and the

ultimate consumer—was primarily designed to permit the producer and converter, when they chose to do so, to transfer at least some of their market risks to the dealer, even as they transfer certain others to the regular insurance companies, which are scientific risk-bearers, just as a commodity dealer is a calculated risk-bearer. Both for a consideration voluntarily assume risks which others are eager to transfer to them. Both perform essential and valuable economic functions which directly result in the lowering of the costs of production, conversion, and distribution of the economic goods of the world. The commodity dealer absorbs both market and credit risks which he, for the mere chance (not an assurance) of a profit, voluntarily assumes and to that extent frees the producer or the manufacturer from those hazards.

The Market Risk of the Dealer. F, whether a wheat farmer in Kansas, a coffee grower in Brazil, or a sugar planter in Cuba, when he is ready to prepare for his new crop, can determine fairly accurately the quantity, quality, and cost of his new crop. Through various brokers, agents, trade associations, co-operatives, and governmental agencies he can obtain reliable reports of the *current* prices at which his product is selling in the central trading centers of the world for delivery on the physical or the exchange markets as much as eighteen months or more in the future. F does not need to wait until his crop has matured in order to sell. He may find that at planting time he can sell at least a portion of his new crop for delivery in any central world market at a price which will assure him a fair and reasonable profit. By doing so, he avoids the risk of an adverse decline in price. Otherwise, he is a speculator on the future price of the commodity.

On the physical markets, however, in order to make his contracts for forward delivery, F must estimate (with allowance for various casualties) both the *quantity* and the *quality* of his crop and offer definite quantities and *specific* grades for sale to some *specific* dealer or factory through some broker or commission agent in the primary or central markets. He may sell to a local dealer who is known to him, or he may sell to a merchant in a central market or to a mill or factory in some distant country. In doing so, he has limited his market risks, but has assumed others. He may not produce the exact quantity or quality which he has sold. Also the dealer or mill, to whom he has sold, may be bankrupt at the time for delivery, thereby subjecting the seller to a credit risk. If F sells abroad, he assumes the risk of changes in the value of foreign currencies, unless he can shift that risk to someone else.

Consequently, the producer will usually prefer to sell to a local dealer or to one in the central markets of his own country. By doing so, he can avoid the risks incident to selling in a foreign country, he can reduce

or eliminate his transportation risks, and he can more readily check the credit of the local or domestic dealer, who also, if the producer's crop is inferior to the specific grades he sold, will be more willing to accept a lower quality (at a discount) than will a distant or foreign dealer or factory.

These factors explain why each physical market has its risk-bearing merchant dealers, those in the local markets buying from the producer and selling to dealers in the large central domestic and foreign markets.

On the other hand, the mills and factories, which convert the raw material, will prefer to buy from dealers in the central markets rather than from dealers or producer in the primary markets. M, whether a sugar refiner in New York, or a tire manufacturer in Akron, prefers to buy his sugar or rubber from a dealer or importer in the central market rather than from a domestic farmer or local dealer or an export dealer or planter in Cuba or the Far East. Although he may be able to buy in the primary market somewhat cheaper—that is not often the case—he is unwilling to assume the risk of non-shipment in case of a rising market and the necessity of a lawsuit in a foreign country or distant state. He also runs the risk of shipments of inferior quality. As a consequence, the great bulk of the physical trade in staple commodities flows from producers to local dealers in the primary markets. They in turn sell to dealers in the central and export markets, and the latter in due course sell to dealers in the foreign markets or to mills and factories in their domestic markets. This is particularly true when, as is often the case, it is the trade or local custom for dealers always to pay cash on delivery of the merchandise or on receipt of shipping documents representing it, whereas mills and factories frequently require credit terms.

Credit Risks of Dealers. As a rule, dealers either furnish bank letters of credit to their suppliers or pay cash on delivery, and at the same time they often extend 30-, 60-, or 90-day credit to their buyers, the converting mills and factories, which may become insolvent and may default on payment before or after delivery. Thus dealers perform a valuable credit or banking function.

In addition, when the central market dealer buys for forward delivery from a producer or from a primary market dealer and sells to a mill, he risks the possibility of non-shipment or default by the seller and the necessity of having to replace the shipment to the mill at a higher price than that at which he had originally bought. He also runs the risk, on falling markets, of having to pay for his own purchases at contract price, even though, when he tenders delivery to his buyer, he may find that, in the months between the date of the sale and date of delivery, the mill buyer has become insolvent and is unable to pay for the merchandise, thereby

forcing the dealer to resell on a lower market at a heavy loss. Again, the mill may fail *after* delivery but before payment.

Other Risks of Dealers. The dealer assumes many other risks. He may buy a specific grade of a commodity from a distant dealer or producer who may deliver an inferior grade which the dealer cannot deliver to his buyer.

Frequently, in order to survive, he may be forced by competition to convert "shipment contracts" (which are fulfilled, if *shipment* is made during the month specified in the contract) into "arrival contracts" (which require *delivery* during the month of arrival, whether or not the ship carrying the merchandise sinks in transit). In other words, a candy factory in Cleveland wants delivery of purchased cocoa beans in, say, April, and it contracts with the dealer for April "arrival." The dealer must deliver in April, even though to do so requires rebuying on the domestic market at a heavy loss all cocoa beans which he has sold under "arrival" terms, and even though the ship carrying the cocoa, which he had bought for "shipment," has sunk in transit or arrives with the beans in a seriously damaged condition, unfit for delivery on his sales contract. In spite of the fact that he may be insured for the value of the beans at the time of shipment from Africa or Brazil, he may have to replace it on a much higher market for delivery on his sales contracts.

Furthermore, when the dealer buys in one market and sells in another, he absorbs all transportation and other casualty risks. He may try to transfer some of these risks to his seller or to his buyer, but trade competition usually forces him to absorb them himself. He does, however, to the greatest extent possible, insure himself with the fire, marine, and other casualty companies, but frequently he is unable to cover all the many and varied hazards which may arise in the course of transshipment from distant points or during storage in a warehouse.

Finally, the dealer serves another useful economic function—that of accumulation by purchase of small parcels from many small producers or local dealers and of resale in large lots to large buyers—as well as the reverse—purchase of large parcels from large dealers or producers and sale in small parcels to many small converters.

All these risks, assumed by the dealers, are essentially speculative hazards which they voluntarily assume merely for a chance of earning a profit. They hope to profit on the rise or decline of prices; sometimes they are "long" of merchandise in anticipation of a rise in the price, at other times they are "short" of the merchandise in expectation of declining prices. Yet, by the assumption of various risks which would otherwise fall upon producers or converters, thereby increasing their costs, the dealers reduce the ultimate costs of production and distribution and aid

in raising the standards of living of the world. Speculation by dealers serves the same economic and social functions that the insurance companies serve, but with an essential difference. The insurance companies, by working on the law of averages and calculated risks based on large numbers and the relatively small incidence of risks, can be assured of a reasonable profit or return on their investments, whereas the speculative dealer is forced to operate on a much narrower base and for only a *chance* (not even a reasonable assurance) of profit. His profit or loss turns solely on his ability to forecast the price trend—the rise or fall in commodity prices.

There was a time in all commodity trades, before the development of the telegraph and cable and, more recently, the radio and the transcontinental and transoceanic telephone, when a dealer in commodities could make a reasonable profit on at least a fair percentage of his annual turnover merely in exchange for the many *services* which he rendered, without the acceptance of certain risks—especially market risks. He could accumulate small parcels at prices slightly below his own market level and sell them simultaneously in larger lots (and vice versa) at a profit sufficient to justify his services, without assuming market risks. He could receive offers overnight by telegraph, telephone, or cable from primary markets, add a reasonable profit for his non-market risk services, and sell the merchandise before the close of the business day without speculation. In other words, there was a dealers' legitimate spread between prices in the primary and central market.

But, with the coming of the trans-ocean telephone and the broadcasting by radio of prices throughout the world daily and hourly to all markets, and with the intensification of competition in all markets as a direct result, this dealers' spread has disappeared in practically all markets. The effect, without doubt, is to increase the price to producers or to reduce the cost to consumers at the expense of the risk-bearing dealers who were forced to become more and more speculative in their operations.

Major Defect in the Physical Markets Which Operate without Exchanges. The major defect in commodity markets which operate without the benefit of exchange services is that there is not a sufficiently large number of risk-bearing dealers or a sufficiently large amount of risk capital among the dealers to give the stability, the liquidity, and the assured continuity of markets which are essential to satisfy the producers' and consumers' desires to transfer their speculative risks to those more willing and able to absorb them.

The Growing Need For Exchange Services in All Commodity Markets. It is chiefly because for many decades there was a growing scarcity of risk capital in dealers' hands and too small a number of risk-bearing

dealers in the constantly expanding commodity markets that these very dealers themselves, in co-operation with the brokers, commission agents, and converters, at last conceived of and organized the commodity exchange. Their purpose was to supplement the work of the middlemen—the dealers—and assure the entry into these trades of larger capital funds and a larger number of professional risk-bearers or insurers, as well as to perform new functions which the dealers could never perform. This new and large-scale capital could only be induced to enter these trades through a new institution—the commodity exchange—which is essentially an insurance device, the organization and operation of which we shall shortly undertake to analyze. It will then be clearly seen that not only does the exchange increase greatly the possibilities of shifting speculative and other risks which the dealers stood ready to assume to the extent of their ability, but it also makes possible the shifting of *additional* risks against which the dealers could never protect the producer or converter.

Before closing our study of organized commodity markets, as they operated before the development of exchanges or as they still operate in many trades, which do not in some cases and cannot in other instances have the benefit of the services of an exchange, it is advisable to examine briefly the trade organizations which function in and are common to each physical trade.

It must be clearly understood that in no instance has the exchange market replaced the physical markets or in any major degree infringed upon their functions and jurisdictions. Rather, the exchange market is an auxiliary to the older physical markets, as a new device—essentially an insurance device—evolved out of the growing needs of the old markets and serving functions which the old markets did not and could never perform alone. In other words, the older physical markets developed the exchange markets to supplement their activities and make them more effective and efficient servants of the public interest.

Producers' Associations. In addition to producers, brokers, commission agents, merchant dealers, and manufacturing converters, there are in each commodity trade important organizations, the structure, methods of operation, and functions of which are vital to these markets. In every commodity field there is a voluntary association of producers. There are many of these in each commodity trade and in each country, organized to represent the territorial, regional, or national interests of the producers. In rubber, for instance, there are producers' associations in various states—British Malaya, Ceylon, Indo-China, Brazil, and the Dutch East Indies. Their membership is limited, in some instances, to the small-scale native producers, in others to large foreign-owned plantations. The

regional, sectional, or state associations in turn are members of a state and national association of producers, and these again may be loosely organized into an international rubber producers' association.

The objectives or functions of these producers' associations in all commodity trades are primarily to increase the bargaining powers of their respective members through collective action. Such collective action does not relate to the commercial transactions of their members in the trade, but is mobilized in connection with their negotiations with similar associations of brokers, dealers, commisson agents, and manufacturing converters of their products in respect to trade problems, as well as with their "pressure group" activities before local, state, colonial, national, and, in more recent years, international legislative or administrative bodies. They exercise political pressure, through their large and widespread membership, to prevent action prejudicial to the producers' interest or to secure special privileges for such producers in the form of governmental subsidies, programs for restriction of production, and price-fixing schemes on both a national and international scale.

Organizations of producers, similar to those in the rubber trades, are found in all staple commodity fields—in wheat in the United States, Canada, Australia and the Argentine; in cotton in the United States, Brazil, Peru, India, Egypt, and China; in coffee in Brazil, the Central American states, and the Dutch East Indies; in sugar in Cuba, the Dutch East Indies, the Philippines, and Hawaii.

The rubber producers' associations were responsible for two disastrous rubber restriction schemes. The first of these was operated between 1922 and 1928 under the auspices of the British government and its colonies, to which it was limited; the second, in the 1930's included other producing nations, with almost 98 per cent of the world rubber production in that period incorporated into the scheme.

The coffee producers' associations of Brazil were responsible for the ill-fated coffee valorization schemes which have been operated almost continuously since 1907 by the several Brazilian coffee-producing states or by the federal government and culminated in the International Coffee Agreement (1940) which expired at the end of the Second World War.

The wheat producers' associations of Canada were responsible for the huge speculative pool operations of the wheat co-operatives (in the Canadian western provinces) which became bankrupt through speculation and in turn bankrupted the governments of the provinces which went to the relief of the co-operatives. The provinces finally were rescued by the Dominion government at heavy losses to the Dominion treasury and its taxpayers.

Producers' associations were also responsible for a similar restriction scheme for sugar in Cuba and for the various subsidy and restriction programs in the United States for cotton, wheat, corn, sugar, tobacco, and many other farm products under the Agricultural Adjustment Acts of 1933-1939 and later legislation.

All these schemes give the producers certain definite short-term benefits, but in the long run they have proved disastrous in that they foster increases in production in uncontrolled and often new virgin areas, stimulate the development of the uses of substitutes and synthetics, encourage the use of reclaimed materials, and, finally, almost without exception, collapse under persistent pressures of economic forces, with the result that the prices of the controlled commodities are driven (as in many past incidents) to levels lower than ever before in recorded history or that *state trading* is substituted for the collapsed schemes.

The worst feature of such control schemes, beyond the obvious fact that they tend to destroy free markets and attempt to substitute arbitrary, dictated prices for free prices established by free merchants on free markets, is that in many instances, again under pressure of producers seeking to perpetuate war-time or emergency controls, they have evolved into permanent state trading where all buying and selling is done by a totalitarian or socialistic state at arbitrarily fixed prices. State trading is now quite common and has been adopted, as a matter of permanent policy, for cotton and wheat in England, cocoa beans in British Africa, wheat, hides, and skins in Argentina, and so on. This trend, if not suspended and reversed, in time may well mean the end of the capitalistic system in all countries which indulge in such state trading and may even jeopardize that system in free countries.

The other functions of the producers' associations are more constructive. They represent their members in all negotiations with other trade organizations, both at home and abroad, in establishing certain services which are beneficial to all elements in the trade. They collect, assimilate, exchange with other associations and government agencies, and distribute to their own members vital trade and crop statistics and other data essential to all who operate in each trade.

The producers' associations also co-operate with other trade organizations in establishing and revising rules and regulations in each market in regard to ethical conduct of the trade, standardization of trade and contract terms, standardization of grades and qualities, arbitration of disputes arising out of the standard contracts of the trade, and establishment of clearing methods to expedite and reduce the costs of deliveries of merchandise and collections of payments under trade contracts.

These last functions, however, are primarily performed by the dealer

trade associations in each primary and central market; but, in order that they may be successfully performed, there must be full and continuing co-operation among the various organizations at the several levels of the trade.

Dealers' Trade Associations. In every primary as well as every central market in each commodity trade there is a trade association, such as the Cotton Dealers' Association of New Orleans, the Green Coffee Association of New York City, and the Rubber Trade Association of New York. Sometimes the brokers and commission agents organize their own association in each market, but more frequently they constitute merely a division of the trade association, such as the Rubber Trade Association of New York, which includes these agencies as well as the dealers.

Establishment of Self-Regulation by Dealers' Trade Associations. Members of these associations, in addition to being subjected to common law and state and federal statutes, pertinent to their trades, are bound by the rules and regulations established by their associations for the ethical and orderly conduct of their business. These regulations are developed by the members themselves, acting according to their constitution or by-laws, and are thereafter binding on all present and subsequent members of the association and on all other buyers and sellers in the trade who voluntarily contract to abide by such rules. The rules are enforced under penalty of suspension or expulsion from the association—which usually means the end of the violators' activities in the trade. These codes are never static, but are subject to change as new techniques develop. The "law merchant" is being constantly revised and improved as conditions demand. The codes are so similar to those of the exchange markets that we need not consider them here. They will be discussed in more detail under exchange operations.

Arbitration of Disputes. The regulations of the dealers' trade associations usually provide that all disputes between members, as well as those between members and non-members, arising out of the standard contracts of the trade (which require arbitration under association procedures) must be arbitrated at the headquarters and under rules of the trade association. The procedures are inexpensive, swift, and efficient, and decisions are made by trade members who are experts in their fields. Provision is made for adequate appeals from an original arbitration committee to an appeals committee.

Standardization of Contracts. Perhaps the most important function of dealers' trade associations is that of standardization of trade and contract terms and establishment of not only one, but several uniform contracts for general acceptance in both domestic and international trade. In performance of this function, close co-operation on the part of pro-

ducers', dealers', and manufacturers' associations has been essential in order to secure general acceptance in the trade.

This development does not mean that in the hide or coffee trade, for instance, one or two uniform or standardized contracts are in use throughout the entire hide or coffee world. It does mean, however, that, whereas in the past—before the trade associations were fully effective—each producer, dealer, and converter attempted to buy and sell on *his own* contract form and terms, now in each central market there are uniform contract forms (relatively few in number) which are used almost exclusively in that market by all who trade in it.

Although the uniform coffee contracts of Rio and Sao Paulo or the uniform rubber contracts of Singapore and Batavia may vary somewhat from one another and from those of New York, Liverpool, or London, nevertheless every trader in coffee or rubber, whatever his status, knows what obligations he assumes and what rights accrue when he sells or buys under any of these standard contract forms (copies of which are made freely available on request by the various trade associations in each market). Slowly, but surely, each world-wide commodity trade is steadily working toward the point where there will be only a limited number of uniform contracts in each commodity trade, with each contract standard for all markets and each serving a specific function—for it will probably never be possible to reduce trading in most commodities to a single uniform contract.

For instance, there will always be a need to distinguish between a uniform or standard "arrival or delivery" contract and a contract for "shipment." When B buys from S on a contract calling for "arrival and/or delivery" of silk in New York during the month of May, B requires and S undertakes to make delivery in May, even though S, in order to make delivery, buys from J in Tokyo the necessary quality and quantity for shipment by fast steamer, which is scheduled to arrive in May, but sinks in transit or does not arrive until June. S, under such circumstances, must still deliver to B under the contract, even though he must enter the New York market and buy silk from a competitor out of warehoused stocks (at a much higher price than S will receive from B) and may be compelled later to resell at a loss the silk bought from J for shipment. On the other hand, if S had sold to B a "shipment" contract, S could complete his contract with B by delivering to B the shipping and insurance documents covering the shipment bought from J, even though the ship carrying the silk sank in transit or arrived late. B's only remedy under this contract is against the insurance company for loss of the cargo or possibly against the steamship company for delayed arrival (*if he can prove negligence or willful action as the cause of the loss*

Except for a few major contract classifications, based on major considerations, it may be possible in time to eliminate the multiplicity of trade contract forms and terms and to permit the trade to deal in contracts which require no substantive changes in the standard form, but merely the filling in of dates, quantities, qualities, price, names of the buyers and sellers, and time of delivery, with all the other contract terms and conditions definitely standardized.

We shall see later, however, that with respect to *exchange* contracts it is possible to reduce the number of contracts to a single one and limit the changes necessary in each contract of sale merely to the date, the names of the buyer and seller, and the price.

Standardization of Qualities or Grades. Another of the important functions of the dealers' trade associations, in co-operation with the other associations in each commodity trade, is the standardization of grades or qualities—that is, the establishment of uniform grades within the general classification of *standard* and *non-standard.* Prior to this development, each producer was forced to grade his own product and develop his own qualities or types—which he frequently covered with a trade name, as is generally done in the finished or consumer goods field. As a result, there were literally thousands of grades and qualities of the various commodities. No buyer could ever be certain that he would receive any one uniform quality in sufficient quantities for the continued manufacture of a uniform quality of his finished goods.

Gradually, however, the various grades of each product were slowly narrowed down and reduced in most trades to forty or fifty (or even less). Those grades then became the recognized uniform qualities and all producers conformed to them, and type samples or specifications (representing each grade) were always available on request.

These uniform grades were then so organized that a certain one became the *basis* (sometimes also called the *standard*) grade and all other grades were classed as either superior or inferior to this *basis* grade. The *basis* (standard) grade is that grade which usually represents the largest proportion of the total production of each commodity. If it sells at fifty cents per pound, all other types or grades are valued in relation to this base price, the superior grades bringing premiums and the inferior grades taking discounts either above or below the current base price, as determined by the law of supply and demand for each grade.

The standardization of grades in staple commodities had the same effect as did the standardization of finished goods—larger-scale production and lower unit costs. Uniformity in raw material deliveries also permitted uniformity in the qualities of finished goods, for converters could now be assured of a steady supply of uniform grades of their raw

materials—and they could reduce their prices to the public as a result of large-scale production in contrast to job-lot production.

This standardization of and reduction in the number of grades not only greatly expanded the volume of trading and sharply speeded it up, but it also had the important result of shifting the vast bulk of the trading in the physical or cash markets from spot sales of merchandise, ready for immediate delivery to the buyer, to trading for forward deliveries. Previously, both dealers and converters had hesitated or positively refused to buy until and unless the merchandise was at hand and could be carefully sampled, inspected, and analyzed. That meant that producers had to assume all market, transportation, and other risks (except where they could insure with casualty companies) up to the point and time when they had delivered their products to the primary, and, often the central, markets where the larger dealers and manufacturers could inspect and sample. Before standardization, speculative dealers who did from time to time buy for forward delivery assumed much larger risks than they need assume today.

With the standardization of grades and the development of official and certified type samples, established by the trade associations and available to anyone, it now became possible for producers, merchants, and factories to sell and buy for forward delivery in full confidence that, in the absence of occasional bankruptcy, fraud, or unintentional error, they would receive the specific grades contracted for. As a consequence, not only did the volume and tempo of trade expand sharply, but, thereafter, more and more contracts were made for forward deliveries and less and less merchandise had to be consigned to central markets and be sold only after arrival and inspection.

The trade associations, however, have not been and never will be able to reduce grades to a single type. It would not suit the purposes of either the producer or the converter to do so. Allowance must be made for the converters' demand for various grades of each commodity, based on differences in price and such elements as varying tensile strength, chemical make-up, and the uses to which each grade is to be put. Nevertheless, the commodity exchanges, as we shall see, have been able to reduce exchange trading to a single grade or, at the option of the trader, to a contract under which many, if not all, standard grades are deliverable under a single exchange contract; for the purpose and function of trading on the exchange market is not to deliver or take delivery of the actual or physical merchandise, but to offer insurance against market and credit risks to those who desire to shift such risks. As will be explained later, the commodity exchange has also been able to perform other functions which were not possible for trade associations on the physical markets.

CHAPTER II

The Economic Functions of Commodity Exchanges

Fairs and market places, as we have seen, existed in the Middle Ages. Not until they 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 original major function was to contribute to place utility; that is, it constituted a center to which goods flowed from distant parts and foreign lands—goods which, without the fair, would never have been shipped from their production centers.

The modern commodity exchange is not a direct outgrowth of the fair, but it serves the same purpose and function with regard to *time* that the medieval fair served with regard to *place*. In medieval society goods were manufactured in job lots, largely *on order* at fixed prices, for custom trade. In modern industrial society both the producer of staple commodities and the manufacturer to a great extent produce standardized products for large domestic and foreign markets *before sale*. Although large-scale production and manufacturing for such markets have greatly raised living standards and provided better and better qualities at lower and lower prices to the consumers, they have introduced risks arising chiefly from the time factor. When any commodity, however durable, is produced for later sale or purchased for conversion into consumer goods months later, there is in a free economy an inevitable risk of an unfavorable price change during the time the goods are being produced or are held for later sales in converted form.

We have already considered the constructive developments of the organized commodity markets in staple commodities before the advent of the commodity exchange. This institution was designed to satisfy certain needs of these markets: to make them more efficient and effective; primarily, to afford to all operators in the physical markets—the farmer, the dealer, and the converting manufacturer—means by which they could, if they so chose, insure against the disastrous effects of price fluctuations;

and to assure the operators that, when they buy or sell at a price, the merchandise will be delivered without fail at the contract price and that all deliveries will be paid for in full at contract time without risk of default by either buyer or seller, regardless of the insolvency of either party after the making of the contract.

The Exchange Market. To effect these fundamental objectives, the exchange market is organized (in addition to, and not in replacement of, the physical market) to provide a new auxiliary market. In the exchange market the operators or their agents actually meet at a common center and, through the machinery of the exchange, trade exclusively (as a rule) in contracts for future delivery of the commodity in specific months.

In the physical market the great volume of transactions, since the standardization of qualities and contracts, is also in contracts for *forward* delivery of the commodity. It will be recalled, however, that operators in the physical market as a rule do not meet at a common trading center. Their transactions are made mostly by telephone, telegraph, cable, or mail, mainly through brokers or commission agents. Although they trade in both spot and forward deliveries, the details of their transactions are not publicized, for they are confidential and may not be disclosed without consent of both buyer and seller.

The two markets have interlocking memberships; many dealers and converters who operate on the physical markets are also members of the exchange market. In the exchange market, however, there are in addition a great many professional risk-bearers or speculators, brought into the market to make possible the transfer of credit and market risks from those who want to insure against them to others who are willing and able to assume them—the speculators who in the aggregate control large capital funds and are geared into the exchange machinery for that purpose as risk-bearers.

The two markets are distinct and separate. Each performs distinct and separate functions, through somewhat similar yet different techniques, and each is necessary to the other in order to serve the producer, the consumer, and the public interests efficiently.

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, mines, and forests to the consumer and from the producer to the converting manufacturer, the exchange does not serve as a conduit. It is rather an auxiliary organization, designed to facilitate the operations of the distributive system of the physical markets in several important respects.

In trade parlance, the exchange market is known as the exchange, contract, or futures market, whereas the physical market is confusingly called the spot or cash market. Though both deal extensively in forward deliveries and some exchange markets trade in spot transactions, most exchanges offer facilities only for futures trading. Grain exchanges offer both.

The chief services of the commodity exchange lie in its affording a means of insurance against the risk of adverse price fluctuations, in insuring deliveries at contract time and payments at contract price against default, and in making stocks of commodities both liquid and mobile, thereby rendering financing easier and costs of distribution lower. It performs these services by affording a broad and continuous market on which the commodity may always be bought or sold for future delivery at a moment's notice at a relatively stable price. The linking together of the principal world markets by telephone, telegraph, radio, and cable focuses in these central market places all available economic factors and other influences bearing on prices.

The breadth of the market and the close interrelationship of the exchange and physical markets, dealing in the same commodity throughout the world, make certain that every factor which can be reasonably anticipated will be reflected in the *current* prices of the commodity. Widespread publication of commodity prices, registered on various futures exchanges and reflecting the best opinion of many traders of all kinds, serves as a guide in the establishment of prices of both spot and forward deliveries on the physical markets; the wide range of grades deliverable on exchange contracts makes exchange prices representative of all supply and demand factors; and their trend is indicative of current opinion regarding the future outlook.

Finally, the exchange regulates organized speculation so as to prevent abuses and assure that it will be conducted under just and equitable rules to serve the public interest. Its standardization of contracts and of grading, weighing, and inspection methods promotes uniformity in trade dealings, and the regulatory function of the exchange is reflected in its self-imposed rules and regulations, which are enforced by disciplinary action, and in its arbitration of disputes arising out of exchange contracts.

A general description of the economic functions of the exchange at this stage will be a sufficient indication of the advantages which producing, distributing, and consuming groups obtain from its existence. These various advantages will be considered in detail later.

The economic functions of commodity exchanges may be summarized broadly under five heads:

1. THE INSURANCE FUNCTION
   (a) The exchange provides liquidity and relative price stability through a broad and continuous market, made possible because of large funds of speculative capital not otherwise available.
   (b) The machinery of the exchange establishes a means of protection (for those who desire it) against adverse price changes through a process known as *hedging*—an insurance device that is available to all producers, traders, and converters.
   (c) The machinery of the exchange clearing house furnishes to all buyers and sellers of exchange contracts a sure method of guaranteeing that both deliveries at contract time and payment therefor at contract prices will be made,[1] regardless of changes in market prices after the contract is made and regardless of the insolvency of either contracting party at time of delivery under the contract.

2. THE FINANCING FUNCTION
   (a) A continuous market and the ready transferability of standardized commodities by means of negotiable warehouse receipts give the commodity a high degree of liquidity.
   (b) Liquidity of the commodity is an encouragement to more liberal loans by bankers and is a safeguard to them.
   (c) Ability to finance commodities readily and to insure against adverse price changes or defaults on contracts enables producers, dealers, and manufacturers to operate successfully on smaller profit margins to the benefit of the consumer.

3. THE PRICE REGISTRATION FUNCTION
   (a) Joinder of markets by telegraph, telephone, radio, and cable focuses all price influences on the commodity exchange; all (domestic and foreign) futures markets in the same commodity are thus linked together and made one broad world market.
   (b) The presence of a large volume of risk-bearing speculation insures that every known influence bearing upon prices will be given careful consideration and weight.
   (c) Interpretation of news by producers, dealers, manufacturers, and speculators assures a degree of anticipation of future trends and events that would not otherwise be possible.

4. THE PUBLICITY AND INFORMATION FUNCTION
   (a) Exchanges gather from all available sources and make public

[1] As will be developed in Chapter VIII, under exchange rules, there are certain emergency conditions which permit certain specific deviations from the exact terms of exchange contracts.

in an unbiased manner statistics of present and potential supply, transportation, current consumption, and potential demand which are useful in estimating price trends and changes.

(b) Daily publication throughout the world of the record of volume and prices of all exchange transactions in contracts for future delivery informs all interested parties, not only of present prices, but also of the future trends.

(c) On the basis of widespread publicity of all futures quotations, dealers, producers, and manufacturers are enabled to make their purchases and sales with a higher degree of certainty and confidence.

5. THE REGULATORY FUNCTION

(a) Exchanges gear large speculative funds of capital into their insurance machinery and regulate speculation so as to prevent abuses and provide for its conduct along orderly lines in the public interest.

(b) Exchanges develop uniform or "basis" contracts which, with their standards of inspection, weighing, and grading, contribute to the certainty, efficiency, and uniformity of practices in each trade.

(c) Exchanges establish and enforce, usually through compulsory arbitration procedures, rules and regulations governing the settlement of all disputes arising out of transactions on the exchanges, thus providing quick, cheap, and efficient settlements by experts, without the need for recourse to the courts; they establish codes to maintain the ethical conduct of business by their members and enforce these through their own sanctions and penalties.

The Risks of Modern Industrial Society. The growth over the centuries of maritime trade, attended by the manifold perils of the sea, led to the development 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. Just as modern industrial society has increased in complexity, so risks have increased and insurance has spread into new areas, moving from fire risks to hail, tornado, hurricane, and many other hazards. Casualties which were too remote to be considered as subjects for insurance a generation or less ago are now within the realm of probability to such an extent that prudent producers, merchants, and manufacturers would not think of carrying on their enterprises without such protection as is available.

Yet none of these casualties is so likely to occur as another more common form of business risk—the risk of adverse fluctuation in prices of raw materials and finished goods, entailing heavy losses to producers, dealers, manufacturers, and others who do not wish to speculate in such goods.

The commodity exchange is not an insurance company, but its facilities provide a means of protection against the ever present risk of unfavorable price changes. The most important function of the exchange is the provision of facilities for insuring or, in the technical language of the trade, "hedging" crops, inventories, purchases, or sales of a commodity against the risks of speculative losses. The subject of hedging is discussed in detail elsewhere, with full explanation of the use of the hedge by all classes of market operators. The main function of hedging is to insure *normal* profits to producers, merchants, and manufacturers who do not wish to speculate or to minimize losses that are already threatening. This can be done by stabilizing the price of the commodity through hedging operations on the exchange.

Successful insurance by hedging is possible only because the exchanges provide a continuous, broad, and solid market. In any market where prices might be subject to sharp changes between sales, hedging would be impossible. If a market were so thin that a single large order could substantially influence the price, the placer of a hedge would always operate under a handicap. Because exchange 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.

Furthermore, the fact that the market is continuous is an insurance against the risk of unsold inventories of raw materials. A dealer in or a converter of wheat, cotton, rubber, sugar, and cocoa may not be able to sell at a profit, but his goods need never be left unsold; the exchange market makes them liquid. He can at least minimize his losses by hedging. He has an active, ever ready market, functioning daily, which will not only absorb as large a stock of goods as he wishes to unload, but also afford him facilities for insuring or hedging his sales or purchases, already made for forward delivery on the physical market.

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 variations 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, or as banker 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 sales of textiles for forward delivery) as regards the price at which his future supply of cotton is to be obtained.[2]

It should be recalled, however, that operators can, to a limited degree, sell or buy forward deliveries on the physical market at fixed prices and so limit their price risks. Nevertheless, in that case there is no guaranty that at contract time the seller will be able to make delivery or the buyer to pay for the delivery at contract price. There is no protection, in other words, against the insolvency of either party, as there is on the exchange markets through the exchange clearing house guaranty. Furthermore, there is no assurance that sales or purchases can be made in volume on the physical markets at the desired time, for most of these markets are not so active, broad, or liquid as the exchange markets.

The Exchange Market as a Guarantor of Deliveries (at Contract Time) and of Payments for Deliveries (at Contract Price). All sales and purchases made on the modern exchange market and *cleared* through the exchange clearing house, an institution affiliated with, but operated as an independent corporation, separate and distinct from the exchange, are guaranteed by the clearing house. In other words, the clearing house guarantees to every buyer on every cleared contract that he will, if he so desires, receive the merchandise contracted for at the proper contract time and in like fashion guarantees to every seller that he will receive payment at the contract price when he makes delivery. This guaranty, as we shall see in our later study of the clearing house system, is so protected that there never has been and in all probability never will be a default on such guaranties. They are safeguarded by various devices and sanctions which make default as impossible as anything can be in this uncertain world.

The exchange clearing house, therefore, in effect, insures the buyer and seller of all exchange contracts, cleared through the exchange clearing house, against the subsequent insolvency of either buyer or seller on all cleared contracts. Contrast this invaluable protection with the risks assumed by those who buy or sell for forward delivery on the physical markets. If a farmer sells wheat at $2.00 a bushel to a flour mill for delivery six months later, it is quite possible that before the delivery date the mill may become insolvent and unable to pay for the wheat at delivery time. The farmer then may be forced to resell at a loss on

[2] *The Cotton Trade,* Senate Document 100, 68th Congress, 1st Session, Part I, p. 103.

the market, which has declined meanwhile to, say, $1.50 a bushel. The reverse situation may also arise; the farmer may default on delivery at contract time, thereby forcing the mill to rebuy the wheat on a rising market at a substantially higher price and hence at a loss.

Exchanges Make Commodities Liquid. A distinguished authority on produce markets has aptly described one phase of the work of commodity exchanges by saying that they give commodities the element of mobility.[3] The establishment of fixed and definite grades has introduced greater certainty and uniformity of qualities in commodity trading. The existence of licensed and bonded warehouses, which store the goods and issue negotiable receipts, provides buyer and seller with an instrument which passes title from hand to hand without actual delivery of the goods. Although the exchange alone is not responsible for the standardization of grades and contracts or for the development of negotiable instruments, as we have seen, its broad and swift-moving market stimulates their widespread use; this in turn encourages a larger volume of trading and makes for a greater liquidity of commodities.

A large market, to which producers, dealers, manufacturers, and speculators converge, makes a contract for a unit of a commodity that is dealt in on a futures market comparable to a stock certificate or a coupon bond in respect to the readiness with which title can be transferred or loans can be readily secured. On liquid stocks of commodities traded on exchange markets the commercial banks naturally lend a greater proportion of their market value than on those which are less liquid because they are not subject to exchange trading.

As security for a loan, the value of liquid as compared with less liquid commodities is much the same as the relative value of 100 shares of United States Steel Corporation stock, listed on the New York Stock Exchange, and 100 unlisted shares of a small and little-known manufacturing company. The small corporation may be as sound financially as the industrial giant, but, because its shares do not possess a ready market, the owner of its unlisted stock is unable to borrow as high a proportion of its current value as can the owner of United States Steel stock. Another parallel is found in the real estate field. Loans on apartment houses, office buildings, and residences in good locations ordinarily are made for a higher proportion of their market 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 always results in higher prices to the consumer. In cor-

[3] S. S. Huebner, in *American Produce Exchange Markets* (Philadelphia: American Academy of Political and Social Science, 1911), p. 11.

porate finance the first mortgage bondholder assumes relatively little risk and may obtain a fixed return of 4 or 5 per cent. Second-mortgage investments involve greater risks to lenders than first-mortgage money and command larger returns. The holder of preferred stock shares the risk of ownership, and, though he enjoys precedence over the holder of common stock in the payment of dividends and the distribution of assets, the fixed rate of the preferred dividend may yield a higher return than that of the bondholder. The owner of common stock assumes the highest degree of risk, and his profits—if the enterprise is a successful one—may be unlimited.

Similarly, in the commercial field, the greater the risk of the dealer, producer, or manufacturer, the wider must be his margin of profit. Let us assume that, in business A, experience over the years has shown that an average of 25 per cent of goods, stocked for resale, will remain unsold at the end of the season and must be cleared at cut prices. In enterprise B, 100 per cent of its stock is sold. It requires no mathematical demonstration to indicate which proprietor, in order to avoid bankruptcy, 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 changes of style must be wider than the profit margin on staple articles.

The operator who can rid himself of the risk incident to price change can afford to do business on a far smaller margin of profit than one who cannot shift that risk. In every phase of the sugar or grain market, where insurance by hedging is widely employed, this condition exists. The elevator owner or the miller or refiner can protect himself by hedging his purchases of wheat or raw sugar or his forward sales of flour or refined sugar. Consequently, there is a much smaller spread here between the price paid by the consumer and the price paid the producer 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 cotton operators could not protect themselves by exchange operations from the market and credit risks involved in price changes.

A statement before the Joint Congressional Committee on the Economic Report (December 1947) expresses clearly the many benefits to farmers' co-operatives to be derived from the use of the grain exchanges for insurance purposes:

My name is Roy D. Crawford. My position is that of Secretary and General Manager of the Farmers Union Jobbing Association—a terminal co-operative marketing and purchasing agency owned and controlled by farmers. Some 250 local co-operative associations comprise our membership, and these local asso-

ciations are in turn owned and controlled by the producers themselves. . . .

My interest, and that of my organization, is to secure on behalf of farmers the lowest possible marketing cost for their products. We are interested in the grain futures market only as it affects the marketing system of the grain industry and the public welfare. We have no interest whatsoever in the futures market from the standpoint of commissions received for handling speculative accounts. Our Association does not accept such accounts. The futures market of the grain exchanges—in our case principally Kansas City and to some extent Chicago—are vital cogs in the marketing machinery of the present distributive system which we use in disposing of the farmers' grain. . . .

Future markets meet a vital need in the marketing of farmers' crops. To function efficiently as a hedging medium, it requires volume—constant volume—to permit its use for hedging or price insurance by either producers or consuming interests. It is almost universally agreed that our present marketing machinery puts our farmers' grain through the channels of distribution at a lower distribution cost than any other commodity or merchandise—but I am convinced that it would not be such in the absence of a fluid and liquid futures market. No substitute system has ever been offered which could promise a near approach to its worth in a free market. Our marketing system requires a market which stands ready at all times to absorb what the farmer wishes to sell, whenever he wishes to sell it—not just when flour mills happen to be in the market. Conversely, the flour millers want a fluid market for price protection at any given moment—not just when the farmers are in a selling mood. Such buying and selling volume properly to reflect sustained year-round demand must be able to marshall all elements and categories of our economy which can be brought to bear in taking a share of this risk burden. . . .

It is the speculator who gives to our markets breadth and liquidity. Animated by the profit motive, the speculator risks his money to back his judgment on the future course of prices, and in doing this he voluntarily bridges the gap between selling demand and buying demand in a way that no one else achieves for the market. . . . If it is necessary that we find some one interest, or some few interests, that may be willing to sell these futures (or hedges) to us at our price—if we have to try to match up our buying interest with a specific selling interest on the other side—we may well find it difficult or impossible to accomplish this at any given time. This would be the case frequently, if trade in the futures markets were confined to those, like ourselves, engaged in specific operations against specific quantities of wheat. If we had to stand by, waiting for the right quantity of hedges to be available at the right price, we should either stand the chance of losing entirely the opportunity to do the business, or we should be forced to quote a price for our wheat that would be sufficiently high to protect us against the risk of any foreseeable market movement. In such an event the distributive cost in the grain business, which I mentioned earlier, would immediately be increased tremendously. Where we now do business on margins of one— two— and three cents per bushel, we should then be forced to take margins of five— ten— or fifteen cents per bushel to compensate for the

risks involved. A futures market of that character would be of little service to those I represent.[4]

The statement of Herman F. Skyberg before the same Joint Committee on the Economic Report shows the value of the exchange to the small country grain elevators of the country:

. . . I am President of the Farmer Co-operative Marketing Association at East Grand Forks, Minnesota. I have been a member of the Board of Directors of that Association for twenty-five of its twenty-seven years, and its president seventeen years.

During the harvest rush we frequently own the elevator full of grain on top of the grain that is in the box cars on its way to market, which is as much as another 30,000 bushels at some times. We cannot afford, with a capital of $50,000, to take chances on the price going down on 100,000 bushels of wheat. If it went down 25 cents a bushel, it would wipe out half our capital, and, if it went down 50 cents a bushel, we should be broke on 100,000 bushels.

With the present marketing system we have protection and do not have to carry this risk. As fast as our manager buys grain from members, he sells futures in the Minneapolis Grain Exchange of a like amount. This means that we have the grain bought from the farmer and sold in the market, and, whether the market goes up or down, we are not affected. This gives us security and insurance. . . .

If we did not have this market, we could buy grain from our farmer members only in the amounts which we could sell from day to day, and it might take us many months to dispose of our harvest.

Suppose that we had no hedging market. We would not dare to buy wheat, which might not get to market for a month or even three or four months, without taking a much wider margin in order to protect ourselves against the possibility that prices might be lower when it got there.

Besides wheat and other grains, our association handles potatoes. The potato marketing season is spread out much longer than the wheat marketing season, and we do not have very many potatoes on hand at any one time. Even so, potatoes give us much more worry than grain because we have to be hunting for markets all the time, prices fluctuate much more rapidly, and frequently buyers are hard to find. We have no quick and positive way of hedging them and so we have a heavy risk on potatoes which does not exist on wheat.

Exchanges Expedite Marketing. The influence of the commodity exchange on orderly marketing is manifest particularly in the case of grains, cotton, cottonseed oil, coffee, sugar, and other commodities, the production of which is seasonal. The wheat crop is harvested and moved to market within a few months' time. Cotton is picked and ready

[4] Hearings Before the Joint Committee on the Economic Report—80th Congress, First Session—December, 1947.

for the market in the fall of the year. 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 millions of bales. The harvesting is heavily concentrated, but the demand for wheat or cotton is widely spread throughout the year. The country does not eat its bread solely in the fall, as it eats its cranberries, and the demand for cotton goods is spread throughout the year. Some agency must store the raw material and absorb the attendant risks. It must be either the producer, the dealer, or the manufacturer. Whoever stores the commodity must also finance it. More important, however, is the risk of price change until the accumulated stocks are sold. Without means of protection against price fluctuation and without means of making stored commodities liquid collateral, it would be virtually a financial impossibility for crops to be absorbed at anything but ruinous prices to the producer; in fact, the warehouseman, the converter, or the dealer could buy only as much of the commodity as his own capital permitted, and the price risk would force him to pay to the producer much lower prices than the exchanges now make possible.

Under conditions as they exist, the hedging dealer or converter, who is now able to finance himself readily through well-secured bank loans, can turn his capital far more quickly and more often than he could otherwise do; consequently he can carry on his business with smaller capital. Under the hypothetical regime we have imagined, it is probable that, if price stability was introduced at all, it would be by growth of huge financial institutions, comparable in resources to the greatest of our industrial corporations, or by arbitrary price controls maintained by ruthless totalitarian governments. The competition of thousands of small merchants would disappear, and, although prices might be stabilized, they would be stabilized at public expense in prices, taxes and freedom. Under the exchange system, the world's harvests flow to market under free, competitive conditions in a comparatively short time, are absorbed in orderly fashion, stored, and distributed in accordance with the needs of consumption. The spread in price between the season when the crop is harvested and marketed and the seasons when it is consumed is so slight as to be negligible.

Farmers, because of their lack of appreciation or understanding of the benefits of the exchange and its methods and techniques of operation, have failed—with some exceptions, of course—to take full advantage of the insurance facilities of the exchanges. This is due, in part, to their lack of familiarity with available methods of financing their exchange

operations. The more recent and widespread development of farmer co-operatives under federal sponsorship and subsidy has resulted in education of more and more farmers in regard to the possibilities of the exchange as an insurance device. In fact, co-operatives are rapidly becoming members of the exchanges and representing the farmers in their hedging practices. The co-operatives, through their high credit standing, based on crop mortgages, which they may readily obtain from their members, can now safely finance the farmers' exchange operations through liquid bank loans.

In the cottonseed oil trade the use of insurance by hedging to permit the orderly absorption of the seed, as it comes to market, has been told very simply and clearly in the testimony of William A. Storts before the Committee on Agriculture and Forestry of the United States Senate. In response to a question as to how the exchange markets help 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 remain with the farmer. It would not be bought by anyone, unless it was at a very, very low price. But with 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 contrast 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.[5]

Exchanges Form a World Market. The linking together of all exchanges operating in the same commodity but in different central and foreign markets makes for a uniformity of price (in terms of gold) throughout the world that would otherwise be difficult, if not impossible, to attain. Over the course of a year's trading, prices of standard grades on the various cotton exchanges in the United States and elsewhere normally move together, and except for differences due to costs of transportation, tariffs, and handling charges from market to market, they are uniform. So the price of the same quality of wheat (in terms of gold) in Europe and at Chicago, Minneapolis, and Winnipeg holds the same under normal conditions, the only differences being those incident to

[5] *Regulation of Cottonseed Oil Futures* (Washington: U. S. Government Printing Office, 1928), p. 9.

the cost of transporting the wheat from one center to another and existing tariffs.

The commodity exchange in normal times is not so much an individual market as it is a division or department of a countrywide or world-wide market for the commodity which it serves. Throughout every hour of each trading day, news from every quarter of the globe, having a direct or indirect effect upon prices of the commodity, is being received and weighed by all types of traders who are expert in analysis. The mere presence of such a body of men gives assurance that, so far as it can be accomplished by human foresight, the events of the future will be reflected in price movements as soon as they can be evaluated. Superior financial resources or superior knowledge of conditions do not avail to give any buyer an advantage over any seller—or any seller an advantage over any buyer. The price movements are the result of forces greater than the knowledge or trading capacity of any one buyer or seller. They epitomize all the knowledge, all the beliefs, all the hopes, and all the fears of thousands of operators, including the best brains in the world's markets.

Could this function be discharged in any other way? It will perhaps be best to rest with the opinion of a Congressional Committee 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. . . . 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.[6]

Professor Alonzo Taylor, of Stanford University, in testifying before a Canadian legislative commission said:

> The various wheat futures trading exchanges of the world ought to be regarded as members of a common system: they are international rather than national in the broad view. Operations on these various exchanges are interrelated and inter-dependent—they represent points of connection on a liquid world market. It is to be regarded as a significant defect of the present system that facilities for trading in wheat futures on established exchanges are lacking

[6] *The Cotton Trade,* Senate Document 100, 68th Congress, 1st Session, Part I, pp. 103–104.

in Australia. Also, despite the irregularity of Asiatic imports of wheat, it is not to be doubted that, if it were technically feasible, the establishment of a grain exchange at a central point in Asia, such as Hong Kong, would be an advantage to exporting countries.

According to this view of grain exchanges and trading in wheat futures, as parts of an international system of marketing, the interests of surplus producing countries are quite as important as those of importing deficiency countries. This system is exceedingly complex, is surrounded by many cross currents, and exposed to abuses. It is, however, impressively superior to the system of cash merchandising of wheat without futures—either by auctions, by exporters' disposition of supplies in importing countries, or by importers' collection of supplies in exporting countries.

If one will contrast the investigations into futures trading in importing and exporting countries—for example, in Great Britain and in North America—it becomes clear that, with the acceptance of the view that the system of futures trading narrows the spread between producer and consumer, the question arises, to whom does the saving, the gain accrue? Consumers in Europe have feared (that apart from the participating traders) such gain would accrue to producers. Producers the world over have feared that (apart from the participating traders) such gain would accrue to the consumers. In each instance, the fear is felt that most of the gain would accrue to the intermediaries. When, however, one contrasts the range between consumers' price and producers' price with the inclusive cost of taking the wheat from the producer and delivering it to the consumer in the foreign country, it becomes clear that the gain represented in narrowing the spread between producer and consumer must have accrued largely to producer or consumer or to both. Economic reasoning on incident enters here. We take it that the orthodox answer would be that the gain is always divided between the producer and the consumer, but not equally, and not in the same proportions from year to year. That is, when the world wheat market bears the complexion of a sellers' market, producers are likely to receive the larger proportion of the gain; when the market has the complexion of a buyers' market, consumers are likely to receive the larger proportion.[7]

Exchanges Level Prices between Markets. The focusing through the exchange of all factors influencing prices, with full publicity of all prices and quantities of all exchange contracts, means necessarily that the prices of commodities on various local or world markets will be kept in close alignment with one another.

The continuous price quotations derived from transactions 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, large operations of "arbitrageurs" promptly serve to accelerate a return to parity. The arbitrageur is an operator who, when prices between markets are out of parity for temporary reasons, buys

[7] *Proceedings of the Canadian Commission to Inquire into Trading in Grain Futures* (Winnipeg: Grain Trade News, 1931), p. 315.

for future delivery in the cheaper market and *simultaneously* sells the same quantity for the same delivery in the dearer market, making his profit not from a change in the price level but from the return to normal of the spread in prices between the two markets. The operations of the arbitrageurs themselves are a major factor in bringing about this return to the normal, for their buying in the cheaper market is an influence in raising prices there, while their sales in the higher market add to the pressure against higher prices in that center. The greater the volume of arbitrage transanctions, the earlier the return of the markets to normal parity.

When the two markets have again returned to parity, as they must in due course when the cause of the temporary disparity is no longer active, the operator liquidates his position by selling in the market where he has previously bought and *simultaneously* buying in the market where he has previously sold. In one market he may sustain a loss, but the profit in the other market will usually more than offset this loss, giving him a net profit. For at no time does the arbitrageur plan to be long or short in the market on balance. What he is long of in one market he is short of in the other market. He must be on guard, however, to see that his purchases and sales in the two markets are made simultaneously; otherwise he will find himself either long or short on net balance and therefore be subject to speculative risks which he, as an arbitrageur, does not intend to assume.

The presence of such a body of operators, always alert to take advantage of opportunities for arbitrage, also aids in keeping the prices of contracts for all future months of delivery on the same exchange market in proper and normal alignment. Should the price of futures for one month rise above normal parity with prices for other months, or should the price of one month become depressed below the level of others, for temporary reasons, 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 and so brings them back to normal parity.

Buyers May Anticipate Requirements. The existence of markets where operators may at any time buy or sell commodities in any desired quantity and at prices which will not be dislocated merely by the execution of large orders is of inestimable benefit, especially to manufacturers who wish to anticipate their needs for raw materials. 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 in his inventory for a period of months. Then, in addition to the loss of interest on his capital, there are storage, insurance, and other charges, as well as shrinkage 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 specifies. When the delivery month arrives, he may take delivery of the commodity he has bought on his exchange contract—or (what is more likely) he may have bought the *exact* grades of wheat he wishes in the spot market, *simultaneously* reselling his purchase contract on the exchange. This is an insurance or hedging operation which performs the service of permitting requirements to be anticipated at prices satisfactory to the miller and without risk of default of the seller. Producers likewise may use the exchange for a similar purpose, selling their products before they are harvested or produced.

Continuous Prices a Factor in Fair Dealing. *Caveat Emptor* (let the buyer beware!) 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, short of fraud, and that he is not required by law and will not, unless specifically asked, reveal circumstances or conditions which would discourage the buyer from purchasing. There is no reason for attaching any obloquy to sellers as a group for taking this attitude. They are usually better informed than buyers—hence the maxim in this form. Where the knowledge or the bargaining power of the buyer is superior, however, the maxim may well become *caveat vendor* (let the seller beware). In a market where price records are not published daily or where markets are local, fair trading ethics depend on how well the buyer and seller are matched with regard to information as to conditions, prevailing prices, and financial resources—in other words, on how well their bargaining power is equalized.

Future markets provide a continuous, day-to-day record of sales and their prices, available to all. Here, contrary to the situation in the physical markets, the buyer, whether large or small, 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, dealer, or manufacturer. It does, however, insure that prices paid will be representative of supply and demand and will be based on the actual world-wide

market at the time rather than dictated by whatever group in the chain of production and distribution happens to have the strongest bargaining power or inside informaion not available to all.

Testifying before the Canadian Commission to Inquire into Trading in Grain Futures, Professor James E. Boyle, of Cornell University, said.

> Price Barometer. On the wide, open, and competitive market furnished by the modern commodity exchange, buying and selling orders meet and a price is registered. The price is registered by the exchange, but is not fixed by the exchange; the exchange is merely a price barometer.
>
> The wider and more liquid this market is, the more correct is the price so registered. Price or value, we must remember, is not a definite, objective, or fixed thing, but is rather a market opinion, or concensus of opinion, based on known facts and on estimates and forecasts, and, of course, changing with new estimates and forecasts based on new facts. On the exchange the price or value is registered, and so I say the exchange serves as a price barometer. It is, in fact, our best price barometer. It is a highly important service to all grain interests to have, each day, definite quotations of grain values—not merely current values, but values for the next few months of the future. The accuracy of futures trading as a price barometer is well known to students of the grain trade. I will cite but one example, but it is typical.
>
> I have selected ten normal years, free from wars or disturbances, because no exchange can forecast a war, which, of course, disturbs prices. The question asked is, "Do the buyers who buy May wheat futures in the month of December accurately forecast the price of May wheat which is realized when the delivery time comes in May?" By taking statistics from the Chicago Board of Trade for ten normal years we find that the forecast which the future is of the later cash price is within less than one cent of the actual price, or, stated in terms of per cent, it is something like 99 per cent correct. Now these years were selected because there was no great disturbance, such as a war, to disturb the barometer. If we take other normal years, we get about the same results.[8]

Does the Exchange Stabilize Prices? It has come to be accepted as almost axiomatic by writers on commodity exchanges that the machinery of the exchange tends to make prices more stable or at least to minimize their fluctuation. This subject is considered at length elsewhere. It may be noted here, however, that the machinery of exchange markets gives ample scope for operations on both the buying and the selling sides. The breadth of the market—that is, the existence of a large number of buyers and sellers—is a condition which operates against sudden and violent upward or downward price swings. This, of course, is relative. Price changes of great extent do occur on the floors of organized exchanges as they do on all commodity markets. If a large group of speculative sellers were not ready to combat an advancing market, or, if a large

[8] *Ibid.*, p. 127.

group of ready speculative buyers were not present to take advantage of price declines, would not the movements be more severe and prolonged? This matter is difficult of proof on either the affirmative or the negative side. A conservative summary at this point would be that there is strong evidence, in support of that contention, and the balance of probabilities substantially favors the contention rather than the reverse.

Price Movements Discount the Future. Experienced operators on the stock market know that stock prices generally, but not always, discount potential developments, favorable or unfavorable, by weeks and sometimes months before the news of such developments is made public. Stocks, accordingly, often sell off when good news comes out, and not infrequently they hold firm or rise when unfavorable news is published. The development has been discounted in advance by expert operators.

Commodity prices can never discount the future with the same precision. Experienced traders in corporate securities can analyze various factors bearing upon the course of profits of a single company much more readily than they can appraise the many factors affecting supply and demand and prices for a commodity in world-wide use. Yet, as news or statistical data which aid in forming opinions come to hand, prices move correspondingly, and the adjustment to a higher or lower level is made long before crops, whether smaller or larger than normal, 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 or physical market are made on the basis of these expectations.

For example, during 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, and of larger yields in Europe and Australia. Europe, the great market for wheat exports, would evidently be able to fill more of its own requirements, while at the same time larger export surpluses would be available in the exporting countries. Prices on the exchanges of the world began immediately—quite some time before the crop-moving season was at hand—to decline, thus reflecting the expectation of lower prices. Such a situation, or its reverse, is constantly developing on exchange markets.

On all exchanges—both security and commodity—there is generally an ascertainable trend of prices. They are moving upward or downward, or they are halting or 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 considerable period of time, and both advances and declines are more orderly than would be possible in a "thin" market—one in which there were relatively few buyers or sellers. Although

or because 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 market opinion is never unanimous. The mere presence of groups of traders who have formed conflicting opinions as to the future of prices and 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. From every part of the world the commodity exchanges gather news of crop conditions and various statistical data bearing on the existing supplies, both foreign and domestic, stocks on hand among dealers or converters, shipments in transit from market to market, production, prospects of production, prices in other world markets, increases or decreases in consumption, and similar material of value to exchange members and the trade. The statistics are published daily or weekly 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 telegraph, telephone, radio, and cable, the commodity exchanges go further than to act merely as clearing centers of information for the trade. They act as barometers for the trade, publishing the news and simultaneously interpreting it in price movements. The record of quotations is given out by the exchanges daily for the benefit of the press and radio, and throughout the day the quantity involved in each transaction and the price at which it is made is flashed immediately by private wire, ticker system, or radio, all over the country and the entire world. This, it should again be noted, is not possible on the physical markets, where each transaction—its price and quantity—is confidential and cannot be disclosed by the broker without the consent of both parties to the contract.

The price record of the exchange, 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, under a contract to deliver, a unit of the commodity during some month in the future should sell, prices for delivery in other months or on the physical markets may be made more intelligently.

Exchanges Regulate Speculation. In every field of business where buying and selling is done, speculation plays a major part, though the public appears not to realize that much of it is speculation. The builder who erects 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 much earlier because he foresaw the extension of residential building and wished to gain by his anticipation of the event. The dealer who purchases stocks of a commodity in the physical market assumes a speculative risk. When the farmer plants his crop, he is speculating on the weather, the price

of his crop at maturity, and a dozen or more casualties which may damage or destroy it. Risk-bearing speculation in substantial volume exists upon and is essential to every exchange. Speculation on the exchange is regulated by the exchange and must be carried on in accordance with established rules designed to make speculators as nearly as possible equal in opportunity, however they may differ in ability and resources.[9]

Not only is speculation on the exchange regulated; it is also harnessed to serve an insurance function as a risk-bearer. In the description of the hedge in Chapter XI, emphasis is laid on its primary purpose—removal of speculative risks for dealer, producer, 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 is transferred to the speculator. It is he who makes the hedging or insurance transaction possible. He is an underwriter and spreader of the risks inherent in price fluctuations. Organized speculation insures that there will always be a ready market for every purchase and every sale and, therefore, a market ready at any time of the trading day to assume the risk which the hedger wishes to pass on. Although the protection afforded by the hedge is not absolute, it is as certain as most other forms of insurance. The value of the hedge varies—depending on circumstances—in the degree to which it affords protection, but the opportunity to secure major measures 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 contracts and of inspection and grading methods or else adopt those fixed by the physical markets or, under certain circumstances, by law. Where there are no legal standards, the purpose of the exchange is to adopt grades and standards which are in the most general use in the physical trade, as well as to make its practices conform with existing trade usages. Not infrequently the exchange is able to play a leading part in the improvement of trade practices. Its efforts are always directed toward securing greater uniformity in rules and customs. Standards of contracts and of weighing, inspection, and grading, whether established directly or merely adopted and improved by the exchanges, insure orderly dealing in the futures markets and create another close point of contact between the futures and the physical (or cash) markets.

Exchanges as Regulators of Consumption. Price is the prime regulator of production and consumption. High prices tend to stimulate production and to discourage consumption, whereas low prices operate conversely. The regulatory effect of prices is in evidence in any phase

[9] For a more detailed discussion, see Chapter III.

of our economic life, whether or not there are organized markets. It cannot be said, therefore, that the commodity exchanges function as regulators of the rate of consumption or production. They do, however, exert an important stabilizing influence. Prices on the exchanges are sensitive. They register almost immediately the force of the many and varied factors which influence prices throughout the world. Because prices thus are brought into close relationship with supply and demand and because price movements discount to a greater or lesser degree what the future may hold 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.

A statement of Henry H. Cate, president of Flour Mills of America, Inc., of Kansas City, Missouri, before the Joint Congressional Committee on the Economic Report[10] (December 1947) will in conclusion serve to illustrate effectively and clearly the practical economic benefits of futures trading to millers, merchants, and producers:

. . . Flour Mills of America, Inc., operates mills located in Kansas, Missouri, and Oklahoma. Our company also operates thirty country elevators located in the states of Kansas, Oklahoma, Missouri, and Illinois, where we buy wheat direct from farmers. In addition, we operate terminal grain elevators, located in Kansas City, Missouri, and in Alva, Oklahoma. . . .

We are not speculators and do not want to be compelled to speculate. But speculation is inherent in the marketing of grain, and speculative risks must be borne by someone. It is in the public interest that such risks be carried by those—namely, speculators—who wish to assume them . . .

The importance of hedging both to flour millers and to grain merchants may not be fully realized. Let me assure you that to men in the business the risk of loss through price changes looms as one of the biggest factors in the business. The great quantities of grain held by modern businesses of this kind and the very considerable size of price fluctuation possible over the period in which grain must be carried make the risk so great that it could easily wipe out the entire capital investment of an operating company. . . .

Wheat comes on the market as producers elect to sell it, not merely as millers and merchants may wish to buy it, and the volume of grain bought may be and frequently is very large in relation to any demand existing at the time, so that very large amounts must be accumulated without knowledge of when, where, and at what price it will be sold.

[10] This Committee had under consideration a proposal by the Truman administration that the Commodity Exchange Authority be empowered to determine the margin requirements imposed by commodity exchanges to protect the exchange contracts from default. The Administration was seeking this authority to control margins as a method of regulation of speculation, on the assumption that speculation is a major cause of inflation and deflation.

The price of wheat is a world price, and, during the period of storage, harvest is going on in some part of the world in every month of the year, with wide swings in price frequently a result.

Covering the entire process of the handling of wheat and flour from the producer to the consumer of flour, the coverage of risk in the absence of hedging would constitute an important part of the charge for the distributive and processing services. But the modern device of hedging transfers practically all the risk and cost of bearing it to others, and the community is thereby relieved of the expense. There are those who delight in taking risks and will pay for the privilege. But most men refuse to take risks in connection with their usual business ventures and, if they must assume them, insist upon prices which make an ample allowance for these risks.

Futures markets afford an opportunity for business men, through hedging, to transfer a part of their risks from their own shoulders to the shoulders of those who are more willing to carry them in the hope of gains through price fluctuations. There is evidence to suggest that speculators in the wheat market, as a group, pay heavily for the privilege of carrying the risks of wheat price changes; so far as I am aware, there is no convincing evidence that speculators in the wheat market, as a group and over a period of years, receive any large reward for carrying the risks which they assume. Whether speculators in the wheat markets, in fact, do pay for the privilege of carrying the risks of price changes or do receive some remuneration for their risk-carrying, it is clear that they carry the risks for a smaller charge than would be exacted for the same service by elevator operators, millers, and the like. . . .

In every year there is a large movement of wheat from farmers' hands to market following the harvest. . . . This is what is known in the trade as the "accumulation period" because of the large quantity which moves at that time and finds its way into storage. Flour mills during this period accumulate stocks of wheat and as far as possible sell the flour against wheat at the same time, so that their offering price for flour is based directly on their purchase price of wheat. However, wheat is often accumulated more rapidly than flour can be sold, and the miller then is in the same position as the grain merchants in that he has bought grain which he must hold until a buyer can be found. He is therefore accustomed to hedge this excess by sales of wheat in the futures market and thereby protect himself against the risk of price changes until he can find a buyer.

On the other hand, there is a general disposition on the part of the mills' customers, especially bakers, to purchase flour for delivery months ahead, and many sales are made for delivery at times as much as six to nine months away. While all mills necessarily have provision for the storage of wheat, in general the mills do not undertake to carry more than a 60-day supply. In order to meet their purchasers' demands and fix a price on the flour before they even know what the wheat will cost, it is their practice to enter the futures market and buy wheat for future delivery. Some of the wheat thus bought will be accepted upon the delivery date and converted into flour. Most often, however, the mill will endeavor to acquire the particular types of wheat desired, as the

wheat becomes available on the market, and, as it is acquired, sell out the futures contract. This again is a familiar and much used method of hedging which protects the miller against price changes. Whether the wheat market goes up or down makes no difference to the miller, because in either case there is an offsetting operation in the futures market which keeps him even on the price. . . .

I have discussed the usefulness of the futures markets as price insurance through the process of hedging, but the benefits of a free and liquid futures market to the trade and to the public extend beyond the avoidance of risk. Operators of business enterprises must figure a return on the capital invested as a part of their costs of doing business. It follows, therefore, that the greater the capital investment required, the greater the margin of profit must be. By reason of the availability of a hedging market, millers and grain men are able to operate on substantially less capital than they would otherwise require, with corresponding benefits to the public. The elimination of the risk of market changes through hedging makes it possible for these business men to borrow from the banks on the basis of 90 per cent of the market value of their grain inventories and at rates of interest as low as 1¼ per cent currently. Were it not for this hedging protection it would be necessary to maintain a working capital from 3½ to 5 times that which is now required. Unless there is a satisfactory futures market, no such basis of credit as now prevails could be granted to millers and grain men.

In order for the futures market to be of the greatest usefulness to millers in protecting them against price changes, it is important that the market be broad and liquid—in other words, that there be sufficient trade in the market to make it possible for the miller to buy or sell with minimum price fluctuations. A thin market—one with a small volume of trade—makes it difficult for the miller to execute his hedges and subjects him to wide fluctuations which may result in losses.

. . . Some have thought that the futures market should be confined to those who wish to hedge grain; that is, [it should function] solely as an operation against specific cash grain. Men experienced in the market know that it could not be maintained under such conditions for the reason that there cannot be a complete coincidence in point of time or in volume. There must be others in the market ready at all times to trade against any hedging transaction. Such men are called speculators. They are also the men who carry the risk.

A large volume of trading is essential to a good hedging market. A large volume of trading in the futures market is necessary to obtain a true expression of values. Large volume results in minimum fluctuations, whereas a thin market causes wide fluctuations. Obtaining and expressing the true value of grain is an important public function, which the exchanges jealously guard.

Speculators are important because they have come to express, where there is a bona fide market, the best judgments of the world on the value of the commodities in which they deal. . . .

After this testimony on the practical benefits of the exchange, it is appropriate that we consider the function of speculation in futures trading.

CHAPTER III

Speculation—A Constructive Economic Activity on Commodity Exchanges

Not infrequently commodity (or futures) exchanges, as distinguished from the physical (or cash) markets, are referred to as speculative markets. The term is not incorrect, if its application is clearly understood. If it is used to imply that the futures market is solely a vehicle for speculation, the phrase is merely a demagogic catchword. If it is used and understood to mean that speculation is a vital and integral part of the work of the futures markets, the definition is less faulty.

The commodity exchanges are of direct and inestimable benefit to the physical markets in affording facilities for insurance or "hedging" purchases and sales-insurance that cannot be effected in any other way in our modern society. Through the transfer of risks from producers, merchants, and manufacturers to speculators, the price to the consumer is lower or that to the producer is higher than would otherwise prevail. The exchanges and the speculators operating here are consequently performing economic functions vital to the public interest.

The Function of Organized Speculation in the Distribution of Staples. The statement of Mr. Harry Shere before the Joint Congressional Committee on the Economic Report (December 1947) emphatically illustrates the practical necessity for futures trading and the economic functions of organized speculation in the distribution of grain:

> . . . I am vice-president of the Van Dusen, Harrington Company of Minneapolis, Minnesota. We conduct a general grain, milling, and feed business, in connection with which we operate terminal elevators. . . .
>
> All of us agree that it is in the direct interest of producer and consumer alike that we have in this country a marketing system which is efficient and operates at the lowest possible cost. It follows that any feature of operation which contributes to that efficiency and low cost is also to the direct benefit of producers and consumers. The feature to which I refer is futures trading. It is the foundation stone of the whole grain marketing system. We look to it to absorb the risk of price change inherent in the ownership of the vast quantities of grain we buy. The futures market enables us to perform our specialized functions,

the storage and processing of grain, with maximum efficiency and at a minimum of price difference between the net return to farmers and the net cost to consumers. . . .

In this country a very small proportion of the grain crop which leaves the farm is consumed in the area where it is produced. The gathering of grain in production areas and its distribution to the areas of consumption are most important functions of our marketing system. The farmer finds an immediate market for his grain at the local country elevator. The country elevator, however, can sell for local consumption but an insignficant proportion of its purchases from farmers. Furthermore, country elevators have a limited storage capacity. At harvest time huge quantities of grain from the producing areas are delivered to the local country elevators, which must have a market for this grain in order to accommodate farmers who wish to sell or store their grain. Demand from consumers develops over the entire crop year. It is not constant. There are, accordingly, periods when mills and processors are not in the market. It is at such times that terminal elevator operators make a vital contribution to a smooth, uninterrupted market. . . .

Terminal merchants and elevator operators perform two major functions. They provide storage capacity to carry large quantities of grain which cannot be consumed immediately, but must be held against future demands as these demands develop over the entire crop year. They further provide equipment in their terminal elevators to process grain for the many and varied consumer requirements. The total storage capacity of all terminal elevators in the United States is in excess of seven hundred million bushels. In Minneapolis alone there are 91 million bushels of storage space; in Kansas City, 61 million; in Buffalo, 57 million; in Duluth and Superior, 50 million; in Chicago, 46 million; and in Omaha, 28 million—to mention only some of the larger centers. Most of these elevators are public and, as such, are the depositories of the physical grain which is delivered on futures contracts. They are licensed by a state or federal agency and are thereby qualified to receive, for storage and handling, grain which they themselves do not own. They must post bonds as dictated by the licensing agency. Their warehouse receipts are registered with a state or federal commission, and they are subjected to inspection at regular intervals to satisfy the authorities that the grain represented by their warehouse receipts is actually in store and is of a proper grade.

These terminals are equipped with modern machinery which constantly changes to keep pace with the changing demands required of the processing function. Many million bushels of grain which reach the terminal elevators must be cleaned, dried, conditioned, and otherwise processed to maintain or improve quality. Were it not for the modern facilities maintained by terminal elevators, it is probable that millions of bushels of grain would be lost each year through spoilage. The terminal saves such grain for the consumer and enables the producer to sell grain which otherwise would have a considerably reduced market value. It is necessary that terminal grain merchants possess highly specialized knowledge of the varying qualities and types of grain required by flour millers, oatmeal millers, corn millers, feed manufacturers, and large

numbers of other industries which convert whole grain into human and animal food and other industrial products. . . .

It is generally conceded that terminal elevator operators handle these enormous quantities of grain economically and efficiently from crop year to crop year. What is not so well understood is the fact that these competing terminal enterprises can make their maximum contribution to the marketing process because the marketing machinery, so highly developed in the United States over the past seventy-five years, provides hedging facilities, that is, insurance against the risk of loss through price change. It is the futures market which enables the terminal operator, in common with all segments in the distributive system, to transfer this price risk. *If speculation is present in sufficient volume, the futures market is liquid and the risk is readily transferred. If, on the other hand, speculation is driven from the market, hedging becomes increasingly difficult as the trade narrows.* [Italics ours.] We have seen such a development recently. Margins, which have only one function, that is, to insure the financial integrity of the futures contract, have recently been increased beyond the measure necessary for that purpose. Speculation has diminished as a result. Concurrently, trade has narrowed and the placing and recovering of hedges against the grain we buy and sell has become difficult. *As is the case in all fields of insurance, the greater the number of underwriters, the smaller the risk to each. So it is with speculation in grain futures. . . .*

If the futures market were not permitted to function freely and provide elevator operators with the means of protecting themselves against price change, their ability to serve the farmer and consumer efficiently would be impaired. The price difference between producer and consumer would inevitably be widened. At harvest time, when many farmers are delivering grain in large volume, the result would be a lower net return to the producer. Later in the crop year, as supplies decrease, the penalty would fall largely upon the consumer by way of a higher price to him.

Terminal operators require very large amounts of bank credit to finance the grain they buy, store, and process. Terminal elevator warehouse receipts are highly regarded as collateral for loans by banks. They are so regarded because the terminal operator, who borrows against the grain, has hedged the grain and thereby protected himself against the risk of loss through price change. If this were not possible, the banks would be obliged to restrict their grain loans, since they would be secured by collateral of fluctuating value; it would become difficult, if not impossible, to finance the movement of grain crops. As a matter of fact, it is entirely conceivable that, without adequate hedging facilities, many of the smaller elevator operators, finding it impossible to secure sufficient bank credit on unhedged grain, would be forced to discontinue business. If that should occur, the final result could easily be that only a comparative few financially strong elevator interests would remain in this field.

Without Organized Speculation Exchange Markets Could Not Function. Providing a medium for insurance transactions is the principal economic function of the commodity exchanges. Hedgers alone, as a

class, however, are not sufficiently numerous, even with all the producers, dealers, and manufacturers who constantly use both the exchange and the physical markets for both hedging and non-hedging operations, to maintain the broad and liquid exchange markets necessary for the performance of the insurance function. Another group of traders must be harnessed into the exchange market—a large number of speculators, with immense capital funds, who are willing and able to absorb market and credit risks which the hedgers want to shift to other shoulders.

The distinction between the speculative trades and the hedging trades is to be found solely in the *intention* of the trader. If the intent of the operator at the time of the sale or purchase on the exchange is to protect an existing contract or market position in the physical market from risks of price changes which might otherwise develop from existing long or short positions—as in the case of a farmer, long of his growing crop, or a factory, long or short of the raw material which it converts into finished products—it is a hedge; if the intent of the operator, whether he sells or buys, is merely to trade for a potential profit, it is a speculation, but both the (long) purchase or (short) sale of the speculative trader usually will serve as an insurance hedge for some non-speculative operator.

In this connection, it should be noted that the volume of actual deliveries of a commodity on any exchange furnishes no indication of the relative volume of hedges and speculative trades. The hedger usually does not elect to deliver or to take deliveries on exchange contracts. Neither does the speculator, as a rule. When the need for insurance no longer exists, the hedger undoes his hedge by selling or buying what he had previously bought or sold; the speculator does the same thing when he wishes to take his profit or fix his loss, as the case may be. The important fact to remember is that both the hedger and the speculator can always deliver or insist on delivery of the actual commodity, if they so choose. To assume, as is sometimes done, that the extremely small proportion of actual deliveries to total volume of annual sales on each exchange 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, for both speculative trades and insurance (or hedge) transactions on the exchanges as a rule are closed out through the clearing house without deliveries.

It is our purpose here to ascertain the reasons for highly organized speculative activities in commodity futures, to examine carefully the many attacks which have been directed against speculation, and to analyze the various defenses of speculation which are made from time to time. We shall not attempt to prove a case for or against speculation as such, but shall consider the validity of these attacks and defenses and explain

the vital and essential economic functions which risk-bearing speculation plays in the workings of the futures markets in staple commodities.

Attacks on Speculation. Speculative activity on commodity exchanges has long been and even now (in 1948) is a subject of frequent and violent assaults from various quarters, including the federal government at times. Paradoxically, speculation comes under attack from both producers and consumers, but the fires of the two groups are generally leveled during drastically different phases of the business cycle. When commodity prices are low at the bottom of a depression, the *producer* is the most vehement critic of speculation. It was no coincidence that the exchanges came under the heavy fire of producing interests in the early 1930's, the nadir of the last major downward spiral of commodity prices; nor is it a mere coincidence that agitation from producing interests dwindled to a whisper as commodity prices swept upward to the highest prices in history in the major inflationary spirals from 1914 to 1920 and from 1939 to 1948, under the powerful influences of the First and Second World Wars. If and when another downward swing in commodity prices from the highly inflated levels of the Second World War period occurs, we may again expect violent attacks from producers upon organized speculation's alleged depressing influence on commodity price levels.

The federal government in (October) 1947 vigorously attacked speculation on the wheat exchanges of the country because of the prevailing high prices. Harry S. Truman, President of the United States, in a public statement placed the blame for these high prices on speculation and demanded the doubling of the cash margins required by the exchanges. As we shall see, there are more effective means of preventing abuses of speculation, where they exist, than an arbitrary increase in margin requirements—a device which penalizes the innocent along with the guilty, reduces trading volume, and destroys the breadth and liquidity of exchange markets at the very time when these characteristics are most needed to prevent violent and disastrous fluctuations.

In this connection an editorial of the New York *Times* under date of October 17, 1947, is decidedly in point, as follows:

> . . . At a press conference at the White House yesterday, President Truman expressed satisfaction with the progress of the food conservation program, which he found showing signs of success. But even as he was making this statement in Washington, wheat futures at Chicago were soaring as high as $3.05 a bushel for December delivery, and closing at between $3.02 and $3.03. Now, the food conservation program is not merely a question of the government's acquiring 100 million bushels of additional wheat for European relief. It is a question of acquiring that wheat without serious disturbance to American

prices. And the unpalatable fact is that its policy has not begun to justify itself to date in the latter respect. On the Saturday before the President launched his program, December wheat closed at $2.80. At the end of nine trading days yesterday, it stood more than 22 cents a bushel higher. But an even greater source of concern is that Mr. Truman, instead of facing the realities of the situation, still stresses "gambling" in the commodity markets as the major factor behind the rise in food prices.

It seems to us that it is time for some plain speaking about this issue of "gambling." When the President began his food-saving campaign some ten days ago, one of his first steps was to demand that trading margins on the commodity exchanges be raised from 17 per cent to 33⅓ per cent [of the value of purchases or sales]. This course was, we believe, a mistaken one, stemming from confusion between *volume of activity,* on the one hand, and *prices,* on the other. The fact is that wheat prices in the United States are and have been the lowest in the world. In Canada, where there now is no futures market (and, therefore, presumably, no "gambling") cash wheat is selling at more than $3.25 a bushel; in Argentina it is in the neighborhood of $6.00. Those of Mr. Truman's advisers who persuaded him that raising grain trading margins would reduce speculative activity were entirely correct on that point. The latest available figures show that it has fallen 53 per cent. What they failed to realize was that, pricewise, the impact of government purchases on a thinned-out market of this kind was bound to be far more severe than on a market of large volume. That explains why prices have risen as far in the past nine days as they did over the entire period from the latter part of August to the first week of October.

The policy adopted with respect to margins was ill-advised and unfortunate. But it would be infinitely more unfortunate and more costly to perpetuate the error by attempting to keep alive the fiction that speculation is at the root of the nation's food-price troubles. For to the extent that we continue to delude ourselves on that score, we are merely permitting our aim to be diverted from what should be our main target—a drastic reduction of domestic meat and grain consumption.

In connection with the charge that speculation in grain was the cause of high prices in 1947, a statement of R. S. Vaile, Professor of Economics, University of Minnesota, made before the Joint Congressional Committee on the Economic Report (December 1947) is particularly interesting:

It is common knowledge, of course, that prices of individual commodities are continually changing in relation to each other. Some are rising, others are falling, and still others are remaining constant. Generally, the dispersion or differences in the movements of prices of the several commodities from one year's end to the next is considerable. This has been true in the post-OPA period (July 1, 1946–October, 1947), as indicated clearly by the price history of the following 18 important basic materials:

RELATIVE PRICES

Percentage Increase of the October 1947 High over the June 1946 Prices

%		%	
2	Rubber	75	Lard
6	*Cotton*	81	Coffee
21	Zinc	82	Lead
34	Sugar	85	Rice
48	Copper	86	Cottonseed Oil
54	Tin	99	Hogs
60	*Wheat*	115	Steel scrap
69	Steers	140	Hides
72	*Corn*	*500*	*Cocoa*

Average 90%

The average increase for the 18 commodities is 90%, with a range from only 2% to 500%. If the first and last commodities (both of which are imported) are omitted, the remaining 16 show a 70% increase in price, with a range from 6% to 140%.

Wheat and corn prices showed increases of 60% and 72%, respectively, at or just below the middle of the range of increases. Cotton, also bought and sold on commodity exchanges, showed an increase of only 6%. (This case is explained in large part by the fact that there was no OPA price ceiling on cotton in June, 1946, or, in other words, the price already had risen in response to economic demand before June, 1946.)

These facts concerning relative price increases appear to negate the charge that operations on grain exchanges in and of themselves have influenced in any major degree the price increases that have occurred. At least it is apparent that the increases in wheat, corn, and cotton prices between June, 1946, and October, 1947, are less, rather than more, than average increases among raw material prices.

Prices, if established on free markets, without monopoly or monopolistic practices and without interference by government with supply, demand, or prices, are determined by the free interplay of supply and demand. Professional speculators merely anticipate market movements; they do not cause them. They merely buy in anticipation of rising prices, based on their analyses of various supply and demand factors, and sell in anticipation of declining prices, when they believe that supply will outrun demand. When they buy they *temporarily* increase total demand, and when they sell they temporarily increase total supply; but in due course they must sell what they buy and buy what they sell. Consequently, in the long run they neither increase nor decrease the supply or the demand.

Usually professional operators are able to anticipate market movements

and buy before the prevailing supply-demand factors put prices up, or they sell before these same factors put prices down. Later, when the general public is finally and fully made aware from subsequent developments (which the speculators have anticipated) that prices must decline because of excess supply (or vice versa), the professional speculator is now ready to buy what he has sold earlier at higher prices (or vice versa) at the very time when others in the market, influenced by *current* news, are selling heavily (or vice versa), thus leaving the offsetting transactions of the speculator as the only stabilizing factor in the market at the time. In other words, organized speculation, according to the overwhelming consensus of experts, in the long run prevents markets from rising as high or falling as low as they otherwise would without the leveling influence of organized speculation.

Another angle of attack has been that speculation is gambling and therefore should be abolished as morally pernicious. Coupled with attacks on speculation as gambling, but deserving consideration as a separate complaint, is the fact that speculators of relatively small means may lose relatively large sums on the exchanges and that the ill effect of these losses on those who cannot afford them must weigh heavily in the scale against the acknowledged benefits which commodity exchanges confer.

Defenses of Speculation. Speculation, as a beneficent economic factor, has been defended on divers grounds as being in the public interest. It is claimed that, by bringing about a *gradual* adjustment of prices to the contingencies which the speculator foresees, sudden and drastic rises and declines in prices are substantially cushioned and therefore are less abrupt and disastrous, less injurious to producers, converters, and consumers than they otherwise would be without speculative activity.

A second defense is that organized speculation steadies prices; that in markets where organized speculation does not exist price changes are wider and fluctuations more erratic, whereas in organized speculative markets prices move within a much narrower range; that speculation smoothes out both the peaks and the valleys of price fluctuations.

A third defense is that speculation welds markets together by keeping prices between different markets at a normal parity. Finally, it is advanced in defense of speculation in commodity markets that the risks incident to price changes may be shifted in the public interest from the shoulders of producer, dealer, and manufacturer to an organized body of professional risk-takers—the speculators, who voluntarily accept them.

Speculation and Gambling. In considering any controversial subject it is well to have clear-cut definitions at the start. When speculation is branded as gambling, the contention is that speculation and gambling

are the same; that the poker player is a speculator and the speculator-trader is a gambler, or vice versa. There is an obvious distinction, however, between the poker player and the speculator which must occur at once to every fair-minded and clear-thinking observer. The speculative trader on a commodity exchange finds an ever present economic condition of fluctuating prices, based on existing risks, and endeavors to take advantage of it by anticipating the trends of prices. The poker player, on the contrary, joins with other gamblers in deliberately creating situations out of which risks develop artificially, for the express purpose or hope of effecting a hazardous gain. Speculation thus differs fundamentally from gambling in this important particular: the gambler creates his own risk, whereas the speculator merely assumes existing risks, arising out of natural or economic forces, which presumably he analyzes scientifically before he assumes them.

That distinction, however, does not go far enough. If we were to stop with this differentiation between speculation and gambling, we should be compelled to meet the more serious objection of the more analytical critic who draws his analogy between gambling and speculation from the race track rather than from the poker table. He points out that the layer of a bet on a horse race creates no risks and merely endeavors to profit from the uncertain factors inherent in horse racing—the relative speed of a number of animals. The short answer, of course, is that the layer of the bet creates a financial risk, which would not otherwise exist, while the commodity speculator may be merely accepting the transfer of a risk which had previously existed.

Wherein does the speculator in commodities 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 is necessary to go further than merely to distinguish between creating risks and accepting existing risks. We must consider the nature of the risk itself. Every contract entered into by every trader, speculative or non-speculative, who sells or buys on a commodity exchange is an obligation, enforceable by law, to deliver or to accept and pay a definite price for a stated quantity of the commodity at a definite time. Each purchase or sale temporarily adds to the total demand or supply of the commodity.

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 of some commodity trade. He increases either the supply of or the demand for the commodity at the moment. Whether he buys or sells—his purchase may be from a hedging seller and his sale may be to a hedging

buyer—he performs an insurance function. He may, at his own option, actually deliver the commodity or receive it; or he may step out of the transaction by counterpurchase or countersale, as the case may be, and never receive or deliver a single bushel or pound of the commodity. Nevertheless, at some time and for a time, he is part of the distributive system and is performing a useful economic function.

Contrast the speculator's operations with those of the man who bets on a horse race or of two gamblers, one of whom bets the other that the price of rubber will be, say 5 cents per pound higher or lower at the end of the day, week, month, or year and agrees to settle the bet on the basis of prices prevailing on the Futures Market. The layer of such a wager clearly has no place in the channels of distribution, performs no useful economic function, and for that reason has no standing in courts of law. The speculator, because he performs a useful economic function, acquires a commercial status and legal right, but assumes corresponding duties. The gambler acquires neither, for he neither increases supply or demand; he renders no service in the public interest.

Furthermore, in every gambling transaction there are two or more parties; some one or more must win and others must lose. Speculation, however, does not necessarily involve like losses and gains. Let us assume that from January to May the price of cotton for May delivery rises from 20 to 28 cents a pound, advancing at the even rate of 2 cents a pound per month. Smith, a speculator, in January buys May cotton on the exchange at 20 cents; he sells (or closes out) his contract in February by a sale at 22 cents to Brown. Brown closes his contract in March at 24 cents by a sale to Jones, who in turn takes a 2-cent-per-pound profit in April by a sale to Robinson at 26 cents. Robinson in May closes out his purchase by a sale to a converter of cotton, who buys to manufacture cloth (which he sells simultaneously), the price of which was based on 28 cents for May cotton.

Here are four speculators, every one of whom has made a profit of 2 cents a pound. It is certain that only one person could 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 had been made from a liquidating holder who was taking a profit, we should have a series of speculative trades with all profits and no losses. Of course, the original owner or producer of the cotton, if he had chosen to speculate by holding the cotton for a higher price, would have made a greater profit than he did by selling to Smith. What of the purchaser of the cotton cloth—does he lose? He does not, because in the delivery month, May, the price of the May cotton future and the price of spot or current deliveries come together at, say 28 cents,

for May or spot cotton. Consequently his purchase of cotton cloth is based on the current price of spot cotton.

After pointing out that legal distinctions between speculation and gambling cannot properly be made by legislation so long as the distinctions are based on the subject matter or the form of the transaction, Dr. Hadley, former president of Yale University, comments on speculation as follows:

> 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.[1]

The law, as we shall see later, enforces speculative contracts where the speculator (and the party to whom he sells or from whom he buys) is entitled under the contract to insist on delivery, or on delivery being taken, if he so chooses.

The United States Industrial Commission, in its extensive Survey of Economic Condition of the United States, summed up the distributive function of speculation (Vol. 6, p. 28) as follows:

> Economic services of speculative agencies, engaged in distributing farm products, are threefold:
>
> 1. They localize industrial risks among a commercial class whose special function is to distribute surplus supplies over deficit times and places in such a way as to lessen the uncertainty of producers and consumers.
>
> 2. They relieve producers and consumers from carrying a whole year's stock, enabling the farmer to convert his crop promptly into cash capital and the latter to supply himself, as his periodical needs may require, without enhancing prices beyond the ordinary rate of risk and returns of such capital investments.
>
> 3. Competition of speculative dealers tends more than any other force to reduce profits of these agencies to a minimum per unit of commodity handled. Released from other economic functions, it is to their interests to seek to reduce the risks of distribution to a minimum. By expert acquaintance with the conditions that involve risks, the hazardous elements are gradually limited, if not entirely eliminated.

Edward D. White in a speech delivered in the Senate on July 22, 1892, discussed the benefits of futures trading to the cotton planter as follows:—

> It gives him a wider, safer, relatively higher, and less fluctuating market. It cheapens the rate at which the producer obtains the money to make his crop by enabling the factor and all who deal with the producer to sell by futures the product with which the producer is to pay them, thus diminishing their risk and enabling them to reduce their charges to the producer.

[1] Arthur Twining Hadley, "Speculation," in *The Functions of the Legitimate Exchanges* (Chicago: Hartzell, Lord Company, 1910), p. 229.

It has diminished the charge of the middlemen by drawing the producer and consumer together, by enabling the buyer to sell for future delivery and buy the producer's crop to fill his future sale, already made.

It has multiplied sellers and brought them to the door of the consumer. It has multiplied investors by enabling them to buy actual cotton and sell futures against it at a small advance to cover interest and charges, thus making the investment safe. The investor, having sold for future delivery against his purchase of actual cotton, is absolutely safe, is submitted to no risk of fluctuation in the market, and, therefore, can afford to pay a better price to the producer.

It has enabled the spinner to make a better price to the consumer. He buys his cotton for consumption by means of a future contract, thus obviating the risk of a decline in the market. He sells the goods which he is to make from the cotton by a future contract, thus insuring a profit, and thus enabling the spinner to do his business on a narrower, because a safer, margin of profit. It has brought the cotton fields of the South nearer to the great centers of American and European consumption by diminishing the risk, thus reducing the difference in price which formerly existed between cotton in the field of the producer and that cotton at the door of the consumer.[2]

Professor Weld, says:

The functions of speculation may be summarized under the three following heads: First, it largely makes possible the shifting of risk from the actual merchandisers of commodities to a body of professional risk-takers; second, it aids in steadying the price level and in regulating the rate at which the year's crop is consumed; and, third, it aids in adjusting prices between different markets and hence in regulating the flow of commodities from producing to consuming regions.[3]

H. C. Emery sums up the function of organized speculation as follows:

To relieve trade of the risks of fluctuating values, by providing a class always ready to take or deliver a property at the market price and, in so doing, to direct commodities to their most advantageous uses, and the investment of capital into the most profitable channels, by fixing for commodities and securities comparative prices for delivery at different times and places.[4]

The United States Supreme Court has emphatically pointed out the *social benefits of speculation.* In a case concerning the Chicago Board of Trade, the Court, in an opinion by Justice Oliver Wendell Holmes, said:

This Chamber of Commerce is, in the first place, a great market, where, through its eighteen hundred members, is transacted a large part of the grain and provision business of the world. Of course, in a modern market, contracts are not confined to sales for immediate delivery. People will endeavor to fore-

[2] Congressional Record, Vol. 23, p. 6,565.

[3] L. D. H. Weld, *Marketing of Farm Products* (New York: The Macmillan Company, 1916), pp. 336–337.

[4] H. C. Emery, *Speculation on the Stock and Produce Exchanges of the United States* (New York: Columbia University Press, 1896), p. 113.

cast the future and to make arguments according to their prophecy. Speculation of this kind by competent men is the self-adjustment of society to the probable. Its value is well known as a means of avoiding or mitigating catastrophes, equalizing prices, and providing for periods of want. It is true that the success of the strong induces imitation by the weak, and that incompetent persons bring themselves to ruin by undertaking to speculate in their turn. But legislatures and courts generally have recognized that the natural evolutions of a complex society are to be touched only with a very cautious hand, and that such coarse attempts at a remedy for the waste incident to every social function as a simple prohibition and laws to stop its being are harmful and vain.

Does Speculation Make for Lower Prices? Many vigorous complaints against speculation arise from agricultural and other producers, inspired by the inadequate prices their products sometimes bring on world-wide markets as compared with the heavy toil and risks involved in production. There is no intent to deal here with problems of farm depressions and governmental subsidies to farmers. When speculation is attacked by producers or demagogic politicians as an influence which lowers prices, there is too often an imperfect understanding of its role; there is perhaps more than a tinge of the fallacy that the cost of production of a commodity should determine its market price, when in reality in a free competitive market for a staple commodity it is the economic law of supply and demand which, regardless of costs or other conditions in any one locality or country, determines the price.

Phases of the Contention that Speculation Lowers Prices. Although the proposition is not capable of exact proof, it seems a reasonable supposition that, if speculation exerts a depressing influence on prices, they should be lowest when speculation is rampant. Various studies of price trends and of the accompanying volume of trading in different commodities show no such correlation.

One single example[5] will be sufficient for illustration. In 1891, the price of wheat in the United States averaged $1.08 for the year. 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 on that exchange declined to 1,079,713,500 bushels. In 1893, when less than a billion bushels were traded in on the exchange, wheat prices averaged approximately 17 cents lower than in the preceding year.

Such studies, no matter how numerous, have only a negative value. It is probable that declining prices, coupled with the fact that, in the particular periods studied, business generally was undergoing a severe

[5] J. G. Smith, *Organized Produce Markets* (New York: Longmans, Green & Co., 1922), p. 129.

depression, were of themselves sufficient to restrict speculation. On the other hand, it is equally clear from these studies that the volume of futures trading had no effect upon the price trend. In general, it is safe to say that, with rare exceptions, that is always the case.

A more extended comparison of the volume of futures trading and price movements was made in the *Report of the Commissioner of Corporations on Cotton Exchanges,*[6] as follows:

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	*Futures Sales New York*[a]	*Average spot price*[a]	*Cotton Crop*[b]	*Relation of Futures 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.

[6] Chapter VIII, Part 4, p. 173.

The report continues:

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 futures 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 of 1881–82. In 1893 the ratio of futures 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 futures market has frequently been accompanied by an advance in the price of spot cotton instead of by a decline. Similarly, an inactive futures market has frequently been accompanied by a decline. Thus, in 1883, when the volume of futures 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 futures 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 futures 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 Futures Trading Increased	*Price Movement*	*Production*	*Years in Which Volume of Futures 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 futures 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 futures 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 futures 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.[7]

[7] *Report of Commissioner of Corporations on Cotton Exchanges,* pp. 273–276.

Another aspect of the effect of speculation on 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 later. This is simply the result 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 are traded in on exchanges, but are sold within a few weeks after harvest, flooding the markets at one time, although the 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 of wheat was only 2.9 cents; consequently, considering elevator charges, shrinkage, loss of interest, and insurance items, 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 Grain Exchange*[8] submitted by that body to the Royal Grain Inquiry Commission in 1921, as follows:

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 NO. ONE NORTHERN WHEAT IN OCTOBER AND MAY—1908 TO 1914

	October				*May*		
	High	*Low*	*Average*		*High*	*Low*	*Average*
	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 at 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

[8] Pages 42, 43.

was a difference between the average October price and the average May price of 16.54 cents 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 13.19 cents more than that in the previous October.

Taking the whole of the six years, the average October price was 93.71 cents and the average May price 98.88 cents, a difference of only 5.17 cents a bushel, which would not have paid carrying charges on the wheat.[9]

A comparison between mean prices for wheat at Chicago in October and in the following May for the period 1890–1927 has been made, using statistics of the Chicago Board of Trade. The average range of wheat in October, excluding the war years, was $\$0.94\frac{5}{8}$–$\$1.11\frac{1}{4}$, and the average range in the following May was $\$1.05\frac{1}{2}$–$\$1.27\frac{3}{8}$. The spread between the mean of October and the mean of May was $13\frac{1}{2}$ 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, but 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 for ten years. There were seven years in which August prices were the highest, five years in which July prices were the highest, and five years in which October prices were the highest. In only three of the forty-four years 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 years. In five years December prices were lowest, and in four years March and November were the two months of lowest prices. Lowest prices were not reached in October or June in any one of the forty-four years.

In the period, 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 of the year, whereas the months of June and January were highest for three of the thirty-eight years. Lowest prices were recorded in August

[9] 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.

for six years and in November for seven years. There were four years in which September, October, and December prices were the lowest. Studies of prices in subsequent years bear out the same conclusions.

These various price comparisons are more suggestive of an evenness of price adjustment throughout the twelve months than of any marked rise at one season and a decline in another. They suggest, not that speculation operates to depress prices in the crop-moving season, but exactly the reverse: that, because the dealer and speculator anticipate demand at the time they buy and because producers and converters can protect their positions by hedging, the price realized by the producer is closer to the price paid by the consumer than would be the case, if speculation were not geared into the exchange markets.

In referring to the influence of organized speculation on prices, therefore, the conclusion appears justified that speculation, as such, is not a material factor in either lifting or depressing price levels. In any case, it would appear that speculation merely levels off both the peaks of boom prices and the valleys of depression levels. Manipulation will be referred to later; we are concerned here only with legitimate speculation and are not considering the influence of unlawful concerted action taken for the ulterior and illegal purpose of controlling prices.

Does Speculation Steady Prices? It is necessary first to define what we mean by "steadying" prices. In any exchange market, oscillations in prices are more frequent, but smaller than in the physical markets. What is meant by our question, then, is whether the range of these oscillations is less than it would be, if organized speculation were not present. This is another question which does not lend itself readily to positive statistical proof. Various attempts have been made to support the contention by these methods, but it should be observed in advance that none of these interpretations is entirely satisfactory as positive proof.[10]

[10] In a case (Board of Trade of the City of Chicago, et al., v. Charles F. Clyne, et al., 260 U.S., 704), in 1922, before the United States Supreme Court, involving the constitutionality of the Grain Futures Act, affidavits were filed by twenty-two nationally known economists, each of whom declared his belief that, with infrequent and minor exceptions, futures trading had a marked tendency to stabilize prices.

These economists were: T. S. Adams, Yale University; James E. Boyle, Cornell; Charles J. Bullock, Harvard; T. N. Carver, Harvard; John Bates Clark, Columbia; Fred Emerson Clark, Northwestern; Melvin T. Copeland, Harvard; Fred Rogers Fairchild, Yale; Henry F. Farnam, Yale; Frank A. Fetter, Princeton; Irving Fisher, Yale; Arthur Twining Hadley, President of Yale; Grover G. Heunber, University of Pennsylvania; Solomon S. Huenber, Pennsylvania; Joseph French Johnson, New York University; Edwin Walter Kemmerer, Princeton; Roswell C. McCrea, Pennsylvania; Wesley C. Mitchell, Columbia; Robert Riegal, Pennsylvania; E. R. A. Seligman, Columbia; Abbot Payson Usher, Harvard; and Allyn A. Young, Harvard.

In this same case quotations, similar in meaning to the affidavits just mentioned,

A frequently used statistical method is that of comparing price fluctuations in a commodity before and after futures 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, automotive vehicles, and even efficient wagon transportation were unknown, with those prevailing under modern conditions, when entire trains and fleets of ships, as well as automotive trucks, loaded with a single commodity, move with a speed which makes the world today smaller than Great Britain was in the Middle Ages? Nor is there a proper parallel between conditions in the 1850's and those in any decade of the twentieth century. The entire tempo of the markets and transportation and communication facilities which feed commodities and their prices into these markets have changed drastically.

It may be remarked, however, that the many comparisons which have been made almost invariably indicate a narrowing in the range of price fluctuations under futures trading. In this narrowing of the range it is possible that futures trading exerts an influence; but, since the method is regarded as inherently unsound, such comparisons are dismissed here simply with the observation that their conclusions are rather more favorable to futures 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 conducted with fluctuations in other commodities which have no futures markets. Here again the statistical method is imperfect. Methods of production and marketing conditions for different commodities are so dissimilar that fluctuations in rice prices cannot be fairly compared with fluctuations in wheat prices to reach a valid conclusion that, solely because the latter are narrower, organized futures trading is the cause.

A more reasonable comparison is that made between the prices of wheat, barley, and oats for the period, 1899–1916, by Professor James E. Boyle, of Cornell University. Wheat and oats were subject to futures trading, but barley was not. The following comparison for the period

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from the writings of four of those economists and from the following additional economists, were incorporated into the court records: Paul LeRoy Beaulieu, France; Richard T. Ely, University of Wisconsin; H. C. Emery, Yale; Benjamin H. Hibbard, Wisconsin; Paul W. Ivey, University of Nebraska; Otto Johlinger, Germany; Louis Perlmann, Germany; John George Smith, University of Birmingham, England; F. W. Taussig, Harvard; L. D. H. Weld, Yale; and George Wermert, Germany.

shows a higher degree of fluctuation in barley than in the other two commodities.[11]

Year	*Wheat Per Cent*	*Barley Per Cent*	*Oats Per Cent*
1899	24.2	57.1	46.7
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

An interesting study between a commodity, which is subject to futures trading, and other commodities, which are not, contrasts prices of wheat with those of onions, potatoes, and apples, as reported in *Orderly Marketing*, a publication of the Minneapolis Chamber of Commerce. Prices of all these commodities are averaged for each month of the crop year for a period of twenty-nine years. The average annual fluctuation in wheat prices from low to high was only 5.36 per cent. On the other hand, onions fluctuated more than 10.9 per cent, and apples experienced a price fluctuation of almost 100 per cent. The annual range in potato prices was shown to be 68 per cent.

Recalling again that this method of proof is not positive, nevertheless it should be observed that it is one of the best methods available and the evidence points most strongly to the conclusion that there is more than a casual relationship between futures trading and price stability.

Professor James E. Boyle, in his testimony before the Canadian Commission mentioned in Chapter II, says:

> It is almost unanimously agreed by economists of all countries that futures trading has two effects on the producer's price: By lowering the middleman charges, it increases the amount of money received by the farmer. It stabilizes the price by putting on the brake against severe bulges and breaks in price.

[11] *Speculation and the Chicago Board of Trade* (New York: The Macmillan Company), p. 123.

Since these two effects are very important to the farmer, I desire to present some supporting evidence.

Raises Price to the Farmer. Why is wheat now handled at the lowest cost of any agricultural commodity? The answer is, chiefly because the price insurance feature of the futures market enables the middleman to work in comparative safety on a low margin. Contrast hay and wheat. Both are standardized non-perishable commodities. Yet the brokerage fee or commission charge on selling hay is many times that for selling wheat. Mr. P. E. Goodrich, president of the National Hay Association of the United States comments on this fact in these words:

"Every man that handles hay from the producer to the consumer speculates largely and takes great chances, as there is no way in which he can hedge his trades. For this reason the fluctuations of the market are large and often a few days will show a variation of values from 25% to 50%. . . ."

Stabilizes the Prices. The second effect of futures trading on farm prices is to stabilize these prices. Futures trading does prevent sudden and violent fluctuations in price by putting on the brakes. Evidence of various kinds can be produced to prove this statement.

If we compare price fluctuations under futures trading with those before the days of futures trading, we see at once a vast difference. Fluctuations of ten cents a bushel in one day are about as common now as fluctuations of fifty cents a bushel in one day then. Of course, part of this greater price stability is due to our better communication and transportation, but part of it is due to futures trading. On this point practically all marketing economists are agreed.

The *Garfield Report on Futures Trading in Cotton,* made by the United States Commissioner of Corporations in 1906 and 1907, was the most comprehensive study on that subject ever published. Futures trading in cotton and futures trading in wheat have exactly the same economic effects on price. The *Garfield Report* found that futures trading in cotton prevents sudden and violent fluctuations in price.

We may turn to the testimony of economists the world over who have studied this subject and they are in almost unanimous agreement on the stabilizing effect of futures trading on price.[12]

Exchange Trading Levels Prices between Markets. With modern methods of communication, the price of cotton in New Orleans, New York, and other world markets would in all probability be maintained in fairly close relationship, whether or not futures trading were carried on. The adjustment is far more certain and rapid, however, with the exchange *arbitrageur* ready to act instantly to take advantage of situations when prices on the different markets get out of normal relationship or parity. The futures markets are sensitive and respond rapidly

[12] *Proceedings of the Canadian Commission to Inquire into Trading in Grain Futures* (Winnipeg: Grain Trade News, 1931), p. 130.

to news received from other 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 a most important contributory influence.

The Speculator's Assumption of Risk. Other services performed by the speculator may be regarded as unimportant in comparison with his vital function as a risk-taker. Let us imagine an insurance or exchange market in which there are no speculators, but only commercial interests—producers, dealers, and converters—placing hedges. We shall assume that this condition exists in the wheat market. Elevators buy wheat as it comes to the market in the fall months. They are then actively engaged in selling futures as a hedge against their spot purchases. Yet, when the hedger offers to sell futures, he must be assured of ready purchasers—buyers who will immediately take his futures at only a narrow price difference below the level at which the hedger calculates he can afford to sell in the light of prevailing spot prices. The large commercial buyers of futures (as hedges) are the millers—who do not, however, concentrate their hedge purchases in the fall or in any one short period. Their sales of flour are spread throughout the year, and their purchase hedges are likewise widely distributed. The flood of concentrated hedge selling from the grain elevators in the fall, consequently, would meet with but a partial response from the millers, whose hedging purchases are not concentrated. The volume of sales would overwhelm the demands from purchasers, and the elevator owners' hedging market would sink beneath it.

In every successful exchange market the hedger, therefore, must depend on the presence of professional speculators in substantial numbers with substantial capital funds. The speculator must be ever present, ready to assume risks, regardless of season. He buys the elevators' hedging contracts when other buyers are few or entirely absent; he sells later in the year when the millers are actively buying hedges and there are few trade sellers. In that way the speculator is performing a vital economic function of genuine value. He has been likened to an insurer, and the likeness, though not exact, is correct.

An efficient, continuous, broad, and liquid market—that is, one where abnormal, erratic, and violent price fluctuations are avoided, despite heavily concentrated seasonal selling or buying—cannot be maintained and operated successfully with only the usual commercial interests actively represented. The presence of organized speculation is imperative to the making of a broader, steadier, and more liquid market.

Speculators Provide a Broad Market. The term "broad market" means a market that is capable of absorbing all offerings in the course

of any trading day without the price of the commodity being affected appreciably by mere volume of sales. Perhaps a more descriptive term for this 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 there have been instances when offerings of as much as 5,000,000 bushels did not depress the price more than one-eighth of a cent per bushel. Such a broad market is essential for successful use of the hedge, and because the speculator's presence makes a broader market he is an invaluable aid to the hedger.

Professor Boyle, in his testimony before the Canadian Commission, referred to earlier, says:

> There is just one question on hedging I desire to leave before the Commission, namely: How wide a market is needed to provide ample hedging facilities? It is my conviction here that a hedging market must be made up of at least 50 per cent pure speculation. There is no use to shy at the word speculation. Much of this blanket condemnation of all speculation is, I am firmly convinced, mere idle nonsense, bordering on cheap claptrap. The question, Shall somebody speculate in farm products? has already been answered in the affirmative. The essence of speculation is risk-bearing. So long as the farmer grows wheat at one place at one time, and this wheat reaches the consumer's mouth at some other time and some other place, there are and always will be risks involved. These risks are inevitable economic risks. They are speculative risks. Speculations in wheat, therefore, may be shifted or distributed or partly reduced, but never can be eliminated.
>
> The hedging function I regard as the second major service of futures trading. The purpose of hedging is to protect profits, limit losses, and safeguard bank credit. Hedging does all three of these things. As price insurance, it does not furnish 100 per cent coverage, for no form of insurance is supposed to do that. I do not need to add to what has already been said here regarding the value of hedging in giving stability to investment, in lessening the risk, and so in lowering the handling margins on wheat.[18]

Though speculators act strictly in their own interest, they may also be said to serve in a representative capacity, when one considers the effect which their combined operations exert on prices. The bulls, or "long" speculators for a rise in price, are in the market representing, in effect, the interests of the producers. Their efforts, of course, are designed to make profits for themselves, but the force of their speculative buying contributes definitely in the short term, when they are buying, toward higher prices for all growers. The bears, or "short" sellers for a decline in price, on the other hand, represent, in effect, the converting manufacturers and consumers. Although the aim of each

[18] *Ibid.*, p. 131.

individual short seller is a profit for himself, every user of the commodity does benefit, at least in the short term, from whatever effect the speculative seller may exert toward reducing the price of the commodity at the time of his selling. Later, when the short seller closes out his speculative position, he becomes a buyer, and the speculative bull becomes a seller when he closes out his position.

In every market a considerable part of the speculative trading on commodity exchanges is done by the floor trader, or "scalper," who has been the subject of considerable criticism. The volume of his purchases and sales contributes greatly toward making a broad and liquid market, but the very nature of his operations—buying or selling for a quick turnover—makes him a negligible factor in influencing prices in the long term. "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; 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 the consumer's standpoint."[14] The floor trader fills the "air pockets" in the market—spots where there are temporarily buyers without sellers (or vice versa)—by breaking the temporary deadlocks between the regular buying and selling traders.

Large Volume of Transactions on Exchanges. In the last column of the table on page 65 it will be noted that the total number of bales sold and bought annually on the New York Cotton Exchange over a great number of years ranged from less than two to almost eight times the total number of bales produced in the corresponding crop year. This condition is not an isolated one. In fact, it is typical of every commodity exchange and of every organized physical commodity market where sales and purchases are made for future or forward deliveries. In every market which deals in such future contracts, whether or not it is an exchange market, it is inevitable that the crop be sold and resold in effect many times. Without doubt, in some instances the ratio may be 10 or 15 to 1 or even higher.

This fact alone is often cited as a basis of severe criticism of speculation not only on commodity exchanges, but also on all physical markets dealing in forward deliveries. The fact that total annual sales on such markets are many times the annual crop—or, in the case of imported articles, such as rubber, cocoa, and coffee, many times the total annual imports of such commodities—is constantly seized upon by uninformed

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

or intellectually dishonest critics of these markets as evidence that gambling or uneconomic and unrestrained speculation is rampant and that organized speculators pool together to depress prices to the farmers or other producers and to inflate prices for the converters and the ultimate consumers.

The explanation is a simple one. For example, let us consider an importation of coffee on the actual or physical market. B, a New York dealer, in December buys 100 tons of actual coffee for March shipment from Brazil with arrival in New York due in May. He pays 15 cents per pound for it. Two days later the New York market has risen to, say, 15.75 cents and B sells the lot to C, also a New York dealer, who, in turn, sells it to D several days later at 16.50 cents. The market then eases off and D sells to E at 16 cents, losing ½ cent per pound. Between December and May (when the coffee arrives and is finally sold to X, a coffee roaster in Chicago) this parcel may have changed hands on the New York dealer market as often as ten to twenty times—sometimes at a profit, sometimes at a loss—none of the profits or losses on each purchase and resale being very large.

It is this condition—the ease with which parcels of standardized commodities may be bought and sold by description without sampling and inspection on standardized contracts at slightly varying prices on organized markets—that makes for broader, steadier, and more liquid markets.

The same methods of buying and reselling in what may be called chain contracts is carried on even more extensively on the exchange markets, where not only domestic, but foreign producers, dealers, converters and large numbers of speculative operators actively buy and sell. The ability to buy and sell so freely is greatly increased on the exchange markets because of the presence there of professional speculators with ample funds, which are geared into the exchange to permit it to function more effectively as an insurance institution. The speculator's presence makes the exchange markets much broader, steadier, and more liquid than the physical markets—thereby benefiting the producer, the dealer, the converter, and the consumer. Each speculative transaction may serve as a hedge for more than one hedger. A buys as a hedge from X, a speculator, and, when the insurance protection is no longer needed, A sells out his hedge, possibly to another hedger, and so on from one hedger to another.

The number and volume of transactions on the exchange is further increased substantially by the fact that the speculator never, or rarely ever, takes or makes delivery on the exchange (though he may do so, if he so chooses). Instead, he usually sells what he has bought—either at a profit or at a loss—and buys what he may have sold—either at a profit

or at a loss—settling the differences either way by paying cash for the losses or receiving cash for his profits.

Furthermore, as will be explained in detail later, when a producer or a converter uses the exchange as an insurance device to hedge, or insure against price or credit risks—whether he insures by a purchase or by a sale on the exchange—he seldom, if ever, takes or makes delivery on such exchange contracts. On the contrary, he most likely will sell on the exchange what he previously bought there as a hedge, or he will buy, just as soon as the insurance protection is no longer needed, what he previously sold there.

As a result of these various factors and conditions, the fact that operators on the exchange markets, dealing in future deliveries of staple commodities, buy and sell annually a volume several times the annual crop of the commodity is the surest evidence that these organized markets have been successful in performing the constructive economic functions for which they were developed—to serve the public interest by the establishment of an effective insurance device against market and credit risks. In fact, if the exchange were a perfect insurance institution, there would be no deliveries at all, whereas deliveries on commodity exchanges generally constitute less than one per cent of the volume transacted in the course of a crop season or a year. The transfer of these risks to speculators reduces prices to consumers or raises prices paid to producers through the elimination of what otherwise would be higher costs of production, distribution, and conversion, which without speculation would fall upon the producer or the consumer in the long run.

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

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 this is that the law is as bad as the quality of the verse. Unless and until a modern statute makes short selling a penal offense, no short seller is in any danger of prison because of that act alone. However, short sales in commodity markets have at times been outlawed by ill-advised legislation in the past, both abroad and in the United States.

The mechanics of the short sale of a commodity are much simpler than

those of the short sale of stocks. A person who believes that the price of General Motors common stock is too high in relation to its earning power may sell it short in anticipation of buying it back later at a lower price. Nevertheless, all contracts on the stock exchanges of the country require delivery on all sales within twenty-four to seventy-two hours. Consequently, a short seller must deliver promptly. Not owning any stock of General Motors, he must borrow the number of shares he has sold in order to make delivery. No owner of the stock will lend it without adequate security; therefore the short seller of the stock must give the owner cash or its equivalent to secure the loan of the stock. 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 the short sale and collects the sales price from the buyer.

Until the short seller returns the stock, which he will do later when he covers his short sale by purchase on the stock market, he pays the lender any dividends which may be declared on the borrowed stock. On the other hand, the lender of the stock pays the short seller interest at current rates on the cash which forms the security for the return of the lent stock. If the demand for a stock is great and the loan supply limited, the rate of interest which stock lenders will pay may decline. Loan demand for the stock may be so great in relation to supply that the stock lender will pay no interest at all. The stock then lends "flat." If there is a serious shortage of the stock available for loans, the stock lends at a premium—that is, the borrower not only has to give cash as security, but has to pay a premium of, say, one dollar or less per share to the lender for the temporary 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 required only to keep his short sale adequately protected, by cash margins, from an adverse rise in the price of the commodity. When the delivery month arrives, he must cover his sale by purchase on the exchange or make delivery on the contract. He may, however, make his purchase at any time without waiting for the delivery month to arrive.

Short selling is most frequently attacked on the ground that it artificially depresses prices. When a sharp price decline occurs in any commodity dealt in on futures markets, the short seller alone is usually blamed for bringing about the debacle, 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 (of Kansas), made some years ago in connection with the introduction of a bill into

the United States Senate to limit trading and prohibit short selling on commodity exchanges is typical:

> 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 on 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 prating about a law of supply and demand?[15]

Six days before the date of Senator Capper's charge that speculation was the cause of the low wheat prices on the Chicago Board of Trade, the *Journal of Commerce,* in a Chicago dispatch, told of the establishment of settlement prices for shorts who were trapped in July corn on the Chicago Board of Trade. Evidently heavy short selling was taking place in corn at the very same time that short selling in wheat on the Board of Trade was active. Short selling in corn was unable however, even to stem the rising trend of prices. Thus, in the very same market, short selling in different grains, carried on at the same time, resulted in diametrically opposite price movements. What is the explanation for this?

Let us trace the development of the world wheat crop in 1928. About the middle of May, the winter wheat crop was reported as likely to be [illegible] bushels, or 12 per cent below the 582,000,000-bushel crop of 1927. The outlook was also for a spring wheat crop smaller than that of the preceding year. A month later, the official 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

[15] *Journal of Commerce,* August 13, 1928.

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 federal government's estimate of the winter wheat crop was raised to 544,000,000 bushels, an increase of 32,000,000 bushels over the June estimate, and the spring wheat crop was estimated 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, as compared with the 1927 total of 873,000,000 bushels. Unofficial estimates placed 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, as 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, as compared with 992,000,000 bushels the preceding year, and for an exportable surplus of 680,000,000 bushels, as 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 twenty-one European countries would approximate 1,374,000,000 bushels, as against 1,[illegible],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 wheat 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 issued and before European estimates were published, December wheat was selling at $\$1.16\frac{7}{8}$ per bushel. The price later touched $\$1.13\frac{5}{8}$, but on October 17, two months later, with the full extent of North America's and Europe's bumper crops realized, the price was $\$1.15\frac{3}{4}$. The speculators who sold wheat short early in the summer had forecast conditions correctly.

Any short sale temporarily increases the supply of the commodity. For every short sale, however, 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 subsequent covering or purchases by the shorts will actively contribute. In any case, every short sale must, before expiration of the contract delivery period, be offset by a corresponding pur-

chase on the exchange or physical markets, thereby increasing demand at that time.

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 at any time. He must buy sometime. As the price declines, the buying of short sellers—as they cover their short trades—tends to offset the 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 nationally recognized 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 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.[16]

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 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. . . .

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

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 wtihout short selling.[17]

So well is the cushioning effect of a short interest recognized on the stock exchanges that, when a rapid run-up in price has driven the 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 in the 1920's lends 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 subsequent covering purchases, when the market was collapsing would have afforded the best, or perhaps the only, market for realty at the time and would have tended to stabilize prices earlier and at higher levels.

Regulation of Speculation. Speculation often bears the brunt of attacks that are really directed against manipulation, which is illegal under both state and federal laws, as it has been for many years under the rules of the various commodity exchanges. By lawful speculation is meant the buying or selling of commodities by traders who expect to profit by a subsequent rise or decline in prices, but are not acting in concert with one another or attempting by joint action to gain control of the supply or depress prices. By illegal manipulation is meant concerted buying or concentrated selling by two or more persons 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 illegal corners or less important "squeezes."

A corner, always illegal, is a condition where one or several operators

[17] H. C. Emery, *op. cit.*, pp. 119–121.

control or have contracted for so much of the supply that outstanding contracts to deliver cannot be fulfilled except at prices which the operators of the corner dictate. A squeeze is a relatively small corner, occurring in deliveries for some one month or some one grade. Some—or, in fact, most—squeezes are inevitable on both the physical and the exchange markets and are not the result of illegal manipulation. For instance, in the winter months steamers bringing sugar, hides, coffee, cocoa, or rubber from foreign ports may not, because of storms at sea, arrive in the month for which they are scheduled and in which the cargoes they carry have already been sold for delivery. The failure of several thousand tons of any one commodity to arrive in the expected month may result in a sharp rise or squeeze in price of that month's delivery, as the merchants, whose cargoes have not arrived, are forced to enter the spot and exchange markets to buy, often at substantial losses, to replace the delayed cargoes, which have been sold for delivery under contracts that must be completed before the end of the month. Otherwise, the sellers will be in default and suffer even more serious losses and penalties. The buying under such conditions creates a squeeze in prices or specific grades of spot merchandise, for the entire market is fully aware of the usually acute need for immediate replacement of such delayed cargoes.

It has been many years since a corner has occurred on any commodity exchange. The speculative corners of the past years were not always financially successful, nor were some of the reputed corners at all effective. Most of them brought ruin upon the operators who engineered them and subjected the operators to criminal prosecution. The by-laws and rules of all commodity exchanges today are framed designedly to prevent the occurrence of such activities and to make them ineffectual.[18]

A manipulative or illegal squeeze is less spectacular than the corner, and it is still possible temporarily and on a small scale. Most squeezes today occur innocently as a result of governmental restrictions—such as the sudden establishment of or decrease in an import quota on a commodity such as sugar. Sellers may be seriously and most unfairly embarrassed by such restrictions and find it almost impossible to deliver on their sales contracts. By-laws have been adopted by the exchanges, however, for the purpose of preventing *any* squeeze from being effective, if the price is forced above the fair market or fair commercial price for the commodity.

The following by-laws of the Commodity Exchange, Inc., are illustrative of this phase of exchange regulation which is designed to outlaw and make ineffectual any corner or squeeze.

[18] See Chapter XIII for further discussion of this point.

Sec. 404. Whenever through any exceptional contingency, not provided for in the By-Laws and Rules, deliveries are not possible, and an extraordinary situation arises, wherein a rigid enforcement of contracts generally would be grossly at variance with just and equitable principles of trade or the public interest, then upon application of any member, and after investigation, the Board may accord relief in such manner as in their judgment the emergency may demand, with due regard, however, to upholding the rights of both buyer and seller and the fulfillment of their just obligations and to the best interests of the Exchange.

Sec. 409. Whenever it shall appear that an interest has been created or a situation exists in respect to any delivery month or months which endangers, or may endanger, the normal functioning of the exchange or of the market, or that conditions have arisen which jeopardize the maintenance of a free, open, and orderly market, or which jeopardizes the fulfillment of outstanding contracts, or which threaten to conflict with the best interests of the exchange or of the public, whether such interest or such conditions may involve a violation of the By-Laws or Rules of the exchange or not, the Board of Governors, by a vote of two-thirds of those present and voting, but in no event by less than twelve affirmative votes, may itself, or through any regular or special committee appointed by the Board, investigate the situation or interest; and for the purposes of such investigation the Board, or such regular or special committee, shall have all of the powers and authority vested by the By-Laws in the Committee on Business Conduct. If the Board shall conclude that such an interest, situation, or condition exists, or that the best interests of the exchange or of the public are or may be threatened, it may by a majority vote of those present, after affording an opportunity for the interested members to be heard, require the member or members involved therein to take such steps as the Board may deem necessary to avert, regulate, or correct the conditions in question, and for that purpose may require such member, or members, to liquidate in whole, or in part, their position or positions within such time and upon such terms as may be fixed by the Board, or to take such other steps as may be deemed necessary or desirable in the discretion of the Board. In the event a member fails to comply promptly with such requirements as the Board may prescribe, his failure shall be considered as an act detrimental to the best interests of the Exchange and its members and he shall be subject to censure, fine, suspension, or expulsion under Section 210 of the By-Laws.

The above powers and authority, given to the Board, are intended to enlarge the authority of the Board and are not intended in any way to curtail or restrict same.

Under the authority of such by-laws, the exchanges of the country are empowered to fix the prices at which contracts shall be settled in order to cope with all squeezes, whether they are innocent or manipulative. Likewise, in time of war, when certain exchanges are forced by conditions or by governmental proclamation to suspend all operations, the directors are empowered to fix the prices at which all outstanding contracts must be liquidated.

By the adoption of by-laws limiting the extent of price fluctuations in a single trading day, by rules of clearing associations (operating in conjunction with the respective exchanges), limiting the volume of trading which each clearing member can clear with the clearing association, and by rigid compliance with the regulations of the federal Commodity Exchange Authority limiting the number of open contracts which any individual speculator may have in any commodity exchange market,[19] the exchanges have established all the practical and effective safeguards necessary to keep their speculative machinery free from abuses. It is more than possible—it is probable—that other reforms will be made as new occasions or new techniques arise. To the extent that the exchanges are alert to exercise aggressive leadership and to effect constructive reforms from within, when necessary, their position as great market places and insurance agencies (essential to the public interests and necessary to more orderly production, distribution, conversion, and financing of staple commodities) will be constantly strengthened, and emotional or demagogic attacks upon speculation will become ineffectual.

Since 1936, with the passage of the federal Commodity Exchange Act, the federal government, in an effort to control the volume of speculation by individual operators, has been authorized to fix the trading limits or market positions of members and non-members of such exchanges as are subject to the Act. These limits are determined by a federal agency and apply only to exchanges dealing in domestic agricultural products.

[19] See Chapter XIII.

CHAPTER IV

Grading, Standardization, and Inspection

Commodity exchanges perform other valuable economic services in addition to their function of providing a means of price and credit insurance. One of these important services is that they render the commodity liquid. By liquidity is meant (1) that the commodity may always be sold or bought at some price readily, instantaneously, and in any amount without the necessity of sharp price reactions, protracted bargaining, or searching for a buyer or a seller; (2) that sale of the commodity may be effected by sellers to buyers through a *standardized* contract which requires no attention to its technical terms and conditions on the part of either party to the transaction, except as to price and time of delivery; and (3) that title to the commodity may be transferred by delivery of a negotiable warehouse receipt, which passes from hand to hand, is everywhere accepted as representative of the stored commodity it controls, and is accompanied by an unimpeachable certificate of the quality of the merchandise.

The standardized futures contract, in conjunction with the negotiable warehouse receipt and the certificate of quality or grade, makes the commodity liquid. In order to impart the full measure of liquidity to a commodity, it is necessary that a negotiable warehouse receipt shall be recognized as the equivalent of the commodity itself. Before such a system of delivery by means of warehouse receipts can be developed, it is essential that definite or standard grades of each commodity be established so that every buyer or seller may know with certainty what he may receive, if he accepts delivery, or what he must tender, if he makes delivery on the contract. After standard grades are established, however, it is still necessary to provide for a system of inspection so that specific lots of the commodity may be properly sampled and certificated as proper for delivery under the exchange contract. These lots are inspected and assorted into standard grades, and grade certificates are then issued under exchange supervision.

As an integral part of the system of grading and inspection, the exchanges license warehouses in which all lots intended or offered for delivery must be stored. The warehouse receipt, issued by approved and bonded warehouses, certifies to the existence of the commodity in the warehouse; the grade and weight certificates certify to its quality and weight.

Advantages of Inspection and Grading. The benefits of standardization of grades or qualities won early recognition in those trades in which futures trading was first conducted. 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,* issued by that exchange about ten years after establishment of a grain inspection and grading system:

> The year 1874 was also rendered memorable by the changes in the methods of handling and dealing in grain, 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 delay 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 on the Board at that time, and I can testify that it was believed that the results 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."

In the physical markets the various trade associations, before establishment of exchanges, had already developed both standard contracts and standard grades as essential services to their members. The exchanges, coming later, were required to develop their own standard contracts and grades, but they benefited greatly from the prior work of the trade associations.

Establishment of well-defined grades and strict adherence to the official standards is of inestimable benefit to the producer, distributor, converter, and consumer.[1] If, in addition to standard grades, machinery is provided for inspection and classification to make certain that each lot of the commodity conforms to a standard grade, there is no longer any practical application of the principle of *caveat emptor* (let the buyer beware). Without standard grades, a purchase would be compelled carefully to inspect every lot of a commodity before he buys; but, once standard grades are recognized in the trade, although purchases of non-standard lots continue to be made by sample, all purchases of standard grades are made by description and deliveries by certification. The great merit of standardized grades is that a large volume of sales "on description" is now possible and that the great bulk of trading, consequently, can now be done in contracts for forward or future delivery, whereas sales by "sample" necessarily imply spot trading in goods ready for immediate delivery—a factor which decidedly limits both the tempo and the volume of trading.

Establishment of Standard Grades and Methods of Classification. In every commodity trade in which the exchanges operate, they have played a pioneer part in establishing grading and inspection systems. At present, commodities may be divided into two broad classes: (1) those in which standards of quality or of inspection, or both, are provided by a federal or state statute; and (2) those in which standards of quality and methods

[1] See Chapter I.

of sampling and inspection are established by the exchange (or by the trade association of the physical market). Included in the first classification are cotton, wheat, and other grains under federal laws. In the second are coffee, sugar, rubber, cocoa, hides, tin, butter, eggs, cottonseed oil, and so forth.

Standards in the Cotton Trade. Grades in the cotton trade have become the subject of legislation by Congress and are now established pursuant to the Cotton Futures Act, passed in 1916. The grades officially recognized under this Act had prevailed previously as standard grades in the trade, having been developed and used by the cotton exchanges and trade associations for many years. 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 the previous trade standards. It did, however, (1) prescribe a method of determining price differentials between various grades, (2) establish a system of sampling, weighing, and grading by officials of the United States Department of Agriculture, and (3) provide for the issuance of official certificates of quality by federal inspectors, who must certify the weight and grade of all deliveries.

Owners of cotton intended for delivery on a futures contract are required by exchange regulations to store it first in a bonded 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 all exchange contracts. The owner gives the chief inspector a written order to sample and weigh. The order states where the cotton is located and the number of bales in each lot. A sampler and an inspector are then detailed to draw samples and supervise the weighing under definite procedures. 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 weights reported by the weighers and compares them with those of the inspector who supervised the weighing. The other set goes to the U.S. Department of Agriculture for classification as to grade.

Branch offices of the Department of Agriculture are maintained in New York and in New Orleans, where cotton exchange markets are located, and in each branch office there is a board of cotton examiners. When each owner's cotton has been weighed and samples drawn, he addresses a request to the board of examiners to classify his lot. This request is made on a form prescribed by the Department of Agriculture. The location of the cotton, number of bales, weight (compressed or uncompressed), and tag numbers are stated in the request. The board, on the basis of the samples submitted, classes the cotton according to

its proper grade. The grade may be one that is tenderable on the exchange contract or one that is not so tenderable. If the cotton is of a non-tenderable 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 of each bale, is issued. From the board of examiners an appeal may be taken to the Cotton Board of the Department of Agriculture, if the owner believes his cotton has been improperly classified.

The owner now has his official certificate of grade from the federal board and his negotiable warehouse receipt from a licensed and bonded warehouse. As noted elsewhere, delivery of the receipt to the buyer effects a transfer of title. He may now present the receipt to the inspection bureau of the exchange to have the weight certified.

The certificate of grade 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 through shrinkage, a condition which must be taken into account, if delivery is made more than a month after the weighing. The owner in this case either may have the lot reweighed or under exchange rules may deliver, making an allowance, however, to the buyer of one-half pound per bale for each month that has elapsed since the last weighing. Inspected and certificated cotton may be transferred from one licensed warehouse to another under the supervision of the Inspection Bureau of the exchange.

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 federal Grain Standards Act was passed in 1916 (the year in which the Cotton Futures Act became operative). Prior to the adoption of the Grain Standards Act, each grain exchange had its own standards of quality. The Act empowers the Secretary of the U.S. Department of Agriculture to prescribe official standard grades for the entire grain trade and, furthermore, to exercise jurisdiction over the inspection and grading of grain. Grades, accordingly, are established under authority of the Act, but only with the full co-operation of the exchange and other agencies in the trade. Not all grain exchanges, however, deal in every established grade of the commodity.

Passage of the Act found the machinery of an efficient inspection and classification system already in existence, with a staff of inspectors and weighers already operating either under state authority or directly under the exchange. This machinery was incorporated as a part of

the federal inspection system by means of a federal licensing device. The actual sampling and grading, accordingly, is still done by state employees or by the exchange staff under federal licenses. In the case of appeals, however, all questions of grades are decided by the federal Department of Agriculture rather than by the authority making the initial inspection.

Grain reaches the terminal markets by rail or water. On arrival, samples of each lot are drawn and the grain is weighed by licensed employees of the warehouse, the exchange, or the state. On the basis of the samples, the grain is classified in accordance with the standards, established according to the federal Act, and certificates are issued. The inspection certificate, showing the grade, and the weight certificate are delivered to the warehouseman, whose receipts record the grade and weight so established. The certificate of grade is good for an indefinite period of time with periodic exchange inspection. Grain in storage, however, is subject to deterioration in *quality*. In case grain deteriorates so that it no longer corresponds to the grade specified in the certificate, a notice is posted on the exchange. The rules of the exchange make it necessary for such grain to be immediately removed from the official warehouse, and it is no longer deliverable on an exchange contract.

The general procedure of inspection and classification of grain and cotton has been separately treated, inasmuch as in each case they are subject, under federal legislation, to the rules of the Department of Agriculture in order to assure growers that their products are classified fairly. This federal supervision does not apply to commodities imported from abroad, such as cocoa, coffee, rubber, silk, etc.

A description of the methods followed in classifying and grading each commodity, not subject to government regulation, would involve much unnecessary repetition, if the commodities were taken up one by one. Instead of treating them separately here, the basic principles by which exchanges are guided in establishing inspection and grading systems will be considered.

Standards in the Rubber Trade. The inspection, grading, and certification of crude rubber were first established by the by-laws of the Rubber Exchange of New York, Inc., on its organization in 1925. In 1933 it was merged with the Commodity Exchange, Inc. Its operations, suspended during the Second World War, were revived in 1947.

Prior to the organization of the Rubber Exchange, an exhaustive investigation was carried on to discover the experience and opinion of the rubber trade as to the determination of deliverable grades and the most satisfactory methods of classifying rubber. As the result of responses to questionnaires and conferences with leaders in the trade and industry,

various specific grades were made tenderable under the exchange contract. The standard and non-standard grades, already developed in the trade, were found to be highly satisfactory. The only problem of the exchange, therefore, was to determine what grades should be tenderable under the exchange contract and to establish methods of inspection, grading, and weighing. This experience closely parallels that in other commodity trades where exchanges have been organized.

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 market, is graded, but on an exchange contract sampling is necessary before acceptance or certification for delivery. Sampling in each commodity presents its own difficulties. In the grain trades a sampling apparatus is employed because of fine differences in quality between different grades. Cotton is sampled by cutting into both sides of a bale and drawing a pound or more; this is necessary 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 otherwise damaged, so that a large part of the bag must be taken as a sample. Rubber is subject to mold and to freezing, and any lot may contain a mixture of ribbings, thus making it difficult to obtain samples that are truly representative. This brief statement will give some idea of the difficulties inherent in the process of proper sampling of specific lots of various commodities before certification for delivery on an exchange contract.

The actual sampling in various trades may be done by one of four methods: (1) by representatives of buyer and seller, acting together in drawing samples; (2) by licensed employees of licensed warehouses; or (3) by inspectors acting under governmental license or license from the exchange; or (4) by the inspection bureau of the exchange.

The first method 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 and accepted by all in the trade as representing goods of a known and definite standard, sampling by private parties strikes at the very root of the desired condition of uniformity. A central authority, lending its reputation and sanction to the process, is lacking. The second method, sampling by employees of a licensed warehouse, is open to the same objections and likely to be attended by disputes as to grading. It is also objectionable because the warehouseman in some trades had a financial interest in the grading process. Since in some grain trades he is permitted to deliver on a warehouse receipt not one *specific* lot, but any lot of a given grade and quantity, his interest lies on the side of grading low (hence

in securing poor samples). If the sampling is done under the third method, by licensees of the exchange, their compensation is derived from fees and no such question occurs.

Consequently, in the first two methods, lack of centralized control makes it possible that uniformity of sampling will be lacking. An objection attendant on the fee system entailed in the third method is a possible tendency on the part of licensed samplers to rush the work (at the expense of careful examination) in order to handle more jobs and earn more fees.

The most satisfactory results are obtained through the fourth method, sampling by an inspection bureau, established by the exchange and directly responsible to its governing board. Uniformity in grading and integrity of the certificates are best assured by this plan.

In respect to wool tops and grease wool, the United States Testing Company, Inc., is designated by the exchange as its agent for these services. The exchange issues its own certificates, based on tests made by that company.

Grading. After 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 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 governmental authority.

The objections to the first of these, grading by licensees, are the same as those mentioned above for sampling by licensees. Nevertheless, in a trade where licensed representatives of both buyer and seller are authorized to inspect jointly and agree upon samples, the license method has proved feasible.

The license system is in operation on the New York Coffee and Sugar Exchange, where sampling, grading, and weighing are all carried on by persons licensed by the exchange. A special committee investigates the qualifications of all applicants and on its favorable report licenses are issued by the Board of Managers. Samples of coffee are drawn by licensed samplers of the exchange. The samples so drawn are inspected by the deliverer and receiver or their qualified representatives. If approved, they are stripped of all identification marks except those of the exchange. The samples are then submitted for grading to a panel of three of the graders licensed by the exchange, who are selected by lot and are not in any way—either directly or indirectly—interested as deliverer, receiver, or representative of the owner. The decision of a majority of the three graders, acting in behalf of both, is final and binding upon the deliverer and receiver, unless an appeal is made. In that event, the sample on which

the appeal is made is submitted to five qualified and licensed graders (or three in the event that five are not available or qualified to act). These graders, selected by lot, must not include those who rendered the earlier decision; a majority decision by them is absolutely final and binding.

In the cocoa and other trades, a similar system of exchange grading and certification is in use.

The second and third methods, grading by an exchange committee or by members of the exchange under license, also present problems. Since exchange members are usually traders, whose business affairs do not permit them to give much time to the performance of exacting work of this sort, uniformity of standards may suffer under such systems.

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

Warehousing. The warehouse, approved by the exchange and bonded by an approved insurance company, stores and preserves the commodity. Its negotiable receipts are collateral security against which banks make loans 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 therefore be done on the owner's capital.

In summarizing the services performed by warehouses in the cotton trade, Alonzo B. Cox, former agricultural economist in the Division of Cotton Marketing of the federal 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 for 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 on 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 co-operatives 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 futures 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.[2]

[2] *Services in Cotton Marketing,* Bulletin No. 1445 (Washington: U. S. Department of Agriculture) pp. 23, 24.

CHAPTER V

Publicity of Prices, Crop and Market Reports, and Other Statistics

Commodity exchanges have been aptly termed clearing centers of information, not only for their respective trades and industries, but for the general public as well. It is important, especially to their members, that the exchanges collect and correlate statistical data pertinent to their related trades. In making public these data bearing on supplies, movements, and withdrawals of the commodity, as well current prices for future deliveries, they perform services of great value to all producers, merchants, and manufacturers. Modern methods of rapid communication link distant markets closely together, especially when there is daily and hourly publication of prevailing prices, as is the case in all exchange markets.

There are no commodities traded in on exchanges the prices of which are not influenced 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, Argentina, and Australia, which normally have surpluses over their own consumption and, consequently, are exporting countries. A short crop in any one producing country does not necessarily mean a high world price, for an increased output in other countries may offset the shortage. The price of wheat futures in Chicago not only represents the outlook for production and consumption in the United States and Canada, but is also the result of the interplay of many forces based on every known factor affecting supply and demand throughout the world. A bumper crop in the Argentine or a prevalence of black rust in the northwestern United States will be reflected in world exchange prices long before the crop comes to market. Damage to the American cotton crop in one producing area is therefore reflected throughout the world in the price paid for every pound of cotton which comes on the world markets.

The United States is an exporter of cotton and grains and normally sells abroad from 40 to 60 per cent of its cotton crop each year and an

average of about 11 per cent of its wheat crop since 1926. In the 1930's, under the price-pegging operations of the federal government, United States exports of cotton and wheat fell drastically from the level of previous years and in some years would have disappeared completely, had not the federal government subsidized wheat exports by as much as 30 cents or more per bushel and exports of cotton by as much as 4 cents per pound—the extent to which federal price supports held domestic prices above world price levels. During and after the Second World War wheat and cotton farmers in the United States again began producing large portions of their crops for world-wide foreign markets and European relief, with exports of wheat rising to about 45 per cent of the crop in 1946.

On the other hand, the United States produces no coffee, tea, cocoa, silk, tin, pepper, or natural rubber. Nor does it produce for its still-growing population sufficient sugar or wool, or an ever increasing number of many other raw materials, essential to the well-being and living standards of our people. Yet we consume more of most of these commodities, even those of which we produce none, than all the rest of the world combined. Nevertheless, with only about 6 per cent of the world's land area and population, we produce annually about 40 per cent of the entire world production of goods and services and consume 70 to 80 per cent of many of the world's basic staple commodities.

Our great productivity—the marvel of the world—and the satisfaction of our great consumptive capacity are in no small degree the result of our organized commodity exchange markets, especially in those major export staples so essential to the welfare of our cotton and wheat farmers and in those necessary, imported articles which we do not produce or produce only in insufficient quantities. It is the delicate and intricate functioning of these exchange markets which make possible the international flow of huge quantities of raw materials from country to country with regularity, stability, and sound credit safeguards. The various services of the exchange play a major part in the efficiency and regularity of our vast international trade in staple commodities, which in 1947 was valued in many billions of dollars.

Since the exchanges are markets for dealing in future deliveries of most international staple commodities, their members and other exchange operators must have accurate, complete, and up-to-the-minute market, price, crop, and other trade information in order to enable them and their customers to discount events months ahead. If commodities grown in widely separated territories or countries were marketed locally, prices in each area would reflect local conditions only and might have no relationship to world-wide supply and demand.

The exchanges in normal times are world markets; accordingly, they

gather, from all over the world, information relating to (1) the past and present production of the commodity, (2) the percentage of the crop which has moved to export points, (3) supplies afloat or in transit to primary and central markets, (4) arrivals and warehouse stocks in primary and central markets, (5) exports from or imports into each country, (6) supplies in the hands of domestic dealers and converters, the total visible domestic and foreign supply, (7) demand, as evidenced by statistics of sales, current and past, collected from foreign and domestic converters, wholesalers, and retailers, and (8) certificated supplies in warehouses available for delivery on futures contracts.

Not only are such statistical data regarding each commodity assembled by the exchanges from every available source, but every exchange maintains the closest touch with prices in all foreign markets abroad and on other exchanges in the United States. Prices prevailing on all futures markets are transmitted by telegraph, teletype, radio, and cable. Not for an instant of its existence is a commodity exchange a market standing by itself. It is a part of a closely related and interconnected world-wide market. Information about the commodities in which they provide facilities for trade and the record of prices which prevail on their floors are also made available to the public by the exchanges usually in daily, monthly, and yearly reports, whereas on the physical markets such data are not made public.

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 being fourfold:

> (1) It makes possible the discounting of the future; that is, 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, that is, 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]

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

In some commodities such statistics, distributed by the exchanges, are the best and most widely used of all sources of information. This is true in the coffee trade, for example. The New York Coffee and Sugar Exchange publishes information regarding growing conditions in Brazil, the movement of coffee by steamers from Brazil to foreign ports, stocks on hand in different primary and central markets, receipts and deliveries daily, weekly, and monthly, prices prevailing in Brazilian and European markets, and similar data with reference to the United States market. The records of the Coffee and Sugar Exchange relating to the movement and supply of the crop are of the utmost value to coffee dealers, roasters, speculators and retailers in this country and abroad.

The Importance of Widespread Publication of Prices. The machinery for reporting prices at which all transactions are made on the exchange floor has been described elsewhere. Through the ticker services, prices prevailing for delivery in every trading month become a matter of public knowledge almost immediately after each trade has been executed. In the evening and morning daily papers throughout the country, summaries of prices paid for each future delivery are published on the financial page, where high, low, and closing quotations are usually given. Prices paid for future deliveries are not only available to the public, but also become a matter of public record in the daily press. No individual interested in a given commodity need be ignorant of prices paid on the exchange for contracts for immediate delivery or for delivery months hence.

In commodities where exchange markets exist, prices of futures contracts serve manufacturers and merchants as a basis for estimating prices they will be required to pay producers or prices they may ask from their customers. The miller who requires wheat in October for flour to be delivered in December bases his price for flour on the prevailing price of December wheat futures. Prices paid to the wheat or cotton producer are based on 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 control of either himself or the exchange. The price which he receives is the best obtainable at the time he chooses to market his crop.

The producer or farmer likewise uses these price quotations as the basis for sales of spot or forward deliveries of the actual commodity to dealers and converters, in addition to his use of the exchange market for hedging purposes. Without the publicity of exchange transactions, the producer, dealer, and converter would have only very limited and often inaccurate reports of prices and volume of transactions on the physical markets.

Contrast this with the situation that exists when there is an inadequate

record or no publication of prices or where reliable prices for future delivery are altogether wanting, as is usually the case on markets which operate without exchanges. It would be claiming too much to hold that the futures exchange is necessary in order that the producer obtain a fair price. If there is sufficient, free, and continuous competition for his product, he will obtain a fair price, whether or not an exchange market exists. Yet the exchange, by assuring a broad, competitive, and continuous market with widespread publicity of all transactions, is the most effective instrument available to producers or converters in search of fair, competitive, and objective prices.

This service of daily publication of prices and volume of all transactions on exchanges takes on major significance when it is recalled that such records and publications are not possible on the cash or physical markets of the same commodities. In these markets, with few exceptions, there is no central meeting place where producers, dealers, brokers, speculators, and converting manufacturers can meet to trade either directly or through their agents. Such trading is done by telephone, telegraph, or cable, either directly between principals or through brokers or agents. Direct trades between, say, a farmer and a dealer or a dealer and a factory are usually kept confidential. In any case, no public record is kept of prices or quantities. Brokers and agents act for their principals and not for their own account, and they are bound not to disclose their principals' business.

Furthermore, there is no agency in the physical markets which at present is organized to collect and publish data regarding transactions on such markets. Undoubtedly, if an attempt were made to establish such an agency, most members of the trade would refuse to co-operate. Producers, merchants, and converters, whether large or small, would prefer that their transactions remain secret, for the understandable reason that they would not want their competitors to know their business. Although it might be possible to develop a system of disclosure of prices and quantities without disclosure of names, most operators would still hesitate to give their consent and co-operation, for trade members all too frequently could fairly accurately determine from the volume of the transactions or other clues who was buying or selling at any given time. This is true especially because the daily volume of turnover in the physical markets, as a rule, is much smaller than on exchange markets, and, if prices and quantities were published, such publication would at times affect this "thin" market very considerably, raising or lowering prices sharply and causing sellers to withdraw at certain times and buyers at other times, thereby making for more erratic and less stable markets.

Some time ago the project of organizing a new exchange market in

an agricultural commodity was under consideration. In order to sound out opinion in the trade and industry, a questionnaire was sent out to producers, merchants, and manufacturers in the field. The preponderance of sentiment on the part of operators in the commodity was adverse to the establishment of futures trading. One dealer returned his questionnaire with "no" inscribed across the face of the document, and in order to discover the reasons for his opposition a member of the group responsible for the questionnaire visited the center of adverse sentiment and interviewed the merchant whose emphatic negative had impressed itself upon him. 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 was more eloquent of the outstanding value of publication of prices by commodity exchanges than any abstract summary could possibly be. The merchant said:

I have many buyers traveling throughout the producing areas to purchase directly from the growers. They pay cash. When they go to a grower and offer him a definite price per pound in 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. 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 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 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 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.[2]

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 person with whom they trade.[3]

Not only does the exchange's record of all prices substantially benefit those engaged in the trade and industry; it also constitutes a valuable permanent record for businessmen, 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."[4]

Sources of Information. The inexperienced speculator, who takes a flyer in some commodity future on a tip or on the basis of random news items he has read, would be astonished at the range of information deemed desirable for a commodity exchange to procure for the benefit of its members who attempt to analyze future market trends scientifically.

Information is gathered by the exchanges from government reports periodically issued on current crop conditions at home and abroad, from numerous private commercial agencies which serve exchanges, and from special correspondents of the exchanges in markets throughout the world, as well as from their own members and from various producers', dealers', and manufacturers' associations operating in the same fields. These associations collect (and redistribute) vital statistical data from their members in regard to past and current prices, inventories, purchases, and sales, but all such data are published only after the fact—weeks after the transactions take place.

Reports Issued. Most exchanges publish a daily report for the benefit of their members. A number of exchanges publish more comprehensive

[2] L. D. H. Weld, *The Marketing of Farm Products* (New York: The Macmillan Company, 1924), pp. 286, 287.

[3] *Services in Cotton Marketing,* Bulletin No. 1445 (Washington: U. S. Dept. of Agriculture), pp. 34, 35.

[4] L. D. H. Weld, *op. cit.,* p. 280.

monthly reports. Nearly all issue yearly publications, ranging in importance from brief, but useful compilations to substantial volumes containing exhaustive statistics of commodities movements and price trends.

Daily Report of the New York Cotton Exchange. The cotton exchanges receive reports from the federal government on weather conditions prevailing throughout the country, the condition of the current crop at stated intervals throughout the growing season, weekly ginnings, shipments, and the like. Reports from the Weather Bureau come into the exchanges 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 exchanges. Official forecasts by the Department of Agriculture for the current crop are issued monthly. Formerly these estimates for each cotton crop began in July, but agitation, provoked by disputes over the accuracy of July forecasts, 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. These reports are issued monthly throughout the winter, the last one in March at the end of the old crop year.

Current information is made available by the New York Cotton Exchange to its members by its daily market report. Receipts of cotton at twenty ports are given day by day for the previous week, with a comparison of receipts for the corresponding day of the previous week and of the previous year, as well as *total* receipts for the previous week. 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 report is a summary of fluctuations in the supply of cotton throughout the country during the week. The visible supply, receipts, and exports are summarized, and stocks in New York and in all ports of the United States are given, including comparisons with the corresponding week of the previous 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[5] report futures contracts at 12:15, 2:00, and 4:00 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 reported prices include those of the spot market in New York and closing prices for futures on the cotton exchange in New York and other trading centers, opening and closing

[5] Prior to suspension of the Liverpool Cotton Exchange by the British Government during the Second World War. To date the reopening of this exchange has not been permitted.

prices in Havre and Bremen,[6] and closing prices in Alexandria and Bombay. Ocean freight rates to the twenty leading cotton markets are recorded, together with demand and cable rates for sterling, francs, marks, and lire, and so on.

The exchange's price record is given for each delivery month, including prices at the three daily calls—high, low, and closing of the day—and the previous day's closing prices. A complete record of all prices on exchange contracts in each delivery month is published. The supply of each grade of cotton, certificated for delivery on futures contracts, is also given.

Pursuant to requirements of the federal Cotton Futures Act for determination of price differences on grades above or below middling, the average differences prevailing currently on ten spot markets of the country for all grades of cotton, deliverable and non-deliverable, are published, together with a notation of the day on which these differences will apply to current deliveries on exchange contracts.

The following quotation from a statement of E. G. Bright, vice-president of the New Orleans Cotton Exchange, before the Joint Committee on the Economic Report (December 1947) indicates the importance of the price-registration function of commodity exchanges:

> At times in the past the futures markets have been closed for a period, as in 1914 at the beginning of the first world war. Cotton sold at six cents and less during the marketing period in the fall and in the following spring sold at more than double that price. During a period when the futures markets were closed, the real value of cotton could not be ascertained and sales varying in value at least one cent per pound took place simultaneously in the same neighborhoods. This deprivation of speculative access to the use of futures markets resulted in great harm to the millions of people engaged in the business of producing, processing, and merchandising of cotton and to a lesser extent to the entire economy.

Daily Market Report of the New York Coffee and Sugar Exchange. The record of prices of futures on the New York Coffee and Sugar Exchange does not differ materially from the record of those on the Cotton Exchange. The world's visible coffee supply, which is computed from figures carefully gathered by representatives of the exchange, is given in considerable detail. Stocks of coffee in the principal European centers and in South America are reported, together with the amount afloat from Brazil to various markets. These figures, bearing on the world supply, are followed by others which detail the movements into, and the stocks on hand in, the United States and the two large coffee-

[6] Prior to suspension of these markets during the Second World War.

distributing centers, New York and New Orleans. A statistical summary of arrivals, deliveries in the United States, and the world's visible supply, month by month, is given in separate tabulations. Prices prevailing on other markets, such as the Santos and Rio exchanges, are also summarized.

In addition to the usual summary of the day's trading, the section of this exchange which is devoted to sugar details stocks of sugar in New York, Havana, and other warehouses, as well as receipts, exports, and summaries of the new and old crop movements, with quotations from other exchange markets in Europe. Weather occupies a place in the sugar market, but is omitted in the coffee market report.

In this connection, the following quotation is of interest, bearing as it does not only on the price-registration function, but also on the advantages of price determination on free markets in contrast to price controls by government:

> During the war, when sugar was under government control, no one had any idea as to the true value of sugar. When decontrol was being debated during the early part of this year, we heard responsible officials of the Department of Agriculture prophesy that a price of 30¢ to 40¢ per pound might result, if sugar were suddenly decontrolled. Today, some seven months later, we see prices of slightly over 5¢ per pound quoted on our Exchange for raw sugar for 1948 delivery. This would translate itself into a price of about 8¢ wholesale for refined sugar instead of 40¢, 20¢, or some other price arrived at by guess. The point is, in a controlled market buyers and sellers have no way of expressing their individual judgment. In a free market, each producer has a good idea of how much he will produce, what it will cost him, and at what price he is willing to sell it. The buyer knows his requirements, because he makes it his business to estimate the probable demand from his customers. Governments that attempt to estimate the demand for a commodity must guess at the financial ability of the probable buyers. In a free market, each of these buyers knows in advance his financial resources and can estimate within a very narrow range just how much he can buy at various price levels. Therefore, when buyers and sellers are permitted to come together in a free market place, they very quickly establish the price of a commodity for the delivery today, next month, or next year.[7]

Crop Statistics in the Grain Trade. The grain exchanges compile and issue reports similar in nature to those which have been described for other exchanges. The information is gathered by the exchanges, operating through their committees on information and statistics, and valuable data are obtained from Broomhall's Agency, an internationally known organization whose lines of information spread over the world.

[7] Remarks of John C. Gardner, president of the New York Coffee and Sugar Exchange, Inc., at a symposium, August 14, 1947, under the auspices of the National Association of Commodity Exchanges and Allied Trades, Inc.

This agency is a large, specialized reporting bureau, which publishes the world-famous *Corn Trade News* and supplies information to subscribers throughout the world. All grain exchanges of the world are subscribers.

Annual Reports. All exchanges publish annual reports similar to operating statements of other business organizations. Some exchanges, in addition, publish statistical annuals which contain a wealth of data on prices, supplies, and crop movements for years past; these constitute valuable historical records. The Chicago Board of Trade issues yearly a bound volume, of 200 or more pages, containing a review of the year and statistical information covering all commodities dealt in on the exchange.

Prompt and Widespread Publication of Prices. A vital field, where the commodity exchange is the *sole* source of information, is the record of all prices and of the volume of all transactions consummated on its floor. This record of the prices prevailing daily is generally made available to all other domestic and foreign exchanges and markets of the same commodity by direct wire and cable; to the public, by radio and ticker services, which carry quotations to offices of commission houses and dealers throughout the country, and by publication in the daily papers. This publicity of exchange transactions serves a most valuable economic purpose.

By affording a basis for arbitrage[8] operations, all the markets of the world on the same commodity are linked closely together. Although prices in one market may occasionally get out of parity with those in other markets, in the long run wheat prices in Chicago, Kansas City, Minneapolis, and the foreign markets will be at a substantial parity; cotton prices at New York, New Orleans, and other world markets will be in alignment; and the same condition will hold true for prices of all other commodities on various domestic and foreign exchanges. Thus, for commodities of world-wide production and consumption there is not a mere local or national market; there is a world market,[9] brought about by close interchange of price quotations and alertness on the part of arbitrageurs to seek a profit by bringing prices back to parity whenever one market is out of parity with others.

Control of Quotations. Different arrangements for disseminating quotations prevail on various exchanges. They are generally promulgated by ticker services and by cable, telegraph, radio, teleregisters, and the daily press; in the customers' room of the exchange commission house

[8] See Chapter XI.

[9] This, of course, is not true where governments under war controls or price-pegging schemes arbitrarily fix the prices of international staples.

members quotations are posted promptly on an electrically operated board.

For years the law has been well established that exchanges have complete control of their own quotations—that is, exchanges may establish rules to be observed in transmitting their quotations as news, and they may also refuse to supply quotations to non-members, if such a step appears desirable.[10] Allowing telegraph and ticker companies to take and sell quotation services to their subscribers has been held by the courts not to amount to publication such as would debar exchanges from exercising discrimination and forbid the furnishing of such services to certain types of organizations. This control of quotations has been of inestimable value in contributing to suppression of bucket shops. By shutting off quotations from any recipient known to be "bucketing orders," exchanges dealt a deathblow to this type of operator. The courts have upheld this right, and commodity exchanges have participated actively in the extirpation of these gambling houses, which pose as legitimate commercial enterprises.

The clauses of the customer's contract with the Western Union Telegraph Company for continuous quotations of the New York Cotton Exchange, reproduced below, are illustrative of the extensive controls maintained by exchanges:

1. That our place of business is and shall be at No. ..... Street, City or Town of ..... State 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, 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, agree-

[10] For the law regarding control of quotations see Chapter XVI.

ments, 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.

4. That the furnishing of said quotations to the undersigned shall be discontinued whenever the Western Union Telegraph Co. 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 exchange markets. Official prices for all active trading months are made public by the Quotations Committees, which also establishes official quotations for inactive months, when no prices are established by trading, and usually gives the "tone" of the market.

Market Letters. Another source of information consists of market letters, issued by dealers, brokers, and commission houses. These letters or bulletins are distributed to their customers to acquaint them with price trends prevailing in the market. They contain current news of developments bearing on the supply of the commodity or on the demand for it and other data and trade information deemed of importance as

affecting prices. The exchange, however, possesses the power to censor all such bulletins sent out by its members. The publication of rumors, insufficiently supported reports, or other misleading matter intended to influence prices, as well as advertising matter which might invite "incompetents to undertake a hazardous enterprise," is discountenanced and disciplinary action may be taken by the exchange against offending members.

Regulation of Consumption. The low price or high price of an article to a major degree influences the demand for it, the one tending to stimulate and the other to retard demand. This is true whether the price is that of wheat or caviar—of cotton or shoes—of spots or futures. But the hourly and daily publication of the prices of futures, reflecting the consensus of trained judgment as to the course of prices months into the future, provides the dealer, producer, or manufacturer operating in a commodity in which futures trading is conducted with a peculiarly sensitive governor. The miller does not have to wait until October to ascertain what he will have to pay for wheat which he will then need. He can anticipate his requirements by exchange operations—and so with the farmer, spinner, tanner, or tire manufacturer.

The regulation of consumption by prices, consequently, is a much more orderly process and one attended with much less uncertainty and anxiety than would otherwise prevail. If cotton prices work so low that it appears that consumption of finished cotton goods will be stimulated, for example, the manufacturer can take advantage of the low prices to assure his requirements by purchases on the exchange for months ahead. It will not do to say that futures quotations are indispensable, but it is not overstating the services rendered by the exchanges to say that *continuous* quotations of futures are a most valuable contribution to our modern industrialized society.

CHAPTER VI

Commodities Adaptable to Futures Trading

Why are some commodities the subject of futures trading on organized exchanges, whereas no such markets have been established for trading in other commodities of equal importance? Why is it that wheat, cotton, coffee, corn, oats, rubber, silk, cocoa, tin, and other commodities are singled out for futures trading on exchange markets, when steel, brass, tea, coal, petroleum, lumber, and many other basic materials are not the subject of exchange trading? The reason cannot be found in the relative importance or value of the commodity in question. The money value of the annual production of steel far exceeds that of our annual imports of cocoa beans, and tea is in more extensive use throughout the world than coffee. In examining the reasons why some commodities have futures markets and others do not, we must first center attention on the nature of the commodity itself.

Units Must Be Homogeneous. It is a condition precedent for all futures trading that units of the commodity be interchangeable. The speculator or the hedger does not buy or sell on an exchange contract any specific or identified grade or specific lot of a commodity, but he buys or sells according to established grades and descriptions. One ton of Grade A rubber is the same as another of the same grade. It is homogeneous. Hence a commodity, the units of which are not readily homogeneous is an impossible one for futures trading.

Looking at those commodities in which futures trading is conducted, it will be found that they all answer this requirement. Some homogeneous commodities are also fungible goods. Wheat is an example of a fungible commodity. A grain elevator may store 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 of the same grade he receives. The stocks of various owners can be mixed and stored in bulk, and purchases or sales can be made, with no thought of the specific identity of such wheat. On the other hand, cotton, silk, and

rubber are examples of commodities that are not fungible, although they are homogeneous. Although specific lots of cotton and rubber are not mixed in storage, they are capable of being graded so that one lot of a given officially certified grade is just as acceptable to a buyer as any other lot of that grade.

The Commodity Must Be Susceptible of Standardization of Grades. 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 all units of which 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 cleanness, and in color. Rubber in 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, and there may be variations in size, tenacity, and 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 a definite number of well-defined, uniform grades, readily identified by the trade throughout the world, the units of each grade become homogeneous, and such grades are suitable for futures trading.

Supply and Demand Must Be Large. The necessity of a broad market for futures trading has been emphasized elsewhere. Even if every other element necessary for futures trading were present, alligator pears would not be a commodity for which a satisfactory futures market could be maintained. The supply, compared with that of staple commodities, is small, and so is the demand. Consequently, speculators with large financial resources might readily obtain control of an alligator pear futures market. It would soon cease to be a natural and free market and would become merely a battleground for contending speculative factions.

Some authorities hold that the commodity, to be eligible for futures trading must be in world-wide demand. As a matter of fact, most commodities which are the subject of the futures trading enjoy a world-wide demand, although in widely different degrees. It is questionable, however, if this characteristic is indispensable to exchange trading. The minimum requirement in this respect may best be summarized by stating that the supply and demand should be large enough to assure that the futures exchange will function as a continuous and orderly market

for the interplay of normal factors of supply and demand 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 also be substantially free and unhampered by artificial restraint, whether by governmental or private agencies. An impossible condition would exist, if organized futures trading were attempted in a market where the supply or price of the commodity is under *effective* control and could be increased or diminished at the will of any government, group, cartel, corporation, or individual. The market would then function, not as an efficient price-making machine, but merely as an adjunct to the arbitrary will of the controller of the supply or price of the commodity.

The term "effective control" has been used advisedly. The Rubber Exchange of New York began operating in 1925 at a time when the British (Stevenson) plan for restricting production of rubber in British Colonies, with various price and export control features, had been in effect for three years. The purpose of the plan was to control the price through periodically increasing or reducing production and the exportable supply by government edict. Nevertheless, the Rubber Exchange functioned effectively from the time of its organization until forced to suspend during the Second World War. The reason for the success of the exchange was that the attempted control was not effective. Had the price of rubber been brought under complete or practical control, every user of rubber, whether manufacturer or consumer, would have been compelled to accept dictated prices. As was expected, however, temporarily high prices produced the inevitable economic effect of increasing the supply from other sources; consequently, control by the British government was only partially effective and the scheme failed ignominiously in 1928, but was revived again as an international governmental cartel in the 1930's.

The same situation has existed in coffee under various valorization schemes of the Brazilian government which have operated more or less continuously since the beginning of the twentieth century—without, however, effective control. In fact, other governmental control schemes in wheat, sugar, cotton, corn, teas, silk, and the like were disastrous failures and occasioned heavy losses to the controlling governments and their taxpayers. Similar schemes have been attempted from time to time, especially in the years between the two world wars, usually without success except in the short term. The long term results have generally been the same as in coffee and rubber. However, state trading—such as now prevails in cotton, wheat, and other commodities in England, in cocoa in British West Africa and Brazil, in hides, wheat, and other com-

modities in the Argentine, and in wheat in Canada—poses much more difficult problems and, if continued permanently and expanded to cover other major areas of supply or demand, may seriously upset exchange trading in such commodities.

The testimony of George C. Schutte, president of the New York Cocoa Exchange, Inc., before the Joint Congressional Committee on the Economic Report, December 4, 1947, illustrates the disruptive effect and sinister implications involved in the current widespread development of state trading, partly as a result of war controls and partly because of the acceptance of state socialism in many countries. This statement relates to the state trading operations in cocoa beans:

> The public interest requires that the nation's great public market places be free at all times of any influences that can possibly interfere with the establishment of prices by the forces of supply and demand. Our public market places exist to perform a vital economic function for the producers, importers, processors, and consumers of our basic commodities. They perform this vital economic function efficiently in direct proportion to their breadth and liquidity. They are, above all, markets for hedging purposes, and all the sound and proper factors which contribute to the efficient placing and removing of a hedge must always be nurtured and protected. They must never be discouraged, and the liquidity of the market place must never be tampered with.
>
> Cocoa, for the major part, comes from West Africa and Brazil and is usually sold on two- to three-month shipping-period spreads; allowing for transportation time, it is not unusual for cocoa to arrive in this country three to four months after the time of original purchase. This makes the exchange extremely important in two respects—one from the standpoint of protection to the importer, and the other in that it provides a medium for assuring supplies on these shores. Under the circumstances, it does not tax the imagination to estimate the effect of two monopolistic sellers controlling 78 per cent of our requirements (British 50 per cent—Brazil 28 per cent).
>
> The world cocoa market was brought to the United States from London, Amsterdam, Liverpool, and Hamburg by the establishment of the New York Cocoa Exchange in 1925. Formerly a large part of African cocoa was shipped to these places for transshipment to New York.
>
> World monopolies now threaten the primacy of the New York market. The Exchange must be kept as free as possible from any interference in order to fight the battle against monopolies, and the Exchange must not be throttled by domestic peace-time controls. Government controls in England, Brazil, and Santo Domingo could, in time, destroy free trading and dictate the fate of the American chocolate industry, which consumes over 40 per cent of the world's production of cocoa beans.

The statement below, by H. G. L. Strange, director of research for the Searle Grain Co., Ltd., Winnipeg, Canada, before the Joint Congressional Committee on the Economic Report (December 1947) is a

startling analysis of the way in which paternalistic legislation insidiously feeds on itself and develops gradually from the relief measures demanded by short-sighted co-operatives into full-fledged totalitarian controls and state trading, which destroy free markets and, if extended, will inevitably lead to complete socialization or communization of the entire economy. The Canadian experience should be a grave warning to the American farmers who have already forced the United States far down the road to state trading, which has destroyed free agriculture in many nations.

In 1929 our Canadian wheat pools co-operatives suffered a loss of 23 million dollars which they owed to the banks and could not pay. They lost this money because they had adopted a policy of marketing their wheat straight to the millers of the world without using the facilities of the Winnipeg open "futures" market. They did not hedge their wheat. Fearing political and economic repercussions, if the pools went bankrupt, their losses were guaranteed to the banks by the Provincial and Dominion governments of Canada. But the Dominion appointed an administrator over their affairs to dispose gradually of their unhedged unsold wheat, using the full facilities of the futures market to sell the wheat. . . .

From such a small beginning started the Canadian Wheat Board, which functioned primarily as an agency to implement a guaranteed moderate floor price for wheat—the wheat, however, being sold through the futures market. This went along quietly until September 27, 1943, when the Government decided that wheat was a munition of war. . . . The Government then closed the Winnipeg wheat futures market, with the full expectation that it would be reopened as soon as the war was over. The market has remained closed to this day, however, and is still closed. From 1943, therefore, the sole marketing agency for all Canadian wheat has been the Government itself, through its Wheat Board. Since 1943, Canadian wheat has become a complete state monopoly.

Canada normally has to sell abroad 80 per cent of an average crop of around 400 million bushels a year. For the crop year, 1943–44, the Government set the price of wheat to Canadian farmers at a considerably lower figure than the price reflected by the Chicago "futures" market. For that year our farmers received 136 million dollars less than they would have received had they enjoyed the same prices that American farmers were paid through the Chicago and other open "futures" markets. For the year, 1944–45, our farmers received 147 million dollars less, and for the year, 1945–46, they received 126 million dollars less than American farmers received. Since the "futures" market was closed in 1943, the Government alone has had to sell year by year all the Canadian wheat crop. The Government became somewhat frightened, apparently, at the possibility of unsold surpluses. So in July, 1946, the Canadian government accepted an invitation from the British government to engage in a bilateral wheat agreement. The terms were that Canada would sell to Britain 160 million bushels for two years at $1.55 a bushel, and 140 million bushels a

year for another two years at a minimum price of $1.25 for the third year and $1.00 for the fourth, the actual prices for the third and fourth years to be arranged later. The actual price for the third year was recently agreed upon at $2 a bushel. Unless wheat prices fall drastically by August 1 next—as does not seem likely—then this two-dollar price will further increase our farmers' losses.

The Canadian Minister of Agriculture it seems, was advised by leaders of certain Canadian farm organizations that the price of wheat was likely, after 1946, to fall below the $1.55 price. As we all know, prices rose steadily after August 1, 1946, the start of the agreement. The Canadian government and their advisers guessed wrong.

The Government announced some time ago that our prairie farmers had lost 123 million dollars (equal to 77 cents a bushel) during the first year of the agreement, as compared with the much higher price at which Canadian wheat had actually been sold by the Wheat Board to some sixty-five countries of the world other than Britain. . . . In spite of the fact that Britain paid $1.55 for the wheat she bought, the Board paid the farmers only $1.35, holding back 20 cents a bushel in case of possible future losses. . . . The Canadian government seized on this comparatively low price of $1.55 that Britain was paying to oblige our farmers to sell wheat, for Canadian consumption as flour and bread, to 12 million Canadian people also at $1.55. The loss to our Canadian farmers on wheat for domestic consumption—approximately 70 million bushels per year—came to an additional 77 million dollars, making the total loss for the first year of the agreement 200 million dollars. I have calculated that if anything like present prices of wheat, as set by the Canadian Wheat Board or as registered by the Chicago open market, prevail until December 31, 1947, the total loss to our prairie wheat growers will amount to 419 million dollars, or about $1,600 on the average to each farmer. The losses are going on today at the rate of around $1.90 a bushel. . . .

A few weeks ago, Mr. J. Hume Lee, a farmer, who has a farm at Gretna, Manitoba, and an adjoining farm immediately across the border line at Neche, North Dakota, informed me that last year he sowed his adjoining farms at Gretna and Neche with Thatcher wheat and O.A.C. 21 barley. He harvested both crops together, with the same implements. He sold his wheat at the American elevator for $2.56 a bushel and at the Canadian elevator for $1.20½. He sold his barley at the American elevator for $2.10 and at the Canadian elevator for 85½ cents. Since then, the quotations for wheat on November 19 at these same elevators were $2.94 for wheat at the American elevator and the same price as formerly—$1.20½—at the Canadian elevator. It is to be noted that, while Britain is buying wheat from Canada under government agreement at $1.55, she is paying for American wheat—and has been paying all these years—the much higher price as reflected by the Chicago futures market. . . .

One reason given by the government for taking over complete control of the whole wheat industry was, as they put it, to prevent speculation in wheat and to prevent speculators from making profits at the expense of the farmers. The fact is, however, that those who signed the agreement for Canada engaged in the greatest wheat speculation of all time. They actually sold "short" 600

million bushels of unproduced wheat over a term of four years for prices they could not foresee. They sold short, not with their own money nor with the government's money, but with the future income of our prairie farmers. These good people forgot, or did not realize, that speculation has no real effect on the price of wheat, either up or down. They forgot also that, because wheat in Canada is harvested and a good part of it delivered to market within 90 days and because the millers of the world only buy their supplies in a steady daily stream throughout the year, wheat cannot be marketed without the aid of speculators, for whoever buys wheat in the fall—so that the farmer can be paid for it—and holds that wheat for months until millers require it later, is a speculator. When the government buys and holds the wheat, therefore, as it is doing in Canada today, then the government, hence all the taxpayers, become speculators. . . .

It is to a great extent because the United States has enjoyed an open futures market, with its reflected high prices to producers, that the United States last year increased wheat acreage. It is because of the government-set price, of necessity a low price to producers, that Canada last year, in spite of the world's great hunger, actually reduced its wheat acreage, for there was no incentive to Canadian farmers to increase it. Since the government closed the futures market in Canada in 1943, our farmers have received much less for their wheat and coarse grains than they should have done. This, I am convinced, is no accident. It must, I am convinced, almost always happen under government monopoly. I confidently make the prediction that, if the "futures" markets in the United States were to be closed, or even were they to be unduly hampered by unnecessary governmental regulation, much the same great losses that have been incurred by our Canadian wheat producers would most certainly fall upon your American grain producers. . . .

It will have been noticed that the present absolutely complete state control over Canadian farmers and over the Canadian wheat industry all actually started in a very small and mild way in the year, 1930, but that it has gone along with a number of quiet, successive, gradual steps, until we have arrived today at complete state monopoly. This illustrates, I suggest, how insidiously government control, little by little, creeps up on the people once it is permitted to start. . . . I venture to recommend to our good friend the United States not to take that first step of control over your wheat industry, for, if it is taken, it will inevitably lead to still further steps until United States farmers end up in the same bad position in which our Canadian farmers find themselves.

During the course of its sixty years of activity, no less than eighteen royal commissions have thoroughly investigated the Winnipeg futures market. Not one of them ever recommended that the market be closed; not one even recommended any curtailment or hampering of its operations. These commissions decided that the futures market was in the interest of producers and that the market performed important services to both producers and consumers. . . . Today, in Canada, our farmers have unwittingly become merely humble servants of the state. The state is their master. Thousands of us in Canada look longingly to the United States, where farmers still enjoy the liberty and freedom

fought for and won by their ancestors against kings and governments. Many of us in Canada today believe fervently that the United States is an oasis of liberty in a gradually extending world desert of human servitude.

It was not to have their every action policed and dictated by bureaucrats, with a constant fear of fine and imprisonment for breaking minor regulations, that Canadian farmers made very great sacrifices in order to assist in winning two great wars for human freedom. We in Canada are hoping, therefore, that some day we may again be blessed with that same individual liberty and freedom which is still fortunately enjoyed and cherished by our brother farmers in the United States.

Another illustration of the effects of state trading in basic staple commodities after World War II is found in Argentina. That country's government likewise created a state monopoly in the sale of wheat, hides and skins, and other products for export. The state bought at fixed prices from the producers, who were forced to accept such arbitrary prices for all exports, and sold these commodities at much higher prices on foreign markets. Whereas the farmer in the United States during much of this period obtained on world markets $3.00 and higher for wheat, the Canadian farmer received only about one half as much, while the same importing countries were paying to the Argentine government the equivalent of $5.00 or more per bushel for wheat. The free markets for wheat maintained by the grain exchanges of the United States assured the American farmer of a market price based on world supply and demand, but the Canadian farmer was forced to subsidize British and Canadian consumers and the Argentine farmer to subsidize the state monopolies of his government.

Futures markets are as frequently located in the consuming centers as in the producing or distributing centers. Exchanges in basic international staples, especially those which the United States imports in large quantities, are vitally important to the nation's economy. Although no coffee, cocoa, natural rubber, or pepper are produced in the United States, nevertheless the principal and largest futures markets for these commodities are located in New York City. The licensed warehouses in which many of these commodities are stored are located in the United States. Because merchants find it profitable to import these commodities and to store them in the licensed warehouses and hedge them in the futures markets, large stocks of these imported commodities have from time to time been accumulated in the United States for normal consumption purposes. Stockpiling will become more and more important, as we approach the exhaustion of many essential materials and are forced to import them from abroad. This point is rapidly approaching in iron ore, copper, and other materials.

Supply and Demand Must Be Uncertain. Uncertainty of supply and demand is prerequisite for a commodity to be the subject of futures trading. If supply and demand are both certain, prices are capable of ready adjustment without the intervention of any organized market machinery. Again, if either of these factors is certain and the other uncertain, although the problem of price adjustment is more difficult, no elaborate market machinery is required to bring it about, nor is there sufficient uncertainty to engage the attention of the large body of risk-bearing speculators essential to a successful futures market. When supply and demand are large, and both uncertain and subject to wide fluctuations from season to season or from year to year, a condition exists where the relationship between the forces of supply and demand on free markets is constantly changing. This interplay of uncertain economic forces produces the constant fluctuations in price which must exist in any successful futures market.

No one would call United States Government Bonds or Atchison, Topeka, and Santa Fe General 4s, or United States Steel Preferred speculative footballs. Yet the prices of these gilt-edged securities fluctuate from day to day and week to week and over the years. The upward or downward price changes may assume large proportions. Constantly uncertain and shifting demand and changing market supply operate to make for an irregular but constant oscillation in prices. It is a similar shifting demand, coupled with the fact that supplies and demand can never be estimated with exactness, that causes oscillations in the prices of all commodities which are adaptable to exchange trading.

The Commodity Must Not Be Perishable. The futures contract may call for a delivery of units of the commodity many months into the future. Consequently, the commodity must be capable of being stored at all times and for considerable periods to meet requirements of the market in times of scarcity. A commodity subject to rapid deterioration does not meet this requirement. The trader who makes a contract to deliver the commodity months after date of sale, having the commodity in store at the time he makes the contract or relying upon the possibility that he can buy at a price from those who do have, must have assurance that the commodity will remain substantially unchanged in quality until delivery date. The commodity should lend itself to the warehouse's economic function of providing time utility. The surplus supply of the present must be capable of becoming the essential supply of the future.

Commodities in Which Exchange Trading Is Conducted. The cereal grains—wheat, corn, oats, rye, and barley—are all susceptible of exchange trading; cotton and wool are the principal textile commodities traded

in on futures markets. Silk was the subject of futures trading on the Yokohama Bourse for many years. Futures trading in silk was inaugurated in New York in 1928, and continued until the Second World War. Sugar and coffee are dealt in on the New York Coffee and Sugar Exchange, cocoa on the New York Cocoa Exchange, and pork products 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 since 1925.[1] Hides have had an exchange in New York City since 1929. The Commodity Exchange, Inc., provided a market for trading in tin, zinc, and lead. Silver and copper were also included, but since 1934 trading in silver has been suspended because of a prohibitive federal "transactions" tax. In contrast with this group of commodities (which is not all-inclusive), however, there are many more commodities which obviously do not lend themselves readily to futures trading.

Commodities Not Adaptable to Futures Trading. Uncanned fruits and vegetables do not lend themselves to futures trading. We need go no further than to note the fact of their perishability. Shoes are an example of a manufactured commodity, the demand for which may vary, but the supply of which is capable of close co-ordination with demand.

Any product the value of which is influenced by changes in style is obviously unfitted for futures trading. The demand would be as capricious in this case as the supply is artificial in the case of a commodity of a monopolistic or semi-monopolistic nature or of one under effective monopoly control. 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 is now in the United States. Furthermore, it is controlled principally by two producers. Sulphur prices, consequently, do not fluctuate as frequently or as widely as other commodities, for the producers can exercise control over supply and fairly well regulate it in relation to anticipated demand.

Since coffee and cocoa are both the subject of successful futures trading, why is tea 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 individual taste as well. The human factor enters into tea classification to such an extent as to make it a difficult subject for futures trading.

Consideration of the nature of a commodity, and of the breadth or narrowness of its supply or the demand for it, will explain why futures

[1] Except for the years of suspension during the Second World War.

trading is not carried on and is not likely to be attempted in many products. Some will obviously be debarred because of perishability; others are known to have a comparatively narrow market. Some, like potash, will fall in the same category as sulphur—unadaptable because of restricted sources of supply, as well as because of a comparatively thin market.

Manufactured articles are capable of more ready adjustment to market demand than is the case with raw materials, partly because of the relatively small number of producers in each manufacturing industry. Of more importance is the fact that, in proportion as the art of the manufacturer contributes to the form, shape, style, color, and make-up of the finished article, individual units of each will vary widely. The element of homogeneity is lost, and buyers, necessarily making their purchases only after inspection, would not be aided by a market whose contract could not possibly reflect the manifold differences in design, style, and quality found in such articles as women's shoes or hats.

It is sometimes stated categorically, but wrongly, that no manufactured product is adapted to futures trading. Nevertheless a line can be drawn between articles which pass through an elementary and uniform process of manufacture to prepare them for the wholesale market and those which pass through more advanced and less uniform 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 homogeneous and capable of standardization through grading.

Commodities Which Might Be Adaptable to Futures Trading. The foregoing review of reasons which make some commodities unsuitable for futures trading leaves one question unanswered. What of iron, tobacco, petroleum, jute, coal, and similar commodities which are durable, possess uniformity, are in world-wide demand, and yet are not dealt in on futures markets at all, or, if such trading is organized, its volume is so strictly limited that the attempt to create a futures market is totally unsuccessful? Are any of these commodities adaptable to futures trading, and, if so, what is the reason for the absence of exchange markets?

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

and inquire further into their possibilities as subjects of futures markets.

The Metals. The London Metal Exchange was for many years a leading factor in futures trading in the metals. In fact, London's long 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 there was conducted in the four principal non-ferrous metals—copper, tin, lead, and zinc. Instead of having separate pits or rings and trading in the four metals simultaneously, they are taken up one by one for short periods during each day.

These four metals, then, are not only adaptable to futures markets but for years have been the subject of active trading. The organization of the National Metal Exchange in New York in 1928 was an effort to revive and maintain active interest in metal futures markets in this country. As the usefulness of the market increased, it was expected that markets for other non-ferrous metals would develop. Trading in lead and zinc futures was started on the Commodity Exchange, Inc. in 1934, but the Second World War disrupted the sources of these commodities and closed their markets. They have not yet been reopened.

Iron. In Great Britain, dealing in iron warrants preceded modern futures trading. Scottish ironmasters, to keep their furnaces in full blast, often manufactured iron for stock during periods of dullness in the industry. This process naturally involved substantial finance, which was accomplished by borrowing against the iron in store. As the practice developed, central storehouses came into being, which issued their own warrants or warehouse receipts. These warrants served as highly acceptable banking collateral. Dealing in them had much of the aspect of modern futures trading. The market, however, was not generally serviceable to the distributing and converting trades, although the warrants were valuable for financing purposes. There was little or no recourse to the market for hedging purposes.

The growth in recent years of integration in the iron and steel industry in the United States—mergers which own mines, iron furnaces, rolling mills, and converting mills, devoted to specialized forms of steel manufacture, such as rails and plates—has made a futures market for hedging purposes unnecessary in iron and in steel products. Pig iron, however, is subject to wide fluctuations in price, and the risks incident to these price changes remain major hazards to the users of pig iron in manufacture. A futures market may in time be developed.

Other Commodities. Naturally there are many commodities which do not now have futures markets, but may in due time develop them. In the evolution of every commodity market the problems of grading assume greater and greater importance, changing conditions in the industry must

be carefully considered, and there is always a considerable degree of inertia or antagonism to be overcome. Some of these commodities in which futures markets would be of benefit to the trades and related industries include petroleum, jute (and its manufactured product, burlap), rice, wood pulp, tobacco, scrap iron, sisal, and hemp.

The constant and substantial improvements in the field of refrigeration, both for storage and transportation purposes, are greatly expanding the possibilities of exchange trading in what otherwise would be unsuitable commodities because of their perishability. Futures trading is already organized in butter, eggs, lard, and hides, all of which require refrigeration to make them adaptable to futures trading. Furthermore, the uniformity of quality, volume of production, and other conditions in the field of canned goods open up increasing opportunities for development of exchange trading in fruits, vegetables, fish, and meats. It is possible that futures markets will evolve as instruments of price protection in many of these fields where they have not hitherto been known.

As an illustration of the possibilities of refrigeration, the following résumé of an operation by the Commodity Exchange, which was undertaken to test the value of refrigeration of hides, is highly instructive, as well as interesting.

When the hide futures market was established in 1929, it was generally accepted in the hide trade and the tanning industry that green salted hides could not be stored in refrigerated warehouses beyond six months without the risk of deterioration. The chemist for the Tanners Council of America, however, thought differently. He contended that, if hides were properly refrigerated, they could be stored for at least two years without deterioration.

The Commodity Exchange, accordingly, purchased a quantity of hides and stored them in approved refrigerated warehouses. One year later 2,000 of these hides were taken out of the warehouse and distributed for tanning among four of the leading tanners in the country. The resultant leather proved to be a perfect product—as good as leather tanned from current production. After the hides had been in warehouse for two years, another lot of 2,000 was taken out and distributed for tanning among the same tanners. The resulting tanned leather was equal in quality to leather tanned from hides which had been warehoused for only three months. As a consequence, it is now generally accepted in the hide trade and in the tanning industry that hides can be refrigerated for at least two years without deterioration. The Commodity Exchange, of course, practicing what its members preach, hedged. The leather, which was the product of these hedged hides, was sold at various times over three years and the hedges

were closed out proportionately at the same time. The entire operation, because of hedge protection, was easily financed and conducted *without any loss* or expense to the Exchange.

Wool. The value of the world's wool crop approximates that of cotton. The chief difficulty which for years was considered as the major obstacle to futures trading in wool was the problem of standard 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 "fleece" wools, raised east of the Mississippi River; and four "territory" wools, raised in the trans-Mississippi states. Considerable study was given to the problem of wool classification and standard grading. The work accomplished by the United States Department of Agriculture indicated that this was a less formidable obstacle to futures trading in wool than it had formerly appeared to be.

Wool was for years the one important textile trade where producers, dealers, and converters in the United States remained without the benefits of futures trading, although active futures markets were operating in France and Belgium. Fluctuations in the price of domestic and foreign wools had been sharp and extensive, and under such conditions operators in the trade were forced to depend on their acumen alone. They had perforce to carry on their business in large part as speculators. Yet wool was in most respects admirably adapted to futures trading. The wide fluctuations in its price brought about by changing demand and supply—varying because of droughts, disease, and a competing demand for sheep as food—unite with the elements of world-wide use, homogeneity, and durability to make it eligible. Finally, trading in wool tops futures was organized as a part of the New York Cotton Exchange in 1931, and in 1941 trading was inaugurated in grease wool.

Petroleum. Few industries have passed through such frequent periods of feast and famine as the petroleum industry.[2]

The prosperity in the petroleum industry generated in the First World War was terminated in 1921, and from then until the Second World War the market problem was largely a struggle against oversupply, with new areas opening and at frequent intervals pouring flush production on the market at distress prices. The development of large production in California, coupled with cheap transportation through the Panama Canal,

[2] In the early development of the petroleum industry in the eastern part of the United States, a futures market for crude oil was organized and operated for some years with active trading at Oil City, Pa.

served to unsettle the markets in 1925. After a brief recovery, the oil markets again became demoralized, as the flush production from the Seminole field poured forth in 1926–27.

Co-operation and self-regulation within the industry arose from necessity in an effort to prevent waste of natural resources through maintenance of a balance between production and demand. This effort was followed by official regulation of production by individual states and, in 1933, by federal restrictions under the short-lived National Industrial Recovery Act, which was followed by federal legislation in support of state regulation of production until the Second World War, when demand for war purposes shifted the emphasis from oversupply to maximum production. In 1940–48, as in 1914–1920, there developed in the United States a substantial petroleum shortage, which appears likely to necessitate increasing imports over the coming years.

It would appear that the petroleum industry might benefit greatly from hedging facilities. When overproduction exists, oil goes into storage. When shortages exist, imports and storage become necessary. Stored oil, however, represents locked-up capital, and storage is an expensive process.

It is necessary to note the manner in which crude oil is marketed. The producer receives a price which reflects generally the condition of supply and demand. Price schedules are established in the various oil fields, and these move upward or downward in response to competition and in accordance with changes in the volume of consumption and production. Similarly, price schedules for refined products are established by the refiners.

If conditions in the industry were such that prices quoted in the same territory differed to an appreciable extent, the usefulness of a futures market would be more apparent. As it is, the keen competition in the industry causes prices of different refiners in the same territory to move upward and downward with considerable uniformity. The development of the Big Inch and other pipe lines across the continent during the Second World War should stimulate the possibilities of futures trading in petroleum. Under present conditions, petroleum may be classed as a commodity adaptable to futures trading, with the marketing problem and state or federal conservation regulations the principal difficulties in the way of the efficient working of a successful futures market.

Coal. Both the anthracite and bituminous branches of the coal industry have also had their ups and downs over the years, with the downs uncomfortably prevalent. Competition from fuel oil has been felt increasingly in recent years, and the country's productive capacity for bituminous coal is far in excess of its present needs. Largely as a consequence, between 1933 and 1947 coal has not had a free market, but has

been controlled by the federal government under the rigid price-fixing devices established by the National Industrial Recovery Act, the subsequent regulations of the National Coal Control Act, and emergency controls during the Second World War. It became a free commodity for the first time in fourteen years on July 1, 1947, with the expiration of war controls.

In coal, difficulties exist in the relatively high storage costs as compared with price and 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 that coal can be scientifically graded, as is most likely, it possesses durability, a demand which fluctuates to some extent with the length and mildness of seasons and to some extent with the business cycle, and a supply which may be estimated, but is fairly uncertain. The principal problem in connection with futures trading in coal, as in petroleum to a much less degree, lies in the market, which is substantially limited to arbitrary zones by freight rates that are relatively heavy in proportion to the price of coal. Consequently there is no such thing at present as a national or world coal market. Furthermore, the ability and willingness of coal producers to contract for industrial deliveries far into the future in large volume at negotiated prices make the need of a hedging market appear less apparent than it really is.

Conclusions. First, the qualities of uniformity, imperishability, and uncertainty of demand and supply must be inherent in a commodity or connected with its use, if it is to lend itself to exchange trading. Second, the conditions under which it is marketed are important.

It is evident also that adaptability of the commodity and of the market must coexist before futures trading can be developed successfully. A commodity which may be scientifically graded and the price of which is subject to relatively wide and frequent fluctuations is admirably adapted to futures trading. Unless its market is restricted or under close and effective control, in the course of time trading in futures may develop. Sharply and constantly fluctuating prices may give rise to such heavy speculative risks that an exchange will be a natural evolution to bring such risks under control.

CHAPTER VII

The Futures or Exchange Contract

A glance at the financial page of any newspaper will reveal a section devoted to daily transactions in the commodity markets, as well as those of the various stock exchanges of the country. Prices are quoted, with summaries of the day's fluctuations in wheat, corn, rubber, sugar, cotton, coffee, hides, cocoa, and many other staple commodities. Opening, high, low, and closing prices are given for all these commodities, not only for immediate or spot delivery in the current month, but also for deliveries in various future months over the ensuing year or more.

Physical (Cash or Spot) Markets and Futures Markets. Unless one is an observant reader, he will be decidedly confused, for there will appear to be not one market, but two or more markets for each commodity in each trading center. Part of this confusion is due to the various trade names for these markets. In each commodity one reads of the actual, physical, cash, or spot market on the one hand and of paper, futures, contract, and exchange markets on the other. Careful reading discloses that there are, in fact, two markets for some commodities and only one for others.

For some commodities—those which have no commodity exchange—as is the case in petroleum, coal, burlap, tea, many metals, and a large number of miscellaneous staples—there is only one market in each trading center. This single market is aptly called the physical market, because it deals in the actual or physical article; it is also called the spot market, because it deals in contracts for the immediate delivery on spot of the physical merchandise; and it is called the cash market, because its contracts usually call for payment of the full contract price in cash on delivery. The best term for this market, however, is the *physical* market, for it not only deals in spot lots ready for immediate delivery, but also trades in contracts for *forward* deliveries of the commodity; moreover, though it does deal in contracts of sale which call for cash on delivery, its con-

tracts also frequently provide for payment on credit terms calling for payment 30, 60, or 90 days after delivery.

In addition to the physical market, there is for many commodities a second market, variously called the exchange or contract or paper or futures market. Here again, there is one truly descriptive name—the *exchange* market (or, if one prefers, the *futures* market, as it is more commonly, but less appropriately called). To call it the contract market implies that the physical market does not deal in contracts, while in fact it does. To call it the paper market implies that in the exchange market alone are contracts made which are settled by offsetting contracts and payment of price differences, whereas in fact a substantial portion of all physical market contracts are so settled without actual delivery of the commodity. To call the exchange market the futures market (as is the common practice) is to imply that the physical market does not deal in contracts for forward delivery, when in fact the great majority of the contracts of the physical market call for delivery in future months. Consequently it is more appropriate, more realistic, and less conducive to misunderstanding to speak of the two commodity markets as the *physical* and the *exchange* markets.

It should be made clear, however, that these two, the physical and the exchange markets, though distinctly separate and independent and performing different functions, are in effect but one market with two separate compartments or divisions—for those commodities which have the benefit of an exchange. One, the exchange market, is a later development, as an auxiliary to the physical market, organized to perform new services and vital economic functions which the physical market is not able to perform. It should be borne in mind, however, that the physical market deals in contracts for both spot and forward deliveries, though the majority of its trading is for forward delivery, whereas the exchange market properly deals only in contracts for future delivery of the commodity. Only an extremely small portion of the exchange contracts, however, are ever consummated by delivery, and the balance are settled by offsetting contracts and payment of cash differences; on the other hand, a great majority of the physical market contracts are consummated by delivery and relatively only a few (as compared with the exchange contracts) are settled by payment of cash differences.

The fundamental purpose of traders in the *physical* markets is *to make or take actual delivery* of specific grades of the physical commodity when the contracts mature to delivery date. Settlement of offsetting contracts develops only as a common-sense practice to avoid unnecessary, costly, and illogical deliveries and counter deliveries. On the other hand, the fundamental purpose of the traders in *exchange* contracts is primarily

not to make or take delivery, but to cancel out every purchase by an offsetting sale (and vice versa), thereby avoiding all deliveries and settling all differences by cash payments. While the buyer or seller on the exchange may, if he so chooses, take or make delivery on exchange contracts, he will usually offset them, for he primarily uses the exchange contract as an insurance device or for speculation; in either case, he wants neither to make delivery nor to take delivery, but desires to settle all contracts by cash payments.

To understand this somewhat confusing picture of the commodity markets, it should be recalled from our earlier discussions that the commodity exchange was a later development in the commodity markets. Before the exchanges were conceived, the physical markets had already been organized, with standardized grades and various uniform contracts for various specific grades and various circumstances. Traders on such markets generally contemplated delivering the commodity under every contract of sale or taking delivery under every contract of purchase. Yet, even in the physical markets before the development of the exchanges, especially in those fields where the exchange was organized very late—as in rubber, hides, wool, cocoa, copper, and silver —there had developed a large volume of trading for forward delivery among the producers, dealers, and converters in the trade.

The question immediately and naturally arises—why are exchanges necessary in commodity markets which are already dealing in forward deliveries? The answer is that the exchange provides a form of price and credit insurance which was not previously available. In the physical market it is possible for a producer *at times* to find a buyer, usually a dealer or a converter, who may be willing to pay a satisfactory price for *specific* quantities and *specific* grades of cotton, rubber, or coffee to be delivered in certain *specified* months in the future. Likewise, the dealer or converter may *at times* be able to buy from producers certain specific grades and quantities of the commodity he needs for delivery in certain specified months. However, there is never any assurance that the buyer will always be able to find a satisfactory seller willing and able to sell the specific grades and quantities for specific deliveries at the time when the buyer wants him. The possibility of such forward purchases and sales in any large quantity at all times is very uncertain. Frequently there are sellers without buyers, and vice versa. Often the seller does not know or like the credit standing of the buyer, or vice versa. Frequently the seller is in one country and the buyer in another, each with a different currency. Usually each trader wants to do business under his own laws and in terms of his own currency. Again, traders do not like to run the risks of defaults in deliveries or payments for deliv-

eries and ensuing lawsuits which may involve taking legal action in foreign countries or distant states.

In other words, in the physical markets there is no continuous market sufficiently large to absorb all potential transactions for forward deliveries without sharp disruption of prevailing prices. There is no assurance that such transactions can ever be made in any large volume when they are needed. There is no certainty that the contract, if made, will be consummated at contract time. Default by either buyer or seller is possible without protection to the other against default and heavy losses. Finally, in the physical market, except in rare cases when operating through an agent without disclosure of the principals, the buyer or seller must always disclose himself as such and "show his hand" at least through brokers, when it may not be to his advantage to do so.

In addition to the price insurance function, the exchange market and its clearing house establish machinery by which these various defects in the physical market can be remedied. A continuous market—able and willing to absorb at any time during the trading day all transactions, regardless of volume, without serious disruption of prices—is assured by the exchange. Its clearing house guarantees delivery to the buyer in the contract months specified and guarantees to the seller payment of the contract price, whether or not at time of delivery the market is sharply up or down from the contract price, thereby protecting both buyer and seller from the other's default. Finally, if the buyer or seller desires to act without disclosure to the trade of his identity or presence in the market, the machinery of the exchange enables him to do so.

In order to render these services to the trade, the commodity exchange gears into its machinery large speculative funds and the professional speculator. It makes available to all members of the trade a peculiar kind of a contract, called the futures or exchange contract. It also establishes a clearing house to guarantee deliveries and payments on all its cleared contracts.

Development of the Futures or Exchange Contract. A sample of the daily reports in the press of the price movements on commodity exchanges is shown in the following summary (Insert facing p. 130) of prices on domestic exchanges of the United States on February 5, 1948, as published in the New York Journal of Commerce the following day:—

The quotations are the prices of consummated exchange contracts for future delivery. The futures contract is the distinguishing characteristic of the commodity exchange, with the operations of which this book is primarily concerned. Although time contracts appear in the physical markets, the futures or exchange contract is essentially a modern American institution, born of necessity in the development of the vast

• Commodity Futures Trading in Detail •

THURSDAY, FEBRUARY 5, 1948

Grains—Chicago

WHEAT

	Open.	High	Low	Close	Prev Close	Life of Contr High	Life of Contr Low
Mar.	2 75¼	2 75¼	2 75¼	$2 75 ¼ ——	2 75 - ——	3 15½	2 15
May	2 66⅜	2 70	2 66⅜	[illegible]	2 70¾ - ——	3 06⅜	2 04½
July	2 43	2 43	2 43	[illegible]	2 47¾ - ——	2 74¼	2 07½
Sept.	2 38	2 38¾	2 [illegible]	[illegible]	2 42¾ - ——	2 67	2 03¾
Dec.	2 35	2 37	[illegible]	[illegible]	2 40¾ - ——	2 60⅜	2 31½
May	2.33	2 33	2 31¾	$2 32 ¾ ——	2 39¼ - ——	2 70¼	1 42
July	2 22	2 22½	2 21	[illegible]	2 29¼ - ——	2 60¾	1 91½
Sept.	2 03	2 04	2 01	[illegible]	2 09¾ - ——	2 41½	1 95
Dec.	1.71	1 72	1 69	$1 [illegible]	1 77 - ——	1 97¾	1.69

OATS

Mar.	——	——	——	*1 17¾ ——	1 23¾ - ——	1 39	.73¾
May	1 10	1 10¾	[illegible]	[illegible]	1 12 - ——	1 29¾	.72½
July	.91	.91½	[illegible]	[illegible]	.93½ - ——	1 09¾	.56
Sept.	.84	.84½	[illegible]	[illegible]	.86½ - ——	.99	.80½
Dec.	.82	.83	[illegible]	[illegible]	.84 - ——	.95½	.78

SOYBEANS

Mar.	3 70	3 70	3 70	$3.70 ——	3 78 - ——	4 41	2 82
May	3 64	3 64	3 64	$3 64 ——	3 72 - ——	4 36½	3 34
July	3 61	3 61	3 61	$3 61 ——	3 69 - ——	4 33½	3 61
Nov.	——	——	——	$3 05 ——	3 13 - ——	3 13	3 13

Minneapolis

WHEAT

May	2 67	2 67	2 [illegible]	[illegible]	2 73¾ - ——	3 01¾	2 15¾
July	2 52	2 52	2 [illegible]	[illegible]	2 60¼ - ——	2 89¼	2 30¼

OATS

May	1 03¼	1 04½	1 [illegible]	[illegible]	1 07½ - ——	1 29¾	.92
July	.85	.85½	[illegible]	[illegible]	.88¼ - ——	1.05¼	.82½

RYE

May	2.48	2 51	2 43	$2 43 ——	2 53 - ——	2 95	2 43

Kansas City

WHEAT

May	2 53¾	2 58	2 [illegible]	[illegible]	2 65½ - ——	2 96¾	1 96½
July	2 30	2 31¼	2 [illegible]	[illegible]	2 38¾ - ——	2 64½	2 17
Sept	——	——	——	$2 29 ——	2 36 - ——	2 52½	2 51¾

CORN

May	2 33	2 33	2 [illegible]	[illegible]	2 [illegible] - ——	2 71½	2 11
July	——	——	——	——	2 31¼ - ——	2 57½	2 39¼

Winnipeg

OATS

May	.81½	81¾	.75	.79¾ ——	.82¾ - ——	.95¼	.75
July	.76¼	.78	.72	.75⅞ ——	.77¾ - ——	.95½	.72
Oct.	.74½	.75⅛	.70¾	.71⅛ ——	.73⅛ - ——	.82	.70¾

RYE

May	4.11	4 11	4 05	$4 05 ——	4 16 - ——	4 33	2 43½
July	3 57¾	3 57¾	[illegible]	[illegible]	3 [illegible] - ——	3 [illegible]	2 04½
Oct	3 44½	3 44½	[illegible]	[illegible]	3 54½ - ——	3 72	2 44¾

FLAX

May	1 19¼	1 20	1 14¾	1 14¾ ——	1 20¾ - ——	1 36¾	1 10
July	1 13	1 13	1 08¾	1 11 ——	1 13¾ - ——	1 31¾	1 07¼
Oct.	1 05½	1 09	1 03	1 05½ ——	1 05¾ - ——	1 25¾	1 03½

Sugar (No. 5)—New York

May	‡4 98	5 01	4 94	‡4 96 ——	5 01 - ——	6 00	4 78
July	4 96	4 97	4 93	‡4 96 ——	5 00 - ——	5 74	4 73
Sept.	‡4 95	5 01	4 95	‡4 98 ——	5 01 - ——	5 73	4 73
Dec	——	4 93	4 92	*4 93 ——	4 94 - ——	5 49	4 99
1949—							
Mar.	——	4 84	4 63	*4 71 ——	4 71 - ——	5 20	4 73
May	——	——	——	*4 71 ——	4 71 - ——	4 98	4 83

Total sales 557—May, 352, July, 66, September, 99, December, 4, and March, 1949, 6

(No. 4)—World

Mar.	——	——	——	*4 06 ——	4 15 - ——	4 30	3 63
May	‡4 10	4 12	4 04	*4 03 ——	4 14 - ——	4 25	3 65
July	‡4 25	4 05	4 00	*4 04 ——	4 12 - ——	4 25	3 68
Sept	‡4 00	4 05	3 94	*4 02 ——	4 10 - ——	4 25	3 69
1949—							
Mar.	‡3 85	3 45	3.35	‡3 35 ——	3 22 - ——	3 92	3 50
May	3 88	3 52	3 45	*3 36 ——	3 22 - ——	3 90	3 46

Total sales 139—May, 33 July, 47, September, 37, March 1949, 9, and May, 13

Coffee—Santos D—New York

Mar.	‡21 90	21 50	21 40	*21 45 ——	21 59 - ——	24 10	15 00
May	‡20 70	20 70	20 20	‡20 25 ——	20 65 - ——	22 10	15 61
July	‡20 10	20 10	19 70	19 80 ——	20 00 - ——	21 42	16 00
Sept.	‡19 60	19 60	19 25	*19 35 ——	19 50 - ——	20 90	17 90
Dec	‡19 15	19 15	18 91	*18 97 ——	19 05 - ——	20 10	18 50

Total sales 140. March, 39; May, 27, July, 40; September, 29; December, 5.

Rio

Mar.	——	——	——	*12 75 ——	13 00 - ——	13 40	13 30
May	——	——	——	*12 30 ——	12 55 - ——	——	——

Cocoa—New York

Mar.	——	41 26	40 70	*41 20 ——	41 50 - ——	42 90	18 00
May	——	39 30	37 60	*39 05 ——	39 30 - ——	41 60	18 50
July	——	37 90	37 80	*37 80 ——	38 15 - ——	39 30	26 90
Sept.	——	36 90	36 75	*36 80 ——	37 15 - ——	38 30	26 65
Oct.	——	——	——	*36 05 ——	36 40 - ——	37 40	37 40
Dec	——	——	——	*35 05 ——	35 40 - ——	36 50	36 25

Sales, 28

Butter—Chicago

Feb.	——	81 50	79 50	79 50 ——	81 95 - ——	82 05	72 00
June	——	——	——	66 00-67 50	66 40 - ——	——	——
Nov	——	68.00	67 75	67 85-67.50	68 25 - ——	68 75	66 00

Sales, 41.

Eggs—Chicago

Feb.	46 15	46 20	46 05	46 05 ——	46 30 - ——	47 50	46 05
Mar.	——	——	——	‡45 25 ——	——	——	——
Oct.	94.75	49 80	49 30	49 35-49 40	49 95-49 85	51 25	43 00

Sales, 9 February and 426 October.

Black Pepper—New York

Mar.	——	——	——	*42 00 ——	*42 00 - ——	——	——
May	——	——	——	*41 00 ——	*41 00 - ——	——	——
July	——	——	——	*39 00 ——	*39 00 - ——	——	——
Sept.	——	——	——	*39 00 ——	*39 00 - ——	——	——
Oct.	——	——	——	*38 00 ——	*38 00 - ——	——	——
Dec.	——	——	——	*37 00 ——	*37 00 - ——	——	——
1949—							
Jan	——	——	——	$35 50 ——	*36 00 - ——	——	——

Sales, none

Potatoes—New York

Feb.	3 54	3 56	3 54	3 55 ——	3 55 - ——	4 02	3 09
Mar.	3 72	3 72	3 70	3 72 ——	3 74 - ——	4 12	3 30
April	3 55	3 55	3 52	3 54 ——	3 56 - ——	4 10	3 70
Nov	2 98	2 99	2 98	2 99 ——	$3 00 - ——	3 05	2 87
Dec	3 15	3 15	3 15	3 15 ——	$3 20 - ——	3 20	3 10

Sales 79 February, 37 March, 26 April, 10 November, and 15 December

Chicago

Nov.	——	——	——	$1 00 ——	3 50 - ——	3 75	3.75

Sales, none.

Onions—Chicago

Feb.	——	5 26	4 99	5 25 ——	4 90 - ——	5 26	3 90
Mar.	——	5 60	5 38	5 [illegible]-5 60	5 38 - ——	5.60	3 31
Nov	——	1.67	1.67	1 67 ——	1 67 - ——	1 89	1.60

Sales, 94

Lard—Chicago

Mar	21 15	21 95	21 15	$21 15 ——	$23 15 - ——	25 87	16 45
May	21 05	22 30	21 05	$21 05 ——	$23 05 - ——	25 97	21 05
July	21 02	22 20	21 02	$21 02 ——	$23 02 - ——	29 15	21 02
Sept.	21 10	22 35	21 10	$11 10 ——	$23 10 - ——	29 00	21.10

Hides—New York

Mar.	‡26 90	27 35	27 02	‡27 10 ——	27 25 - ——	34 30	16 10
June	25 65	25 40	25 25	‡25 20 ——	25 50 - ——	30 15	17 45
Sept.	‡24 65	24 95	24 44	24 44 ——	‡24 90 - ——	28 50	22 50
Dec	‡24 90	24 15	24 00	‡23 50 ——	‡24.10 - ——	27 40	23 80

Sales, 160 lots

Cotton—New York

	Open.	High.	Low	Close	Prev Close	Life of Contr. High.	Life of Contr. Low.
Feb.	——	——	——	*34 49— ——	*33.55 - ——	——	——
Mar.	33.70	33 70	33.20	33 48-33.70	33 50-34 10	36.17	22.66
Apr.	——	——	——	*33 62— ——	*33 88 - ——	——	——
May	33.65	33 74	33.22	33.66— ——	33 80-33.85	36.26	23.04
June	——	——	——	*33 37— ——	*33 60 - ——	——	——
July	33 20	33 26	32 77	33 07— ——	33 38 - ——	34 98	26.35
Aug	——	——	——	*32 39— ——	*32.72 - ——	——	——
Sept	——	——	——	*31.69— ——	*32.06 - ——	——	——
Oct.	31 22	31 30	30 88	31 00— ——	31.28-31 55	31 19	26 35
Nov.	——	——	——	*30 90— ——	*31.25 - ——	——	——
Dec.	31 00	31 05	30 65	30 80— ——	31 15 - ——	31.40	22.78
1949—							
Mar.	30 95	30 93	30 60	*30 62— ——	*31 01 - ——	31.18	28 70
May	——	30 75	30 49	*30 50— ——	*30 80 - ——	30 98	28 90
July	——	30 12	30 10	*30 05— ——	*30 41 - ——	30 50	30.45

Transferable notice price, 33 49. Market closed steady.

New Orleans

Mar.	33 49	33 57	33 03	33 38— ——	33 57 - ——	36 80	22 22
May	33 55	33 68	33 10	33 54-33 56	33 64-33 68	36 36	23 69
July	33 10	33 29	32 69	33 03-33 05	33 25-33 31	34 99	26 20
Oct.	31 29	31 20	30 76	31 10— ——	31 28 - ——	31.90	24.60
Dec	$31 00	30 98	30 53	30 [illegible]— ——	31 00-31 01	31 29	27.30
1949—							
Mar	$30 94	30 78	30 58	‡30 75 ——	‡30 91 - ——	30 98	28 60
May	‡30 75	30 65	30 49	‡30 54 ——	‡30 75 - ——	31 04	29 98
July	‡30 28	30 25	30 25	‡30 15 ——	‡30 15 - ——	——	——

Market closed steady.

Cottonseed Oil—New York

Mar.	‡23 30	23 30	22 70	$22 70— ——	$24 70 - ——	31.35	15.75
May	‡23 25	23 25	21 66	*21 66— ——	$23 66 - ——	29 90	16.00
July	‡22 60	22 60	21 04	‡21 05-‡21.15	$24 04 - ——	28 85	17.75
Sept.	‡21 30	21 40	20 05	‡20 15-‡20 20	$22 05 - ——	27 60	20.05
Oct.	‡19 00	18 50	18 50	‡18 50-‡19 00	$20 50 - ——	26 31	18.50
Dec	‡17.90	17.90	17.55	‡17.00-‡18 50	$18 71 - ——	24 50	17.58
1949—							
Jan	*17 00	——	——	*17 00— ——	*18 00 - ——	——	——

Total sales—385 lots.

Cottonseed Meal—Memphis

Mar.	——	80 00	80 00	$80 00— ——	$83 00 - ——	98.75	50 00
May	——	——	——	$78 00— ——	$78 75 - ——	92 90	52.50
July	——	75 10	75 00	$75 00— ——	$77 00 - ——	92 00	67.00
Oct	——	——	——	*$5 00-$70 00	$73 00 - ——	85 50	75 00
Dec	——	64.00	64 00	‡63 10-$67 00	$68 00 - ——	82.50	64.00
1949—							
Jan	——	63 00	63 00	‡62.50-$65 00	$67.00 - ——	68.00	63.00

Sales, 17 lots.

Soybean Oil—New York

Mar.	——	——	——	$23 00— ——	$25 00 - ——	24 50	22.01
May	——	——	——	$22 50— ——	$21 75-$24 50	26.60	21.55
July	——	——	——	$21 50— ——	$21.25-$23.75	——	——
Sept.	——	——	——	$21 50— ——	$21 25-$23 75	——	——
Oct.	——	——	——	*19 25— ——	*21 25 - ——	——	——
Dec	——	——	——	*19 25— ——	*21.25 - ——	——	——
1949—							
Jan.	——	——	——	*19 25— ——	*21.25 - ——	——	——

Sales, none.

Soybean Meal—Memphis (Decatur Basis)

Mar.	——	80 50	80 50	$80 50— ——	$83 50 - ——	93 50	51.00
May	——	76 50	76 50	$76 50— ——	$79 50 - ——	95.75	54.00
July	——	75 90	75 90	$75 90— ——	$78 90 - ——	95.05	73 50
Oct.	——	——	——	*73 00-$74 50	$78.00 - ——	91.50	75.00
Dec	——	——	——	‡65 00-$67 00	$70.00 - ——	——	——
1949—							
Jan.	——	——	——	‡64 00-$69.00	$66 00 - ——	66.00	66.00

Sales, 26 lots.

Wool Tops—New York

Mar.	‡185 0	——	——	‡184 0— ——	186 0 - ——	187.0	137.0
May	‡183 5	183 5	182 5	‡182 5— ——	184 5 - ——	185.0	127 3
July	‡180 0	181 5	180 0	‡181 0— ——	182 1 - ——	184.0	125 3
Oct.	‡176 0	175 0	176 0	‡175 0— ——	176 0 - ——	180 5	124 0
Dec.	‡173.0	176 0	175.0	176 0— ——	178.0 - ——	179.5	169 5
,,	——	0	172 0	‡174 0— ——	‡176 0 - ——	177.5	171 0
,,	——	—	—	‡172 5— ——	174 6 - ——	175 5	174.5

pounds. Spot price, *189.0, unchanged. Market closed steady.

Grease Wool—New York

Mar.	‡124 0	124 6	124 6	124 6— ——	‡125 0 - ——	127.0	88 0
May	‡124 0	124.0	123 5	124 0— ——	‡126 0 - ——	127 0	85 0
July	‡120 0	123	120 0	123 0— ——	‡122 2 - ——	125 3	85.3
Oct.	118 0	119 0	117 5	‡119 0— ——	‡121 2 - ——	124 0	105 0
Dec	‡115 0	118.2	118 2	‡117 8— ——	‡120 0 - ——	123.0	118.2
1949							
Mar	‡112 0	116 0	115 5	‡115 5— ——	‡117 5 - ——	119.5	115 5

Sales, 300,000 pounds Spot price, *123.5, up 15 points. Market closed steady.

Rubber—New York

Feb.	——	——	——	——	*20 75 - ——	*20 60 - ——	——	——
Mar.	20 70	20 94	20 50	*20 75 ——	20 60 - ——	23.10	13 20
Apr.	——	——	——	*20 15 ——	*20 00 - ——	——	——
May	19 55	20 10	19 60	*19 75 ——	*19 80 - ——	22 10	14 05
June	——	——	——	*19 70 ——	*19 25 - ——	——	——
July	‡19 10	19 10	19 15	19 60 ——	19 15 - ——	21 55	14.05
Aug	——	——	——	*18 80 ——	*18 80 - ——	——	——
Sept.	18 78	19 05	18.70	18 85 ——	*18 70 - ——	21.09	18 90
Oct	——	——	——	*18 50 ——	*18 35 - ——	——	——
Nov.	——	——	——	*18 45 ——	*18 30 - ——	——	——
Dec	‡18 20	18 60	18.40	*18 40 ——	*18 25 - ——	19.05	18.33
1949—							
Jan.	——	——	——	*18 40 ——	*18 25 - ——	——	——
Feb.	——	——	——	*18 40 ——	*18 25 - ——	——	——
Mar	——	——	——	*18 40 ——	*18 25 - ——	——	——
Apr	——	——	——	*18 40 ——	*18 25 - ——	——	——

Sales, 225 lots.

Copper—New York

Feb.	——	——	——	‡18 55 ——	‡18 85 - ——	——	——
Mar	——	——	——	‡18 50 ——	‡18 80 - ——	19.00	17.20
April	——	——	——	‡18 [illegible] ——	‡18 70 - ——	——	——
May	——	——	——	‡18 00 ——	‡18 40 - ——	19 00	17.25
June	——	——	——	*17 90 ——	‡18 30 - ——	——	——
July	‡18 20	18 00	18 00	‡17 80 ——	‡18 20 - ——	19 60	18 00
Aug	——	——	——	*17 70 ——	*18 05 - ——	——	——
Sept.	——	——	——	*17 60 ——	*18 00 - ——	18 50	18.40
Oct.	——	——	——	*17 50 ——	*17 95 - ——	18 50	18 39
Nov.	——	——	——	*17 45 ——	*17 95 - ——	——	——
Dec	——	——	——	*17 45 ——	*17 85 - ——	——	——
1949—							
Jan.	——	——	——	*17 45 ——	*17 85 - ——	——	——

Sales, 1 lot.

Zinc—New York

Feb	——	——	——	——	‡11 05 - ——	‡11 05 - ——	——	——
Mar	——	——	——	——	‡11 05 - ——	‡11 05 - ——	——	——
April	——	——	——	——	‡11 05 - ——	‡11 05 - ——	——	——
May	——	——	——	——	‡11 05 - ——	‡11 05 - ——	——	——
June	——	——	——	——	‡11 05 - ——	‡11 05 - ——	——	——
July	——	——	——	——	‡11 05 - ——	‡11 05 - ——	——	——
Aug.	——	——	——	——	‡11 05 - ——	‡11 05 - ——	——	——
Sept.	——	——	——	——	‡11 05 - ——	‡11 05 - ——	——	——
Oct.	——	——	——	——	‡11 05 - ——	‡11 05 - ——	——	——
Nov.	——	——	——	——	‡11 05 - ——	‡11 05 - ——	——	——
Dec.	——	——	——	——	‡11 05 - ——	‡11 05 - ——	——	——
1949—								
Jan	——	——	——	——	‡11.03- ——	‡11 05 - ——	——	——

Sales, none.

* Nominal. † Bid. ‡ Trading. § Asked. ¶ Offered

of grain, greatly augmented receipts at Chicago and made necessary the establishment of many warehouses, that is, grain elevators for storing vast supplies which arrived faster than they could be sold for milling consumption. A system of inspection and grading followed close upon the growth of terminal facilities. The elevators issued negotiable receipts showing the grade and amount of grain which was stored. These receipts, evidencing title to so many bushels of wheat of a certain quality, were capable of transferring title to specific lots of grain, when passed from hand to hand by endorsement from one trader to another. The dealer, therefore, could sell his wheat and transfer it to the buyer by mere delivery of the elevator receipt—a negotiable 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 short to one merchant and borrow from some elevator warehouse 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 to the lender later, at a time agreed upon, receipts for an equivalent amount of grain. If his judgment proved to be correct, he could buy grain in the same amount at a later time, when the price had fallen, and turn over to the lender the receipt for this grain, thereby satisfying the loan. If, contrary to his expectations, the price rose, the financial results would be a loss to the short 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 merely grain of a given grade without regard to any one specific lot, for wheat of each grade is fungible. Thus developed a system of trading in grain for *forward* delivery. This trading for forward deliveries "to arrive" was on the physical market. The Civil War gave an impetus to the use of contracts of this sort, and in 1859 the Chicago Board of Trade inaugurated the first trading in *futures.* Out of this simple development grew the concept of the modern commodity exchange.

In the cotton trade the development of the use of futures contracts proceeded along similar lines. In the earlier days, when both cotton and news crossed the Atlantic to Europe in sailing vessels, little selling "to arrive" in Liverpool was done because of the uncertainty of arrival. The advent of the steamship, however, introduced a new and hazardous factor into the cotton trade between England and the South. The cotton still traveled in sailing ships, but the news went by faster steamers. The risk to the owner of the cotton was now much greater, for the news might have an unfavorable effect on prices in England. By the time cotton in the slow sailing vessel reached Liverpool, knowledge of factors

depressing its price would have preceded it. Thus it became a matter of vital necessity to eliminate this risk by marketing the cotton before its price could be affected during transit. As a consequence, the custom arose of taking samples from bales which were being shipped by sail to Liverpool and offering them for sale in New York "to arrive" at Liverpool; 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 "to arrive" basis.

Then came the trans-Atlantic 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 "by description" now specified an established, well-recognized 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 various months.

In 1870 the New York Cotton Exchange was organized. In time the two markets, the physical and the exchange, each operating side by side, took on separate functions and characteristics, but each remained essential to the other. One of the distinguishing characteristics of the exchange market is the *futures* contract. For, as a rule, an exchange furnishes facilities for trading only in a *single* contract, whereas in the physical market trading takes place in many uniform or standard contracts, one for each specific type.

A Futures Contract Defined. Professor Emery defines an exchange 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, however, is somewhat more comprehensive and brings out those features of the futures contract which distinguish it sharply from the every day trade 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

[2] H. C. Emery, *Speculation on the Stock and Produce Exchanges of the United States* (New York: Columbia University Press, 1896), p. 46.

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. 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]

It must be restated for the sake of clarity that the physical markets still trade in contracts for forward delivery of *specific* grades at *specific* times and that such contracts are standardized and their terms made uniform under organized rules and regulations of the trade association active in each commodity trading center, just as they are under the exchange organization. This restatement is necessary, for it is sometimes stated in error that *all* transactions "made under the rules of some commercial body, in a set form" are exchange or futures contracts.

Among the distinguishing features of an exchange or futures contract as compared with a contract for forward delivery on the physical market is the fact, first of all, that in the exchange contract the date, the names of buyer and seller, the price, and the month of delivery are the only terms which remain to be determined and filled in, whereas in the contract for forward delivery on the physical markets it is necessary to determine and fill in (a) the *specific* grade of the commodity which is being bought and sold, (b) the terms of the sale, whether cash on delivery or cash 30, 60, or 90 days from date of delivery, (c) whether or not the contract is a "shipment" contract (merely obligating the seller to *ship* the parcel within a specific month and deliver to the buyer the shipping documents) or an "arrival" contract (whereby the seller guarantees that the ship will arrive and that in case it does not he will make good on the delivery from other sources), (d) whether or not the contract is F.O.B., C & F, C.I.F., or otherwise—trade terms which determine whether freight and marine insurance will be the responsibility of the

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

buyer or the seller and also fix the time when title to the parcel passes from seller to buyer.

Furthermore, in the exchange contract, delivery of the quantity sold can be satisfied by tender of any one of such grades of the commodity as are specified by the exchange under its current rules and regulations; consequently, the exchange contract is not for a specific grade, but for such tenderable grades as the seller chooses to deliver. Again, the exchange contract has requirements for margins to protect the traders from default, whereas the contracts on the physical market usually do not. Finally, the exchange contract is made subject to the rules and regulations of the exchange, and all disputes that arise in this case usually must be arbitrated according to and under the rules of the exchange, to the exclusion even of the courts; whereas contracts for forward delivery on the physical market may or may not be subject to the rules and regulations of a specific trade association and may or may not provide for compulsory arbitration under some such rules.

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 New York Cocoa Exchange is typical of other exchange contracts. The following is the latest (1948) form prescribed by the by-laws of that exchange, the observance of which becomes obligatory when contracts are executed by buyers and sellers:

CONTRACT NO. 1

OFFICE OF.....

New York.....19.....

SOLD FOR

To

.....

30,000 pounds net of cocoa beans (in original shipping bags of average weight (s) customary for the growth), the growth of any country or clime, including new or yet unknown growths, deliverable from warehouses, licensed by the New York Cocoa Exchange, Inc., in the Port of New York, between the 1st and last days of.....next, inclusive; the delivery within such time is to be at seller's option, upon notice to the buyer of either seven, six, or five days, as may be prescribed by the By-Laws or Rules; the cocoa is to be of any grade permitted by the By-Laws; at the price of.....cents per pound for the Standard grade and growths, with additions or deductions for other grades and growths according to the rates of the New York Cocoa Exchange, Inc., existing on the afternoon of the day previous to the date of the notice of delivery.

Either party is to have the right to call for margins as the variations of the market for like deliveries may warrant, which margins shall be kept good.

This contract is made in view of, and in all respects subject to, the By-Laws and Rules and Regulations established by the New York Cocoa Exchange, Inc., and all differences and/or disputes that may arise hereunder shall be settled by arbitration pursuant to such By-Laws, Rules, and Regulations.

For and in consideration of one dollar to the undersigned, in hand paid, receipt whereof is hereby acknowledged, the undersigned accepts this contract with all its obligations and conditions.

..... (Seller)

..... (Buyer)

Characteristics of the Futures Contract. As stated, the contract calls for the delivery of standard and approved exchange grades. The by-laws of the exchange provide that one particular grade shall be designated in the contract, but they further provide that other specific 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 specific grade of the commodity is specified in the contract, nevertheless other specific grades are tenderable by the seller, at his option, subject to price differentials determined from the price of the contract grade as the basis.[4] On a *physical* market contract, however, only the specific grade sold can be delivered.

A second characteristic of the exchange contract is that delivery may be made between the first and last trading days of the delivery month, and the time for delivery within these limits is at the *seller's* option. The contract unit (so many pounds, tons, or bushels) is always fixed, and the margin requirement is an inherent provision of the futures contract and is designed to protect both parties from default. Both parties to the contract must be members of the exchange, although they may be acting as brokers or agents for others. In so far as the exchange is concerned they are regarded solely as principals who in effect guarantee all obligations of their customer principal, for whom they act. Finally, delivery in accordance with the exchange contract is accomplished by means of warehouse receipts evidencing the seller's title to the commodity in the amount named and accompanied by an official certificate of quality that it is one of the grades recognized by the exchange as acceptable for delivery. It should be recalled, however, that only a very small portion of exchange contracts are consummated by delivery.

[4] Commodity exchange contracts are usually *basis* contracts. An exception is cottonseed oil and silver. Some exchanges have, in addition to a basis contract, a second contract which calls for delivery of a specific grade, where that grade constitutes a large majority of the annual production.

For each of these contract characteristics there is a definite reason for its 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 every single unit of it was indistinguishable from any other, there would be no necessity for basis contracts, but *most commodities* which are traded in on an exchange have *many* standardized grades which are well recognized in the trade and each of which may be classified into several sub-grades. One of the most important and far-reaching economic problems of the exchange is the determination of the number of such grades which shall be allowed for tender against exchange contracts and which one shall be the basis grade.

A basis contract is designed (1) to make the various grades, tenderable against exchange contracts, truly representative of the normal commercial demand and supply for the commodity on the physical markets and in its related industry, (2) to provide producers, merchants, and manufacturers with ample facilities in the way of satisfactory trading volume both for ordinary commercial and for hedging purposes, and (3) to assure a sufficiently large percentage of the commodity for tender or delivery against exchange contracts to prevent squeezes and corners.

The exchanges, however, cannot permit dealing 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 so as to guard against the possibility of the use of the exchange as a dumping ground for grades not readily salable elsewhere. Commercial demand and supply thus form the foundation on which the exchanges work in determining the various qualities or grades 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, but a substantial number of tenderable grades is necessary to discourage corners and squeezes.

The foregoing characteristics are vitally important to producers, dealers, and manufacturers. There is another group, however, whose activities are highly important to the successful operation of the exchange, namely, the speculators. The speculator is not a specialist in grades and is concerned primarily with simplicity. His need is for a contract that will require no attention to details or technicalities, but 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, that is, 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; it is usually representative of that grade of the commodity for which there is the greatest commercial use or that grade which represents by far the greater portion of the annual production or crop. There are other grades, some inferior and some superior in quality to the basis or contract grade. A problem difficult of determination and of great commercial importance faces the exchange in establishing 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, this is an open invitation to artificial price manipulation. The result of such a situation would be to encourage squeezes and illegal corners, thus impairing the usefulness of the exchange as a medium for hedging. The hedger, who in selling or purchasing relies on an orderly price relationship, only to find it disturbed by a squeeze, when he comes to undo his hedge, may find the protection he seeks fully 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 current by-laws of the exchange. If, let us say, eleven grades of a commodity are deliverable and Grade No. 11 is the poorest in quality, this grade may be the one which it is hardest to market in ordinary commercial channels. The result is that the less desirable grades of the commodity may tend to accumulate for delivery on exchange contracts. The prices of all grades would then be adversely affected, for the buyer would be apprehensive that he might be tendered the objectionable grade, if he chose to accept delivery, and this apprehension might be reflected in the price of the exchange contract. Evidently too wide a range of tenderable grades will have the effect of accumulating, for delivery on the exchange, those grades for which there is the least commercial demand for delivery on contracts in the physical market.

Grades Deliverable on Commodity Exchanges. Yet, although the exchange does not wish to become a dumping ground for undesirable grades, the primary object in establishing grades for futures trading is not

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

[6] For a full discussion of the problems arising from artificial price movements, see Chapters XIII and XIV.

necessarily to insure delivery of a high quality of the commodity. Millers, spinners, or others who use the futures markets do not and should not do so ordinarily in order to obtain specific grades of wheat, cotton, or some other commodity which they need. In fact, the primary function of the exchange is insurance against market and credit risks, not the replacement of the delivery function of the physical market. Consequently, only a very small proportion of the total sales on the exchange, usually less than one per cent, are ever delivered. They are "offset" and settled in cash just as soon as the insured risk is no longer necessary or the speculator decides to establish his profit or loss. Grades are made tenderable primarily to permit deliveries in the exceptional cases where the buyer wants them or the seller desires to deliver and also to connect futures markets more effectively with the cash or physical markets; that is, since exchange grades are also recognized in the cash or physical market, there must be a normal price parity between the cash market and the futures market so that commercial interests may use both and so that hedging between the two markets may be possible and effective at all times as price and credit insurance.

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 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]

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

The number of *grades* tenderable against an exchange contract is variously established by the by-laws of each exchange, with the single exception of cotton, in which grades are prescribed by federal statute. *Standards* for grading in the grain trade have been established by federal statute, but the grades deliverable on grain exchanges are selected by the exchanges from those established by federal law—grades for which the particular exchange is a natural hedging market.

The United States Cotton Futures Act provides for the classification

[7] Vol. V, p. 199.

and inspection of cotton. On the New York Cotton Exchange seventeen grades are deliverable. Middling is the basis grade, and Strict Good Middling, Good Middling, and Strict Middling command premiums over the price for the contract grade; Strict Low Middling, Low Middling, Good Middling, Tinged, Strict Middling Tinged, and Middling Tinged are deliverable at discounts.

On other markets, such as the New York Coffee and Sugar Exchange, the New York Cocoa Exchange, and the New York Produce Exchange, the tenderable grades are established by the exchanges in accordance with the three following principles: (1) preservation of price parity or uniformity of grades between the physical and futures markets; (2) insurance against manipulative corners and squeezes; (3) assurance that the grades delivered shall be of a quality merchantable and useful in the trade.

Differentials. The premium or discount for each grade deliverable on an exchange contract is in cents and fractions or decimals of a cent per bushel or per pound. These price spreads between the premium or discount grades and the contract grade are known as differentials and are usually determined and fixed by the by-laws of each exchange.

On those exchanges where both grading and inspection are subject to government regulation, however, the method of establishing differentials may also be prescribed by law. The United States Cotton Futures Act specifically provides a method for the determination of differentials between the basis grade and the various grades deliverable on cotton futures contracts. If a market for spot lots exists on the exchange, as is sometimes the case in cotton and grains, the differentials prevailing in the various spot markets 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 federal law requires that differentials on deliverable grades are to be governed by an average of prices prevailing in ten selected spot or physical 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 posted on the bulletin board of the exchange, with a notation of the delivery day to which they apply.

Unit of Trading. In determining the contract unit, the primary object of the exchange is to establish the one which will be the most serviceable to producers, dealers, and converters—that is, 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 official trading unit in both wheat and corn is 5,000 bushels. Trades may be made in contracts for 1,000 bushels.

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 of 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 and 112,000 pounds of sugar, respectively. The rubber contract of the Commodity Exchange provides a trading unit of 22,400 pounds; the New York Cocoa Exchange, 30,000 pounds; the New York Produce Exchange, 60,000 pounds of cottonseed oil; and the Commodity Exchange 40,000 pounds of hides.

Price Decimals. Here, as in other fields, each 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 country-wide and world-wide trading, and that intangible personality called the "market" is a composite of all types of opinion and of all degrees of financial resources. Banker, manufacturer, producer, merchant, broker, trader—whether 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 bargaining 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."[8] Similarly, the commodity exchanges represents the aggregate of all that America—or, in normal times, the world—knows about the commodity in which trading is carried on.

Price variations between bids and offers must be small enough to reflect accurately this sensitive market. These minimum variations are established by the by-laws of each exchange. Prices of wheat and corn may fluctuate in eighths of a cent per bushel. Price fluctuations of 1/100 of a cent per pound record the shifting buying and selling pressure for coffee, cotton, sugar, cocoa, hides, pepper, rubber, copper, zinc, and cottonseed oil.

The Delivery Months. The futures contract usually permits delivery during any one of twelve successive calendar months. In some markets the limit is eighteen months, or even more. 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 as in the cotton trade, where some months are normally active and others inactive.

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

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.[9]

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

On the New York Cotton Exchange as a rule, trading, is concentrated in six months, though two other months are 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.[10]

In other markets it will be found that all months may be equally active, especially if the commodity is not a seasonal or crop commodity.

Delivery at Seller's Option. The seller has the entire trading month that is specified in his contract 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 penalizing a seller 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, accompanied by an exchange certificate of quality.

Warehouse Receipts. At the beginning of the present chapter it was mentioned that the practice of grading and issuing warehouse receipts had been established in the grain trade at an early date. The use of

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

[10] W. H. Hubbard, *Cotton and the Cotton Market* (New York: D. Appleton & Company, 1923), p. 240.

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 negotiable warehouse receipt, which passes by negotiation from seller to buyer when delivery is to be 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 has been explained in detail in Chapter IV. For other commodities, inspection, grading, and weighing 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 lot delivered on an exchange contract shall be certified as a known and definite tenderable quality and verified as to its weight or measure. Warehouse receipts, accompanied by quality and weight certificates issued under the authority of the exchange, are accepted in full confidence that the commodity which they represent exists and is of the grade and weight or measure specified.

The warehouse receipt is the document 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 number of tenderable grades. In other commodities, however, the warehouse receipt represents definite and specific lots, identified by serial number, chop, brand, or other identifying marks set forth on the face of the receipt.

Other negotiable instruments, such as a promissory note or a bill of exchange, represent a promise to pay money; the warehouse receipt represents commodities in store, subject to delivery on demand. The note or bill of exchange may be endorsed and passed from hand to hand; the negotiable warehouse receipt is likewise capable of transfer by endorsement and delivery. The transfer of the negotiable warehouse receipt accomplishes delivery and passage of title just as effectively as physical delivery of the goods.

CHAPTER VIII

Organization and Operation of a Commodity Exchange

Ancient Markets and Modern Exchanges. Without the fairs and markets which spread over England and the European continent in the Middle Ages, internal trade would have remained entirely local. Communications depended upon travel, which 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 and other European countries with busy centers which afforded the chief means of carrying on internal commerce and offered practically the sole means of trade in products of foreign lands.

Between the fair of the thirteenth century and the commodity exchange of today there appears to be little in common. Yet both were born of the same economic necessity. Modern liners cross the Atlantic in less time than medieval travelers required to journey one hundred miles. Modern communications by cable, radio, and trans-oceanic telephone enable the Manchester spinner to reach his markets more quickly than the itinerant merchant could travel from house to house. Nevertheless, throughout all the economic development of the centuries the need of *central* markets has remained and steadily increased—their nature changing, their scope and functions 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]

One can briefly define a commodity exchange as an organized market, if all that is comprised in the word "market" is fully comprehended. The exchange provides an active market place where its members actually meet to trade in its *standard* or *basis* contract under established rules and regulations and where buyers and sellers from every quarter of the globe can transact business through member brokers or commission agents who

[1] H. C. Emery, *Speculation on the Stock and Produce Exchanges of the United States* (New York: Columbia University Press, 1896), p. 12.

represent them. The exchange, as did the fair of the Middle Ages, establishes rules to govern all transactions made on its trading room or floor and endeavors to secure and enforce uniformity in the customs of the trade.

Cash Markets and Futures Markets. A sale on the physical or the cash market contemplates delivery of the commodity. The physical market trades only in contracts for delivery of *specific* grades. Commodity exchanges or futures markets trade in contracts which allow delivery of various approved grades under a basis contract. Some of the commodity exchanges have facilities for trading in physical deliveries of merchandise "on spot," ready for *immediate* delivery. Most exchanges do not, however, for that is not a proper exchange function, but rather a function of the physical market. In the grain trades, trading in "spots" is permitted on the exchanges. Samples of grain contained in cars which have arrived at central markets are displayed on tables, and purchases and sales are made on the basis of samples representing each carload lot. On the other hand, spot markets exist separately and apart from the largest organized exchange in the cotton trade. However, though some exchanges may provide facilities for spot trading, the primary purpose of the commodity exchange is to serve as a market for future delivery under standardized futures contracts. Their quotations are for delivery in specific future months; their sales are made, *not from sample, but by description on the basis of standardized grades.*

This chapter is concerned with the operations of such futures or commodity exchanges. We shall examine their organization, their purposes, their aims, the manner in which they regulate trading among members, and how that trading is conducted upon their "floors" or "rings" or "pits."

Organization of Exchanges. The older commodity exchanges were chartered by special acts (of the legislature in the various states in which the exchanges are located) not because of any inherent peculiarity of commodity exchanges, but because they came into being before the adoption of the membership corporation laws under which the later exchanges have been organized. The Chicago Board of Trade, which commenced operations in 1848 as a spot market and received its charter in 1859, is the oldest of the commodity (futures) exchanges, although the St. Louis Merchants' Exchange was organized before the Board of Trade developed futures trading in 1865. The New York Produce Exchange, at first only a spot market, was incorporated in 1862. The New York Cotton Exchange was organized in 1870 and chartered as a corporation the following year. Various exchanges, mostly located in New York—such as those for trading in rubber, cocoa, silk, hides, and metals—were organized in the decade following the First World War.

The Commodity Exchange, Inc., was a consolidation and merger of the Rubber Exchange of New York, the National Silk Exchange, the National Metal Exchange, and the New York Hide Exchange. The merger became effective in 1933. At the date of the merger the Rubber Exchange had a futures market for rubber; the National Silk Exchange had a futures market for raw silk; the National Metal Exchange had a futures market for tin, copper, and silver; and the New York Hide Exchange had a futures market for hides. All these futures markets were absorbed into the Commodity Exchange, Inc., and subsequently that exchange established futures markets for trading in lead and zinc. Trading in silver was suspended in 1934, when the federal government nationalized silver and imposed a prohibitive "transaction" tax on sales of silver. Trading in all other commodities of this exchange was suspended during the Second World War. The rubber, hide, copper, and zinc markets have since been resumed, but trading in tin and lead has not been resumed as yet.

All exchanges in the United States are non-profit organizations. They merely establish the machinery and facilities through which their members may operate for their own profit, but they themselves do not transact business for profit.

A casual survey of the list of commodities in which futures trading is conducted will suggest that operating methods and practices in the various markets cannot be identical in every respect. Wheat, corn, rye, and oats are traded in for future delivery. Cotton, coffee, sugar, cocoa, rubber, cottonseed oil, hides, and various metals also have organized futures markets. Differences in the characteristics of these two groups of commodities, however, necessarily make for minor differences in the rules of trading and in the terms of contracts of their respective exchanges.

Yet the same broad, fundamental plan of organization and the same operating techniques are found in all commodity 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 in other markets only material variations from the general rules and practices.

Objectives. The objectives 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—and through them any producer, dealer, converter, or speculator—efficient facilities for trading in specific commodities. In order to further these aims, its declared purpose is to establish equitable and just principles governing the conduct of business by its members; to maintain uniformity in contracts, trade terms, trade customs, usages, and practices in order to effect standards of classification or grading in commodities in which its members deal; to

acquire and disseminate useful trade informaton to its members and the public; to arbitrate disputes; to establish machinery whereby traders may, if they so desire, minimize or insure against various market and credit risks; and to co-operate with other markets and exchanges operating in the same commodity and having similar aims.

Membership. The membership list of each commodity exchange is representative of every division and element of the industry and trade and, in normal times, of every country where the commodity is an important factor in trade. Flour mills, grain elevators, exporters, importers, farmers' co-operatives, and dealers in grain in all parts of the world are represented on the Chicago Board of Trade. Merchants in England, Europe, Asia, and Africa and manufacturers, dealers, commission agents, and brokers in New England and the South hold membership on the New York Cotton Exchange. Seats on the same exchanges are owned by members residing in France, England, Italy, Switzerland, India, and China, in addition to a large number of farm co-operatives, dealers, and manufacturers in the United States.

The chief requirements for exchange membership are that a candidate must be of good character and must have demonstrated his sound financial responsibility. Applications for membership must be endorsed by two members of the exchange. The names of applicants must be posted on the bulletin board of the exchange for a specified period before action is taken by its membership committee. This committee conducts a thorough investigation into each applicant's qualifications, both financial and personal. All members are requested to advise the committee, in confidence, if they know of any objection to the candidate. Both the applicant and his sponsors are examined orally by the membership committee. 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 him in accordance with the terms of its charter, by majority vote or otherwise. On his election, the new member must subscribe to the exchange's by-laws and rules and thereby agrees to abide by all existing regulations and all subsequent amendments.

A partnership, at least one of whose general partners is a member of the exchange, may be extended membership privileges and have its exchange business transacted at the commission rates prevailing for exchange members. The same privilege may be accorded to a corporation, one of whose executive officers is a member of the exchange. Actual membership, however, is confined to individuals.

Seats. In addition to qualifying by election, it is necessary for each new member to obtain a "seat." A seat is a member's interest in the exchange, similar to a share in a corporation, evidenced by a stock

certificate. The new member obtains his seat by negotiating a purchase from some other member; since the seat involves valuable privileges which accrue only to exchange members, it possesses at all times a definite value, which varies from time to time. The relative prices of seats on different exchanges are determined by the current volume of business transacted, the number of authorized seats, and the financial resources of each exchange. The number of seats is fixed by the charter of each exchange and may be increased or decreased only with consent of its members.

Dues. Members of an exchange pay annual dues sufficient to cover its ordinary operating expenses. These dues are based on the budget estimate for the ensuing year. Whatever may be the method of levying dues, the end in view is never to establish a profit for the exchange, but merely to assure the collection of sufficient revenues to permit it to conduct its work efficiently and perform its services effectively.

Government. The central control of an exchange is vested in a president, a vice-president, a treasurer, and a governing body known as the board of governors, directors, or managers. The governors are usually elected annually by the members. On some exchanges, however, the terms of board members are arranged so that one-third of the board is elected annually. Although various committees appointed by the board play an important part in administering the exchange's operations and machinery, the board in each case exercises final control.

The Secretary. The secretary of an exchange is a salaried officer chosen by the board. On his shoulders rests much of the responsibility for the smooth working of the exchange machinery. He is usually the superintendent of the exchange. In addition to performing all the duties ordinarily imposed on the secretary of a stock corporation, he is responsible for proper operation of the trading floor. He collects dues, assessments, and fees from the members and supervises the keeping of the books and the 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 all matters of importance.

He performs such other duties as may be assigned to him by the board and its various committees. The secretary is the most active officer of the exchange and must possess high executive ability. He is aided by a substantial staff in the work of his office and in the maintenance and supervision of the official records and statistics of the exchange.

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

The Arbitration Committee. Organized exchanges uniformly provide for adjustment, by voluntary or compulsory arbitration, of all disputes between members without recourse to courts of law. Usually all members when they join the exchange are required to bind themselves to *compulsory* arbitration and to subject themselves to all its rules and regulations. In general, however, one of two policies is adopted: (1) the exchange may merely provide the machinery for voluntary arbitration and leave to disputing parties the option of resorting to it; or (2) the arbitration committee may be compelled to act on the complaint of one of the parties and to serve notice on the adverse party and summon him to arbitrate (as he is required to do by the rules of most exchanges). The rules of the Chicago Board of Trade, however, provide merely that "the policy of the Association is to encourage, but not to compel, the arbitration of disputes."

All members of an exchange subject themselves to the provisions of its charter and to the by-laws of the exchange adopted, but subject to change by its members in accordance with the provisions of the charter; in addition, all members are bound by all subsequent rules and regulations promulgated by the exchange in accordance with the provisions of its charter and by-laws. If a member objects to any rule or regulation, his only recourse is to resign, though such resignation does not release him from existing obligations (including compulsory arbitration) under any exchange rule, so long as that rule is within the scope and authority of the exchange.

Arbitration of Controversies. In voluntary or (what is more common) compulsory arbitration the procedure is similar to that of an action at law, but it is stripped of legal formalities and rigidity. A complaint which is a written recital of the subject matter of any controversy arising out of exchange transactions, is filed with the arbitration committee by the complaining party, and a duplicate is served on the other party, who is required to file his answer within a specified number of days. Three qualified members of the exchange, chosen from a panel as arbitrators, then proceed to hear and determine the matter in controversy according to the rules, practices, and customs of the exchange.

The arbitrators possess judicial powers which are ample for conducting hearings promptly and for bringing them to rapid, just, final, and binding determination. They may compel the production of papers by any exchange member, and they may subpoena any member to attend hearings and give testimony. Disregard of a subpoena issued by the arbitration committee or by other committees empowered to conduct hearings renders a member subject to suspension or even to expulsion from the

exchange. The hearings in arbitration proceedings are private, unless both parties request open sessions.

The decision of the arbitrators concludes the entire matter, unless an appeal is taken promptly within a specified time to the board of appeals —another committee appointed by the board of governors—whose *decision is final and conclusive.* 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 of arbitration, the parties agree to abide by the award through a voluntary execution of the arbitration agreement before the hearing is held.

The by-laws of the exchange provide for enforcement of all arbitration decisions by disciplinary action on its members. The threat of expulsion, in extreme cases, is a sufficient penalty to insure acceptance of the final decision.[2] Only in cases where the constitutional rights of the parties are alleged to be in jeopardy or where the exchange procedure is claimed to be biased or contrary to the charter or by-laws of the exchange can there be an appeal to the courts. Once arbitration has been agreed on, the courts refuse to intervene until the arbitration process has been exhausted.

It is essential to understand that, though the arbitration is between exchange members, in most cases these members have bought and sold for the account of their customers, who are the principals and are responsible to the exchange members for all commitments on behalf of their customers. On the other hand, the customers of each member are, at law and under the contract relationship between the exchange member and his customers, bound by the authorized acts of their agent (the member) and, consequently, are responsible to the member for all awards of the arbitration committee with respect to all exchange contracts entered into by the member on instructions of his customer-principals. In effect, therefore, exchange arbitration awards are binding not only on all members, but also on all the customers of members, who in turn have full recourse at law against their customers for all awards against them as members with respect to contracts made for the account of their customers.

Every year, a great number—in fact, hundreds—of controversies involving large and small sums of money are thus disposed of with a minimum of expense and delay. 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

[2] Under statutes, in most states, an award in arbitration proceedings may be docketed with the full force of a judgment obtained in a court of law and may be enforced by sheriff's execution processes against the property of the losing party.

of disputes in Commodity Exchange, Inc., sums up the spirit in which all arbitrations 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.

Frequently lawsuits drag through the courts for several years of trial and appeals, leaving the parties uncertain as to the outcome and involving heavy expenses. The arbitration of disputes in commodity trades, whether under exchange or trade association procedures, has the great merit of prompt, cheap, and efficient settlement of disputes by *experts* familiar with trade customs, terms, and practices rather than by a jury of laymen who are in no sense experts or familiar with trade terms and conditions.

Arbitration of Grade or Quality Disputes. Arbitration of disputes as to grades or qualities of deliveries in the *physical* trades under trade association auspices has been treated elsewhere. It should be noted here again, however, that experts quickly draw samples of the disputed deliveries and promptly determine whether or not the tenders are up to the quality sold and, if not, whether the buyer is entitled to demand a new tender of the proper grade or under the contract must take the inferior quality at an allowance fixed by the arbitrators in the absence of a mutual agreement of the parties. Thousands of grade disputes are thus settled quickly by the arbitration procedure, thereby relieving the courts of many cases which otherwise would tend to swamp their dockets.

On the *exchanges,* however, arbitration of disputes on qualities of deliveries is not necessary. Such disputes are avoided by official certification of all deliveries (as to quality or grade) before any specific lot of the commodity is tendered for delivery on an exchange contract. This certification is made either by federal officials (in the cotton trade) or by officials licensed for that purpose by the exchange. Any exchange member, before tendering a delivery on an exchange contract, secures a certificate of quality which, once issued, is binding on all parties and must be accepted without dispute. In case there is disagreement between the owner of the parcel offered for certification and the certifying officials, the owner may appeal to an official committee, the decision of which is

conclusive and binding. Provision is made for recertification of all certified lots, when conditions make this necessary.[3]

Discipline. Just as arbitration provides a means of settling disputes that is analogous to civil actions at law, so the exchanges enforce their own rules with respect to the ethical or professional conduct of their members by a procedure analogous to that of the criminal courts. After hearings and appeals the decisions of the disciplinary committee are enforced by suspension or expulsion.

To indicate the extensive disciplinary powers which the exchange exerts over its members, a section of the by-laws of Commodity Exchange, Inc. is quoted below. A member may be suspended or expelled—

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

(b) For refusing to submit to and abide by any award or decision of any Arbitrators, the Arbitration Committee, the Board of Appeals, the Quality Committee, the Quality Board of Appeals, or the Supervisory Committee, made, signed, and filed under the provisions of these By-Laws or Rules.

(c) For buying or selling contracts for the delivery of a commodity 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 corporation, or that of any of his partners, employees, or agents, whether with or without his consent, in newspapers, circulars, or otherwise, any advertisement or article 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 in commodities, or upon the Exchange, or that shall have been disapproved by a majority of the Board after such member has had an opportunity to be heard.

(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.

(h) For becoming insolvent as the term insolvency is defined in these By-Laws.

(i) For suspension or expulsion from membership in any other security or commodity exchange.

An exchange member is responsible not only for his own acts and omissions, but also for the conduct of his employees and his partners

[3] For more detailed discussion see Chapter IV.

or the corporation with which he is affiiliated. If any of the prohibited acts are committed by an associate or agent of the member, the latter's non-participation affords him no protection against disciplinary penalties.

Charges of 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 or non-member of the exchange.

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 the facts so warrant, a formal complaint against the member is preferred.

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. On receiving the complaint, the supervisory committee serves a copy of it, together with the documents and the list of witnesses, upon the accused member. 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 and to accompany 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 has been filed after the time for filing has elapsed, the supervisory committee proceeds to a hearing and notifies 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 undergoes either voluntary or involuntary bankruptcy, the supervisory committee conducts an investigation to ascertain the reasons which occasioned his failure. If unbusinesslike or unethical conduct has been a contributing factor, the committee so reports to the board of governors and the member becomes ineligible for reinstatement.

Floor Committee. The committees described above 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 or ring or pit of the exchange and with enforcing the rules applicable

to trading and to the conduct of members on the floor. Misleading or ambiguous bids or offers 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.

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

On the ticker of most exchanges, 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. Since the pressure of competition precludes the charging of rates above the minimum, 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.[4] The commission rules regulate competition by placing members on a plane of equality in their dealings with the public. This prevents competition on a price basis by the splitting of commissions. It benefits the public by precluding the possibility of discrimination

[4] "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.

"The penalty 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 dirctly or indirectly, in person or through any firm or co-partnership of which a member may be or may appear to be a partner or through any agent or agents or otherwise, shall be, upon conviction for the first offense, suspension for a period not exceeding twelve months, the term of suspension to be fixed at the discretion of the majority of the Board of Managers present at a meeting thereof, and for the second offense, expulsion." (Extract from Section 3.01, By-Laws of the New York Cotton Exchange.)

between the charge for service rendered to large operators and that for service to small operators. The committee on commissions decides all controversies which involve interpretation of the commission regulations.

Committee on Information and Statistics. In markets highly sensitive to changes in demand, accurate and up-to-date information about the visible and future supply of and demand for the commodity and about all factors which may influence prices are of the utmost importance. Information that is gathered and published regarding weather conditions in crop areas, supplies on hand and afloat, takings by consumers, and so forth is described elsewhere.[5]

The work of compiling and publishing statistics that flow into the exchanges by telegraph and cable is performed under direction of the secretary, but the committee on information and statistics exercises 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.[6] This bureau has charge of the inspection, grading, and weighing of all tenders of the commodity for certification. The committee also supervises the warehousing of certificated stocks.

Other Committees. The foregoing committees have been described in some detail, for their work is peculiarly related to the specialized operations of a commodity exchange. There are other committees which require no more than mention, for their work is paralleled by that of similar committees in many other corporate bodies. The executive committee has general administrative functions, including control over the quotation service, management of the exchange building, hiring of employees, and 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 of proposed officers and members of the board to be voted upon at annual elections; it is essentially a selection

[5] See Chapter V.

[6] See Chapter IV.

committee, and in most instances its ticket is the only one in the field and its nominees are usually elected as a matter of course.

The foregoing committees are those which are common to most exchanges. If more than one commodity is traded in on the exchange, a separate committee is established for each commodity. 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 floor, ring, or pit occupies the central and most prominent place. 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, and from a rostrum 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 there 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 New York Stock Exchange is carried on around posts, each post being the trading point for certain stocks. The futures trading ring 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 provided 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.[7]

Reporting Trades. Exchange rules usually provide that the time, quantity, and price of each transaction must be reported immediately upon its consummation. The reporting is done by a staff of uniformed

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

attendants who stand at the ring. As soon as a transaction is concluded, the reporter takes note of the price, the amount sold, and the delivery month. These data are immediately flashed by signals to a clerk stationed on the rostrum. The clerk telephones the particulars of each sale to the attendant, who posts quotations on the blackboard, and the transaction is entered by another clerk on the exchange's record sheets. The prices so reported simultaneously appear on the tape, wherever tickers are installed. Frequent summaries of the day's trading appear also on the news tickers.

It is interesting to contrast this procedure with that of the physical markets, where there is no common meeting place (except on grain exchanges which provide facilities for trading in spot lots), for all business is transacted by telephone, telegraph, cable, or mail either through brokers and commission agents or directly between principals. There is no publicity of transactions, all of which are confidential, unless disclosed with the consent of both principals on each contract.

Telephone Booths. Throughout the trading day, orders come in to the exchange floor from commission houses, which have branch offices in various parts of the country and even abroad. 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 to the commission house (that gives the order) the price at which the purchase or sale has been made.

Hours of Trading. All exchanges have fixed hours for trading. Most exchanges open at ten o'clock and the trading day ends at three o'clock, except on Saturdays when the close is at noon, if they remain open at all. There are practical reasons for the limited trading day. Even with only five hours at the ring, brokers are likely to quit the floor thoroughly exhausted, if the market has been active and the 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 of actual supply and demand. A long session would not only make for lethargic trading during part of the day but would also increase the opportunity for price manipulation. The more active the market, the more likely are prices to be representative of effective demand and supply.

It must be remembered that execution of orders at the ring is only a part of the story of a trade. After trading has ended for the day, all trades remain to be cleared and margins must 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 credits and debits 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.

Limitation on Daily Price Fluctuations. The exchange rules also fix a limit on price fluctuations during any one trading day. The limit varies among the exchanges; on the Chicago Board of Trade, for example, it is 10 cents per bushel for wheat. When prices in the course of any one day have risen or fallen above or below the closing prices of the preceding day to the full extent of the limit, no further trading is permitted on the exchange for that day except at prices which are within the limit. The purpose of this rule is to allow market operators to obtain a more objective perspective on the underlying factors which have precipitated the heavy fluctuations, to prevent panic among either buyers or sellers, to permit the exchange commission houses, as well as the clearing house itself to prepare additional calls for market variation margins, and to enable exchange traders to prepare to meet such calls.

The origin of this limit on price fluctuations on any given day is interesting and can be traced to the First World War. Late in 1916 there had been frequent rumors of peace. Large amounts of cotton in the South, consequently, were held in anticipation of higher prices on the cessation of hostilities, because during the war relatively little cotton had been shipped to Europe through lack of cargo space. On February 1, 1917, an announcement was issued by the German government that submarines would sink without notice all allied and neutral ships found in certain zones. On the morning following this announcement at the opening of the New York Cotton Exchange the price of cotton dropped $25 a bale ($5\frac{1}{2}$ cents per pound). This was, until then, the most drastic drop within a single day in the history of cotton prices on the exchanges. Within a few days a very substantial part of the price decline was regained. Subsequently, the federal government requested the cotton exchanges to provide for limitation in daily price fluctuations. Since that time similar limitations have been adopted by most all exchanges. The following rule, which relates to limits, is typical:

> Trades for future delivery of hides in any month shall not be made during any one day at prices varying more than two cents per pound above or below the lowest price of the closing range of such month as established by the Committee on Quotations at the close of the preceding business session of the Exchange. The foregoing limitations shall not apply to trading in the delivery month during the period in which Transferable Notices for delivery therein may be issued, unless otherwise determined by the Board.
>
> At the discretion of the Board, any limit of trading herein provided for may

from time to time and without previous notice be changed or suspended or temporarily modified.

The affirmative note of a majority of those present, but in no event less than twelve members of the Board, is necessary to effect any change in the foregoing provisions.

It is a strict rule, enforced under penalties, that no trades on the exchange may be made before or after trading hours. Brokers gather at the ring at the opening 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 sound of the gong. All unexecuted orders 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 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 elsewhere.[8]

Standard Contract. Each commodity exchange has a fixed unit of trading. The unit is prescribed in the by-laws and incorporated in the futures contract. The amount traded on each contract is thus always fixed and certain. One contract calls for the delivery or receipt of one unit of the commodity. Every trade is made in terms of that unit.[9]

Price Quotations. Just as the trading unit is prescribed in the interest of uniformity, so minimum limits of price quotations in fractions or decimals of a cent are established. Offers are made and accepted in terms of cents or of fractions of a cent per pound or bushel of the standard unit. An illustration will make this clearer. The New York Cotton Exchange requires 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. Or, let us say a rubber exchange broker sells "five December" at 18.05. His contract is to deliver 112,000 pounds of rubber—five lots—and for this the buyer will pay at the rate of 18.05 cents per pound.

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

[8] See Chapter V.

[9] For contract units on various exchanges, see Chapter VII.

carried on in every month of the year. In others, either through 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 Board of Trade futures trading is concentrated in four months of the year—May, July, September, and December; that is, a vast majority of the contracts are made for delivery in one of these four months. On some exchanges trading is conducted as far as eighteen months in the future.

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. The next calendar month then becomes the earliest month for trading; meanwhile the most remote calendar month of those in which trading is carried on moves up as the last delivery month.

Calls. Trading on most of the exchanges is opened daily by a "call," which resembles an auction by months. It is an orderly means of establishing prices at the opening for each delivery month in turn, instead of plunging at once into general trading. 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. Bids to buy and offers to sell are then made for that month only. These may or may not result in trades. In either event the market quotations for the call hours are thus publicly established either in terms of actual transactions or in terms of bids and offers. After all bids and offers for one month have been concluded, the call proceeds to the next month, and so on through the list until the last month in which the commodity may be traded 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 and 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 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 the reasons 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. Similarly, the spectator here, who knows that an

exchange is a nation-wide—or, rather, a world-wide—market place, may be bewildered by what he sees.

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 to buy must be announced by outcry across the ring. This rule causes a babel of voices, but it makes for an open market. Every trade and the price at which it is made is certain of registration. 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. Knowing that, much of the apparently meaningless shouting and gesticulation becomes simple of comprehension. 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 29 cents. So long as he continues this offer, a trade cannot be made at a higher figure. Similarly, if B is bidding for May cotton at 28.90 cents, no trade can 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 at the moment. The purpose of the rule, of course, is 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 acceptances of bids or offers was mentioned. There is one case in which 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." If there are simultaneous acceptances, one for all and the other for part of a lot, the former prevails.

The two brokers involved in a transaction make notes immediately of the particulars of the trade which has been consummated, and both buyer and seller are careful to compare these. In case the notes do not agree, the member who claims to have made the purchase or sale is required by rule to close out the contract immediately 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 two brokers to share the 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 who is not a member of the Chicago Board of Trade and wishes to trade there pays a commission of $15.00 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, whereas the commission charged a member of the exchange is one-half that which is paid by the non-member.

On many exchanges, instead of a flat rate applicable to all contracts at all prices, a graduated scale of commissions is established. On the New York Cotton Exchange, the minimum commission is $17.50 per contract on all orders executed at a price of 30 cents per pound or less. If the price exceeds 30 cents per pound, there is an additional $2.50 for each 5 cents or portion of 5 cents of such excess in price.

Floor brokers, who make a specialty of executing orders for other members and who "give up" or name their principals for clearing house purposes, 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. When A "gives up" X as the real member in interest, the contract will be signed by X and by B. Since the floor broker's work is thus confined to the making of the trade at the ring, his commission is lower. On Commodity Exchange, Inc., where the member rate is $10.00 per contract for hides and rubber, the floor brokerage rate is $2.25. On the New York Cotton Exchange, where the member rate is $17.50 for contracts closed at 30 cents per pound or under, the floor brokerage rate is $1.75, when the price of such transaction does not exceed 30 cents per pound; when the price of such a transaction exceeds

30 cents per pound, there is an additional 25 cents for each 5 cents or portion of 5 cents of such excess in price.

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, say, 10 October. Although this is but a continuation of his original position so far as the principal is concerned, the subsequent purchase and the sale are regarded as new transactions and therefore subject to regular commission rates.

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

Ring or floor brokers representing commission houses devote their time entirely to executing the orders which come in from 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 Chapter III, on speculation, the part played by those who make the market are 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, floor speculators may supply an important part of the buying power and the selling pressure which bring bids and offers together and make a closer market.

Contract Slips. Trades are made at the ring *viva voce,* but brokers do not rely solely on 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 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, as 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 also entered on 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 and, in addition, of guaranteeing all deliveries and all payments on all cleared contracts. The clearing house and its work will be the subject of the following chapter.

CHAPTER IX

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 current debts and credits among merchants and bankers became as necessary to the fair as the fair had become indispensable to the economic life of the people. The fairs of the Middle Ages achieved their greatest growth in the twelfth and thirteenth centuries, and toward the end of this period an efficient clearing system evolved at the fairs of Lyons. After each of the four fairs held there during the year, settlement days were established on which

> . . . 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. Efficient clearing houses were at a later date established in commodity markets in the United States. They clear both the standard contracts and the money accounts of each commodity exchange to expedite both deliveries and collections under such contracts.

The exchange clearing house of each commodity market bears the same relationship to its affiliated exchange that the financial clearing house bears to the banks. The exchange clearing house, however, performs several additional functions. It clears not only all money accounts (debits and credits) and all offsetting contracts of its members, but also guarantees performance of them—a function that no other clearing house system undertakes. This function is a part of the important insurance services

[1] C. A. Conant, *Principles of Money and Banking* (New York: Harper & Brothers), Vol. II, pp. 239, 240.

of commodity exchange markets—the insurance of delivery and payment on delivery under every cleared contract.

During the course of a day's work on the exchange, a broker executes many contracts of purchase and sale between members of the exchange. Some of his *sales* for certain customers for deliveries in specific months, will probably be to a member from whom he also has *bought* during the day, for the account of other customers, other contracts for delivery in the same future months. Since the purpose of an exchange is to facilitate the business of its members, under such circumstances the offsetting of such purchase and sales contracts in the same delivery months against one another is mere common sense, for "it would be as idle to insist upon an actual delivery and counter-delivery between the members of the 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 and Ring Settlements of Contracts. Before describing the work of the modern clearing house, it may be well to mention briefly methods of settlement (of offsetting contracts) which prevailed before modern exchange clearing houses were developed. Without clearing houses, brokers were accustomed to settle their offsetting contracts with one another by what they called direct "washes" and by "rings."

Suppose a broker on a grain exchange in April has on his books sales contracts to deliver many thousands of bushels of May wheat and also purchase contracts for the receipt of many thousands of bushels of May wheat. Many such offsetting contracts of purchase and sale of May wheat have also been made by other members from day to day for the accounts of their various customers during the month preceding the delivery month—May. If no settlement by offsetting sales and purchases were possible *before* delivery, margins would have to be maintained on all such contracts until delivery time, that is, the month of May. Then would come the business of the making and receiving of deliveries and counter-deliveries and paying for such deliveries and counter-deliveries and of sampling, weighing, billing, and collecting for them. If, however, broker A has *sold* for certain customers contracts for the delivery of May wheat to broker B and for other customers has *purchased* from B contracts for delivery of May wheat, these contracts between A and B can be settled without the expense and delay of duplicate deliveries and duplicate collections by the offsetting of like purchases against like sales and by the payment of merely the differences in prices based on the volume involved in such contracts.

If the prices at which A sold his May contracts to B are higher than

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

the prices at which he made his May purchases from B, he can bill B merely for the cash difference, and payment by B of the differences will close these transactions between them. Thus, assuming A's sale to B to have been 5,000 bushels of May wheat at $1.50 a bushel and his purchase from B to have been 5,000 bushels of May wheat at $1.48 a bushel, the payment of 2 cents per bushel, or $100, by B to A avoids all the unnecessary expense of delivery and counter-delivery and payment and counter-payment. This is the simple, common-sense method of settlement of all such contracts. This was the method formerly used for direct settlement or "washing" out of purchases against corresponding sales. It could be effected readily, whenever a sale or a purchase of a definite quantity of a commodity in any delivery month had been offset by a counter-transaction for the same quantity in the same month between the same parties.

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

Though A is thus still obligated to deliver 10,000 bushels of May wheat to B, A's books may show that, as the result of a similar settlement of contracts with C, A is a net purchaser of 10,000 bushels from C. A's books, consequently, show his present position to be one in which he has no real interest in delivery. He has sold to B and bought from C like quantities (10,000 bushels) for delivery in the same month. If A can bring B and C together, so that C will deliver directly to B, A can withdraw completely from these transactions.

The clearing of these contracts through a three-party settlement processs which could not be effected by direct settlement was accomplished (before clearing houses were developed) through the formation of "rings." If, for example, Smith owes Jones $10, Jones owes Brown $10, and Brown owes Smith a like amount, all three debts can be canceled without payment of any money if all three parties come together and agree to offset debt against debt. If, however, all three parties were to pay their debts, each one would be a mere conduit for transmitting each debtor's $10 to his creditor. The simplification of the procedure by having all three parties come together is obvious. Just as obvious and much more pressing was the need for some such system, when the article owed or to be cleared was not money, but *standard contracts* covering deliveries of large quantities of *standard grades* of wheat or cotton or any other bulky, but

homogeneous commodity which is transferable only by time-consuming and expensive samplings, weighings, loadings and unloadings into warehouses, and payment and counter-payments after deliveries and counter-deliveries.

The old form of ring settlement did not differ in principle from the simple financial transaction described above. It involved one more element, however, since deliveries, as well as prices, were to be 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 E a five-cent loss, making the total losses six cents, the profits and losses being equal. All that is necessary is for those who have losses to pay the differences to those who have profits and settlement of the ring is made.[3]

As a consequence, those transactions which could not be offset directly by "washes" with other members were cleared through the "ring" wherever possible. Ring settlements, however, could be made only by a voluntary effort and by comparison of all trades. After exchange hours, brokers' clerks would repair to the "ring room" to compare all 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 from various members.

As trading on exchanges assumed an ever increasing magnitude, however, it became apparent that this method of clearing was both cumbersome, time-consuming, and inadequate for the clearing of a large volume of contracts. Consequently, in order to facilitate settlements of differences on both direct washes and rings, central associations were eventually established to which payments due from one exchange member to another could be delivered and through which balances due to other members could be collected. But this development was a slow one.

In the case of coffee, for instance, the first step was an arrangement by the Coffee and Sugar Exchange (of New York) under which the

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

Corn Exchange Bank in New York acted as the central clearing agency for the settlement of such differences, the payment of which automatically closed the exchange contracts. Rings were still worked out, however, by voluntary co-operative efforts on the part of exchange members. Representatives of member firms met daily in a room of the exchange after close of trading and endeavored to trace contracts through the various members present in order to complete as many rings as possible.

This was a difficult operation in active markets, since there would be so many contracts outstanding and not directly offset that a seller, in attempting to trace a contract back, might find that as many as 20 or more firms were involved. If even one of these firms had no representative to approve the ring, it could not be formed. A firm which had a large position in the market and was short of funds could, therefore, conceal its position and prevent the formation of rings merely by not revealing all its outstanding contracts to other members or simply by not sending a representative to the ring room.

At the same time, although exchange rules in earlier days permitted members who were parties to a contract to call upon each other for margins to cover daily or hourly market variations, as well as original margins, it became customary to call for variation margins only. If both variation and original margins were uniformly required, it was claimed, financial requirements would have been so great that none but the most highly capitalized firms could do business. This disinclination to call for original margins, however, not infrequently occasioned disastrous losses through failures and bankruptcies, which expedited the development of an efficient clearing system.

Furthermore, since the ring frequently was the only means members had of adjusting differences speedily and effectively, the failure of a firm which would have been a link in the settlement chain produced serious financial consequences to all in the chain. At best, the proportion of contracts liquidated by direct washes and rings was relatively small compared to the total volume of outstanding contracts at any one time in each active trading month.

Functions of the Modern Commodity Clearing House. The cumbersome, unorganized, and voluntary method of wash and ring settlements has now been replaced by settlement through clearing associations affiliated with the various exchange markets. Instead of forming rings or making direct washes and sending clerks from commission house to commission house to make payments and collect differences, all exchange contracts are now passed through the clearing house affiliated with each exchange as an intermediary. Members of commodity exchanges today under the modern clearing house system no longer deal with each other

after the contract has been made on the floor and exchange contract slips have been exchanged. Each member thereafter deals exclusively with the clearing association, which assumes the contracts of every member as against every other contracting member. For instance, the Rubber Clearing Association Rules (Section 11) provide that the Association "may accept contracts and assume the obligations imposed thereby."

In other words, the modern exchange clearing house becomes the buyer on all sales contracts of its members, and the seller on all purchase contracts of its members; consequently all offsetting contracts can be readily washed out, and rings are no longer necessary. All contracts are between the clearing house and a member buyer or a member seller. All offsetting contracts are merely "washed out." In addition, the clearing house, by assuming the contract of every member as against other contracting members, insures to each member that all his purchases will be delivered by the clearing house at contract price and that all his sales will be paid for at contract price by the clearing house.

Organization of a Clearing Association. The modern exchange clearing association is usually a corporation organized separately from the exchange and independent of it. As a rule, it is a stock corporation, the stock of which may be sold only to exchange members. Its business is conducted under the management and supervision of its own board of directors and officers. Its sole purpose, however, is to act as a central clearing agency for members of a specific commodity exchange. Every member of the exchange, and only a member of the exchange, is privileged to become a clearing house member, contingent on 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, say $10,000.
(3) Agreement by contract to clear all exchange transactions through the clearing house.
(4) Agreement to abide by all the by-laws and rules of the clearing house and all subsequent amendments.

Partnership firms, having a partner who is an exchange member and also a stockholder in the clearing house, may enjoy clearing privileges on the same terms as a clearing member, though technically the firm cannot be a member. On most exchanges where corporations are accorded the *privileges* of exchange membership, the corporation may likewise obtain clearing privileges on compliance with all the foregoing conditions through one of its officers who is also a member of the exchange.

Having thus briefly outlined the legal status of the clearing house and the requirements for membership, let us proceed to consider its operations in respect to the clearing of exchange contracts.

Reporting to the Clearing House. At the conclusion of each day's trading on the exchange, the brokers exchange contract slips evidencing their purchases and sales made on the floor. These slips then go to the offices of the exchange member on whose behalf the brokers' contracts were made. All clearing house members are required to file reports with the affiliated clearing house at the close of each day. The clearing houses, however, reserve the right to refuse to accept any contract offered for clearance by so notifying the parties on or before eleven or eleven-thirty o'clock in the forenoon of the following business day. On the filing and acceptance of these reports, all accepted contracts between clearing members are thereafter *assumed* by the clearing house, which thereupon becomes the buyer from every seller on the exchange and the seller to every buyer on the exchange of all cleared contracts. In effect, therefore, the clearing house guarantees performance of all cleared contracts by substituting itself as a contracting party to each contract.

To clarify this whole operation: A has sold to B across the exchange trading ring 10 contracts of May cotton. At the conclusion of the day's trading, contract slips are exchanged between the brokers, A and B, and on these slips are noted the names of the respective clearing members—say, R and S—for whom the brokers have consummated the trades or the names of the clearing members through whom the non-clearing house member traders have arranged to clear their transactions. When the clearing house members named in these contract slips file reports of their respective transactions with the clearing house, the latter becomes the purchaser from S, the seller, and it becomes the seller to R, the purchaser. So far as S is concerned, R, the buyer, is eliminated as a party to his transaction. The clearing house assumes the contract and takes the place of R. In the same way S is eliminated as the seller to R and the clearing house replaces him. *The clearing house, therefore, stands in the relation of the buyer from every seller and of the seller to every buyer.* It becomes the other party to every exchange contract cleared by a member through the clearing house. Consequently, the exchange clearing house not only expedites deliveries and collections, but also, in addition to effecting direct settlements or "washes" of all offsetting contracts, in effect guarantees all exchange contracts (cleared through it) both as to delivery and payment of contract price on delivery. It can do so only because of the rigorous and strict margin requirements and other sanctions which it enforces upon its members.

The brokers' reports to the clearing house are made on forms pre-

scribed by the clearing house. There are two separate reports: one, printed and ruled in red ink, setting forth a list of each broker's sales for the day; and the other, printed in black or blue, giving a list of each broker's purchases for the day.

On the report of sales, the clearing house member 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 contract price. The daily "settlement price," which is the figure to which all trades are adjusted for margin and settlement purposes at conclusion of each day's trading, is noted and the amounts due from each member to the clearing house, or from the clearing house to each member, are recorded in the debit and credit columns, respectively. The debit or credit for each transaction is the difference between the contract price and the day's settlement price, which usually is the closing or last price in the day's trading for the specific future month bought or sold and cleared. 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 each clearing member's open market position with the clearing house (long or short) and the debit or credit balance of each member with the clearing house on all contracts for each delivery month.

In order to give a more comprehensive understanding of this report, it is necessary to become familiar with the margin requirements imposed by the clearing house on each transaction to protect itself from possible default of a member on his commitments to the clearing house.

Original Margin Requirements. The operation of the clearing house, in addition to making possible the direct settlement of all offsetting contracts, is designed to guard against the remotest possibility of financial loss to any member or the clearing house. When the latter stands in the shoes of every buyer, thus bound to fulfill his contract with every seller, and in the shoes of every seller, thus obligated to fulfill his contract with every buyer, it guarantees performance to each of every contract and, to enable it to do so, it must require from each of its members a money deposit for each contract cleared *and not offset.*

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 cash deposit, the amount of which is determined by the rules of the clearing house and is known as the *original* margin. The by-laws of the clearing house usually establish the *minimum* amount which the clearing member is required to post against each contract, and the board

of directors from time to time may raise or lower these margin requirements, subject to this minimum limitation. Some clearing houses may establish original margin requirements on a graduated scale, based on the total long or short position of each member with the clearing house. Current original margin requirements of various clearing associations are given in the following tabulation:

ORIGINAL MARGIN REQUIREMENTS OF CLEARING ASSOCIATIONS
(January 15, 1948)

Commodity	*Clearing Association*	*Net Interest (Contracts)*	*Amount per Contract*	*Straddle or Spread Interest*	
Cocoa	New York Cocoa Exchange	1– 500	$1,800		$600
		501–1,000	3,000		
		1,001–1,500	4,200		
Coffee	New York Coffee and Sugar Exchange	1– 500	$ 750		$100
		501–1,000	1,000		
		1,001–2,500	1,250		
Copper	Commodity Exchange	1– 200	$1,000	1– 500	$100
		201– 400	1,200	501–1,000	200
		401– 600	1,400		
Cotton	New York Cotton Exchange	——	$1,000		$100
Cottonseed Oil	New York Produce Exchange	Under 2500	$1,200		$250
		2,501–2,799	1,800		
		2,800–3,099	2,400		
		Every 3¢ advance or fraction thereof	600		
Hide	Commodity Exchange	1– 200	$1,500	1– 500	$100
		201– 400	1,700	501–1,000	150
		401– 600	1,900	1,001–1,500	250
		601–1,000	2,200		
Rubber	Commodity Exchange	1– 200	$ 400	1– 500	$100
		201– 400	550	501–1,000	150
		401– 600	700		
		601–1,000	900		
Sugar	New York Coffee and Sugar Exchange	1– 500	$ 600		$200
		501–1,000	750		
		1,001–2,000	950		
		2,001–3,000	1,150		
		3,001–4,000	1,350		
Wheat	Chicago Board of Trade	——	25¢ per bu.	None	
Corn	" " " "	——	25¢ " "	None	
Oats	" " " "	——	12¢ " "	None	

A straddle (or spread) position is one in which a long position of a member in one delivery month is balanced by a short position in another and both are held by the same clearing member. Original margins must be maintained on a straddle position, but the requirement is less than that fixed for a *net* long or short position.

All figures in the above table are *minimum* original margin requirements on all *net* interests or long or short trading positions, as well as straddle positions, of each clearing member with the clearing house. Some clearing houses make it discretionary with their board of directors to fix the maximum margin requirements within the limits prescribed by the by-laws. The directors may at any time, on twenty-four hours' written or oral notice delivered to the offices of clearing members, require *additional* original margins. Sometimes the additional margins are required to cover the premiums at which future months are selling above the current month. Often, too, they are required because of sharp fluctuations in the price level.

ADDITIONAL MARGIN REQUIREMENTS AND NOTICE OF CHANGE IN ORIGINAL MARGIN
(January 15, 1948)

Commodity	*Clearing Association*	*Additional Margins*		*Notice of Change in Original Margin*
		Current Month	*Premium Month*	
Cocoa	New York Cocoa Exchange	Up to three times requirement on net interest	Amount of premium	24 hrs.
Coffee	New York Coffee and Sugar Exchange	See Cocoa	„ „	24 hrs.
Copper	Commodity Exchange	„ „	„ „	24 hrs.
Cotton	New York Cotton Exchange	Up to $2,500 per contract	„ „	24 hrs.
Cottonseed Oil	New York Produce Exchange	See Cocoa	„ „	24 hrs.
Hide	Commodity Exchange	„ „	„ „	24 hrs.
Rubber	Commodity Exchange	„ „	„ „	24 hrs.
Sugar	New York Coffee and Sugar Exchange	„ „	„ „	24 hrs.

The calculation of these various margin requirements is made as follows: A & Co. may appear on the books of an exchange clearing house

as long 300 May contracts and short 300 May contracts. There is, therefore, no net interest and, consequently, no original margin requirement. If A & Co. appeared as long 300 and short 200 contracts for the same month, there would be a net long interest of 100 contracts, which would require a deposit of, say, $1,000 per contract unit, or $100,000. If the company were long 200 May contracts and short 200 July contracts, its position would be a straddle. It is long and short a like amount, but for delivery in different months. Its straddle position totals 400 contracts, which would, strictly speaking, require a deposit of, say, $1,000 per contract for contracts long and short, or a total of $100,000; but the by-laws, as indicated above, make special provisions for straddle positions—say, $100 per contract, or $40,000.

Variation or Market-Difference Margins. As previously stated, the daily report of each clearing member must be accompanied by a check for the original margin for each contract offered for clearance and *not offset.* In addition to the original margins, each clearing member is subject to hourly calls for payment to the clearing house on each contract of the so-called market-difference or variation margin, which is the equivalent of the difference between the contract price and the current market or settlement price, if the market price from day to day or hour to hour shows a loss on his open position with the clearing house. On the other hand, if the difference between the contract price and the daily market or settlement price reflects a profit on his open position, the clearing member has a corresponding right to draw (on the following day) upon the clearing house for the market difference on his open position. In this way every contract is kept fully margined to the current daily market price of each trading month, thereby protecting each member and the clearing house from losses.

Each contract in any case must be adjusted each day to the daily settlement price established by the clearing house for this specific purpose—or, if necessary, from hour to hour. Should there be a substantial price fluctuation during the day, the by-laws of the clearing house provide that members against whom the market is running may be called upon to meet variations in the price by certified check, which must be delivered to the clearing house within a specified time—a half hour or an hour, usually, after the delivery of a call. Should any member default in meeting such a call, the clearing house must close out all his contracts with the clearing house by buying or selling on the floor of the exchange at prevailing prices, thereby immediately determining the losses on all the member's contracts. Such losses will be recouped from the margins and other security lodged with the clearing house by the defaulting member.

The method of computing the margin requirements may be further elucidated by the following illustration:

A is, say, short of 10 cotton contracts (100 bales of 500 pounds each) with the clearing house; B is long 10 contracts with the clearing house. Assuming that minimum original margin requirements of $1,000 per contract are in force in the New York Cotton Exchange Clearing House, A would be required at the time he files his report to post $10,000. B, the buyer of the 10 contracts, is required to post a like amount with the clearing house. If the price of cotton at the close of the day on which A and B bought and sold should have advanced 1 cent per pound, A, the seller, in order to keep his position margined to the market, would be required to post an additional $5,000 as a market-difference margin 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, in whose favor the market is running, could draw on the clearing house on the following day for $5,000, because his open position with the clearing house entitles him to a credit for that amount. As the price fluctuates from day to day, A and B must in like manner maintain their respective net positions with the clearing house fully margined to the settlement price of each day.

The daily report, containing a recapitulation of the member's trades and his debit or credit balance with the clearing house, is made up so as to indicate precisely not only his net open interest or market 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 his total purchases and sales in each delivery month for the current day. The column "Carried Over for Tomorrow" gives the net market position of the firm with the clearing house for each delivery month.

An illustration will make this clearer. Jones & Co. at the close of Monday are short with the clearing house six contracts of March coffee. 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 and four sold on Tuesday. Jones & Co.'s net purchases of March coffee at the close of Tuesday, therefore, are three contracts, and this amount is entered under the "long" side of the column "Carried Over for Tomorrow." The net position shown in this column is the basis on which the amount of the original margin is established. A definite time within which reports

must be delivered is fixed, and the clearing member is subject to a fine, if his report is delayed.

The reports of the members are entered in the books of the clearing house. These books must always show an exact balance between all long and short contracts of the clearing house with all members and also an exact balance between the amounts due to the clearing house from all its members and the amounts which it holds to the credit of all its members. The clearing house itself is and never can be long or short of the market. The individual position of each member—his total net interest, or long or short position, and his interest in each delivery month with the clearing house—is always known.

Margin Requirements Imposed on Customers of Exchange Members. Margins imposed by the clearing house upon its own members should not be confused with those which the exchange itself requires each of its members to impose on his customers, for whose accounts he consummates contracts upon the exchange.

The exchange usually fixes the minimum original margin requirements, but each member may, if he deems it advisable, impose *higher* requirements upon his customers, either individually or generally. The minimum original margin on commodity exchanges is usually smaller than that on stock exchanges, for the traders in commodities are dealing in futures rather than in spot transactions, which usually are closed out before delivery. Consequently, the commission agent member is not required to take delivery, or to borrow to make delivery on short sales, and, therefore, does not need to furnish the total value of the purchase or sale when it is made. Hence, he needs protection only against adverse market fluctuations.

Such protection is secured through original and market-difference margins, paid to the exchange member by his customers, in much the same manner as they are administered by the clearing house in its relations to its members. As a rule, the original margins range between 10 and 33 per cent of the value of the contract of purchase or sale, and each transaction must be kept margined to the market, as it moves against either the buyer or the seller. Lower rates are permitted in straddle operations. In some exchanges no margins are required for hedging transactions, whereas on other exchanges lower rates are applied. Failure of the customer to respond to a demand for original or additional market-difference or variation margins permits the commission house member to close out the commitments of the defaulting customer. The conditions relating to the marginal requirements of customers are incorporated in the purchase or sales contract.[4]

[4] See Chapter XVI.

Some exchanges at times have granted to its members, where their high credit standing warrants it, the right to extend credit to various customers in connection with original and variation margins. When this is done, however, the exchange fixes a maximum limit on such credit—say, $10,000 per account—beyond which credit may not be extended by any one member to any one customer. This regulation, however, does not foreclose the right of any one customer to obtain the maximum credit from several exchange members with whom he deals, provided his credit standing warrants it. After all, the arrangement between each exchange member and each customer is primarily based on the financial standing of the customer.

Responsibility for the prevention of speculation on exchanges, by those who can ill afford to suffer speculative losses, rests on each exchange member, whose interest in protecting himself from defaults of those with limited resources is the most effective method of eliminating such unwise speculation.

A statement by J. O. McClintock, president of the Board of Trade of the City of Chicago, before the Joint Congressional Committee on the Economic Report (December 1947) at a hearing in connection with proposals that Congress authorize the Commodity Exchange Authority to determine the margin requirements of all exchange operators, states vigorously and concisely the function of margin requirements from customers:

> The system of margins in the futures markets has become essential to the entire system of credit necessary in the fast-moving operations of modern production and distribution. . . . Margins on grain futures contracts are required as a guarantee that both the buyer and seller of the contract will conform to all the commitments set forth in the terms of the contract. Margins are, in effect, what is commonly referred to as "earnest money," as employed to bind a contract on real estate which might be contracted for today with delivery to be effected at a later determined date. The funds, representing margins, are handled very much the same as these "earnest money" payments are handled, that is, they are placed in a segregated or escrow depository pending final conclusion of contractual commitments. . . .
>
> Credit is the life-blood of our national commercial existence. Trading in grain futures contracts requires a system of credit. This credit is established by the rules and regulations of the grain exchanges in connection with the requirements and application of margins. Values involved in terms of money, less the margin required, become an item or credit between the buyer and seller, pending final consummation at contract maturity, when transfer of title of the commodity involved is effected and settlement in full is made. This form of credit is necessary for the reason that documents of title which signify ownership cannot be transferred between the buyer and seller until the date

of contract maturity. Accordingly, no documents of collateral value are available, in the interim, between the date of the contract and the date of maturity of the contract, with which credit might be established at a commercial bank. What would be the results of the lack of a credit system above described? It would mean that those dealing in futures contracts would be compelled, in the cast of 100 per cent margin, to provide capital in an amount and without the benefit of credit to match the value in dollars of all the grains to be hedged.

For example: The grain merchant is selling a million bushels of wheat to the government or a processor; the merchant would then want to buy futures contracts to offset the cash trade he made to the government or processor. The value of a million bushels of wheat at present is three million dollars. In order for the merchant to accommodate his needs, he must find a person, or a group of persons, readily capable of putting up three million dollars in margins on sale contracts made to fill his need. The same situation would apply in case the farmers would wish to sell wheat or corn; when the merchant buys it, he would wish to sell protective futures to offset the purchase of the cash grain. In this instance, the merchant, wishing to sell the futures, would have to seek buyers of futures who are capable of putting up margins in the amount determined by the volume involved, which might mean a million dollars, or ten million dollars, or even much more, within the period of one day. . . .

I believe you realize, as anyone concerned with the realities must realize, that this form of commerce cannot be carried on without credit any more than can commercial activity of any kind be pursued without credit. If margins required amounted to 50 per cent, instead of 100 per cent, the difficulties resulting from stagnation and constriction of interest because of a lack of proper credit would be only proportionately less serious. The point is, however, that any restraint placed on credit, over and above that required for safety, is a blight and could finally result in the complete deterioration of the commercial activity being undertaken. . . .

You are treating with the credit structure of the nation's agriculture and the very existence of the entire system of marketing which, born of economic necessity, has been evolved through the decades to meet the nation's needs.

In this connection, I wish to point out that the use of the margin authority by the executive branch of the government could be so applied that it would change and ultimately destroy completely our marketing system as now constituted. With this done, it would throw distribution of our agricultural products solely into the lap of the government, which would automatically possess itself of the power to control the allocation and use of grains and to determine the price.

Protection of Customers' Accounts. Although the clearing house protects clearing members from possible defaults of other clearing members, it does not protect *customers* of clearing or exchange members from default by their commission agents. The Commodity Exchange Act, passed by Congress in 1936 to regulate futures trading in domestic agri-

cultural products, such as wheat, cotton, and the like, imposes certain restrictions on all futures commission merchants in these trades with respect to treatment of their customers' margins.[5]

Guaranty Fund. It would appear from the foregoing that the clearing house itself, as well as each of its members, has ample protection as a result of original and market-difference or variation margins against any loss occasioned by default of a clearing member. Margin deposits, however, form only one element in an impregnable financial bulwark which alone makes it possible for the clearing house to guarantee all cleared contracts both as to delivery and payment. As a further safeguard, before an exchange member may become a clearing member, he must contribute to the guaranty fund of the clearing house. The amount required of each clearing member will vary in different clearing houses, as indicated in the table that follows. Usually three-fifths of this deposit may be in United States government bonds.

When the deposit has been made, it cannot be withdrawn by the member, as a general rule, until 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, the deposit 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 is deposited in the form of cash or government securities in an approved bank. The cash or bonds cannot be withdrawn for payment or delivery either to the clearing house or to the clearing member except on an order bearing the signature of three of the clearing house directors. The deposit of each member into the guaranty fund guarantees his individual transactions with the clearing house, but the aggregate fund is used, where necessary, to absorb any losses on any one member's account which may exceed all the credits to that member's account. In other words, all members guarantee the accounts of all other members.

Clearance Fees and the Surplus. Still another financial resource of the clearing house—one which in some clearing houses is being continually augmented—is the surplus fund accumulated from fees charged for clearing each contract and billed to each member monthly. In comparison with the services which the clearing house renders, these clearing fees are small, but small fees paid on the many contracts cleared by all clearing members every business day of the year amount to impressive totals at the end of each year.

A member of the Cotton Exchange Clearing House pays 5 cents for

[5] See Chapter XIII for details on these restrictions.

GUARANTY FUNDS AND CLEARANCE FEES
(1948)

Commodity	*Clearing Association*	*Guaranty Fund*	*Clearance Fee per Contract*	*Originally*
Cocoa	New York Cocoa Exchange	$ 5,000	50¢	50¢
Coffee	New York Coffee and Sugar Exchange	15,000	25¢	20¢
Copper	Commodity Exchange	10,000	25¢	50¢
Cotton	New York Cotton Exchange	7,500	5¢	10¢
Cottonseed Oil	New York Produce Exchange	5,000	20¢	
Hide	Commodity Exchange	10,000	25¢	50¢
Rubber	Commodity Exchange	10,000	25¢	40¢
Sugar	New York Coffee and Sugar Exchange	15,000	25¢	20¢
Wheat	Chicago Board of Trade	Corporate shares @ $3,500 per share — not less than 1 or more than 12 in proportion to the estimated volume of clearing	$1.87½ per million bushels	—
Corn	" " " "			—
Oats	" " " "			—

each contract he clears. If he clears 1,000 contracts in a day, he pays the clearing house $50 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. The funds are usually invested in United States government bonds, and interest received from these is usually applied to the operating expenses of the clearing house. The income from the surplus fund may even 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.

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 guaranty 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 the member's contracts with the clearing house in six trading hours by purchase or sale on the exchange floor, and the closed account must be debited or credited with

the resulting losses or profits. If, when the contracts of a failed member are closed out, a deficit is owed to the clearing house, then, in order to make good the deficit, recourse is had first to the member's margin account and after that to his contribution to the guaranty fund.

If these measures should prove insufficient to make good the deficit, the surplus fund would be applied to such extent as the board of directors may determine. If the loss should be so great as to exhaust the surplus fund, the general guaranty fund stands as a second reserve. If the guaranty fund should be drawn upon to make good losses caused by a member's default, it would be immediately restored by assessment upon all clearing members. This assessment, according to the usual by-laws, would be levied according to the equitable principle that those who have benefited most from the clearing house must contribute most, should the failure of a co-member draw heavily upon its resources. The total clearings for a specified number of months would be calculated; the total clearings of each member for this same period would be determined. Each member's share of the assessment would be in the same ratio that his cleared contracts would bear to the total clearings. Thus, a firm whose clearances for the period were equal to one per cent of all clearings would bear one per cent of the entire assessment. On the other hand, in case the clearing house suffers a loss through the failure of a depository bank or a defalcation and an assessment of members should be considered necessary to replenish the guaranty fund, such assessment would fall equally on each clearing house member.

Security of the Clearing House. These elaborate safeguards indicate sufficiently the impregnable financial strength of the clearing house of the commodity exchange. The financial resources in the guaranty fund and the surplus fund are strong bulwarks in themselves, and the right of assessment of all members is also fully enforceable and effective; but the right to call for original and daily or hourly variation margin deposits is the greatest possible and most effective insurance against both minor and heavy losses. *With all 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.* No modern clearing house in the commodity markets has ever defaulted on its legal commitments.

Failures of clearing house members have occurred from time to time, but the margins on deposit have always been sufficient to absorb market differences and protect the clearing houses against loss. Nor is the financial solidity of benefit merely to the clearing house as an institution. With the safeguards it provides, not only is it impossible for the clearing house to lose, but no clearing member can suffer loss through default on the part of any other member, except through assessment.

It should be noted here that this function of the clearing house is a credit insurance function by which every commodity operator who is a member of the clearing house may insure that every sale will be paid for at contract price and that every purchase will be delivered at contract price. This credit insurance function is performed only by commodity exchange clearing houses, which is in sharp contrast to the situation on the physical markets, in case bankruptcy of either the buyer or seller on a contract may take place between the date of the contract and the date of delivery.

An Efficient Medium of Delivery. Having now described the organization, the clearing of contracts, the credit insurance function, and the financial strength of the clearing house affiliated with each exchange, we shall turn to its service in facilitating deliveries and payments.

In the course of a trading day in, say, November, a broker on the exchange sells five contracts of a commodity for delivery the following May. During the months that follow, the seller, we shall assume, does not offset his contract by a purchase, and May arrives with the seller bound to deliver the amount sold under this contract. The seller has elected to make delivery rather than close out the sales contracts by offsetting purchases. He has the option of making delivery on any trading day during the month of May. On May 5 he elects to deliver, and he issues five transferable notices, one for each contract sold. Let us assume that the commodity in question is rubber and that the transferable notice is issued to Commodity Exchange Rubber Clearing Association, Inc. These transferable notices are reproduced on the opposite page.

Five separate notices are required, for no transferable notice can be issued to cover more than one contract. The clearing house is the recipient of each transferable notice. The delivery day, which is filled in, will be a subsequent, but definitely fixed business day; that is, if the notice were issued on a Monday, the delivery would have to be made on Thursday, unless a holiday intervenes. If it were issued on Friday, the commodity 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 business day. The price established for the last business day preceding the issuance of the notice would be the one inserted in the notice.

When transferable notices are delivered to the clearing house, it ascertains from its books the names of those clearing members who are long of May contracts and distributes the notices among them. A clearing member who does not wish to take delivery 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 his buyer. Each

Delivery Month _____ 19____

COMMODITY EXCHANGE, INC.

TRANSFERABLE NOTICE
STANDARD RUBBER CONTRACT

_____, M o'clock New York, N. Y., _____ 19____

To _____

Take notice that on _____ 19____ we shall deliver to you about 22,400 pounds of Ribbed Smoked Hevea Plantation Rubber of the grade of _____ (Exchange Rubber Type) packed in _____

in warehouse known as _____

on dock located at _____

at the Transferable Notice price of _____ cents per pound (with adjustments) in accordance with the terms of the Standard Rubber Contract of Commodity Exchange, Inc, and the By-Laws and Rules with respect thereto.

The Certificate of Grade expires _____ 19____

The Certificate of Weight is dated _____ 19____

We pledge ourselves to deliver on the day specified for delivery, to the last acceptor hereof, documents as per [illegible] of the Exchange, upon written notice of the holding of this notice given to us by [illegible] on the day this Notice is issued, except that a transferee who becomes the last acceptor of a Transferable Notice after 4 P M. on the last notice day for delivery in the current month must notify us before 9 A M on the next business day.

This Notice is to be delivered to us simultaneously with our delivery of the documents, referred to above, to the last acceptor hereof

Signed _____

CONDITIONS

Each of the acceptors hereof agrees that the last acceptor hereof will, before 4 P.M. on the day this notice is issued, or as otherwise required, give written notice of the holding of this notice to the issuer hereof, and will on the day specified for delivery receive from the said issuer the documents as provided in the By-Laws and Rules, and make payment against them, all in accordance with the provisions of the By-Laws and Rules of Commodity Exchange, Inc.

It is further agreed that each acceptor hereof shall continue all his (or their) liability to each other for the fulfillment of the contract until all documents required by the By-Laws and Rules of the Exchange for the delivery of rubber against Standard Rubber Contract shall have been received by the last acceptor hereof, from the issuer, and this Notice shall have been returned to the issuer, at which time all responsibilities of the intermediate parties hereto shall cease.

Signed _____

TIME RECEIVED	THE ABOVE WITH ALL ITS CONDITIONS AND OBLIGATIONS IS HEREBY ACCEPTED	TRANSFERRED TO

person to whom the notice is passed by such a sale has half an hour in which to sell it. The commodity is in the warehouse, certified as to grade and 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 actual delivery.

On the notice, it will be observed, there is space for endorsements 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 final buyer and must accept the delivery. The notice may circulate for not more than one business day. It reaches finally a buyer who desires delivery. He is said to "stop the notice." All the intervening buyers have been eliminated by their sales on the receipt of the transferable notices. Until final payment and delivery of the warehouse receipt, both buyer and seller must maintain their margin deposits in the clearing house.

Adjustments, if necessary, are made between the buyer and the delivering seller in accordance with the certified grade and weights of the commodity which is delivered under the contract.[6] When payment has been received by the seller and he has delivered the warehouse receipt to the buyer, the contract is closed. The necessity for all washes and rings has been eliminated.

Contrast the simplicity of this procedure with the former roundabout method. Before development and organization of the clearing association, let us say that 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 or more 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, the only means of liquidating the contracts involved was by receipt of transferable notice in the delivery month and subsequent billing by in-between parties based on the transferable notice price.

The old cumbersome method of *settlement* between parties (before the modern clearing association developed), 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

[6] Contracts are in terms of a basis grade of the commodity; but delivery of other tenderable and certified grades is usually permitted, with differences in price allowed to compensate for the variation in the quality of the goods from the standard grade. See Chapter VII.

notices, the settlement price established by the exchange is, say, 14 cents. C stops the notice. The exchange rules provide that the "stopper" shall pay the "issuer" at the transferable notice price—in this case, 14 cents. The exchange rules further provided that any difference between the contract price and the transferable notice price be settled on the day following delivery. Accordingly, A collects 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, collects 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, has paid his losses in the transaction—3 cents per pound.

The rules of the modern clearing house regarding a 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 also be liable for all damages suffered by the purchaser, in addition to a monetary penalty; if his default should be willful, he may be suspended or expelled from both the exchange and the clearing house.

It should be recalled, however, that on most exchanges the general rule is that deliveries are not made on the exchange, but usually most exchange contracts are consummated by offsetting purchases and sales, the differences between purchase and sale prices being settled by cash payments.[7]

Limitation of Interest. A rule usually found in every clearing association limits the net long or short interest of each clearing member, his interest in any one month, and his straddle or spread interest. Thus, the *net* interest of a member of the New York Cotton Exchange Clearing Association is currently limited to 4,000 contracts (100 bales of 500 pounds each), and his interest in any month may not exceed 5,000 contracts. This affords an effective method to prevent undue speculation. There was no limitation of interest on the grain exchanges prior to 1936.[8]

The table on the following page shows the limitation of interest in various clearing associations in January 1948.

Since 1936, with the passage of the federal Commodity Exchange Act,[8] the trading commitments or market positions of all operators on such exchanges as are subject to the Act are determined by a federal agency, in an effort to prevent undue speculation. Although the federal act authorizes the imposition of maximum trading limits on all speculative exchange operations, whether or not they are conducted by members of the exchange, it does not grant authority to regulate the margin requirements either of exchange members or of their non-member cus-

[7] See Chapter III.

[8] See Chapter XIII.

LIMITS OF INTEREST
PERMITTED MEMBERS BY CLEARING ASSOCIATIONS

Commodity	*Clearing Association*	*Number of Contracts*		
		Net Interest	*Any One Month*	*Straddle Interest*
Cocoa	New York Cocoa Exchange	1,500	1,500	2,500
Coffee	New York Coffee and Sugar Exchange	2,500	2,500	4,000
Copper	Commodity Exchange	600	400	1,000
Cotton	New York Cotton Exchange	4,000	5,000	4,000
Cottonseed Oil	New York Produce Exchange	None	None	None
Hide	Commodity Exchange	1,000	750	1,500
Rubber	Commodity Exchange	1,000	500	1,000
Sugar	New York Coffee and Sugar Exchange	4,000	1,500	4,000

tomers; nor does the Act apply to any exchange except those operating in domestic agricultural products.

Confidential Relationship of the Clearing House and Its Members. The strictest confidence is maintained between the clearing house and its members. The clearing house manager alone knows the individual long or short or straddle positions of each member. In referring to the responsibilities of the secretary-treasurer and the 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 infomation concerning the market standing of any member clearing through the association.[9]

Summary. The advantages of modern exchange clearing houses may be summarized from the standpoint of their convenience to their members. By the process of daily reports, 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, thus leaving himself only buyer or seller of the net amount not offset; (3) keeps all his contracts fully margined up to the market daily; and (4)

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

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 simplification of contract relations, and a vital service in the form of credit insurance. Not only are the members' contracts cleared, but they are also guaranteed as to delivery and payment, and the guaranty is fortified so strongly that the daily margin deposits have proved sufficient to absorb every loss to the clearing house arising out of any defaulted contract. In fact, in more than one case the clearing house has turned over a surplus to the trustees of a failed member's bankrupt estate.

The machinery of trading on the floor of the exchange and the clearing of exchange contracts have now been described. In the following chapter we shall follow the course of a typical transaction from the time the order is placed with the broker until the contract is finally closed in the clearing house.

CHAPTER X

A Typical Transaction on the Exchange

It will be helpful now to trace a few typical exchange transactions from the time the buying or selling orders are first given to the time—perhaps days, perhaps months later—when the transactions are closed by delivery and payment or by offsetting purchases or sales, followed by cash settlements. It is impossible, however, to take as typical the progress of any one single order, for the disposition of individual transactions will vary with the purposes which dictated the original purchase or sale.

The transaction may be initiated by a speculator who neither owns the commodity nor has any intention of ever taking delivery of it; it may be a purchase or a sale made by a merchant or a miller who really wants delivery or to make delivery, or, on the other hand, is hedging by buying or selling as a protection against already existing risks of price fluctuation involved in his inventories or his commitments on the physical market; 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; and, finally, it may be a hedge sale of a producer. A clearer understanding of the functioning of an exchange will perhaps be possible, if we follow in detail different types of orders which proceed from buyers or sellers whose motives in trading are of a 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, has kept in touch with price fluctuations, and has formed an opinion on the general trend of the rubber market. He believes that crude rubber will sell lower. If his judgment is sound, he can make a profit by selling a distant future at its prevailing price and later buying back this same future at a lower price. The first part of this transaction is known as a short sale. Although he is not a member of any exchange, he may be a customer of L. & Co., one of the many large commission houses which are members of the New York

Stock Exchange, the Commodity Exchange, Inc., the New York and New Orleans Cotton Exchanges, the Chicago Mercantile Exchange, the New York Coffee and Sugar Exchange, the New York Cocoa Exchange, the Chicago Board of Trade, and other leading commodity exchanges.

On January 2 Brown telephones L. & Co. One of the customers' men receives the call, and Brown gives him an oral order to sell 10 contracts (units) 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 price, but has decided that the market may decline or is not active enough to make this procedure desirable. His order, as given, is practically one to sell at the best possible price. Had he used a limited order, he would have named a definite price at or above which the sale must be made.

Brown's order is entered on a selling ticket in the office of L. & Co.; a number and the time of its receipt are stamped upon it. The use of numbers instead of names saves time, aids in preventing mistakes in the transmission of orders to the exchange, and protects the identity of the customer. From the main office, direct wires connect L. & Co. with all the exchanges of which they are members. The customers' man telephones to the floor of the exchange where booths are leased to members. An attendant of L. & Co., standing at that firm's booth, takes down the order to sell 10 May rubber. Brown's name is not mentioned—he has become a number. L. & Co.'s floor broker, who receives the selling order, does not know for what customer's account it is to be executed.

At the ring, brokers are shouting their bids and offers of rubber for various delivery months. The broker of L. & Co. listens for a bid for May rubber. Since 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 fifteen columns in which prices of all 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 on the board under the month traded in. Attendants, with telephone headpieces and earphones so attached that their wearers can walk back and forth on a bridge in front of the board, receive the price and number of lots as fast as trades are reported from the ring. The broker looks at the May column to find the price at which the last May sale was made in order to ascertain at what price to make his own offer to sell for Brown's account. He then offers 10 May at 20.20. His offer is countered by a bid of 20.10 from across the ring, but he continues to call out his offer, hoping to make his sale at 20.20 and thus obtain the highest possible price for his cus-

tomer. Having instructions to sell at the market, however, and receiving no bid at 20.20, he finally sells the ten lots at 20.10.

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 the broker's offer had been accepted simultaneously by several brokers, the question of priority would probably have been settled immediately among the brokers themselves. The floor committee is always present and is empowered to rule on the question of precedence in case the brokers are unable to reach an amicable agreement.

L. & Co's broker made the sale to a broker representing H. & Co., another exchange firm. Each broker carries cards printed and ruled in red on one side and in black on the other. Each *sale* on the floor is noted on the side ruled in red, and each *purchase* is recorded on the side printed and ruled in black. The two sides are printed exactly the same except that at the top of the red side of the card, before the date line, the word "sold" appears and the column for recording the name of the other broker is headed "to," whereas on the black side the words are "bought" and "from."

On the side printed in red, L. & Co.'s broker notes "H., 10, May 20.10." Across the ring the broker of H. & Co. has noted on the side of his card printed in black, "L, 10, May 20.10." Later in the day the two brokers will compare their cards to make sure that their notations as to quantity, price, and month are in accord. L. & Co's broker now instructs the attendant at the telephone booth to report to his office the price at which the sale was made. L. & Co. immediately notify Brown by telephone that they have sold for his account 10 lots of May at 20.10. All this activity may have required much less time than is necessary to describe it—normally 30 to 40 seconds on the floor of the exchange.

What Brown Sold. When Brown receives notification that his sale has been made, he knows that he is now under contract to deliver to a purchaser, whom he does not know and probably never will know, 224,000 pounds (100 long tons) some time at his option in the month of May at 20.10 cents per pound. Every exchange has its own standard contract unit in terms of which all transactions are made. Each rubber contract calls for the delivery of 22,400 pounds (10 tons), and Brown has sold 10 contracts.

Confirming the Sale. Trading continues at the ring of the exchange until the closing gong sounds at three o'clock. Then tables are brought out on the floor and the floor broker for L. & Co. joins other brokers, who sit down to exchange contract slips confirming all trades of the day. One of these slips is filled in with the particulars of Brown's sale as follows:

New York, January 2

SELLER .....L. & Co. .....

BUYER .....H. & Co. .....

Subject to the Rules and By-Laws
of
Commodity Exchange, Inc.

Number of Contracts of Rubber	*Delivery in*	*Price*
10	May	20.10

L. & Co.
By.....
Attorney

L. & Co.'s broker hands this slip to H. & 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 224,000 pounds of rubber by L. & Co. to H. & Co. at the contract price to be delivered in the month of May. Neither knows the customer of the other.

Clearing the Trade. X., L. & Co's broker, at the close of the day takes his slips (among them the one signed by H. & Co.'s broker) to his office. L. & Co.'s daily report to the clearing house is made up from these slips. The report, as soon as it is completed, is sent to the clearing house. H. & Co. meanwhile have been engaged in making out a similar report. Messengers of these two firms will take the reports to the clearing house, carrying with them checks for original margin requirements on their respective net purchases and sales. After their reports and checks have been delivered to the clearing house, L. & Co. and H. & Co. no longer have any relationship with each other on Brown's sale, although Brown still remains a customer of L. & Co. The clearing house has now been substituted for H. & Co. as purchaser of Brown's 10 May rubber and for L. & Co. as seller of Brown's 10 May rubber. In other words, L. & Co. now have a contract of sale to the clearing house, and H. & Co. have a contract of purchase from the clearing house for the account of their respective customers.

Brown's Margin with L. & Co. Brown is an old customer of L. & Co. He has, say, $10,000, on deposit with them—enough to take care of the original margin requirement and to cover subsequent small fluctuations in price. Brown has already been notified by telephone of the execution of his order, but a written confirmation is mailed to him before L. & Co.'s office closes for the day. The commission houses send confirmations, one of purchase and the other of sale, to their respective customers, as follows:

CONFIRMATION OF PURCHASE

Dear Sir:—

As indicated below, we have this day BOUGHT for your account and risk, subject to the By-Laws, Rules, Regulations, and Customs, as now existing or hereafter amended or adopted, of the Exchange where the purchase was made and its Clearing House, and subject to all applicable Federal and State laws and to the regulations of any Government agency having authority with respect thereto:

Date, January 2, 1947

Account	*Quantity*	*Commodity*	*Price*	*Remarks*	*Extension*
A. B. Customer	Ten (10)	Rubber	20.10¢ per lb.		

All orders for the purchase of commodities for future delivery are received and executed with the understanding that actual delivery is contemplated and the party giving the order so understands and agrees. We reserve the right to close out contract (s) without notice when margins in our judgment are insufficient. Contract (s) will be closed out by us as and when authorized or required by the Exchange where made; or, if you fail to give instructions which can be executed under prevailing conditions, we shall close out the contract (s) or take delivery and dispose of the commodity by any feasible method and upon any terms which we may see fit. Against a "long" position in the near month, we must have liquidating instructions, or we must be placed in sufficient funds to take delivery at least five days before the first notice day of said month, and in default thereof we reserve the right, without demand or notice, to close out the contract (s) or to take delivery and dispose of the commodity upon any terms and by any method which may be feasible.

Yours respectfully,
H. & Co.
By.....

CONFIRMATION OF SALE

Dear Sir:—

As indicated below, we have this day SOLD for your account and risk, subject to the By-Laws, Rules, Regulations, and Customs, as now existing or hereafter amended or adopted, of the Exchange where the sale was made and its Clearing House, and subject to all applicable Federal and State laws and to the regulations of any Government agency having authority with respect thereto:

Date, January 2, 1947

Account	*Quantity*	*Commodity*	*Pirce*	*Remarks*	*Extension*
Robert Brown	Ten (10)	Rubber	20.10¢ per lb.		

All orders for the sale of commodities for future delivery are received and executed with the understanding that actual delivery is contemplated and the

party giving the order so understands and agrees. We reserve the right to close out the contract (s) without notice, when margins in our judgment are insufficient. Contract (s) will be closed out by us as and when authorized or required by the Exchange where made; or, if you fail to give instructions which can be executed under prevailing conditions, we shall close out contract (s) or make delivery by any feasible method and upon any terms which we may see fit. Against a "short" position in the current month, we must have instructions to close out, or all necessary delivery documents must be in our hands at least 5 days before the last trading day of said month, and in default thereof we reserve the right without demand or notice to close out the contract (s) or procure the actual commodity for delivery upon any terms and by any method which may be feasible.

Respectfully yours,

L. & Co.

By.....

Commissions. For executing Brown's order, L. & Co. receive a commission of $200.00. The prevailing minimum commission for purchase or sale on the exchange is $20.00 for the sale or purchase of one contract, and Brown has sold ten contracts. If he were a member of the exchange, the commission charged by L. & Co. would be half of the above amount —$10.00 per contract, or $100.00 in all.[1]

Brown follows daily the course of rubber prices in the newspapers and is an interested reader of all statistical matter and news which have a bearing on rubber. Will the course of prices follow his anticipation? As 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 21.10. At this stage Brown has an unliquidated paper loss of 1 cent per pound on his sale, and, if he were at this time to close out his trade by a corresponding purchase, he would actually and immediately sustain this loss. Since he has sold 10 contracts (224,000 pounds), his paper loss amounts to $2,240.

Variation Margins. The price of May rubber having advanced 1 cent a pound, L. & Co., in addition to the original deposit, have paid to the clearing house $2,240 as variation or market-difference margin. As L. & Co. pay this sum to the clearing house, which credits it to the account of H. & Co., subject to their draft, L. & Co. simultaneously debit the account of Brown correspondingly.

Switching. No further price change of any moment occurs. Before May arrives, L. & Co. reminds Brown that he has until May 25 (the last delivery day for May rubber) to do one of two things—either to close out his contract by a purchase of 10 May or else to fulfill it by the

[1] For current commission rates on commodity exchanges, see Chapter VIII.

delivery of 224,000 pounds of rubber of a grade tenderable on the exchange contract. Brown decides to cover. Nevertheless, despite the fact that the price of rubber has advanced 1 cent per pound since his sale, he is not yet convinced that his judgment of the longer-term trend of prices was wrong. He decides, therefore, to get out of his unprofitable May short sale, but still to remain short 10 contracts of rubber. Accordingly, he directs L. & Co. to buy 10 May rubber at the prevailing market price, but to sell 10 October simultaneously at the market. His purchase of 10 May offsets the sale which he made in January and leaves him with no obligation to deliver rubber on the May contract, but he now has a liquidated loss of $2,240. The May contract is bought back on the floor of the exchange at 21.10, and a new short sale is entered into by the sale of 10 October at, say, 21.90. Brown has simply switched his short position from a near month to a more distant position, but he now has a liquidated loss of $2,240 to overcome.

Brown's Trade Closed. Before October arrives, Brown's judgment may be vindicated. The price of October rubber declines to, say, 16.10 cents per pound. Brown now has a paper profit of 5.8 cents per pound, amounting to $12,992 on his sale of October rubber. Deducting the $2,240 which he lost on the sale of May rubber, he still has a net profit of $10,752, less commissions to L. & Co. for the two lots of 10 contracts each. Brown now instructs L. & Co. to buy 10 October. The buying order follows the same course that his original selling orders pursued, and, when the confirmation notice of L. & Co. reaches him, his trading is closed and he receives a statement from L. & Co. of his profits and charges, together with a check.

If Brown had been bullish on the rubber market and, instead of selling short, had ordered L. & Co. to buy for his account, the operations would have been the same except that Brown would have made money on his first and lost on his second transaction.

A Protective Sale. Differing widely in type of transaction is the sale of Mr. Black, a merchant who deals in crude rubber. Since the primary markets for rubber are abroad, Black is in constant touch with merchants in Singapore, Batavia, and Colombo. On April 1 he is in receipt of offers to sell rubber for April shipment from exporters with whom he deals, and he accepts 50 tons offered by a merchant in Singapore at a price of 18 cents a pound, c.i.f. New York, for April shipment. The Singapore merchant will prepare immediately to ship the rubber, which will be en route by the middle of April. Not desiring to speculate on this transaction, Black wishes to make certain that he will not lose money, if the price declines below 18 cents. His shipment will probably arrive in June and he has at the moment no immediate buyer for the specific

grade on the physical market. He now is long of 50 tons of the physical rubber, but to protect himself from market risks he can sell 5 June contracts (50 tons) on the exchange.

On April 1 he instructs L. & Co. to make the sale. They execute his order at, say, 19 cents per pound on the exchange floor for June delivery. The difference between the c.i.f. price of 18 cents and the price of the exchange future is represented by interest charges, weighing, trucking, and other incidental expenses. Black has now bought at 18 cents and sold on the exchange for delivery in June at 19 cents per pound. By the time June 1 arrives the price of rubber for immediate delivery has declined, say, to 17 cents per pound.

If it were not for his sale on the exchange, Black would be compelled to find a purchaser on the physical market at a loss to himself. But he has no such problem. When he sold the 5 June futures, he had thereby procured a purchaser of his physical rubber, if he decided to deliver on the exchange. It is now only necessary for him to make delivery in accordance with his contract, if it is more profitable for him to do so. Black has avoided a loss in a declining market through his protective sale. He has been enabled to buy the rubber and hedge it at a reasonable profit when, without such protection and unable to sell it immediately to an actual user, he might have deemed it unsafe to purchase.

When the shipment arrives from Singapore, it is sampled, inspected, weighed, and certified as to quality. Since the rubber is of a grade tenderable on the exchange contract, he instructs L. & Co. to issue transferable notices. He has sold 5 contracts, each representing 10 long tons, and his purchase abroad was 50 tons. L. & Co. accordingly issue 5 transferable notices to the clearing house, one for each contract. The clearing house notes that H. & Co. are among the many clearing members who are long on June rubber; accordingly, the transferable notices are sent to them.

H. & Co. have a half hour in which to decide what to do with the transferable notices. If they wish the physical rubber for a customer, they will stop—that is, they will retain—the notices and accept delivery. Having instructions from their customer, however, not to accept delivery of the rubber, they send the notices immediately to the exchange, where their floor broker sells them in the ring as 5 June contracts. Each succeeding buyer or transferee into whose hands the notices come has this same time limit of a half hour for disposing of them; otherwise, he must take delivery. The time of transfer and the endorsement of each buying member are placed on the notices in the space provided for that purpose. The notices finally come into the hands of a broker acting for a purchaser who wishes to take delivery. The notices are stopped by him. The delivery day on a transferable notice is a fixed business day succeeding the date

of the notice. Both L. & Co. and the buyer must meantime maintain their positions with the clearing house; that is, they must 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 for the rubber has been made. When the buyer gives Black his check in exchange for the delivery of the documents, both notify the clearing house. Black's transaction then is completed.

More likely, however, Black will prefer to sell his physical rubber on arrival to a tire manufacturer and close out his exchange sale by an offsetting purchase. By doing this he is likely to make an extra profit, for he may obtain a small premium for the specific grade on the physical market—a premium higher than the price which he would get by delivery on the exchange contracts. In any case, by such action he will not suffer any loss.

The Central Market Place. In these two transactions the work of the exchange as a great market place has been briefly 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 cost estimates for a sale of 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, before the day's trading closes, sells the contract again to a tire manufacturer, who in turn is protecting a sale of tires for forward delivery.

The commercial needs of merchants and manufacturers, the judgment of speculators, and the shrewd buying and selling of floor traders all contribute to make the market liquid and broad. Enough has been shown to indicate the impossibility of labeling any single exchange transaction as wholly speculative or wholly commercial, unless one knows every step through which each contract passes. A speculator may be the maker of the price which the merchant needs for his protection, whereas the hedging merchant may in turn make it possible for the speculator to back his own judgment of market trends at the risk of a loss for a mere chance of a profit.

CHAPTER XI

Hedging

In days when trade and commerce was chiefly local and commodities passed more directly and quickly from producer to distributor and from merchant to consumer, relatively little credit risk or hazard of substantial price change, based on time, was involved. Under modern conditions of mass production in agriculture, mining, and industry, as well as of swift transportation and large-scale warehouse and refrigeration facilities, expansion in the volume of dealing in wheat, cotton, coffee, and other staple commodities and, more than expansion, the development of trading in standard contracts for forward delivery of standard grades, have introduced elements of time hazard which have already been discussed in describing the origin and growth of the futures contract. These hazards were instrumental in bringing about the formation of commodity exchanges. It was to minimize credit risks and to guard against the hazards of wide fluctuations in prices arising out of transactions for future deliveries that the commodity exchange and the modern form of the futures contract were evolved to provide insurance for producers, dealers, and manufacturers. The current widespread use of the futures contract for insurance or hedging represents the highest development of the machinery of the exchanges today. Like all insurance, the hedge is used to protect against major casualties and to *minimize* losses therefrom, but it does not give perfect or full protection from all losses arising out of such casualties. No form of insurance can guarantee to do that.

All insurance may be said to represent a hedging operation. The possessor of a $50,000 life value, for example, goes to a life insurance company to hedge that value with a $50,000 life insurance policy. After that, no matter what happens, the insured is always even financially, since he has his life, if he lives, while his dependents have the money value of that life should he die. The owner of a $50,000 building goes to a fire insurance company to hedge the same with a $50,000 fire insurance policy. Thereafter, he is financially secure, since he has the building, if it does not burn, or its equivalent in cash, if it should burn. . . .

Similarly, the owner of $50,000 worth of cotton goes to the speculative exchange market (the insurance institution which is made possible through the existence of four necessary factors: namely, a large body of speculators, a continuous market, a future contract, and short selling) to hedge that value against loss through a price decline, with a short sale for the same amount. Thereafter, he is financially secure, just like the owner of a life value or of a building, since any shrinkage in the value of the cotton is offset by the gain derived from the short sale, which serves the same purpose as an insurance policy.[1]

Risks of Dealer and Manufacturer. It is only necessary to take, at random, familiar experiences in any commodity market to find in them a wealth of illustrations of risks of price changes and credit hazards which are inherent in these transactions.

A cotton merchant in a southern port during April receives an order from a spinner abroad for one thousand bales of cotton of a specified grade and staple for December shipment. The order specifies 1 inch staple; the grade, strict middling. The cotton exchange *basis* grade is middling $\frac{15}{16}$ inch; strict middling is one grade higher than middling and sells at premium over the prevailing price of middling. From the price prevailing on the exchange for middling $\frac{15}{16}$-inch cotton, the merchant estimates the price of strict middling 1-inch cotton at $2\frac{1}{2}$ cents per pound higher, adding freight and carrying charges and including his profit of, say, 3 per cent. The merchant then sells to the spinner the cotton of the grade and staple wanted for shipment in December at the price so determined. The contract of sale is made at a time when the crop has not yet been harvested or possibly at a time when it may not even have been planted.

The risk to which this merchant has exposed himself, by thus entering on an unqualified contract at a definite price for delivery of a quantity of a specific grade of cotton which he does not own, is sufficient on a *rising* market to cause him a heavy loss. He expects to earn a profit of only, say, 3 per cent on this sale. Such small profits on many deals are his livelihood. His primary concern in business is the earning of these profits. Yet, if the price of cotton were to advance, say, 5 cents per pound between the time of sale 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 as well.

A country grain elevator operator buys from a farmer 5,000 bushels of No. 1 Northern spot wheat at $2.00 per bushel. The purchase price is based on the prevailing exchange price in the terminal market. A week or more may pass before the grain can be shipped to or arrive at the terminal market for sale. In that short time the price may have declined

[1] S. S. Huebner, Professor of Insurance, University of Pennsylvania, in *Annals of the American Academy of Political and Social Sciences,* May, 1931.

substantially below that paid to the farmer. The elevator also is primarily interested in making a small merchandising profit on many transactions; yet the possibility of sharp price fluctuations subjects him to heavy speculative risks.

A flour miller contracts in April to deliver 5,000 barrels of flour in December to a bakery or to the United States Army at a price based on current exchange prices for December wheat. The price quoted for the flour is sufficient to cover costs and insure a *normal* milling profit, but it does not include a margin sufficient to justify a speculative risk. The month of December arrives and the miller, by reason of an advance in the price of wheat, may be compelled to pay, say, 20 cents per bushel more than the price on which he based his estimate when he contracted to mill the flour at the fixed price. He will require approximately 25,000 bushels of wheat to make 5,000 barrels of flour. An advance in the price of wheat would cost him $250.00 for each cent per bushel.

Eliminating the Risk. If producers, merchants, millers, spinners, and manufacturers were compelled to face such market hazards without means of protection, many fields of enterprise would be left in the hands of speculators of iron nerve and tremendous financial resources. More important, prices would be much higher to consumers or much lower to producers and would also be much more erratic. The profits of merchants and converters would necessarily have to be higher to compensate for these speculative hazards.

Although the examples mentioned 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 *normal* merchandising, milling, or manufacturing profit, without allowance for assumption of speculative risks based on time. He wants to operate without such risks.

There are, of course, various ways in which the risk of a 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 price risk: (1) as soon as he made his contract of sale, he could buy and store spot cotton of the grade sold; (2) he could buy for forward delivery in the appropriate market the particular grade he needs; or, (3) if he could not immediately obtain the necessary specific grade, 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 by later exchange of his stored cotton for the grade he desires.

None of these methods would appeal to a business man. To buy cotton immediately for many such deals would be highly undesirable, because such transactions would soon tie up his entire capital from

spring until the time for shipment in December. Interest on the frozen capital, shrinkage of the cotton, and carrying charges on the stored cotton would soon eat away his profits. It would also be equally unsatisfactory for him to attempt to buy from a farmer the specific grade he requires, 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 small merchandising profit. The second method (buying the specific grade for forward delivery), 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 party who contracts to make the forward delivery, and he would be faced with the same problem which confronted the cotton merchant.

The cotton merchant or the flour miller who seeks to minimize his risks of price changes by purchasing at once for forward delivery the specific grade of cotton (which he has sold) or the specific grade of wheat (which he has contracted to mill into flour) from a cotton or wheat farmer or merchant dealer is subjecting himself to another risk—a credit risk. The farmer or the merchant from whom the specific grade of cotton or wheat is bought for forward delivery may fail to make delivery at the date it is due. A rising market between April and December may tempt them to resell their cotton or wheat at higher prices (despite the certainty of a lawsuit for damages for non-delivery). Furthermore, they may be forced into bankruptcy before delivery date. In either case the cotton merchant or flour miller would be compelled to meet such defaults by again entering into the market and rebuying the defaulted contracts, possibly at much higher prices. The legal right to sue a defaulter on a contract or to file a claim for damages against a bankrupt estate is not adequate protection against such risks.

The merchant and the miller, because of the facilities of the exchange, are not compelled to resort to any of these methods. They can obtain protection against both the hazards of default and the risks of price fluctuation, a protection so eminently satisfactory in result that it more appropriately should be termed *price and credit insurance.* The merchant and miller can protect their contracts to sell by offsetting purchases or hedges on the exchange.

No merchant or miller could operate in face of such price and credit risks without working on margins of profits much larger than normal. This, in turn, would raise prices to consumers or lower those paid to producers. In any case, the merchant and miller want to operate on their normal merchandising or milling margins—a small percentage on large volume—without assuming speculative risks. For these reasons they

will insure against such risks by hedges—off-setting insurance transactions—on the exchange.

After all, a futures market serves much the same purpose in the marketing field as does Lloyd's in the shipping field. It takes, for example, the risk incident to a fall in price on a warehouse full of butter, wheat, or cotton—a risk too large for any one person or firm to carry without courting bankruptcy—and breaks it up into many small parts and passes these small parts on to others. These may be hedgers who want to balance and offset other kinds of risks or they may be speculators who feel that there is better than an even chance that the market will move in the opposite direction and give them a profit—there is normally a seasonal rise, for example, in the open futures contracts of grain, as grain moves into commercial channels. There is a seasonal decline toward the end of the crop year, as supplies diminish, and short hedgers and long speculative traders reduce their futures contracts. This is an indication of the insurance or risk-dispersing character of the futures markets.[2]

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 another commodity that has a parallel price movement."[3] The hedge, then, entails the use of the futures contract on a commodity exchange as a means of offsetting the risks incident to a trade transaction or a market position in the physical trade.

It may be helpful to trace a typical hedging transaction. A flour miller makes a contract in July to deliver 5,000 barrels of a specific grade of flour in December at a fixed price. He will need a specific quantity of a specific quality of wheat for milling into flour in November. At the time the miller makes the contract for sale of the flour, he can simultaneously buy December futures contracts for the necessary *quantity* of wheat on the Chicago Board of Trade, or the Minneapolis or Kansas City grain exchange. In the interval between the time when the contract for the sale of the flour is made and November, when the miller will need the specific grades of wheat to mill the flour, the price of wheat rises, say, 2 cents per bushel. When November arrives he purchases in the spot market wheat of the quantity and *quality* he desires. He loses 2 cents per bushel by reason of the advance in the price of wheat on the physical market during the intervening four months, but at the time he obtains the spot wheat he simultaneously closes out his hedge transaction by selling the December exchange contracts. He makes thereby a corresponding profit of 2 cents per bushel on his exchange

[2] Address by J. M. Mehl, chief of the Commodity Exchange Administration, before the Chicago Mercantile Exchange, September 10, 1941.

[3] Alonzo B. Cox, *Cotton Prices and Markets,* Bulletin No. 1444 (Washington: U.S. Dep't of Agriculture), p. 27.

transaction. This profit on the exchange operations balances his loss on the purchase of the spot wheat and insures him his normal milling profit on the manufacture and sale of the flour at a small cost in commissions. The speculative price and credit risks were eliminated by the hedge.

The hedge is employed in like manner by those who buy or already own actual commodities in order to protect themselves against a fall in price. The grain elevator which buys 5,000 bushels of wheat from a farmer can protect itself by selling simultaneously futures or exchange contracts for a like amount; then, if the price of wheat declines, although there will be a loss on the sale of the actual wheat which goes to the terminal market, there will be a corresponding profit when the hedged transaction is closed on the exchange by an offsetting purchase. In both these hedging or insurance operations the *hedger* has protected himself not only against price fluctuations or risks, but also against credit losses.

In the words of Dr. Emery: "The hedger 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."[4]

Mr. William L. Clayton, formerly Under Secretary of State and president of Anderson, Clayton & Company, the largest and most active cotton merchants in the world, has given the term hedging a broad and at the same time exact meaning. In 1936, speaking before the Senate Committee on Agriculture, he said, "My definition of hedging is the offsetting of a market risk in one transaction by [assuming] a market risk of the opposite nature in another transaction involving a like amount of the same commodity."

Object of the Hedge. The following analysis of hedging from the New York *Journal of Commerce,* July 10, 1940, answers the argument against hedging frequently used by those who do not understand its proper function:

Under the title "An Opportunity for Commodity Exchanges" a *Journal of Commerce* editorial several weeks ago stated: "The commodity futures exchanges offer business men an opportunity to hedge inventories and future commitments, so as to avoid the risk of larger losses from unpredictable price swings."

Among the various letters received in response to this editorial the following in our opinion, merits special attention since it raises a very pertinent point in connection with the value of hedging for the protection of raw material inventories.

We quote from this letter: "The writer's experience would indicate that the

[4] Henry Crosby Emery, *Speculation on the Stock and Produce Exchanges of the United States* (New York: Columbia University Press, 1896), p. 160.

cocoa market does provide a source of raw material supply and that a manufacturer can protect his raw material against price increases simply by being long of the market, but this is nothing more than speculation, whether the market goes up or down. However, if cocoa is bought and simultaneously hedged out, the hedges to be repurchased from time to time as materials are used, the manufacturer has not the price protection which is necessary to meet competitive conditions."

No doubt this point is well taken. Take an example: Two manufacturers or dealers buy cocoa at 5¢ per pound. One of them hedges his commitments in the futures market; the other takes a chance on an advancing market. Now assume that the price rises to 6¢ per pound. The buyer who placed hedges in the futures market against his actuals must sell at 6¢ because he has to take a 100-point loss when buying back his hedges in the futures market. On the other hand, the buyer who took a chance on the market can well afford to sell the cocoa at 20 points or so below his competitor, thus giving up merely a small part of his speculative profit. Clearly then in this case the buyer who did not hedge had the advantage over the one who did.

However, the case would have been entirely different, if the price of cocoa had gone not up but down. Then, of course, the buyer who placed hedges against his actuals would have been able to sell at the lower price without loss, since his hedge sale in the futures market would show a corresponding profit.

In discussions regarding the value of hedging one frequently encounters the argument that hedging is fine when prices go down, but a nuisance when the market goes up. True enough; but this argument only proves that those using it have not yet fully understood the functions of hedging. Hedging is of value only if it is adopted as a matter of policy to be used at all times. The whole idea of hedging consists in trying to eliminate speculative risks from the merchandising or processing of raw materials. Those using this method of price protection must be aware, however, that in doing so they give up the chance to make speculative profits. It has been proved time and again that, in the long run, this is the more profitable method of doing business in commodities.

The whole purpose of hedging is to remove credit and price risks or to minimize them. Hedging is not used to make a profit, either speculative or otherwise, but to insure one already existing or to limit a loss already threatened. It is this purpose which has caused the hedge to be termed price and credit insurance. Business men can, through established insurance companies, insure against such major casualties as fire, employers' liability, explosion, and other contingencies which, though remote, contain the possibility of great loss to anyone who suffers the casualty. The organized insurance companies do not, however, offer insurance against price and credit risks inherent in commodity contracts and commodity positions. Yet the risks inherent in such contracts or market positions are much less remote and sometimes are more devastating than those defined as strictly insurable casualties.

The unhedged profits of producers, dealers, and manufacturers are radically affected by price changes and credit risks.

The trader is primarily concerned with getting a profit from differences of price in different markets. . . . 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.[5]

The hedge, therefore, is used to insure the producer, dealer, or manufacturer against loss due to price changes or credit risks in commodities. Its purpose is to insure his profit or minimize his loss, one of which is 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 transaction or market position in the physical market or *vice versa*. The physical market transaction and the exchange transaction are complementary. The hedger, however, by insuring against speculative risks, must forego the chance of speculative profits.

Gross margins [of profits] in the flour milling industry are small compared to the gross margins in most other processing industries. Figures published by the National City Bank for 1944–45 show that 1,017 leading manufacturing concerns, covering a very wide field, reported a percentage of 3.9 of net income on sales after taxes. The Millers National Federation reports figures—covering sixty flour milling concerns, a representative cross section of the industry, for the years, 1939–43 of 2.33 per cent after taxes.

There are various reasons for this showing, one of the principal ones being that millers utilize the services offered by the commodity exchange. As a result of the use of the grain futures market, my company, as well as practically every other flour milling company, has been able to keep itself "hedged on the market" and avoid speculation in wheat. Were the miller to accumulate wheat without hedging facilities, he would be obliged to exact a greater margin of profit in order to cover his risks, or go out of business.[6]

An interesting use of the hedge is indicated in the following quotation from the testimony of J. M. Mehl, then assistant chief of the Grain Futures Administration, Department of Agriculture, before the Committee of Agriculture of the United States Senate, April 21, 1936:

They [the Quaker Oats Company] claim, I believe, that, when oats futures are selling on the Chicago Board of Trade at a price which will assure them a fair

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

[6] E. H. Mirick, vice-president of Pillsbury Mills, Inc., before Senate Committee on Agriculture, April 23, 1946.

retail price for oatmeal, say 10 cents per package, they know rather definitely from past experiences how much oats in the form of package goods can be sold, and in such a situation they plan their advertising campaign, purchase their labels and boxes, let their advertising contracts, and buy the futures in what they would say is a hedge against their investment.

Classes of Hedges. There are two broad divisions of producers, manufacturers, and dealers who employ the hedge for protection: first, those who are producers, buyers, or owners of some commodity; second, those who have entered into contracts for the forward sale of some commodity or a product manufactured therefrom, but at the time of making the contracts do not own the commodity sold or necessary for the maufacture of the goods which have been sold. The hedge is employed by both classes for the same protective purpose; the procedure is merely reversed to fit the case. The owner or producer of a commodity is long of the physical grain or cotton in warehouse, under contract or in his growing fields. He obtains his insurance protection by a short sale of an equivalent amount in the futures or exchange market. The dealer, spinner, or miller who contracts ahead for the sale of a commodity or its products *prior* to ownership is short in the physical market. He protects his position by the purchase of a futures contract on an exchange for an equivalent amount.

In the first class—the longs—are the various producers, the elevators in the grain trades which buy wheat from the farmer and forward it to the terminal market for sale, and the merchants and converters who buy cotton from the growers or accumulate stocks for merchandising or manufacturing purposes. In the second class—the shorts—are the flour millers, exporters, cotton spinners, and local shippers who sell commodities which they do not own. 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. Although the hedge is an efficient form of insurance, it is not complete insurance. Perfect insurance would require that profit or loss on each transaction on the physical market be balanced exactly by a corresponding loss or gain on the futures or exchange market.

To afford a full measure of complete insurance protection to those who employ the futures contract for hedging, there must be maintained during the life of each hedging transaction:

(1) A stable price relationship or price spread between the basis (or standard) exchange grade and the specific grade of the commodity bought or sold in the physical market;

(2) A constant instead of a narrowing or widening (price) spread between the price of deliveries in the spot or current month and prices for deliveries in various future months; and in certain cases

(3) A stable price spread between prices of raw materials and prices of finished goods produced from such materials.

The futures contract can be employed to hedge or insure the purchase or sale of the physical commodity only because prices in the physical market and prices on the exchange generally *tend* to rise or fall together at the same rate. Advances or declines in prices of all grades on one market tend to be paralleled by corresponding advances or declines in prices of the same grades on the other market. Likewise, the prices of all grades of spot or near-by deliveries *tend* to rise and fall with prices of more distant future deliveries. Similarly, the price spreads or differentials between various grades of the same commodity *tend* to remain the same rather than to widen or narrow. Finally, the normal premiums of future deliveries over prices of current or spot deliveries, based on carrying charges from spot to distant future months, *tend* to remain *constant* and not widen, narrow, or collapse into discounts.

A *material* dislocation of the normal relationship between spot prices and the price of futures, or between physical market prices and exchange market prices, will temporarily make the hedge an imperfect protection. Likewise, a temporary widening or narrowing of the price differentials between the price of exchange contracts and prices of various grades of the same commodity may give imperfect protection or entail actual loss to the hedger. Similar temporary widening or narrowing of the price spread between raw materials and finished goods produced from them may reduce the insurance protection or even entail actual loss. Finally, if the normal price spreads between spot or current deliveries and distant futures (that is, the normal premiums of future deliveries over spot or near-by deliveries) narrow, widen, or, worse still, go into reverse and become discounts, the hedger not only may fail to get insurance protection, but may suffer substantial losses besides. It is these temporary shifts inherent in price movements, known as *basis* risks, which make hedging operations far from the simple matter they appear. It must be recalled, however, that insurance of all kinds is primarily to protect against *major* casualties. The hedge may result in losses at times, but such losses are usually small compared to the major risks of sharp market fluctuations and resulting *heavy* losses, if no hedge is employed. This subject will be treated in greater detail in the next chapter.

Correlation between Prices of Raw Material and Manufactured Goods. The manufacturer may employ the hedge in two ways. When he acquires supplies of his raw material from the physical market, he may sell futures (short) on the exchange in the endeavor to rid himself of the risk of price fluctuation in his raw material inventory before sale of his finished goods. When he makes sales for forward delivery of his finished

products, he may buy futures on the exchange in the endeavor to guard against paying higher prices for his raw materials, when needed, to process into finished goods. When the former type of hedge is employed, it is vital to the manufacturer that the price of the finished product and that of the futures move uniformly together. If they do not—specifically, if the price of the futures (of which he is short on the exchange) rises to a greater extent than the price of the finished product, the hedge will be imperfect, for the reason that the manufacturer will lose more on his short hedging transaction than he gains because of the advance in the price of his finished goods.

From the manufacturer's standpoint, the effectiveness of the hedge as protection may be influenced by the varying proportion which the cost of the particular raw material bears to the total cost of the particular manufactured article. In *A Study of Cotton Hedging for a Grey Goods Mill, 1921–1926,* the Bureau of Business Research of Harvard University 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.[7]

The argument is made 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, though the study lends color to the argument, it does not follow that it is conclusive. As the study points out:

> 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 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, as revealed by the study, may be the result of the specific causes named, or the failure

[7] *A Study of Cotton Hedging for a Grey Goods Mill, 1921–1926,* Bulletin No. 70, Bureau of Business Research (Cambridge: Harvard University Press, 1928), p. 19.

of some mills to hedge (whereas others do hedge) may be responsible for the imperfect correlation between raw material prices and the prices of the finished goods. The mill which by speculation acquires its materials at a lower cost and does not hedge can cut its prices under those of 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. It must be recalled that hedging is for the purpose of eliminating speculative risks and, to be successful, must be employed as a matter of permanent and consistent policy.

Shifting the Hedge. When a purchase on the physical market for (raw material) inventory purposes 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 by delivery will find the purchased commodity still in inventory. The necessity of keeping it hedged, however, still remains. The original futures sales contract must be closed out during the month of its maturity. It will be closed by an offsetting purchase on the exchange. At the same time, another future in a more distant month will be sold on the exchange. It is one and the same hedging operation, although of necessity it has involved a shifting of the protective sale from one delivery month to another. As a matter of fact, the alert hedger usually shifts his hedge to a distant month before the month for delivery of the futures contract arrives, if he has any reason to anticipate that such a shift will be necessary. He will do so in order to escape the uncertainties of market fluctuations frequently accompanying the approaching maturity of a futures delivery.

Hedging Applies Only to Balances. It is not only possible, but a matter of frequent occurrence that a firm dealing in a commodity may have its purchases and sales in exact balance. When this occurs there is naturally no necessity for hedging. Being long and short equivalent amounts, the firm's trading 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 merchant who owns or has contracted to buy 75,000 bales of cotton on the physical market and has contracts for forward delivery on the physical market amounting to 65,000 bales has a net long interest of only 10,000 bales. It is this net long interest which the dealer may protect by the sale on the exchange of futures contracts of an equivalent amount. As the net long interest increases by purchases on the physical market, further hedges by offsetting sales on the exchange will be made; and, since the interest may be reduced by sales on the physical market, the hedges will be closed out by purchases

on the exchange to an amount sufficient to bring in balance the smaller net long interest of the dealer.

Selecting the Market. Hedging not only involves the careful selection of the month in which to buy or sell, but may also involve the careful selection of a market for the sale or purchase of futures. Normally, prices in different markets for the same commodity move together. Differences in price between two markets for one commodity equalize the 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 costs of shipping cotton across the Atlantic and incidental charges and expenses. Similarly, a difference in wheat prices based on shipping costs exists between Chicago and Minneapolis. A market where prices rule lower may temporarily advance to a point where the spread between it and another market is materially less than the normal difference due to the cost of shipping from one to 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 futures contract as a hedge. Conversely, a widening of the normal difference would indicate the desirability of placing a purchase hedge in the market where prices are abnormally low. The work of the arbitrageur[8] will, as a rule, 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 November or early December. 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 is dictated in this case by the time when the miller will go into the market for the physical wheat. Since it is a fundamental principle of hedging that the futures sale on the exchange is closed as soon as the purchase on the physical market is made or simultaneously with it, or vice versa, the practice of buying or selling a contract for the future month which most nearly coincides with the time of the operator's requirements in the physical market is the general rule that is followed.

It may be that sales are being hedged which require deliveries over an extended period. Here the futures contracts which are bought as hedges may be spread over consecutive delivery months. Thus, a manufacturer (contracting for the sale of forward deliveries of finished cotton goods) who will need his raw materials in October, November, and December

[8] See Chapter XII.

buys hedges in October and December, closing out these separate hedge contracts by sales on the exchange as he buys his necessary grades in the cash or physical market. The selection of the month in which his hedges are placed, however, is largely determined by the judgment of the hedger.

Apart from synchronizing spot and futures transactions, certain other considerations may enter into the selection of the month for placing the hedge. On some exchanges there are certain months that are inactive. The merchant or manufacturer, in placing a hedge, would naturally avoid placing it in one of these inactive months, where prices are likely to be more irregular and the market less broad and liquid.

Another consideration becomes of great importance, as the delivery month for the futures contract approaches. Squeezes[9] may occur in the current month. Consequently, those who have selling hedges in the current month must observe the stocks of the commodity available for delivery in the current month, as it approaches, 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 should then be shifted to a more distant delivery month. The reason for this is that the hedge operates most effectively as insurance when the prices of the exchange and physical markets maintain as nearly as possible the spread existing when the hedge was placed. A squeeze disturbs this relationship. When the hedging transaction is a sale, a squeeze may operate to destroy a large part of the protection sought by the hedger and may even cause serious losses in buying back the hedge sale at an abnormal price.

Practice Regarding Delivery on Hedges. Futures which are bought or sold as hedges are in the vast majority of cases closed out by offsetting sales or purchases on the exchange. Delivery is exceptional.[10] On the Chicago Board of Trade, where 88 per cent of all exchange trading in grain in the United States is conducted, more than 99 per cent of all contracts are closed out by offset and not delivery. This is a normal condition and in line with the purpose of the hedge. In fact, the more perfectly the market operates as an insurance vehicle, the smaller the deliveries. Theoretically, a perfect exchange or insurance market would have no deliveries.

It has been explained previously that a variety of grades of a commodity in which there is future trading are made tenderable on the exchange contract, and the grade to be delivered is at the *seller's* option. Thus, although the contract has a *basis* grade, the purchaser may receive

[9] See Chapter XIII.

[10] See Chapter III.

any one of a number of tenderable grades or a number of various grades. He, as buyer, has no choice as to quality, and for the 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.[11]

Accordingly, the hedged merchant or manufacturer, who has purchased on the exchange, but desires a specific grade of the commodity, will purchase it in the spot market, thus obtaining the grade which exactly meets his requirements, while simultaneously selling his hedge contract. This is a major consideration which militates against taking delivery of any large amount on exchange contracts.

In the cotton textile industry, the manufacturing centers may be far removed from the exchange delivery points. 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 the cotton to the mill, when actual requirements for spot deliveries of specific grades may be filled at points near by. When delivery is tendered on an exchange 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 it 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 . . . deliver on what were originally intended for hedging contracts. Particularly is this true when his cotton proves to be of 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.[12]

Hedging by Transactions in Other Commodities. Not only may a transaction be hedged by an offsetting purchase or sale of a future in

[11] M. T. Copeland, *The Cotton Manufacturing Industry of the United States* (Cambridge: Harvard University Press, 1912), p. 186.

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

the same commodity, but an exchange future in another commodity may be bought or sold, if there is a normal, corresponding, and usually dependable price relationship. Illustrations have already been given of the purchase of an exchange 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. Again, unless prices are likely to be thrown out of normal relationship by unusual differences in the normal size of or demand for the respective crops, futures for one grain may be employed as hedges against the sale or purchase of another. Prices of wheat and rye usually move together with a fair degree of unison; hence a purchase of rye could be offset or hedged by the sale of a wheat future (or *vice versa*) before futures 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 business life 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 (which he offers as collateral security for the loan), if it has been hedged than if it has not been hedged. In England before the Second World War the banks customarily required any commodity which represented the security for a loan to be hedged if possible. Credit everywhere is more readily procurable on hedged than on unhedged commodities, and all unhedged inventory may be considered speculative. On hedged loans a higher percentage of the pledged commodity can be borrowed—up to 90 per cent and at lower rates of interest—than on unhedged loans, for the hedge limits the risk and removes to a large extent the speculative uncertainties of price fluctuations. The hedge, therefore, is strongly advocated by banks for their 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. . . . 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.[18]

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

Relation of Spot and Futures Prices. The *normal* relation between prices for spot or current deliveries and prices of near-by and more distant futures is based on the cost of storing and carrying spot merchandise to the future months. If spot cotton is selling at, say, 20 cents per pound in September and the cost of carrying cotton for each month in storage (including insurance, loss of weight, loss of interest, and all incidental expenses) is, say, 1/10 of a cent per pound, then *March* cotton of the following year cannot sell for any appreciable time on the exchange or the physical market in excess of $\frac{3}{5}$ of a cent per pound above September of the previous year. The spread or premium of prices of future deliveries over the price of spot deliveries cannot normally for any length of time be more than the actual costs of carrying the spot commodity from any given time to the future month of delivery. For, if the spread rises above such carrying charges, there are many experienced operators with ample financial or credit resources ready to buy unlimited quantities of any commodity, subject to exchange trading, so long as they can buy spot and simultaneously hedge or sell for delivery from one to twelve months or more into the future at prices which cover the spot price and all carrying charges, including interest. (Bank loans are easily made without

[18] 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.

limit for such operations, for risks of default are eliminated by the hedging of the certified and warehoused commodities which become the security for such loans.) Such opportunities arise from time to time, when heavy seasonal crops are being marketed. "It need hardly be said that this result is entirely unaffected by whether the price of cash and futures rises, remains constant, or falls during the months while the operation is being carried on. The hedge not only permits the operator to earn the carrying charges, but also protects him, like any other hedge, from a decline in price."[14]

Credit Insurance through Hedging. Whereas credit insurance through the regular casualty companies is more or less common in certain retail trades—where, as in the department store field, the average sale is relatively small in dollar value, but the number of sales is extremely large—such insurance is not practical in the staple commodity trades for various reasons. Although the number of sales of commodities in various trades is large, the dollar value of the average sale in the commodity trades is so much larger and the number of sales so much smaller than in the retail trades that credit insurance, at least at present, is not practical. As a consequence, the commodity exchanges are the only credit insurance agencies available to commodity operators, and they can be used by producers, dealers, and converters so that, in effect, they substantially reduce, if not insure against, several types of credit risks.

The producer, when he sells on the physical market for delivery, say, six or nine months later—even though the terms of sale may be cash on delivery—still subjects himself to a credit risk: the risk that his buyer will not be able to pay for the delivery on tender. The buyer may become insolvent and the seller may be forced to resell the parcel at a substantial loss on a falling market. This risk of bankruptcy between date of sale and time of delivery can be greatly minimized, if not entirely eliminated, by selling futures contracts on the exchange. When ready to deliver, at harvest time, the producer finds a buyer for his specific grades, now on spot, and sells to him for cash on delivery (or to a financially strong buyer on short-term credit), while simultaneously unhedging his exchange contracts by purchases of contracts he had previously sold.

Likewise, when a miller or manufacturer desires to buy for delivery in the distant months of delivery, he can eliminate the risk of default of a producer or a dealer on a contract for forward delivery. This risk is a substantial one on a sharply rising market. The producer or dealer may have overspeculated and be forced into bankruptcy before he delivers on the forward sales. This risk can be avoided by the miller or converter

[14] G. S. Shepherd, *Marketing Farm Products* (Ames, Ia.: Iowa State College Press, 1946).

through purchases of futures on the exchange. When delivery is due on such contracts, the miller who does not want to take delivery of a miscellaneous assortment of tenderable grades, resells his exchange contracts and simultaneously buys on spot, the specific grades which he desires. This practice eliminates all credit risks involved in potential defaults by sellers of forward contracts on the physical market.

The dealer, likewise, whether he is buying or selling for later deliveries, can protect himself from all such credit risks by such exchange operations as the producer and the manufacturer use for that purpose.

This type of credit insurance, of course, does not and cannot cover the type of risk involved in selling merchandise on open account, say, on 30-, 60-, or 90-day credit terms; but operators who constantly deal in large quantities of staple commodities for deliveries in the distant future are fortunate to have a vehicle through which they can insure against credit losses based on contract defaults, which, when they occur, may run into many thousands of dollars on a single contract.

The Work of the Arbitrageur. The Arbitrageur (frequently designated as a spreader) is a market operator who takes advantage of an abnormal price relationship between markets or between futures for different delivery months (or even between different commodities) by making sales of specific quantities in the market or delivery month or commodity which has become relatively or abnormally high and by buying *simultaneously* the same quantities in the market, month, or commodity which has become relatively or abnormally low. He makes his profit by merely reversing the process when the prices return to their normal parities. The operation will be clearer, if each transaction is considered separately.

The normal 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 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 due to differences in futures contract delivery terms or to the difference in quality, and in costs of handling and delivery to some 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, Winnipeg, or Port Arthur comes into competition with grain moving from Chicago or Minneapolis to Europe. Let us assume that the *normal* spread between the Winnipeg and Minneapolis markets is $9\frac{1}{2}$ cents per bushel. Now, the price of the May future at Winnipeg, let us say, is quoted in January at $10\frac{1}{2}$ cents per bushel higher than the May future in Minne-

apolis. The arbitrageur notes this abnormality of 1 cent per bushel. He *sells* May or some more distant future in the relatively higher market—that is, in Winnipeg—and *simultaneously buys* the same futures for a like amount in the relatively cheaper market, Minneapolis. He may or may not assume a definite risk, but in any case he performs a definite service which aids in keeping world markets at normal parities. He is reasonably certain to be compensated by a profit when the normal parity is resumed. When prices again return to the normal spread of 9½ cents between the two markets, the arbitrageur can simultaneously close out his short sale at Winnipeg and his purchase in Minneapolis, making a profit of 1 cent per bushel, inclusive of commission and other charges. The course of the market is immaterial so long as prices before maturity of the contracts come together again at the normal spread. For instance, prices in both markets might rise. He would lose on his short sale in Winnipeg, but the Minneapolis price, with the return to the normal parity, would rise further, and, he would make a profit of 1 cent per bushel more on sale of his purchase in Minneapolis than he would lose in Winnipeg. Similarly, if prices in both markets decline, though he will lose on the purchase in Minneapolis, he will clear a profit of 1 cent per bushel net, for the Winnipeg future will decline 1 cent per bushel more than the Minneapolis future, as the normal parity returns. In normal times, before the Second World War, arbitraging between the wheat markets of Chicago and Liverpool and other world markets was quite common from time to time.

The same opportunity for arbitraging exists between futures for different delivery months on the same exchange. The operator, or spreader, or straddler, sees that the September cotton future is abnormally cheap in comparison with November, or *vice versa*. He will straddle the market by buying the under-priced month and simultaneously selling the over-priced future, making his profit when the normal price parity returns by selling out his long position and simultaneously buying back his short sale.

In these operations, so long as the arbitrageur buys and sells the same quantities simultaneously in the dislocated markets and, when the normal spread between the two markets has returned, reverses the process by simultaneous counter-sale and counter-purchase, he generally assumes no market risk, provided his operations have been made in months of delivery sufficiently far in the future to permit the abnormal spread to give way to the normal one.

If, however, the operator fails to buy and sell simultaneously or to repurchase and resell simultaneously, or if he closes out one end of the arbitrage before the other, he "lifts a leg" (in trade parlance) and at

once has taken either a long or a short speculative position, rather than a balanced one, and so subjects himself to risks of a loss or a chance of a speculative profit—which is not the principle on which the arbitrage is based.

Even when he is properly balanced—long in the lower-priced market and short in the higher-priced market—if one market is a foreign market, he runs the risk of losing his arbitrage profit when he attempts to convert that profit—in a foreign currency—into dollars, if the currency of the foreign country is not a gold currency or otherwise firmly stabilized in terms of the dollar.

In the spring of 1930, normal spreading relationships were badly upset by the entry of the Grain Stabilization Corporation into the futures markets. At first its operations centered in the Chicago May wheat contract, and the result was unusual strength in that delivery compared with other positions. For example, Chicago May wheat had been ten cents under Winnipeg May earlier in the season, due to a very small crop of superior quality in Canada and a liberal crop in the United States. When the Stabilization Corporation, functioning with government money, started to buy Chicago May wheat in March, 1930, there was a scramble on the part of speculative shorts and spreaders to cover their Chicago May contracts. As a result, Chicago May wheat went to a premium of seven cents per bushel over Winnipeg May wheat, in spite of the fact that this country held an enormous surplus of wheat for export and actually carried over more wheat in the following July than ever before in its history. It is natural to inquire why this happened, and the only logical reply is that fear of governmental interference in the market outweighed all normal factors of commercial value and it was the psychology of fear that governed spreading differences. When this psychology changed in May and these fears had subsided, Winnipeg May wheat regained a premium of five cents over Chicago, a difference more nearly in line with ordinary relationships and merchandising values.[15]

A less familiar operation is that of arbitraging between different commodities. A definite and normal 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 simultaneously 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 in that market, thereby expediting the return of the normal parity between the two markets.

[15] S. C. Harris, "Arbitraging," *Annals of the American Academy of Political and Social Science,* May, 1931.

Summary. The primary purposes of the hedge have been shown to be insurance against the risks of wide price fluctuations and credit defaults. The insurance is obtained by offsetting a purchase or sale or position in one market—the cash or physical market—by a sale or purchase in the futures or exchange market. The protection may approximate complete price insurance, if prices of spot and future deliveries, the price spread between various grades, and prices of the physical and exchange markets maintain their normal and close relationship from the time the hedge is placed until it is closed; or it may be imperfect, if there is a temporary dislocation of these relationships. The temporary dislocation at times may last for considerable periods, but experienced operators can usually anticipate and avoid the consequences of such abnormal conditions. However perfect or imperfect the particular hedge may be, if it is originally undertaken with discretion and judgment, the speculative risk is minimized.

A further value of the hedge to the merchant or manufacturer lies in the increased borrowing power which it gives him against his inventory holdings or long positions in raw materials and in the consequent lower margin of profit on 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 largely independent of speculative risks.

CHAPTER XII

Hedging in Practice

In practice the hedger must give careful attention to the selection of both the market and the month in which to place his hedge. These, however, are only preliminary considerations. There are certain risks, known as *basis* risks, which cannot be eliminated by the hedge. The success of the hedge as insurance against price risks may depend on the maintenance—throughout the life of the hedge—of the same spread between the price of the *basis* contract on the exchange and the price of a *specific* grade on the physical market existing at the time the hedge is placed. It may depend on the maintenance of the relationship between the price of the current or some near-by position and the price of some distant position existing when the hedge is placed. The hedger must be alert to avoid being caught in an abnormal movement which may temporarily change these price spreads or relationships between two grades or two positions either to his material disadvantage (at times involving a serious and unanticipated loss) or to his material advantage (at times giving him an unexpected and possibly considerable windfall of speculative profit).

If the price of all particular grades of a commodity on the physical market always moved in unison with one another, and particularly if their prices always fluctuated upward or downward at the same rate and in unison with the price of the *basis* grade of the exchange contract (on which the price of each tenderable grade is determined by various differentials, known as *premiums* for grades superior to the basis grade and as *discounts* for inferior grades), hedging would be an operation of the utmost simplicity. Also, if prices of various grades of raw materials and prices of finished goods produced from them always rose and fell at the same rate, and if the spread between the prices of contracts for deliveries in the current or near-by months and deliveries in the various more distant future months always remained constant during the life of a particular hedge, the insurance protection which hedging affords would be practically perfect.

The usual and familiar type of hedging transactions is not difficult to understand. We refer to the hedge where the loss or gain on a transaction or position in the physical market is more or less evenly balanced by a gain or loss on the offsetting exchange transaction, as explained in the preceding chapter. Hedging is not always so simple, however. Though widely and effectively used as an efficient form of price insurance, it is by no means as innocuous as the hypothesis that prices of various grades in various markets and for various delivery months move in lines exactly parallel to one another would seem to indicate.

The normal relationship or spread between the price of the current (or spot) month and the price of more distant futures may, contrary to the general tendency, widen or narrow during the life of the hedge. Likewise, the spread between prices of raw materials and the prices of manufactured goods produced from them may alter temporarily during the life of the hedge. Furthermore, the price differential or spread between a particular grade on the physical market and the basis grade of the exchange contract may undergo an abnormal, but temporary change between the time when the hedge is placed and the time when it is closed out. These risks of changes in the price relationship between different grades and among various months of delivery, known as changes of *basis,* cannot be hedged or shifted to the speculator. They are inherent in changing economic and market conditions due to temporary shifts in the supply-demand factors relating to particular grades and deliveries in particular futures months. There is no escape from them except by unremitting alertness on the part of the user of the hedge. He must at all times be constantly prepared to shift his hedge position at the first sign of change from the actual relationship which existed when the hedge was placed. Such changes are less rapid than price changes and usually can be foreseen before they threaten serious losses.

In this chapter the causes of some of these abnormal situations will be outlined and the problems they present will be pointed out. We shall then be in a better position to consider the extent to which hedging can successfully be practiced, the various interests which at present employ hedging as price insurance, and the way in which they operate.

Discounts on Distant Months. The normal relationship between prices of commodities ready for immediate delivery in the current month and prices of contracts for distant future deliveries is that the more distant months should command premiums *above* the current month or the far month *above* the near month by at least the amount of the actual costs of carrying the commodity from one month to the other. Handling charges, storage, shrinkage, insurance, interest on capital, and the like are necessarily expended in the purchase of the spot commodity and in

carrying it forward in warehouse to particular distant months. This principle is theoretically sound and generally operates in actual practice for futures trading in any given commodity under normal conditions.

From time to time, however, because of extraordinary demand for near-by deliveries—as in 1946–1948, following the Second World War, when world requirements for grains, cotton, and most other basic raw materials exceeded world supply—prices of spot and near-by deliveries will rule substantially above prices for more distant deliveries. During the Second World War many millions of productive acres were overrun and necessarily withdrawn from production, and many millions of productive workers were drafted for military service from agricultural areas in Europe and Asia. Large agricultural areas were also devastated by the war and depleted of man power, seeds, fertilizers, and productive machinery for planting and reaping crops. Other areas were afflicted with blighted or frozen crops for several years in succession. Large agricultural sections of eastern Europe were sealed off behind the so-called Iron Curtain of Soviet Russia. Similar conditions prevailed for years in large areas of the Far East. Rail and water transportation for distribution of basic raw materials broke down, because of destruction or capture of rolling stock and river shipping. Marine shipping facilities, decimated by submarines and bombers during the war, had not been replaced. Finally, a major contributing factor to the world shortages of basic materials was the exhaustion during the war of the normal surpluses of grains, cotton, wool, and other staples, usually carried over from year to year in normal times as buffers against unexpected crop failures or other casualties.

Such situations are not normal, although they are also not uncommon. In years of peace they are more frequently found in crop commodities rather than in such staples as rubber, ferrous and non-ferrous metals, and the like, which are not seasonal products. They occur usually when it is expected that a very short crop in one year will be followed by a much larger crop in the next year.

A clear and succinct summary of the reasons why distant months in more normal times 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 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.[1]

Discounts in the distant months usually develop when there is a strong *sellers'* market; premiums usually prevail when supply and demand are more or less in balance or there is a continuing normal carry-over or surplus from season to season to take care of emergencies—a condition which *generally* prevails when world supply and demand are in approximate balance.

An important factor in the relationship between prices on the physical market and those on the exchange or futures market is the supply of the commodity available for delivery on the futures exchange. A low supply of the commodity, suitable for delivery on the exchange, tends to advance the price of the futures contract over prices on the physical market, for both immediate and forward deliveries. 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 fifteen 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 ten designated (cash) markets. On the other hand, the average price of New York futures was 36 points above the price in the ten markets during the eleven months when the stocks of certificated cotton in New York were less than 100,000 bales."[2]

During 1947–48, with a short cotton crop and very high prices, the prices of current and near-by futures deliveries held consistently and substantially above the price of the more distant futures—particularly those months during which the new crop (expected to be larger) would be coming to market. In other words, following a short crop and high prices, distant future deliveries will sell below current and near-by deliv-

[1] Alonzo B. Cox, *Cotton Prices and Markets,* Bulletin No. 1444 (Washington: U.S. Dep't of Agriculture), p. 71.

[2] *Ibid.,* p. 71.

eries on both markets because merchants and speculators are discounting the current high prices in the light of anticipated higher crop yields, with lower prices almost a certainty.

The normal situation—that is, when there are premiums on the distant future positions over current or near-by months—is clearly evidenced by reports of actual prices prevailing on various New York commodity exchanges on February 10, 1938, prior to the Second World War; the abnormal situation—that is, when there are premiums of the current and near-by futures over the more distant futures—is clearly indicated by the reports of actual prices on the same exchanges ten years later, on February 10, 1948, subsequent to the Second World War. Prices for both these years were published in the New York *Times* of February 11, 1938, and February 11, 1948, respectively, as follows:

Prices 1938

RUBBER

	High	*Low*	*Close*	*Prev. Close*
Mar.	14.54	14.37	14.52t@.53	14.43t
May	14.71	14.61	14.70t	14.60t
July	14.84	14.68	14.83t	14.72t
Sept.	14.96	14.88	14.95t@.96	14.83t@.86
Dec.	15.10	15.00	15.06t	15.00t
1939				
Jan.	15.15	15.15	15.11n	15.05n

HIDES

STANDARD CONTRACTS

Mar.	8.26	8.20	8.27 @ .30	8.41b
June	8.71	8.51	8.63t	8.72t
Sept.	9.06	8.86	8.95t	9.08t
Dec.	9.26	9.26	9.26n	9.39n

COTTON

	Open	*High*	*Low*	*Close*	*Prev. Close*
Mar.	8.70	8.71	8.63	8.69	8.77
May	8.81	8.81	8.74	8.80	8.87
July	8.86	8.88	8.77	8.83	8.94
Oct.	8.90	8.92	8.55	8.90	8.99
Dec.	8.94	8.96	8.88	8.92	9.02
1939					
Jan.	....	8.97	8.89	8.94	9.06

Prices 1948

RUBBER

	High	*Low*	*Close*	*Prev. Close*
Mar.	20.70	20.41	20.70t	20.25
May	19.98	19.60	19.95–19.98t	19.52
July	19.54	19.16	19.54t	19.05
Sept.	18.95	18.70	18.95 @ 19.10	18.54

HIDES

Mar	27.50	27.22	27.50t	27.15
June	25.50	24.85	25.30 @ 25.50t	24.85
Sept.	24.15	24.00	24.40n	23.90
Dec.	23.15	23.15	23.55n	23.10

COTTON

	Open	*High*	*Low*	*Close*	*Prev. Close*
Mar.	33.83	34.13	33.75	33.98	33.88
May	33.92	34.23	33.85	34.07	33.94
July	34.42	33.62	33.33	33.45	33.40
Oct.	31.10	31.19	31.03	31.07	31.20
Dec.	30.80	30.89	30.72	30.80	30.93
1949					
Mar.	30.70	30.70	30.48	30.52	30.76
May	30.35	30.41	30.28	30.32n	30.55
July	29.90	30.00	29.90	29.90n	30.13

When prices of distant future deliveries are higher than for near-bys, in trade parlance there are "premiums on the distants" or "discounts on the nears," and, when they are lower than the near-by future deliveries, it is said that there are "premiums on the nears" and "discounts on the distants."

To make clearer the effect of a change in the normal relationship between prices for various delivery months on a hedge, the following quotation will be helpful:

Significance of Cash-Future Spread. The significance and the importance of the spread [between near-by and more distant future deliveries] lie in the fact that the relationship of cash and future prices primarily determines the effectiveness of hedging by way of futures as a protection to merchants and manufacturers. So long as this spread remains constant, the merchant or manufacturer has nothing whatever to fear from price changes, irrespective of how great they may be. Changes in the spread, however, may easily involve the hedger in large gains or serious losses, depending upon whether the change is in his favor or against him. From this it follows that the more stable or uniform the cash-future spread, the more satisfactory are conditions for hedging, and vice versa.

What a hedger can expect with reference to changes in the cash-future spread is determined in no small degree by the existing relationship of cash and futures at the time the hedge is placed. The reason is that the movement of cash and futures is not actually parallel, as is frequently assumed, but is more nearly a converging one, so that there is a constant tendency for the cash-future spread to narrow throughout the life of any given option.

In part, this narrowing tendency of the spread may be attributed to the steadily declining cost of carrying cash commodities to the maturity of the option (contract), as the life of the option shortens. In part, it is the result of the fact that future contracts mature and must be settled. The month of the maturity of the option is the month in which all buyers or sellers of futures, desiring to do so, must either take or make delivery of the actual commodity. Therefore, subject to some qualifications with reference to corners, delivery rules, and the like, neither the future nor the cash can normally command any substantial premium over the other in the same market at that time, and cash and future prices will approximately equal each other in the month of delivery. Because of this fact the spread between cash and futures should tend to narrow more or less as delivery approaches, irrespective of the cost of carrying.

The narrowing of the cash-future spread tends to work in favor of or against the hedger, depending upon the relationship existing between the cash and futures at the time the initial paired transactions were entered into, and may be summarized as follows:

(1) When hedges are placed with the future at a premium over the cash and the cash-future spread narrows, the selling hedger gains and the buying hedger loses.

(2) When hedges are placed with the future at a premium over the cash

and the cash-future spread widens, the selling hedger loses and the buying hedger gains.

(3) When hedges are placed with the future at a discount under the cash and the cash-future spread narrows, the selling hedger loses and the buying hedger gains.

(4) When hedges are placed with the future at a discount under the cash and the cash-future spread widens, the selling hedger gains and the buying hedger loses.

From this summary it appears that, because of the narrowing tendency of the spread, premiums of futures over cash are generally favorable to the hedge seller, and discounts unfavorable, and that the reverse is true of the hedge buyer.

Now, the majority of initial hedging transactions, at least in agricultural staples, are normally on the selling rather than the buying side of the futures market. This is primarily due to the operations of merchants who sell futures against their purchases of the actual commodity from producers. A large number of selling hedges are also placed by manufacturers, though in their operations initial hedge purchases are perhaps somewhat more common than initial hedge sales.

Since the converging tendency of cash and futures works in favor of selling hedges, when futures are at a premium, and the bulk of initial hedging transactions are on the selling side, it is reasonable to conclude that, to be of maximum service for hedging operations, futures should normally show premiums over rather than discounts under the cash. . . .

Small crops tend to produce urgent buying on the part of manufacturers who wish to be assured of a supply of the particular grades and qualities which they require, before the supply is exhausted. Certain cotton mills, for example, emphasize the fact that better cotton is obtainable as soon as the crop comes on the market. If the crop is short, therefore, the manufacturers buy heavily and this demand is reflected to the merchants from whom they commonly purchase. These same conditions tend to cause relatively slower marketings by the producer, who is likely to figure that, in view of the short crop, higher prices will probably be obtainable later. The result is a tendency for spot prices to advance sharply.

If, on the other hand, the crop is large, the demands of manufacturers are less urgent because they anticipate no difficulty in obtaining their requirements. Frequently they anticipate lower prices and so buy less freely. Producers, fearing later declines in prices, hasten to market their crops, and purchases from them tend to exceed the dealers' sales to manufacturers. Not only is the absolute volume of selling hedges larger because of the size of the crop, but neither manufacturers nor merchants feel any necessity for buying futures for protection. Practically all hedging, therefore, is on the selling side of the market.

Large crops, therefore, tend to depress spot prices in the early part of the marketing season, which also tends to depress the near futures as compared with the distant. The heavy and early marketing of the farmer, combined with the slowness of the manufacturers in purchasing, results in an accumulation of the spot commodity in the hands of dealers. This in turn results in heavy hedging

sales, mostly placed in the nearer options, which tends to depress those below the more distant ones.[3]

It should be clear, therefore, that a subsequent change in the spread existing at the time the hedge is made will seriously affect the hedger and under certain conditions cause him unexpected losses against which he cannot insure or hedge. Under other circumstances, he will benefit from an unexpected windfall. However, with proper expert advice from his commission agent, he can be warned in time of coming changes in the spread, and, if they are favorable, no action is necessary other than to stand by and accept the unexpected profit. If, on the other hand, the change is likely to affect him adversely, the hedger can close out his hedge and, if desired, transfer it to a new month; or, if that is not advisable, he must decide whether the loss resulting from the possible change in spread is likely to exceed the possible loss from an open or unhedged speculative position. In any case, the hedger is more interested in protecting himself from *major market* fluctuations, which as a rule are more likely to result in heavier financial losses than those involved in the *basis* change of the spread between near-bys and distant futures. Judgment and foresight and willingness to shift positions are the only protections against such risks.

Changes in Basis Weaken the Hedge as Insurance Protection. The hedger seeking insurance protection from risks of price changes frequently finds that he has secured protection against changes in the price *trend,* only to become involved in changes in the spread between prices of particular grades in the physical market and the *basis* or *contract* grade of the exchange market. In many trades the problem is not too serious, where most of the trading is in the same standard grade which is also the *basis* grade of the exchange contract. The relation between the price of standard grade in the physical market and the price of the same grade on the exchange usually remains constant, though it generally sells at a small premium in the physical market over the price in the exchange market (because the exchange buyer is never sure of receiving any one grade on an exchange basis contract).

In trades such as cotton and wool, however, where a very substantial part of the trading in the physical market of necessity is in grades other than the standard or basis grade of the exchange contract, the problem of changes in the price spread between the *basis* exchange grade and various inferior or superior grades traded in constantly and in large volume on the physical markets becomes a most serious one. The result is that hedgers in such markets necessarily are more concerned with the

[3] W. H. S. Stevens, in *Annals of the American Academy of Political and Social Science,* May, 1931.

change in this spread than in the general trend of the prices. They are protected from the latter by the hedge, but they cannot hedge against the former. In trade parlance they are said to be *trading in the basis* and their losses or gains from such changes are known as "basis losses" and "basis gains."

If March cotton is selling on the exchange at 32.50 cents per pound (the price being determined on the exchange floor as the price for the *basis* grade, with other grades deliverable at certain premiums or discounts) and a merchant buys a lot of cotton of a grade worth ½ cent less than the *basis* grade, at 32.00 cents, he can hedge by selling on the exchange at 32.50 cents. Later, when he sells the inferior grade to a mill at 33.50 cents, he may find that, while the physical market has risen 1 cent per pound on the inferior grade, the price of the exchange or basis contract has risen 2 cents. Consequently, when he closes out his hedge on the exchange by purchasing back his hedge sale, he finds he has suffered a basis loss of 1 cent per pound and a net loss of ½ cent rather than a profit of ½ cent—a loss which he did not anticipate. On the other hand, the price on the exchange may have increased only ½ cent, while the price of the grade held by him had risen 1½ cents. In that case, the hedger would reap an unexpected *basis* profit of 1 cent per pound in addition to his normal merchandising profit.

The changes in the price spread between the futures contract on the exchange market and particular inferior or superior grades on the physical market are much more frequent and more rapid than changes in the price spread between near-by deliveries and more distant future deliveries, but they are not so frequent or so swift as changes in the general price level. Moreover, these changes are also due to different causes. Essentially they result from changes in the relative supply-demand factors applicable to each particular grade. The demand or supply for a specific grade may change drastically, without any change in the supply-demand relatives applicable to other grades. This may be due to the fact that crop or weather conditions have increased or decreased the supply of one or several grades, without causing similar changes in other grades. It may be due to a sudden heavily increased demand for a certain grade from mills which have found a new and popular use for a particular grade that previously had been in small demand.

Not only will the supply of the several grades and qualities of any of these grades vary widely from year to year, but after the crop is harvested, there will be further variations during the year, depending upon the rate of consumption of the particular grades and qualities in that crop.

Similarly, on the demand side, the market for the manufactured commodity produced from any one particular grade or quality of raw material may be either brisk or sluggish, as compared with that for goods produced from another

or other grades or qualities. And this is true not only as between the years, but also at different periods within the same year.

Despite these fluctuations in the spreads or differences between various grades and qualities in the cash market, all sales and purchases must be hedged in a single basis future contract upon which not merely one grade or quality, but several grades and qualities are deliverable. The basis or cash-future spread, therefore, is in fact not one, but several bases or spreads, each of which represents the difference between the cash price of each lot of specific grade and quality and the price of a basis future contract in which all hedges must be placed and which is therefore common to all. Because of the foregoing fluctuations in the cash market, it is apparent that the spread between the future and one grade or quality of the cash may move favorably to the hedger at the same time that the spread of the future and some other grade is becoming unfavorable.[4]

On this subject, Mr. A. H. Garside, late economist of the New York Cotton Exchange and the New York Wool Top Exchange, says:

At any given moment there are in existence thousands of lots of wool and wool products, of many different qualities and at many different locations, and hence worth many different prices. On the other hand, at any given moment different future deliveries of wool tops on the New York Exchange command slightly different prices. The spread between the price of any given lot of wool or wool product and the simultaneous price of any given future delivery on the Exchange is the "basis" on that lot in terms of that future delivery. Thus, theoretically at least, there are thousands of bases that one could calculate and quote at any given time. When the price of a given lot of wool or wool product is more than the price of the future delivery used in calculating the basis on it, the basis on it is said to be "on"; when it is less than the price of the future delivery, the basis on it is said to be "off"; when it is the same as the price of the future delivery, the basis on it is said to be "par."[5]

Any market operator is said to be *long of the basis* when he owns spot cotton

on which the purchase price has been fixed, and against it he has on his books a sale of futures cotton, but does not have against it a forward shipment sale of spot cotton. . . . (In other words, a shipper is *long of the basis,* if he owns spot cotton against which he has not a forward sale of spot cotton, and his *basis* position with respect to such cotton is the same, regardless of whether or not the purchase price has been fixed or whether or not he has sold futures cotton as a hedge against it.) It will be seen that in both of these cases the shipper (operator) takes the *basis* risk and he loses in the event of a decline in the basis.[6]

[4] *Ibid.*

[5] A. H. Garside, *Wool and the Wool Trade* (New York: Frederick A. Stokes Company, 1939), p. 164.

[6] A. H. Garside, *Cotton Goes to Market* (New York: Frederick A. Stokes Company, 1935), p. 249.

An operator is said to be *short of the basis* when he has sold for forward delivery on the physical market cotton of other than the basis grade. His *basis* position is the same, whether or not he has hedged the short sale by purchase of a future on the exchange. In either case he will lose money in the event of a rise in the basis.

The use of the term *basis* in all this discussion is perhaps unnecessary. What the term is used to express may be simply stated by saying that the price differentials between *grades* of the same commodity are subject to change from time to time, as supply-demand factors for particular grades change. As a consequence, on a free market the price of one grade may rise while others remain constant, or may remain constant while others decline, or may decline more slowly while others are declining rapidly, and so on. Several grades at the same time may move contrary to the general market trend. The problem is needlessly complicated by the use of the term basis to express these changes in spreads.

As an Englishman has pointed out:

> The nomenclature of the cotton market makes it difficult for an outsider to follow the use of trade terms. . . . The premiums above or discounts below the price of middling are obviously differences above or below the basis price of middling. But, by a peculiar method of shorthand thinking, cotton traders have come to use the word "basis" as meaning not the *basis* price of middling, but the differences above or below it. Thus, if a cotton merchant says that "the basis is rising" he means not that the basis price of middling is rising, but that the difference or "points on" which must be paid (for a superior grade) is greater than before, though as a matter of fact the price of middling may have fallen.
>
> This peculiar use of the trade terminology is, of itself, enough to confuse the layman very badly, but unfortunately the difficulty has been made still greater by the custom of the trade in using the word "basis" in still another sense. . . . The official quotations of spot (physical) prices, which are made up daily, always show a higher value for middling on the spot (physical) market than the current quotation of the futures contract, although that is also based on middling. This premium of the spot (physical) price over the futures (exchange) price for the same grade is also known in the market as "the basis," for no apparent reason other than that the fact that it is a difference expressed in points on. This use of the same word "basis" for two entirely different things is a source of dire confusion to the outsider who tries to understand the talk on the exchange or to read a market report. . . .[7]

Effect of Change in Basis upon the Hedge. The so-called *basis,* or rather the change in the basis, is a far more important matter to a hedger, once he is hedged, than is the general trend of prices thereafter. In fact,

[7] John A. Todd, *The Marketing of Cotton* (New York: Pitman Publishing Corp., 1934).

the latter is entirely immaterial, if the particular spread or basis on which he is operating is the same when the hedge is closed as when it was placed. Under such conditions, the profit or loss on the offsetting exchange operation will exactly balance the loss or gain on the operation in the physical market, and thus perfect insurance protection against market fluctuation will be afforded. The problem created by a change in basis may be more fully illustrated by the following example:

Upland & Co., cotton merchants, purchase on the physical market 500 bales (500 pounds each) of a specific grade of cotton on spot for immediate delivery on August 1. They pay 20.80 cents per pound, a price which is 50 points *above* (or "on") the price of the October future on the exchange. They hedge the purchase transaction by a sale of five hundred bales of October futures at 20.30 cents. Upland & Co. later sell the *actual* cotton to a mill at 19.80, taking a loss of 1 cent per pound on the operation in the actual cotton. At the time they sell to the mill, the October future is 19.70 and they close their hedge by the purchase of the October contracts on the exchange. The profit on the hedge or exchange transaction is only 60 points, or $\frac{3}{5}$ of a cent per pound, which is 40 points less than the loss on the actual cotton. The net loss on these transactions, therefore, is $\frac{2}{5}$ of a cent per pound, or $1,000. Narrowing of the basis has given the merchants imperfect protection.

Changing basis and changing spreads between markets make the operation of hedging far from the simple matter usually given in illustrations. Fluctuations in spreads 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, changing basis is watched for the purpose of shifting hedges to more remote months in order to avoid squeezes in the near-by 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 a series of illustrations will best bring out the intricacies of the hedging operation, thus supplementing the illustrations given above. Let us first take two illustrations of gain or loss because of a change in differentials between grades. In order to make the illustration as clear as possible, it will be assumed that no change in the general price trend occurs in either the cash (physical) or the futures market from the time the hedge is placed to the time it is undone or closed out.

When December cotton futures are selling at 20 cents, a cotton dealer acquires in the physical market a stock of good middling, a grade superior to the *basis* grade (middling) at an average cost of 20.71 cents, or 71 points per pound *above* the price of the December future. He hedges

this "long" cotton by a sale of the December future at 20 cents. His *basis* therefore, is, 71/100 of a cent per pound. He sells his good middling cotton a month later to a mill at a price averaging only 45 points *above* or "on" December, simultaneously undoing his hedge by buying at 20 cents. The result of his transaction is a loss, as follows:

Cash Transaction		*Futures Transaction*	
Bought good Middling at points "on" Dec.	71	Sold December future	20.00¢
Sold good Middling at points "on" Dec.	45	Bought December future ..	20.00¢
Loss (due to change in differential)	26		— 0 —

The merchant loses 26/100 of a cent per pound by the decline in the basis. If his *merchandising* profit on the sale of the actual cotton is more than 26/100 of a cent per pound, it will be reduced by this amount. If his profit is exactly 26/100 of a cent per pound, it will be balanced by the loss on the exchange. If his profit is less than 26/100 of a cent per pound, the transaction will show an actual loss on his books. Had the price differential between good middling in relation to December futures advanced instead of declining, the merchant would have gained correspondingly instead of losing.

In the above transaction the merchant was holding a premium grade on the physical market. Now, let us assume the merchant had held strict low middling, a discount grade, acquired at an average cost of say 94 points below or "off" the price of the December future. With the December future selling at 20 cents, his strict low middling would thus cost 19.06 cents per pound. He hedges by a sale of the December future. Later he is able to dispose of the actual cotton at a price averaging, say, only 38 "off" the December future, which is still at 20 cents. This transaction shows the following result:

Cash Transaction		*Futures Transaction*	
Bought Strict Low Middling at 94 "off" December	94	Sold December future	20.00¢
Sold Strict Low Middling at 38 "off" December	38	Bought December future ..	20.00¢
Profit (due to change in differential)	56		— 0 —

Here the merchant has gained 56/100 of a cent per pound by the advance in the basis. Had the basis for strict low middling in relation

to December futures declined instead of advancing, the merchant 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, costs of delivery, and the *merchandising* profit on the purchase and sale of the physical cotton, in order to bring out as clearly as possible the influence of changing relationships (basis) in the prices of different grades. In the illustrations below, the transaction is similarly reduced to its simplest terms, in order to bring out the effect of a change in the relationship between the cash (physical) and futures markets.

With December cotton selling on the exchange at 21.60 cents, A. & Co. contract to sell on the physical market at a price of 23 cents for forward delivery of middling cotton, the basis grade. This sales 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 cents. Between the time of making the short sale for forward delivery and the time for delivery, A. & Co. acquire the necessary cotton on the physical market at a 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 cents, a full 2-cent drop. A. & Co. close out their hedge transaction by selling the future, when they buy the physical cotton. 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 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 a loss because of the narrowing of the price spread between a specific grade on the physical market and December futures or, say, an advance in the basis on spot cotton in relation to December futures. The

decline in the futures market was greater than the decline in the price of the specific grade of cotton on the physical market.

Now let us assume that the reverse of this situation occurs. A. & Co. make their forward sale on the physical market and place their hedge on the exchange as before, later acquiring their specific cotton at the same cost—20.10 cents. But the price of the December future declines 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	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 an extra profit of 1 cent. The physical and future markets have again got out of alignment, but the change has been to the advantage of all those placing *long* hedges in the December future.

Perhaps the simplest method of explaining why hedges are not perfect insurance is to review a very common condition which may arise from time to time. Let us suppose that the standard or basis grade of some commodity has been selling for some months at between, say, 10 and 20 cents per pound. Grade Z, however, is an inferior grade which, let us suppose, has a valueless moisture or water content of 10 per cent of its weight. This factor causes it to sell more or less consistently at a 10 per cent discount from the price of the standard grade. With the standard at 20 cents per pound, Grade Z will sell at 2 cents per pound less, or 18 cents. If, however, the price of the standard grade should, for reasons such as a very short production for the year, soar to 40 cents per pound, grade Z likewise would rise sharply, but because of the 10 per cent water content it would now sell at a 4-cent per pound discount—at 36 cents per pound. If the standard rose to 80 cents, grade Z would sell at 72 cents, with the spread constantly rising as the price of the standard rose. Likewise, if the standard price should fall from 20 cents to 5 cents, the spread or differential between the two grades would fall from 2 cents per pound at the 20-cent level to ½ cent per pound at the 5-cent level.

Consequently, if a merchant anticipating a rise in the market should purchase 20 tons of grade Z at 17½ cents (when the standard grade

was selling at 20 cents) and hedge it by a sale on the exchange of futures contracts calling for delivery three months later at 20 cents per pound, and if, when the delivery date arrives, the price of the standard grade has risen to 60 cents per pound, he would be required to sell his grade Z at a discount of 6 cents per pound instead of at the 2-cent discount which prevailed at the time of his purchase. He would therefore incur a loss of 4 cents per pound on the twenty-ton hedge operation because of the sharp change in the differential between the two grades. If, on the other hand, the exchange market declined to 5 cents per pound, the differential on grade Z would fall from 2 cents to ½ cent and he would have an extra profit of 1½ cents per pound on the hedge.

In order to relate such premiums and discounts to *basis,* the following observations may be helpful:

Spot (trade) contracts are drawn in terms designed to facilitate the distribution of actual cotton; futures contracts, in terms that facilitate hedging. This is a fundamental reason for differences in price. The distinction can be brought out by supposing that in September a merchant and a spinner are discussing the relative value of a spot contract for "middling seven-eighths," f.o.b. Houston and the December New York future. Typically, the spot contract will be for even-running cotton of seven-eighths-inch staple *only,* the exact place of delivery will be named, and the time of delivery will be specified. The buyer will know what he will get and when and where. The future is a *basis* seven-eighths contract, with mixed lots (of cotton) composed of many descriptions (grades) deliverable (under the exchange contract) at several points (discount or premium below or above the contract price) on any day of the delivery month. The spot contract is more expensive for a merchant to fill and more desirable for a spinner to hold than the future; these features tend to increase its price as related to the price of the future.

Another fundamental condition to be taken into account in considering basis is that stocks gather carrying charges. For ten-cent cotton these amount to 5 to 6 points per pound per month. Theoretically, therefore, the basis for spots relative to a futures delivery month should advance as the month is approached, since the shorter the period stocks must be carried (for delivery on a futures contract), the smaller the cost of carrying them. This condition is usually referred to as the "carrying charge" theory.

. . . Using the term *basis* in a broad sense or as applying to a range of qualities (grades), the basis tends to be relatively low when available supplies are heavy and demand is not urgent, and vice versa. During a delivery month middling seven-eighths at a delivery point of a futures contract will not sell below the current price of the future by more than the cost of making delivery upon a sale of the future, or 15 to 20 points. As a rule it will command a premium, and at times a high premium. The basis for grades other than middling seven-eighths consists of the basis for *that grade* plus or minus the premiums or discounts for such grades, as compared with middling seven-eighths. When a

sharp demand for middling has caused the basis for that grade to run up, the advance will eventually be checked by spinners switching their purchases to other descriptions (grades) and by merchants (who are carrying middling under hedges) buying back their hedges and selling their spots.[8]

Not only are 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 also constantly alert to shift their contracts in order to make an additional profit. Suppose October cotton futures have been bought as a hedge and have risen 150 points since the buying hedge was placed, whereas December futures have advanced only 110 points. The October contract can be closed out 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 future 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 risks have been passed to other shoulders.

Mr. Reavis Cox, market editor of the New York *Journal of Commerce,* in a pamphlet, *Hedging Cotton* (at pages 8–9), weighs the advantages of hedging, with its attendant *basis* risks, and compares them with the risks involved in unhedged operations, as follows:

> As to the comparative sizes of the fluctuations in "basis" and the fluctuations in prices, which may be termed "basis" risk and price risk, respectively, there seems to be no general rule. In 1923–24 "basis" risk for various grades (5 grades of cotton) ranged from almost two-fifths to almost one-half of the price risk. In 1924–25 and 1925–26 "basis" risk was from one-third to one-fourth as large as price risk. In 1926–27 "basis" risk was one-fourth to one-fifth as large as price risk. In 1927–28 there was a wider variation between the grades, "basis" risk ranging from one-third to one-eighth of price risk. Summarized briefly, these figures indicate that the individual's risk, when he is hedged, has been from one-eighth to two-thirds as great as it would have been had he not been hedged. In other words, hedging is of substantial value, but it falls short of destroying all risks from price fluctuations. . . .
>
> Even with a "perfect" hedge, the merchant would have to operate with the greatest care. Once he has decided to hedge all his cotton, he is no longer concerned with the rise and fall of prices. His only interest is "basis." If "basis"

[8] Theodore D. Hammatt, Economist of the Commodity Exchange Authority, in *Hedging Cotton* (New York: Journal of Commerce, January, 1938).

goes against him, he loses; if it goes in his favor, he makes a profit. Even with a "perfect" hedge, he would have to use the most careful judgment in deciding whether to go long in the spot market and short in futures, or short in the spot market and long in futures, and he would have to make a separate decision for each grade.

The following editorial from the New York *Journal of Commerce* under date of May 23, 1929, effectively summarizes the advantages of hedging, despite basis risks:

Basis versus Price Risks

It has been shown in a series of articles published in *The Journal of Commerce* that the merchant who hedges does not thereby guarantee himself against losses from fluctuations in the "basis"—that is, the premiums over or discounts from the quotations for the nearest basing month at which spot cotton has been sold. Generally speaking, however, the variations in basis are much less than the long-time swings of actual cotton prices, with the result that the hedged merchant has his risks of loss greatly reduced.

Over short periods of time the "basis" risk is apt to be much smaller than the price risk, indicating that the futures market under such conditions offers an especially good insurance against loss to the hedger. Nevertheless, there are notable exceptions to this generally satisfactory rule. The statistics compiled by *The Journal of Commerce* indicate that even over short periods conditions may be such that the hedged merchant is subjected to heavier risks than the unhedged one. In 1927, for instance, basis risk on low middling exceeded the actual price risk over a period of three months. The maximum loss that the hedger might have suffered was 1.57¢ per pound, for instance, while the unhedged merchant could only have sustained a maximum loss of 1.36¢ per pound.

Illustrations of this sort do not provide any valid general arguments against hedging, but they undoubtedly show the need for exercising good judgment at all times and under conditions that ordinarily call for a minimum amount of caution. Basis risk even for the short periods is not only present but, in the case of lower grades of cotton, may be many times as large as normal profits. Thus, whether long-time or short-time transactions are under observation, vigilance is required, if losses are to be avoided. Hedging is not an automatic process, and much harm has been done to organized commodity markets by spreading mistaken notions of this sort. An intelligent appreciation of the limitations of a contract market provides the best assurance that it will be used to secure the maximum benefits to those who resort to it.

Hedging in the Grain Trade. Grain is bought from the farmer in large volume by country grain elevators during the harvesting seasons. These organizations are of primary importance in the country markets. Although 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 controlled by farmer's organizations, known as co-operative elevators; single elevators, owned by an individual or corporation; and line elevators, in a chain owned by one company.

In the *Report of the Federal Trade Commission on the Grain Trade* (1922), it is stated that 50 per cent of the 8,500 country grain elevators of the United States customarily hedge their purchases.[9] This does not mean that 50 per cent of the elevators always 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 on hand 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 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.[10]

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 in the report of 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."

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

[9] Vol. I, p. 213.

[10] *Report of the Federal Trade Commission on the Grain Trade,* Vol. I, p. 218.

Hedging on consigned grain is best done in the option (future) 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. . . .

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.[11]

Reasons for Spot Selling above Futures in the Grain Trade. In the grain trade the uncommon situation of spots (lots ready for prompt delivery) selling above futures occurs from time to time and may continue for considerable periods. This, as has been explained earlier, may be due to abnormal market influences, such as a temporary scarcity of grain, a temporary demand in excess of current supply (for example, the extraordinary shipments for European relief in 1947–1948), or a short, high-price crop followed by a normal or large crop. A second reason may be found in the fact that the grain tenderable on the futures contract may not be the full equivalent of grain of a corresponding grade bought in the cash market. The grain delivered on a futures contract is likely to be so mixed that, although 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; hence the cash grain commands a premium over the future. In the case of wheat, a considerable quantity generally sells at substantial premiums over the futures, because of its high protein content as compared to that of the basis grade on the exchange.

[11] From an address by J. C. Lyman before the Western Grain Dealers Association, *Grain Dealers Journal,* May 10, 1928, p. 560.

Hedging by Terminal Elevators. The country elevator, a buyer of spot grain, generally sells futures on the exchanges as hedges. Other leading factors in the grain trade which sell futures as a hedge are the terminal elevators and the buyers of "to arrive" grain. Terminal elevators are located in the large central markets. As crops come to the market, millions of bushels of grain are handled by the large terminal companies. They are buyers of grain, some of which they resell at once and some of which they store 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, of which the elevator is long, requires protection in this way. Thus an elevator which is long 800,000 bushels of wheat and has sold 200,000 bushels for forward delivery will maintain a hedge only on its net long position of 600,000 bushels. Buyers of "to arrive" grain usually hedge their commitments by sales in order to protect themselves against the risk of price fluctuation, while the grain is in transit.

Users of the Buying Hedge. Millers who contract ahead for the delivery of flour can and usually do 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 seaboard markets or points distant from the primary markets insures his ability to fulfill his contract by purchasing futures which are liquidated later, as the physical grain is picked up in the cash market for delivery on the contracts of sale.

The extent of hedging by the milling interests cannot be determined exactly. The larger mills, particularly in the Northwest, apparently make a practice of hedging their forward contracts for the sale of flour. The futures are either placed in the month, when the flour is needed, or spread over successive months; they are closed out as the actual grain of the quality required is obtained on the physical market. On the other hand, mills which are located in close proximity to country markets may not hedge at all, but rely on their ability to obtain the grain in the contiguous markets when and as needed.

Hedging by Producers. The hedge is used chiefly by dealers and manufacturers and to only a limited, though increasing, extent by producers of cotton and grains. In other fields, such as rubber, sugar, and coffee, producers hedge extensively. The reasons why producers of grains and cotton do not use the hedge more generally are: (1) relatively few of the millions of producers raise crops which are large enough to warrant the expense of the hedge protection; (2) a good part of the producers' crops are usually marketed immediately after harvest; (3) producers are generally unfamiliar with hedging techniques; (4) they find it difficult

to arrange for the margins required for hedge sales; and (5) temporarily, at least, the existence of government support of prices of a number of basic farm products.

The producer usually bears the risk in price fluctuations during the growing season, but, when the crop has been raised, the risk passes quickly into other hands. In recent years, however, the hedge has been employed on an increasing scale by producers, both large and small, acting in concert through farmers' co-operative associations. Farmers are tending more and more to use the facilities of the exchanges to hedge their growing crops, rather than speculate on the price at harvest time. The farm co-operatives, which have greatly increased in numbers under federal subsidies since 1933, offer their services at cost to those who desire to hedge and in many instances arrange for the margins required by the exchange under the general credit of the co-operative, which may take a mortgage on the farmer's crops or other collateral as security. In any case, the large-scale, mechanized farms are constant users of the exchanges for hedging purposes.

Not only do grain elevators, but also the individual farmers in rapidly increasing numbers, with encouragement from the co-operatives, use the grain exchanges to avoid storage charges. They can sell all their crop for cash, but, if they anticipate higher prices, they may simultaneously buy futures on one of the several grain exchanges, holding the futures contracts rather than the actual grain or cotton. The farmer who lacks storage facilities on his farm is thus enabled to carry stocks in unlimited quantities at the lower costs of storage in a *terminal* market (which he pays through the prevailing premium for the futures over spot prices). This practice of selling spot wheat or cotton and holding futures in their stead, of course, is not a hedge, but rather the continuation of a speculative position. The exchange is used only for the sake of economy, convenience, and liquidity rather than for that of price insurance.

Cattle feeders are frequent users of the grain exchanges for hedging purposes. Needing large quantities of corn for their cattle, which they are fattening for market, they buy spot corn from local farmers, promising them payment at any time during the season at the farmers' option. The feeders pay at the price prevailing when demand for payment is made. In effect, the farmer can pick any day to demand payment at that day's prevailing price, thereby avoiding storage charges and yet remaining free to speculate throughout the year for a rise in prices. This practice is possible only because the feeders, simultaneously with the delivery of the corn by the farmers, immediately buy hedging futures contracts on the exchange. When a farmer demands payment for his corn, the feeder sells a corresponding future and accounts to the farmer at

that day's price. In this way the feeders eliminate the risks of price fluctuations.

Markets Used for Hedging Grains. The more widespread practice of hedging in the grain states makes Minneapolis the leading market for the hedging of country elevators. Unless prices between markets are out of parity with other markets, the practice is to make the hedging purchase or sale in the nearest futures market. Though Minneapolis leads the field for hedging on the part of country elevators, Chicago is the seat of operations for more diverse hedging interests and for country elevators spread over a wider territory. The Kansas City Exchange is another active grain market. There are other grain exchanges throughout the country and in Canada; some were suspended during the Second World War and have not yet reopened.

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 grain commission houses are a factor; these tend to increase the extent of hedging by country elevators. The commission house often finances the country purchaser and, as a protection to its advances, requires that purchases be protected by a hedge.

Some grain 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. Such elevators are speculating for the rise and using the hedge only as a stop-gap against the time when in their judgment it will be safe to speculate again.

Hedging in the Cotton Trade. In the cotton trade hedging is generally practiced by merchants and to a varying extent by mills. In the days before the British Parliament established a governmental monopoly to buy all cotton converted in England, it was said that "nine-tenths of all cotton shipped from America to the Mersey is sold against (hedged) either in New York or in Liverpool."[12]

The cotton merchant must be alert and an expert in judging the grade, staple, and character of cotton. His country buyers must also be expert judges of cotton. He generally protects his long position in spot cotton by selling futures on the exchange. Another use of the hedge, and one widely employed, is to protect forward contracts of sale on the physical markets. A merchant often contracts to deliver cotton of an exact grade and staple to a buyer abroad. The price quoted to the foreign buyer is based on the price of the future for the month in which the merchant contracts to make

[12] J. G. Smith, *Organized Produce Markets* (New York: Longmans, Green & Company, 1922).

shipment. This forward contract is protected immediately by a purchase of the future for that month. A merchant who accumulates cotton for export may also employ either the selling hedge as a protection against over-purchases made for his account by his agents in the field, or the buying hedge as a means of protection, if his agents' purchases have not been equivalent to the sales he has made.

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 characterized the textile industry for many years. This practice materially reduced the time and risks involved in inventories and forward sales contracts for the delivery of the finished goods. Before the 1920–21 collapse of cotton prices, the mills would sell finished goods as far as six months ahead, hedging the contract by a purchase of cotton futures. Later, with the forward selling period cut in half, the tendency developed to fill actual requirements by immediate purchases of physical cotton. If the size of orders for finished goods 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 physical cotton at all; they mistakenly confine their use of the hedge entirely to the protection of forward sales of finished goods.

Among the southern mills the use of the hedge has expanded in recent years, but many mills make no use of it and some are still avowedly opposed to it. In the South mills, 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 more distant markets. These purchases of spot are protected by sales of exchange futures, and then, as orders are taken for manufactured goods, enough of the hedged sales are closed to protect only the "long" spot cotton in inventory.

> 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.[18]

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

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 may decline before any weakening in prices of cotton 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.

Buyer's and Seller's Call. In the cotton trade a considerable volume of business is done on "buyer's call" and on "seller's call." The practice of selling on buyer's call originated in the cotton export trade on sales of cotton to English mills which wanted to assure shipments in a particular month, but did not want to fix the price of the cotton immediately. The practice is now used extensively in both the buying and the selling of cotton on the domestic markets.

When buying cotton from farmers, a dealer frequently gives them the right to fix the price at their option at any later day's current quotation (with a limit of, say, sixty days in which to choose the day). This is known as a seller's call. The dealer may then sell to a cotton spinner and allow him to fix the price at his option at any subsequent day's current quotation (within a reasonable, specified period). In other words, the dealer has bought on seller's call and sold on buyer's call.

Let us assume that middling inch cotton, a grade superior to the *basis* grade, is selling in Houston, Texas, at 20.25 cents, while the near active future, May (three months off), is selling at 20 cents. The trader will quote this cotton to a spinner at 25 points on or above the price of May, this quotation being known as the "basis" or premium for this cotton at Houston over the basis grade. In practice, the basis for any grade does not, as a rule, change rapidly, although the market price itself may do so. Changes in the basis take place more slowly. To obtain the actual price of any one grade at any moment, the basis or differential for that grade at that time is added to or subtracted from the then price of the futures month used. This provides a very effective way of quoting physical cotton, in view of its constantly changing value. To get the corresponding price at Charlotte, North Carolina, it is necessary only to add the number of points required to pay the expenses to ship it there, say, 75 points. Consequently, if the trader buys the quality in question at 20.25 cents, he sells May futures as a hedge at 20 cents; in other words, he buys the physical cotton at 25 points on or above May and sells May on the exchange as a hedge. Then he offers it, landed in Charlotte, at 135 points "on" May, which would give him 35 points profit,

if the freight and other charges total only 75 points. Being hedged, he is concerned, meanwhile, not about price fluctuations or the trend of prices, but only with possible changes in the basis, or price spread, between the specific grade and May futures on the exchange, for it is the latter in which he makes his profit or loss.

The merchant sells the hedged lot, say, two weeks later, to a mill in Charlotte at 135 points on or above the current exchange price of May, but the mill wants the usual privilege of calling or choosing the day (within a reasonable time limit) on which it will fix the price of the cotton. This procedure is called "selling the cotton on buyer's call." The merchant agrees and waits until the mill fixes the price on the basis of, say, 19.75 cents for May. As soon as this is done, the merchant buys back an equal amount of May futures on the exchange at 19.75 cents. The sale price to the mill is therefore 19.75 cents plus 1.35 cents, or 21.10 cents. The profit to the merchant will be, as stated above, 35 points.

The merchant will make on the spot cotton 21.10 cents (the price he sold it at) less 20.25 cents (what he paid for it), or 85 points. On his futures he will make a profit of 25 points, for he sold at 20.00 cents and bought back at 19.75 cents. Hence he will make a total gross profit of 110 points, but he has expenses of 75 points, thus making the net profit 35 points.

The transactions[14] listed on p. 245 will illustrate the operations of the cotton merchant who buys on seller's call and sells on buyer's call and protects himself from price risks by hedging the transactions.

Hedging in the Sugar Industry. In wheat and cotton relatively little hedging is done by individual growers. A fundamental reason for this, particularly in the cotton trade, is that the individual production of a large number of the growers is not sufficient to make one contract unit; consequently, they operate mainly through co-operatives. In the sugar trade, producers and refiners of both cane and beet sugar employ the facilities of the New York Coffee and Sugar Exchange extensively 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 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, manufacturers, bakers, and wholesale grocers, all large-scale users of sugar, make use of the protection afforded by the hedge.

Mr. John C. Gardner, president of the New York Coffee and Sugar Exchange, speaking on August 14, 1947, at a symposium under the aus-

[14] All this material has been adapted from a pamphlet issued by Merril, Lynch, Pierce, Fenner & Beane, Members of the New York Cotton Exchange (New York, 1947).

		Debit	*Credit*
Jan. 2 —	Merchant buys from a farmer 100 bales Middling 15/16 inch *at 20 points "on" (or above) May futures,* allowing the farmer to fix the price when he chooses, but before April 16. *The merchant is now long of the basis only.* For information's sake only, May then was 20¢. The farmer probably receives $8,000 on account when he delivers the cotton and it is agreed final adjustment will be made when the price is fixed.		
Jan. 29 —	The merchant sells the cotton to a mill, on buyer's call, at 135 points "on" May, of which 90 points are for freight, commissions, and other expenses. He gives the mill the right to fix the price when it pleases, but before April 16. *The merchant now has sold the basis.* (The market was then 20.80¢ for May.)		
Feb. 10 —	The farmer notifies the merchant to fix the price of his sale on the basis of 20.90¢, the day's price of the May futures, plus .20¢ (as agreed on Jan. 2), or a total of 21.10¢. The *merchant is now long of the cotton,* but *at the same time sells a May futures contract as a hedge at 20.90¢*		$10,450.00
	The amount (less any previous advance) paid the farmer is	$10,550.00	
Apr. 15 —	The mill notifies the merchant to fix the price on its purchase from the merchant at the then current level of 18.80¢ per pound for May, making the sale price to the mill 18.80¢ plus 1.35¢ (as agreed on Jan. 29), or 20.15¢. The merchant receives from the mill		10,075.00
	The merchant, at the time of shipping to the mill, will have to pay freight and all other charges, equal to 90 points, or	450.00	
	On the same date that the price to the mill is fixed, the merchant buys a May contract. The price of the May futures then is 18.80¢, making the cost	9,400.00	
	The total result of the completed spot transaction and the liquidated futures hedge is therefore	$20,400.00	$20,525.00
	making a profit of	$125.00	

pices of the National Association of Commodity Exchanges and Allied Trades, described hedging in the sugar trade as follows:—

Hedging by a Raw Sugar Producer. In Cuba there are about 160 active mills that grind cane and process it into raw sugar. The cane is planted and cultivated in part by farmers, known as "colonos," and in part by the mills themselves on company-owned land. During the grinding season, which extends from the first of January to the end of May, the colono delivers his cane to the mill and is paid for it on the basis of the average New York market price for sugar. These cane settlements are made fortnightly. At the same time, the mill is grinding its own company-owned cane. From this you can see that the mill becomes the owner each fortnight of two batches of raw sugar, one batch produced from its own cane and the other produced from the cane bought from its farmers or colonos. Since the Cuban crop is sold over a period of twelve months, the mill assumes a very substantial market risk during the grinding season. It is the almost universal practice of the modern enlightened mill owners to sell on our Exchange all or a substantial part of the colono sugar which they are required to take over during the grinding season. They may likewise hedge part of the sugar that has been produced from their own cane. Many mills, of course, make sales of actual sugar to American seaboard refiners during the grinding season; but, since there is a limit to refiners' storage capacity, it is necessary that the Cuban producers have some other sales outlet, if they are to protect themselves against market declines during the second half of the year.

Hedging by the Colonos. The cane farmer or colono also utilizes our Exchange. Sugar cane requires 12 to 15 months to mature. During this period the colono incurs certain cultivation expenses. Sugar prices may be very high during the year of cane growth, but the colono is not able to cash in on these high prices, since he is not paid for the cane by the mill until it is actually cut and delivered. Therefore, if he anticipates a substantial decline in the market during the crop year in which his cane will be harvested, he sells sugar futures for delivery 6 to 12 months in advance. If his forecast has been correct, he will receive less money for the cane, but this will be offset in a general way by the profit on his futures sale. When the cane is delivered to the mill, he naturally repurchases his outstanding futures, unless he is still bearish on the market and wishes to remain short. In that case, his position changes from that of hedge seller to outright speculator on the bear side.

Hedging by Seaboard Cane Refiners. Cane refining is a big volume business requiring large plants and ample capital. Despite the fact that sugar is used daily by every citizen in more or less equal quantities, its distribution from the refiner level is extremely uneven. The distributing trade buys on what are called "moves," taking on at one time a 30 to 45 days' supply. This means that the refiner must buy large quantities of raw sugar, process it into refined, and carry it in his warehouses until the trade is ready to take it off his hands. Many times, when his inventories become uncomfortable on a declining market, he has to resort to our futures market for temporary protection.

Hedging by Beet Processors and Growers. The situation of the beet factories in our western states is not greatly different from that confronting the Cuban raw sugar mill. The farmer grows the beets and delivers them to the factory.

The beets are processed by the factory, and the resulting refined sugar is sold over a period of twelve months. After deducting taxes, discount, freight, and selling expenses, the net proceeds of the year are divided approximately on an even basis between the factory and the farmers. In this case you will note that the beet processor does not take the same market risk as the Cuban mill, because he does not pay for his beets at a fixed market price during the harvesting period. Nevertheless, if the market is declining, both the factory and the farmer receive a lower average net price. If the market is attractive during the harvesting season, it is not at all uncommon for the beet factory to sell part of its expected production on the Exchange, repurchasing later as the sugar is sold. The beet farmer can also sell futures against his growing crop, if he anticipates a decline, repurchasing later as the sugar is sold, but it is probable that our American farmers use the Exchange less for this purpose than do the cane farmers in Cuba.

Hedging by Industrial Users of Sugar. Many of our large industrial users of sugar, such as the bottlers, candy manufacturers, bakers, and others, use the Exchange as a matter of ordinary business routine. For example, a candy manufacturer may book orders for the Christmas or Easter trade several months in advance. If he finds it inconvenient or impossible to buy the necessary sugar from a refiner, he merely purchases an equivalent amount of sugar futures on the Exchange. As the sugar is needed for processing in his plant, he goes to a refiner and purchases for prompt delivery and closes out his Exchange hedge. If the price of sugar has advanced, he pays the refiner more, but makes an approximately offsetting profit on his futures purchase. If the market has declined, he would naturally sustain a loss on his futures, but then he would be paying less for his refined sugar. It frequently happens that an industrial user will overestimate the demand for his production. He buys too much sugar and then finds that his production is moving too slowly on a declining sugar market. In this case he would protect himself against inventory loss by selling futures in an amount equal to his processed sugar. . . .

The sugar markets of the world have become a homogeneous whole as a result of the quotations constantly going out from our Exchange. By appropriate adjustments for differences in freight, insurance, and duties, the buyers and sellers in London, Havana, Java, or Peru know the world market value of sugar as well as do the sugar brokers in New York. . . .

In summary, our Exchange provides price insurance for the farmer, the beet and cane processors, the refiner, and the industrial user of sugar. It has materially lessened the costs of distribution and facilitated the financing of growing crops and warehouse stocks; it has linked all the markets of the world and supplied a continuous ready market for both buyers and sellers at all times; by supplying accurate statistical and price information, it has facilitated the forecasting of future trends in supply and demand and enabled business men to plan ahead more intelligently.

Hedging in the Coffee Trade. The export movement of coffee has been controlled for many years by the Brazilian government under its valorization schemes. So effective has the control been at times that price

levels have been to a large extent artificially maintained. This has tended to reduce interest in the market and to hamper its usefulness for hedging. Periodically, however, the schemes collapse and free markets are revived. The New York Coffee and Sugar Exchange has endeavored to aid hedging by producers, dealers, and roasters 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 coffees separately insures a greater degree of accuracy in relative quotations and thus makes the market more useful to the trade.

Hedging in the Rubber Trade. Rubber is also an import commodity. Hence the majority of hedges placed by dealers constitute sales of futures against their purchases 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, of course, will be based on the price of the future; on the other hand, a selling hedge is employed when large inventory stocks of or contracts for crude rubber are carried and are not offset by definite forward contracts for the manufactured article. Large estate producers in the Far East and merchants in Singapore, Colombo, the Dutch East Indies, Europe, and the United States also use the New York Rubber Exchange extensively for hedging their production or market operations.

Hedging in Cottonseed Oil. Cottonseed 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 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.

Hedging by Custom Copper Smelters. Custom copper smelters purchase copper ores or copper concentrates and smelt the same. The smelting operation requires from 60 to 90 days. Not infrequently there is a lapse

of as much as four months between the time the ores are purchased and the smelting treatment completed. During this period the smelter can protect himself against a decline in the price of copper by selling futures contracts. In the meantime, should the market price of the physical copper decline, the loss will be offset by the profit obtained when the futures contracts, previously sold, are bought back. It is the general practice of custom smelters to seek their profits only in the treatment (smelting) charges. However, a reverse situation could also arise. A smelter might commit himself to deliver refined metal at a specified price before his raw-material needs are covered for such a contract. In order not to run an undue price risk, he may under such circumstances buy futures contracts when he enters such a commitment. Then, should there be an unforeseen advance in the price he has to pay for his raw materials, this would be offset by a profit on his long futures transaction.

Hedging by a Fabricator. A fabricator of metals can use the futures markets to equal advantage. This applies to companies making semi-manufactured metal products, as well as to consumers of metals who manufacture finished goods. A fabricator may find himself at times with a large inventory on hand, and at other times his commitments may exceed his stocks. In both instances the futures market offers facilities for protection. Inventories can be protected by a sale of future contracts; outstanding and uncovered commitments, by a purchase of futures.

In periods of uncertain business prospects, the protection of inventories—whether of raw materials or fabricated products—against sudden price declines is of course most valuable. Where inventories of fabricated products are hedged, a sudden price drop would at least be partially offset by a profit on the futures transaction when the short sale is liquidated, although there may not be parallel movements between prices of raw materials and finished goods.

Hedging by a Miner. A mining company, believing that prices will decline, yet anxious to maintain continued operation and employment of its employees, may use the mechanism of the futures market to sell its production well ahead in the form of contracts for future delivery. It then has the choice either of buying back these futures contracts, if its production is sold through trade channels, or of delivering actual metal, processed from its production, against the outstanding futures contracts at time of their maturity.

Summary. A significant feature of hedging is its use in different industries by large or important interests which are subject to an exceptional degree of risk. In the grain trades, the country, line, and terminal elevators, as well as most millers, are 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 the sugar trade, all interests are active hedgers. Producers, merchants, and converters in the coffee, rubber, cocoa, and many other trades benefit from the hedge. 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 the 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. Co-operatives are constantly increasing the interest of producers in hedging their combined smaller parcels through the facilities of the co-operatives.

Despite the fact that the so-called *basis* risks cannot be hedged—and, as a consequence, many hedges cannot give complete or perfect insurance—the operator who seeks to eliminate speculative risks is well advised to adopt hedging as a matter of permanent rather than haphazard policy. In the long run, with the exercise of good judgment, wise foresight, and willingness to shift positions quickly, the hedge is certain to prove to be insurance against *major* hazards of price and credit.

CHAPTER XIII

The Commodity Exchange Act.[1]

On September 21, 1922, the Congress of the United States enacted legislation regulating transactions on grain future exchanges and for other purposes. (U.S.C., title 7, secs. 1–17.) It was known by the short title of "The Grain Futures Act." This act was amended on June 15, 1936 (Public No. 675 of the 74th Congress), which extended its application to future trading and dealings on exchanges in certain commodities in addition to grains. The word "grain" is deleted from the law as amended, and the word "commodity" is used instead. Commodity is defined to mean wheat, cotton, rice, corn, oats, barley, rye, flaxseed, grain sorghums, mill feeds, butter, eggs, Irish potatoes, wool tops, fats and oils (including lard, tallow, cottonseed oil, peanut oil, soybean oil, and all other fats and oils), cottonseed meal, cottonseed, peanuts, soybeans, and soybean meal. It does *not* undertake to regulate commodities other than those specifically mentioned; consequently, it does not cover imported articles such as coffee, cocoa beans, rubber, silk, tin, and the like. In fact, the coverage is limited to domestic products of agriculture. Since the amendments in most instances supplement and enlarge upon the provisions of the original Act, it is necessary to consider in its present form the original Act as amended.

The Commodity Exchange Act rests upon the power of Congress to regulate interstate commerce. The constitutionality of the Act (in its application to grains) was upheld by the United States Supreme Court in 1923. (Board of Trade v. Olsen, 262 U.S., 1.) The court sustained the right of Congress to legislate with respect to transactions in grain, involving the sale thereof for future delivery, as commonly conducted on commodity exchanges. The broad, general foundation for the Act is set forth in Section 3. This recites that transactions in commodities for future delivery on exchanges are conducted in large volume by the public generally and are used extensively by producers, dealers, and manu-

[1] This chapter is adapted from a digest, dated June, 1936, by J. M. Mehl, Administrator of the Commodity Exchange Authority, U.S. Department of Agriculture, and is used here with his consent.

facturers for hedging commodities shipped in interstate commerce; and that such transactions have a direct or indirect effect upon interstate commerce and, therefore, are subject to the authority of Congress under the interstate commerce clause of the Constitution.

Contract Markets. Any exchange or any board of trade, desiring to conduct a futures market in *any of the commodities named in the Act,* must first be designated as a "contract market" by the Secretary of Agriculture. By "board of trade" is meant "any exchange or association, whether incorporated or unincorporated, of persons who shall be engaged in the business of buying or selling any commodity or receiving the same for sale on consignment."

Generally speaking, it is unlawful for any person to make or enter into any contract of sale for future delivery on or subject to the rules of any board of trade in the United States of any of the commodities covered by the Act, unless such contract is made by or through a member of a board of trade that has been designated by the Secretary of Agriculture as a contract market. It is unlawful also to transmit through the mails or in interstate commerce any offer to make such contract or any confirmation of such contract or to transmit any quotation or report of the price involved in such contract, unless made by or through a member of a board of trade which has been designated as a contract market. A further requirement is that contracts of sale for future delivery must be evidenced by a record in writing, showing the date, the parties thereto, and their addresses, the property covered, and its price and terms of delivery, which record must be kept for a period of three years, or for a longer period, if so required by the Secretary of Agriculture. Such record must be kept open to inspection by representatives of the United States Department of Agriculture and of the United States Department of Justice. Contracts for future delivery do not include the sale of commodities on the physical markets for deferred shipment or forward delivery.

Conditions for Designation. In order to be designated as a contract market, a board of trade must meet the following conditions:

1. It must be located at a terminal market where cash commodities of the kind specified in the contracts of sale of commodities for future delivery are sold in sufficient volumes and under such conditions as to fairly reflect the general values thereof and the differences in value between various grades.

2. There must be available official inspection service approved by the Secretary of Agriculture.

A board of trade located where the conditions described in 1 and 2 above do not obtain may be designated as a contract market, if such

board of trade provides for the delivery of commodities on its futures contracts at a delivery point or points and upon terms and conditions approved by the Secretary of Agriculture.

3. It must provide for the making and filing—by the board or by the members thereof, as the Secretary of Agriculture may direct—of reports in accordance with rules and regulations and in the manner and form and at such times as may be prescribed by the Secretary of Agriculture, showing the details and terms of all transactions entered into by the board or the members thereof, either in cash transactions consummated at, on, or in a board of trade, or transactions for future delivery.

4. It must provide, in accordance with rules and regulations of the Secretary of Agriculture, for the keeping of a record by the board or members thereof, showing the details and terms of all cash and futures transactions entered into by them, consummated at, on, or in a board of trade, which record must be in permanent form, showing the parties to all transactions, including the persons for whom made, any assignments or transfers thereof and the parties thereto, and the manner in which such transactions are fulfilled, discharged, or terminated. Such record must be kept for a period of three years from date, or for a longer period, if so directed by the Secretary of Agriculture, and must at all times be open to the inspection of any representative of the United States Department of Agriculture or of the United States Department of Justice.

5. It must provide for the prevention of dissemination, by the board and members thereof, of false or misleading or knowingly inaccurate reports concerning crop or market information or conditions that affect or tend to affect the price of any commodity in interstate commerce.

6. It must provide for the prevention of manipulation of prices and the cornering of any commodities by dealers and operators.

7. It must not exclude from membership in, and all privileges on, such board of trade any duly authorized representative of any lawfully formed and conducted co-operative association of producers, having adequate financial responsibility, which is engaged in any cash commodity business, if such association has complied and agrees to comply with such terms and conditions as are lawfully imposed on other members of such board of trade. Board of trade rules, however, may not be so made or construed as to forbid the payment of patronage dividends by a co-operative association to its bona fide members.

8. It must provide for making effective the final orders or decisions entered pursuant to paragraph (b) of Section 6 of the Act. These relate to the denial of trading privileges and the revocation or suspension of registrations as futures commission merchants or floor brokers of persons found guilty of violating the act.

9. Each contract market must promptly furnish to the Secretary of Agriculture copies of all by-laws, rules, regulations, and resolutions made or issued by it, or the governing board thereof, or any committee, and of all changes and proposed changes therein.

10. Each contract market must allow inspection at all times by authorized representatives of the United States Department of Agriculture or of the United States Department of Justice of the books, records, and all minutes and journals of proceedings of such contract market, of its governing board, and of all committees, and of all subsidiaries and affiliates of such contract market—which books, records, minutes, and journals of proceedings must be kept for a period of three years from the date thereof or for a longer period, if the Secretary of Agriculture shall so direct.

11. Each contract market must require the operators of warehouses in which or out of which any commodity is made deliverable on futures contracts to make such reports, keep such records, and permit such warehouse visitation as the Secretary of Agriculture may prescribe. Such records and warehouses must be open to inspection by any representative of the United States Department of Agriculture or of the United States Department of Justice.

12. When so directed by the Secretary of Agriculture, each contract market must provide for a period, after trading for future delivery in any delivery month has ceased, in which to make settlement by delivery. Such period may not be less than three nor more than ten business days, to be fixed by the Secretary of Agriculture after notice and hearing, if he finds this is necessary to prevent squeezes and market congestion. The Secretary's order hereunder cannot affect contracts already made.

13. Each contract market must require the party making delivery on any futures contract to furnish the party receiving delivery written notice of the date of delivery at least one business day prior to the date of delivery. The Secretary of Agriculture, after notice and hearing, may require longer notice of delivery—not more than ten business days—if he finds that the giving of longer notice of delivery is necessary to prevent or diminish unfair practices in trading. The Secretary's order hereunder cannot affect contracts already made.

14. Each contract market must require that contracts of sale of commodities for future delivery shall provide for the delivery of commodities of grades conforming to United States standards, if such standards have been officially promulgated.

15. Each contract market must require that receipts of federally licensed warehouses be accepted in satisfaction of futures contracts, without discrimination, if such warehouses meet all reasonable requirements imposed upon other warehouses as to location and suitability for warehousing

and delivery purposes. It is entirely optional with the warehouseman, however, whether he will operate under federal or state license.

Co-operative Associations. Co-operative associations of producers meeting the requirements set forth in section 5 (e) of the Act are entitled to membership representation in, and all privileges on, contract markets. This has been held to include the right to clear trades through the established clearing house of an exchange. (The Board of Trade of the City of Chicago v. Henry A. Wallace, et al., and Farmers National Grain Corporation, 67 Fed. [2d], 402.) Control over membership and trading privileges, except as to co-operative associations, is left with the exchanges.

A co-operative association entitled to the benefits of the Act is described as a "lawfully formed and conducted co-operative association of producers, having adequate financial responsibility, which is engaged in any cash commodity business." Such a recognized association must comply and agree to comply with such terms and conditions as are imposed lawfully on other members, except that no exchange rule may forbid the payment of patronage dividends by such co-operative associations to its bona fide members.

The words "co-operative association of producers" are defined to mean "any co-operative association, corporate or otherwise, not less than 75 per cent in good faith owned or controlled, directly or indirectly, by producers of agricultural products and otherwise complying with an Act of Congress of February 18, 1922 (U.S.C., 1934 ed., title 7, secs. 291 and 292), as now or hereafter amended, including any organization acting for a group of such associations and owned or controlled by such associations." The Act of Congress of February 18, 1922, is the Capper-Volstead Act, setting up certain standards for co-operative associations. One such standard is that the business done for non-members shall not exceed in value that done for members. Section 2 of the Commodity Exchange Act provides that business done by a co-operative association for or with the federal government, or any agency thereof, shall not be considered either member or non-member business in determining compliance with the Capper-Volstead Act.

A co-operative association meeting the requirements of the Act may not be excluded from membership in, and trading privileges on, a contract market, unless such exclusion is authorized after notice and hearing before the Commodity Exchange Commission, comprising the Secretary of Agriculture (Chairman), the Secretary of Commerce, and the Attorney General. Such co-operative association, however, is automatically barred from further trading on a contract market upon failing to meet its obligations with the clearing house of such market. In that event, its trading is limited to closing open trades and discharging existing contracts. Such

trading must be in accordance with the rules of the market governing such cases.

Co-operative associations of the federated type are authorized to compensate, on a commodity-unit basis or otherwise, its regional member associations for services rendered or to be rendered in connection with organization work, educational activities, or the procurement of patronage. However, no part of such compensation may be distributed to patrons (whether members or non-members) of either such federated co-operative association, or of its regional or local member associations, otherwise than as a dividend on capital stock or as a patronage dividend out of the net earnings or surplus of such federated co-operative association.

Registration of Futures Commission Merchants and Floor Brokers. Before any person may engage in the business of futures commission merchant in soliciting orders for the purchase or sale of any commodity for future delivery on or subject to the rules of any contract market, he must register as such with the Secretary of Agriculture. The same is true of persons acting as floor brokers. Futures commission merchants must also comply with the requirements of the Act governing the handling of margin funds belonging to customers.

A futures commission merchant is defined to mean and include "individuals, associations, partnerships, corporations, and trusts [that are] engaged in soliciting or in accepting orders for the purchase or sale of any commodity for future delivery on or subject to the rules of any contract market and that, in or in connection with such solicitation or acceptance of orders, accept any money, securities, or property (or extend credit in lieu thereof) to margin, guarantee, or secure any trades or contracts [which] result or may result therefrom." The term "floor broker" is defined to mean "any person who, in or surrounding any 'pit,' 'ring,' 'post,' or other place provided by a contract market for the meeting of persons similarly engaged, shall engage in executing for others any order for the purchase or sale of any commodity for future delivery on or subject to the rules of any contract market, and who for such services receives or accepts any commission or other compensation."

It will be noted that the registration requirements, both as to commission merchants and floor brokers, apply only to persons who are engaged in the execution or handling of orders for others. Exchange members executing their own orders and trading exclusively for their own account are not required to register. However, a correspondent of a commission house, soliciting business in his own name and being directly responsible to customers, must be registered as a futures commission merchant.

A futures commission merchant must display in each of his offices where

orders are solicited or accepted the original or an official duplicate copy of his registration certificate.

The requirements for registration are simple. Applicants must give and continue to give such information and facts as the Secretary of Agriculture may deem necessary concerning the business in which the applicant is or will be engaged. In the case of futures commission merchants, such information includes the names and addresses of managers of branch offices and of all correspondents and agents engaged in soliciting or accepting orders for the purchase or sale of any commodity for future delivery; also the names of officers and partners, if a partnership, and of officers, directors, and stockholders, if the Secretary of Agriculture so directs, in the case of corporations. All registrations expire on the thirty-first day of December of each year, but are renewable upon application, unless registration has been revoked or suspended for violation of the Act and the period of suspension has not expired. A fee not to exceed $10.00 is authorized for registrations and renewals and for copies of registration certificates.

The Secretary of Agriculture can suspend or revoke registrations after notice and hearing, upon proof that the Act or regulations made under the Act have been violated. The decisions of the Secretary of Agriculture with respect to violations are subject to review by the United States Circuit Court of Appeals in the circuit in which the petitioner is doing business.

Protection of Customers' Margin Moneys. The Act requires all futures commission merchants (whether members or non-members of a contract market) to treat and deal with all margin moneys, including securities and property, as belonging to the customer from whom received. Moneys received from different customers to margin or guarantee trades, involving commodities covered by the Act, may be commingled in a common fund, but all such moneys, securities, and property must be separately accounted for and may not be commingled with the funds of the commission merchant, and may not be used to margin or guarantee the trades or contracts of or to extend credit to any person other than the one for whom the same are held. This requires physical segregation of moneys, securities, and property belonging to the commodity customers of a commission firm. A commission merchant may not use such moneys in his own business, but is given rather wide discretion to deposit and invest such funds for the purpose of safekeeping.

Margin moneys of customers may be deposited with one or more banks or with the clearing house organization of a contract market. They may be invested in obligations of the United States, in general obligations of any state or of any political subdivision thereof, in obligations fully

guaranteed as to principal and interest by the United States, and in "investment securities" as defined in and under authority of Section 5,136 of the Revised Statutes. They may be loaned on the security of negotiable warehouse receipts to the extent of the current loan value of such receipts. Investments and loans, however, must be made in accordance with rules and regulations and subject to conditions prescribed by the Secretary of Agriculture.

Commission merchants are authorized to withdraw and apply such portions of customers' margin moneys as are necessary in the normal course of business to margin, guarantee, secure, transfer, adjust, or settle the contracts or trades of customers or resulting market positions with any member or with the clearing house organization of a market, and may also withdraw and apply margin moneys to the payment of commissions, brokerage, interest, taxes, storage, and other charges lawfully accruing in connection with the contracts and trades of customers. The purpose of the described margin provisions is to preserve and hold intact for customers all moneys, securities, and property deposited by them to guarantee trades and to prevent their being used for any other purpose. The word "customer" refers to customers trading in commodities covered by the Commodity Exchange Act.

Limitations on Trading. Section 4a authorizes the Commodity Exchange Commission—consisting of the Secretary of Agriculture, the Secretary of Commerce, and the Attorney General—after notice and hearing, to fix limitations both upon the amount of speculative trading that may be done by any person during any one business day and upon the amount of the speculative net position, long or short, that may be had by any person at any time. *The limitations affect only speculative trading and speculative positions. Hedging transactions are specifically exempted and the Commission may exempt also transactions known as spreads or straddles.*

The Commission is given wide discretion in the matter of fixing trading limits when, after notice and hearing, it appears that such limits are necessary to prevent excessive speculation constituting an undue and unnecessary burden upon interstate commerce in any commodity. The Commission may fix different trading limits for different commodities, markets, and delivery months and may fix different trading limits for buying and selling operations. The limits on daily trading may differ from those fixed for net positions.

Spreading and straddling transactions are subject to the trading limits fixed for speculative transactions, unless exempted therefrom by the Commission. The Commission may fix separate and different trading limits for spread and straddle transactions.

Speculative trading limits apply to the trading of futures commission merchants and floor brokers only to the extent that such trading is for the account or benefit of such futures commission merchants or floor brokers. In other words, the trading limits apply to the parties in interest rather than to those acting in a strictly agent capacity in executing trades. They apply to all traders, whether or not members of a contract market.

Hedges Exempted. Hedging transactions are exempted from the trading limits. Aside from and in addition to his hedging trades, a hedger may have speculative trades not in excess of the trading limits. Trading limitations apply only to futures transactions and do not affect cash or spot transactions or holdings of the actual commodity.

Hedging transactions are defined to mean "sales of any commodity for future delivery on or subject to the rules of any board of trade to the extent that such sales are offset in quantity by the ownership or purchase of the same cash commodity, or, conversely, purchases of any commodity for future delivery on or subject to the rules of any board of trade to the extent that such purchases are offset by sales of the same cash commodity." In computing the amount of any commodity which may be hedged by any person the Act specifically authorizes the inclusion of:

"(A) the amount of such commodity such person is raising, or in good faith intends or expects to raise, within the next twelve months, on land (in the United States or its Territories) which such person owns or leases;

"(B) an amount of such commodity the sale of which for future delivery would be a reasonable hedge against the products or by-products of such commodity owned or purchased by such person, or the purchase of which for future delivery would be a reasonable hedge against the sale of any product or by-product of such commodity by such person."

The latter provision is believed to be sufficiently broad to cover all necessary hedging of all reasonably related risks incident to the purchase or sale of commodities and products and by-products thereof, including various forms of forward sales, as well as risks incident to the merchandising or processing of any commodity.

Unlawful Transactions and Practices. It is unlawful for any member of a contract market or any correspondent, agent, or employee of such member in or in connection with any order to make, or the making of any contract of *sale of any commodity in interstate commerce,* or any contract of *sale of any commodity for future delivery,* made or to be made for or on behalf of any person:

"(A) to cheat or defraud or attempt to cheat or defraud such person;

"(B) willfully to make or cause to be made to such person any false report or statement thereof, or willfully to enter or cause to be entered for such person any false record thereof;

"(C) willfully to deceive or attempt to deceive such person by any means whatsoever in regard to any such order or contract or the disposition or execution of any such order or contract, or in regard to any act of agency performed with respect to such order or contract for such person; or

"(D) to bucket such order, or to fill such order by offset against the order or orders of any other person, or willfully and knowingly and without the prior consent of such person to become the buyer in respect to any selling order of such person, or become the seller in respect to any buying order of such person."

It will be observed that the above described acts are unlawful in connection with either cash commodity transactions in interstate commerce or transactions for future delivery.

Accidental Omissions, Exceptions. The apparent intent and purpose of the words "willfully and knowingly and without the prior consent of such person" used in the above quoted paragraph (D) of section 4b is to make due allowance for transactions wherein a futures commission merchant may inadvertently find himself on the opposing end of a customer's order. This may happen when such futures commission merchant is also trading for his own account, and is having his own orders and those of customers executed through independent floor brokers who at the instant of executing orders by trade with each other on the exchange floor do not know that they are acting for the same principal. It happens also that orders of customers required to be executed are sometimes overlooked, in which circumstances the commission merchant or floor broker may wish to assume the trade. This may be done with the prior consent of the customer. Again, it may be that in an inactive market a firm, having customers' buying orders which it is unable to execute at a fair price, may wish to make hedging sales of its own which would be similarly affected by the inactive market. In such circumstances, presumably, a firm might properly become buyer in respect to the selling order of a customer, if the customer were willing and gave his prior consent.

An apparent further exception has special application to cotton. It authorizes futures commission merchants and floor brokers "who shall have in hand, simultaneously, buying and selling orders at the market for different principals for a like quantity of cotton for future delivery in the same month" to execute such buying and selling orders "at the market price." But such execution must take place "on the floor of the

exchange where such orders are to be executed at public outcry across the ring."

The legislative history of this particular amendment, which was modified and changed from its original form, indicates that its first intended purpose was to authorize ex-ring execution of buying and selling orders received and held simultaneously. Subsequent modifications, however, changed it so as to require execution of such orders in the same manner as other orders are executed.

The primary purpose of the provisions of section 4b appear to be to prevent advantage being taken of customers who have every reason to believe that their orders are being executed by a disinterested party as agent.

Wash Sales, Cross Trades, Privileges, etc. Section 4c makes unlawful any transaction which is, or is of the character of, or is commonly known to the trade as a "wash sale," "cross trade," or "accommodation trade" or which is a fictitious sale; also any transaction which is, or is of the character of, or is commonly known to the trade as a "privilege," "indemnity," "bid," "offer," "put," "call," "advance guaranty," or "decline guaranty." All transactions that are used to cause any price to be reported, registered, or recorded which is not a true and bona fide price are unlawful.

Permissive Ex-Ring or Ex-Pit Transactions. It is specifically provided in Section 4c that nothing contained therein shall be construed to prevent the *exchange of futures* in connection with cash commodity transactions *or of futures for cash commodities or of transfer trades or office trades,* if made in accordance with board-of-trade rules applying to such transactions and if such rules have not been disapproved by the Secretary of Agriculture. The apparent purpose of the latter provision is to authorize, under proper conditions, trades and transfers of interests—as between different customers and commission houses—which involve futures contracts, but for practical reasons must be made off the exchange floor or outside of regular trading hours by private arrangement.

With reference to the prohibitions of sections 4b and 4c, it is specifically provided that these shall not be construed to impair any state laws which might be applicable.

Bucket Shops, Misrepresentation. Section 4h makes it unlawful to conduct any office or place of business anywhere in the United States for the purpose of soliciting or accepting any orders for the purchase or sale of any commodity for future delivery or for conducting any dealings in any commodities for future delivery, if such orders or dealings are executed or consummated otherwise than by or through a member of a contract market. It is also unlawful for any person falsely to represent

himself to be a member of a contract market, or to be the representative or agent of such member, or to be a registered futures commission merchant, or to represent falsely that orders solicited or handled by such person are executed on or by or through any member of a contract market. This provision, together with the requirements of section 4f (2) that registered futures commission merchants must display registration certificates, affords the public protection against bucket shops and firms having no exchange connections.

Provisions of Law Affecting Non-Members of Commodity Exchanges. The trading limits which are fixed by the Commission will apply, of course, to non-members as well as members of contract markets. Generally speaking, the record-keeping requirements apply to members and to persons registered as futures commission merchants. However, section 4i makes it obligatory upon all persons, whether members or non-members, to report and to keep books and records that are open to inspection, whenever such persons deal or trade in commodity futures during one day in an amount equal to or in excess of an amount to be fixed from time to time by the Secretary of Agriculture and whenever such persons have or attain a long or short position in any commodity or future equal to or in excess of an amount to be fixed from time to time by the Secretary of Agriculture.

The operation of bucket shops is prohibited as to all persons. False representation by any person as being a registered futures commission merchant is unlawful, as is also any trading in futures of the commodities mentioned on any board of trade which is not a contract market.

The agents and employees of futures commission merchants, and of their correspondents, may be prosecuted for cheating, fraud, bucketing, and so forth, under section 4b. The prohibitions of section 4c relative to dealings in privileges and the like apply to non-members as well as to members.

Penalties and Procedure. Under the Act of 1922 the Commodity Exchange Commission—consisting of the Secretary of Agriculture, the Secretary of Commerce, and the Attorney General—had original jurisdiction in all except criminal cases. By the amendments of June 15, 1936, the Commission is given original jurisdiction in all noncriminal cases involving contract markets, and the Secretary of Agriculture is given original jurisdiction in all other non-criminal cases.

Proceedings before the Commodity Exchange Commission. Violations by contract markets, except of cease and desist orders, are subject to original jurisdiction by the Commodity Exchange Commission. Such Commission is authorized to suspend, for a period not to exceed six months, or to revoke the designation of any board of trade as a con-

tract market, upon a showing that such board of trade has failed or is failing to comply with the requirements for contract market designation or is not enforcing its rules of government made a condition for such designation.

An appeal from the order of the Commission lies to the Circuit Court of Appeals in the circuit in which such board of trade has its principal place of business. Likewise, in the event that the Secretary of Agriculture should refuse to designate any board of trade as a contract market, appeal therefrom lies first to the Commission and next to the Circuit Court of Appeals.

Section 5b of the Act provides that failure or refusal of any board of trade to comply with any of the provisions of the Act or any of the rules and regulations of the Secretary of Agriculture thereunder shall be cause for suspension for not more than six months or for revoking the contract market designation of such board of trade.

Section 6b provides an alternative means for proceeding against contract markets. Instead of suspending or revoking the contract market designation of an exchange, the Commission may make and enter cease and desist orders against a board of trade or against its directors, officers, agents, or employees, requiring them to cease and desist from the violations complained of. Thereupon and after the lapse of the period allowed for appeal, if such orders are not complied with, the persons against whom they are issued are guilty of a misdemeanor and upon conviction may be fined not less than $500 nor more than $10,000 or imprisoned for not more than one year, or both. Each day during which there is failure or refusal to obey such cease and desist orders is a separate offense.

Proceedings before the Secretary of Agriculture. The Secretary of Agriculture is authorized to deny trading privileges on all contract markets as to any person who is violating or has violated any of the provisions of the Act or any of the rules and regulations made pursuant to its requirements or who has manipulated or is attempting to manipulate the market price of any commodity in interstate commerce or for future delivery on or subject to the rules of any board of trade.

In the case of persons registered as futures commission merchants or floor brokers, the Secretary may suspend for a period not to exceed six months or revoke the registrations of such persons, if found guilty of violating or of having violated the provisions of the Act or the rules and regulations made thereunder. As to such futures commission merchants and floor brokers, the Secretary of Agriculture may suspend or revoke their registrations with or without denying them trading privileges on contract markets.

Proceedings by the Secretary of Agriculture must be pursuant to notice

and hearing, and from his orders there is the right of appeal to the United States Circuit Court of Appeals in the circuit in which the petitioner is doing business.

Criminal Offenses. Violations of the following named sections constitute misdemeanors: section 4 (trading on non-contract markets), section 4a (exceeding speculative trading limit), section 4b (cheating, deceiving, bucketing, etc.), section 4c (wash sales, cross trades, privileges, etc.), section 4d (engaging as futures commission merchant without being registered as such or failing to comply with requirements concerning customers' margin moneys), section 4e (engaging as floor broker without being registered as such), section 4h (conducting a bucket shop or representing self falsely to be a member of a contract market or a registered futures commission merchant, etc.), and section 4i (failing to report and keep records of trades when of amounts designated by Secretary of Agriculture). Upon conviction, a person may be fined not more than $10,000, together with the costs of prosecution, and imprisoned for not more than one year, or both.

Market manipulation and attempted manipulation and corners and attempted corners of any commodity are likewise misdemeanors and subject violators to fine and imprisonment. Fine and imprisonment may be imposed upon any person who shall fail to evidence any contract mentioned in section 4 of the Act by a record in writing as therein required; also upon any person who shall knowingly or carelessly deliver or cause to be delivered, for transmission through the mails or interstate commerce, false or misleading or knowingly inaccurate reports concerning crop or market information or conditions that affect or tend to affect the price of any commodity in interstate commerce.

General Powers of Secretary of Agriculture. The Secretary of Agriculture is authorized to make and promulgate such rules and regulations as in his judgment are reasonably necessary to effectuate any of the provisions or to accomplish any of the purposes of the Act. He is authorized to fix and establish fees and charges for registrations and renewals thereof and for copies of registration certificates, not to exceed $10.00 for each registration, renewal, or copy. He is authorized to communicate to the proper committee or officer of any contract market and to publish, not withstanding the provisions of section 8 of the Act, the full facts concerning any transactions or market operations, including the names of parties thereto, which in his judgment disrupt or tend to disrupt any market or are otherwise harmful or against the best interests of producers and consumers. Section 8 directs the publication of the results of investigation and of statistical information, and so forth, but prohibits the

publication of data and information which would separately disclose the business transactions of any person and the trade secrets and names of customers, except as to persons found guilty of violating the Act pursuant to formal charges and in accordance with the procedure prescribed in section 6.

CHAPTER XIV

The Law of Commodity Exchanges—Relations with the State — Relations with 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, whereas the unincorporated association, although amenable to the general body of law, does not derive its powers direct from the state and is, therefore, 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 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

[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."

[2] People v. Chicago Board of Trade, 80 Ill. 134, 137 (1875); *accord,* Turner v. Chicago Board of Trade, 244 Fed. 108 (C.C.A. 7th 1917), *cert. denied,* 245 U.S. 667 (1917); Thomson v. Thomson, 293 Ill. 584, 127 N.E. 882 (1920).

differ from stock corporations in that they possess an extensive control over the admission of members and a far-reaching disciplinary control over the members after their admission. 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 most of 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 and the settlement of disputes between members and in other ways contributes to the maintenance of an efficient market place. Thus, it is an organization which fills an important place in the business world, but it 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 the 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 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 remaining assets, after paying all debts, are sold and the proceeds are 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. The member who paid $30,000 for his seat will receive no more than the member who paid $3,000.[5] But, though

[3] Moffatt v. Kansas City Board of Trade, 111 S.W. 894 (Mo. App. 1908), *reversed on other grounds*, 250 Mo. 168, 157 S.W. 579 (1913); Albers v. St. Louis Merchants' Exchange, 138 Mo. 140, 39 S.W. 473 (1896); Belton v. Hatch, 109 N.Y. 593, 17 N.E. 225 (1888); Leech v. Harris, 2 Brewst. 571 (Pa. 1870).

[4] On Partnership and Corporations, see those titles in CYC., C.J., and C.J.S.

[5] Belton v. Hatch, 109 N.Y. 593, 17 N.E. 225 (1888).

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]

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. As membership corporations, exchanges, however, 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 and convey title to real and personal property in its own name. The exchange may sue and be sued as an entity.[8]

The foregoing points of differentiation between the commodity exchange and the corporation and partnership 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 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

[6] N.Y. MEMBERSHIP CORP. LAW, Sec. 2.

[7] McCarthy Bros. Co. v. Chamber of Commerce, 105 Minn. 497, 117 N.W. 923 (1908).

[8] McHenry v. Chicago Board of Trade, 131 Ill. App. 275 (1907).

[9] N.Y. MEMBERSHIP CORP. LAW, Sec. 55.

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 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 a partnership. 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 eighty years. Through legislation and judicial interpretation a body of law defining the regulatory powers of the state, has been built. 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,

10 Hitch v. Hawley, 132 N.Y. 212, 221; 30 N.E. 401, 404 (1892).

11 14-A C.J., Corporations, Sec. 3687, and 19 C.J.S., *id.*, Sec. 1651.

12 People v. Chicago Live Stock Exchange, 170 Ill. 556, 571; 48 N.E. 1062, 1066 (1897).

13 People v. Chicago Live Stock Exchange, *supra*, note 12; Hitch v. Hawley, 132 N.Y. 212, 30 N.E. 401 (1892).

the subject of regulation by public authority will be considered, leaving for treatment elsewhere actions brought against exchanges by members and by private individuals—non-members 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 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 decisions 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 as monopolies in violation of the Sherman Anti-Trust Law have been unsuccessful. The former question was decided in a 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.[15]

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 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 since sugar was 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

[14] Moffatt v. Kansas City Board of Trade, 111 S.W. 894, 900 (Mo. App. 1908).

[15] United States v. New York Coffee & Sugar Exchange, Inc., 263 U.S. 611, 44 Sup. Ct. 225 (1924); Moore v. New York Cotton Exchange, 270 U.S. 593, 46 Sup. Ct. 367 (1926).

be carried 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 price—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."[16]

In *Moore v. New York Cotton Exchange,*[17] 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 in violation of the Sherman Law. The reasoning back of this contention was as follows: The futures contract calls for delivery of an article of interstate trade and, therefore, 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" 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 inter-

[16] United States v. New York Coffee & Sugar Exchange, Inc., 363 U.S. 611, 619–621; 44 Sup. Ct. 225, 227–28 (1924).

[17] 270 U.S. 593, 46 Sup. Ct. 367 (1926).

state trade or commerce, if any, is indirect and incidental. Neither in purpose nor in effect does it directly or unreasonably restrain such commerce or operate to create a monopoly." [18]

But, although no court has ever held that an exchange in the course of its ordinary operations is operating a monopoly in restraint of trade,[19] nevertheless members may become amenable to criminal prosecution under anti-monopoly laws for engineering "corners."[20] In addition, the exchanges themselves provide for disciplinary action against members guilty of such misconduct. The corner, in short, is prohibited by exchanges, regarded with disfavor by the courts, and made a subject of civil and criminal liability.

The customary rules and by-laws of exchanges which prohibit members from dealing with those who have been suspended or expelled and 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. Though 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 conditions under which the grain business is conducted. A board of trade which requires its members to treat all its customers 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."[21]

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.[22]

[18] *Id.* at 606, 46 Sup. Ct. at 369–70; Board of Trade of the City of Chicago v. Christie Grain & Stock Co., 198 U.S. 236, 25 Sup. Ct. 637 (1905).

[19] See, however, United States v. Tarpon Springs Sponge Exchange, 142 F. 2d 125 (C.C.A. 5th 1944), in which the court, while reversing a judgment which sustained the demurrer to an indictment, observed (at p. 128): "Much depends on the purpose for which the exchange is operated. . . ."

[20] United States v. Patten, 226 U. S. 525, 33 Sup. Ct. 141 (1913); see also Peto v. Howell, 101 F. 2d 353 (C.C.A. 7th 1938).

[21] State v. Duluth Board of Trade, 107 Minn. 506, 551; 121 N.W. 395, 413 (1909).

[22] Daniel v. Chicago Board of Trade, 164 F. 2d 815 (C.C.A. 7th 1947). See 41 C.J., Monopolies, Sections 157, 158, for further examples and cases.

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 designed to regulate or throttle exchange activities has appeared both in Congress and in the state legislatures. By 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 that 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, 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." [23]

Thus the legislative branch may not regulate private enterprise at its pleasure, nor may it regulate any and all activities. To be subject to the police power of the state 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." [24]

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 *Chicago Board of Trade 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." [25]

Power to Regulate Trading. Two recent cases have upheld the power

[23] People v. Steele, 231 Ill. 340, 345–346; 83 N.E. 236, 237 (1907).

[24] Tyson v. Banton, 273 U.S. 418, 430–431; 47 Sup. Ct. 426, 428 (1927).

[25] 262 U.S. 1, 40–41; 43 Sup. Ct. 470, 478–479 (1923).

of an exchange to take such action as may be expedient in the regulation of trading in emergencies, despite the effect of such action upon outstanding contracts.

In *Garcia Sugars Corporation v. New York Coffee and Sugar Exchange,* 7 N.Y. Supp. (2d) 532, affirmed without opinion Sub. Nom., *Rifkind v. New York Coffee and Sugar Exchange,* 258, App. Div. 871, 216 N.Y. Supp. (2d) 1023, it was held that the exchange had the power to suspend trading in sugar futures contracts and order liquidation of contracts open in a particular month at a price fixed by an exchange committee because no quota sugar was available for delivery owing to the filling of the existing quota, as established by the United States Department of Agriculture.

In *Crowley v. Commodity Exchange, Inc.,* 141 Fed. (2d) 182, it was held that the exchange had the power to close out all open silk futures contracts as of the date when the War Production Board requisitioned available supplies of silk within the United States, and to fix as the price for settlement of such contracts the closing price on the last day of trading despite the fact that such price was higher than the O.P.A. ceiling price. This occurred in June, 1941, prior to the entry of the United States into the War. The action of the Government, however, was justified by the emergency powers granted in connection with the military program and the action of the exchange was upheld by the court because of the nature of the emergency which it faced by reason of the requisitioning of all available supplies of silk.

In both of these cases the power of the exchanges to make reasonable settlements of open contracts in dealing with the emergencies which had arisen was upheld.

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.[26] Even in the absence of specific authority, the power to regulate their internal affairs by proper by-laws is inherent. The general requirements for the validity of the 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 v. 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

[26] N.Y. Membership Corp. Law, Sec. 20.

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." [27] 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.

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.[28] 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.[29] On the other hand, it should be noted that it has been held that by-law provisions subjecting the member to a lien in favor of other members for claims arising out of exchange transactions has been held not in contravention of the bankruptcy law.

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."[30] In the case of *People v. Chicago Live Stock Exchange,*[31] 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. At 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.

[27] 86 Minn. 448, 450–451; 91 N.W. 8, 9 (1902).

[28] See preceding section in this chapter on Commodity Exchanges and the State.

[29] Cohen v. Budd, 52 Misc. 217, 103 N.Y. Supp. 45 (Sup. Ct. 1906).

[30] Kolff v. St. Paul Fuel Exchange, 48 Minn. 215, 217; 50 N.W. 1036 (1892).

[31] 170 Ill. 556, 48 N.E. 1062 (1897).

Requirements that members submit controversies arising out of exchange transactions to arbitration are found in the by-laws of most all exchanges. In a Missouri case[32] such a regulation was held invalid; but this is contrary to the present weight of authority.[33]

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 an earlier chapter 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 on the ground that telephone boys in his office were giving out continuous quotations of exchange prices, a forbidden practice. 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 only to the personal acts and conduct of the exchange member.[34] 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.[35] An invalid by-law or rule does not bind the members.[36] In a case involving a member of the Coffee Exchange, it was held that a suspension of the member was wrongful under the following circumstances: A delivery of coffee was rejected on the ground that the coffee was adulterated. Adjudicators were appointed in conformity with the rules and found that the coffee was deliverable under the exchange by-laws and, therefore, must be accepted. Nevertheless, the member refused to accept the coffee and in consequence, was suspended. The court held that the adjudicators had not apparently passed upon the question of adulteration of the coffee and that, since dealing in adulterated food products was in violation of the law, the member could not properly be suspended for refusing to deal in such food products regardless of their tenderability under the exchange by-laws. Therefore, it was held that the member could not be punished for his action.

[32] State v. St. Louis Union Merchants' Exchange, 2 Mo. App. 96 (1876); *cf.* Albers Commission Co. v. Spencer, 205 Mo. 105, 103 S.W. 523 (1907).

[33] See, for example, Pacaud v. Waite, 218 Ill. 138, 75 N.E. 779 (1905).

[34] Lamborn v. New York Cotton Exchange, 203 App. Div. 565, 197 N.Y. Supp. 57 (1st Dept. 1922). As a result of this decision the by-laws were amended specifically to make a member responsible for the acts and omissions of his employees and partners. (The court indicated that such a rule would be unobjectionable.)

[35] See 23 C.J., Exchanges, notes to Sec. 4, and 33 C.J.S., *id.*, notes to Sec. 3b.

[36] *In re* Lurman, 90 Hun. 303 (N.Y. 1895), *affirmed,* 149 N.Y. 588, 44 N.E. 1125 (1896); and see Moffatt v. Kansas City Board of Trade, 250 Mo. 168, 157 S.W. 579 (1913).

This decision may be questionable and the case might have been decided otherwise had it been shown that the exchange rules did not permit delivery of adulterated coffee and that the decision of the adjudicators necessarily constituted a holding that the coffee was not adulterated.

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." [37] And, since all members are thus bound together by contract, a single member has no cause for 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. . . ."[38]

The member is bound in the same way by by-laws and rules subsequently adopted, with the following exception, however: he cannot 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 would be held illegal.[39]

The validity of any by-law or rule may be subject to attack by the state, if it contravenes public policy or violates a 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 that was admittedly invalid,[40] the court said: "A voluntary association, whether incorporated

[37] Belton v. Hatch, 109 N.Y. 593, 596; 17 N.E. 225, 226 (1888); Jackson v. New York Cotton Exchange, 249 App. Div. 329, 19 N.Y.S. 2d 207 (1st Dep't, 1940); Hyde v. Woods, 94 U.S. 523 (1876); Picaud v. Waite, 218 Ill. 138, 75 N.E. 779 (1905); O'Brien v. South Omaha Live Stock Exchange, 101 Neb. 729, 164; N.W. 724 (1917).

[38] People v. New York Cotton Exchange, 8 Hun. 216, 220 (N.Y. 1876).

[39] *Compare* Parish v. New York Produce Exchange, 169 N.Y. 34, 61 N.E. 977 (1901) *with* Franklin v. Dick, 262 App. Div. 299, 28 N.Y.S. 2d, 426 (1st Dep't 1941), *affirmed without opinion,* 287 N.Y. 656, 39 N.E. 2d 282 (1941).

[40] American Live Stock Commission Co. v. Chicago Live Stock Exchange, 143 Ill. 210, 233; 32 N.E. 274, 280 (1892).

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 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." [41]

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, so long as they are not contrary to public policy or in contravention of positive law, they are sustained by the courts. [42] 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) must be elected to membership by the exchange. Compliance with either one of these require-

[41] Green v. Chicago Board of Trade, 174 Ill. 585, 593–94; 51 N.E. 599, 601 (1898).

[42] Moffatt v. Kansas City Board of Trade, 111 S.W. 894 (Mo. App. 1908), *reversed on other grounds*, 250 Mo. 168, 157 S.W. 579 (1913).

ments without the other is of no avail. A person who purchases a seat obtains no privileges of the exchange until his election; in the case of the election of an applicant who has no seat, similarly, his admission to privileges is held in abeyance until he acquires a seat. Although 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. . . ."[43]

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 *Haebler v. New York Produce Exchange*:[44] "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

[43] Garrigues Co. v. New York Produce Exchange, 213 App. Div. 625, 627; 211 N.Y. Supp. 13, 14 (1st Dep't 1925). See also Chicago Board of Trade v. Johnson, 264 U.S. 1, 44 Sup. Ct. 232 (1923); Hyde v. Woods, 94 U.S. 523 (1876); American Live Stock Commission Co. v. Chicago Live Stock Exchange, 143 Ill. 210, 32 N.E. 274 (1892).

[44] 149 N.Y. 414, 44 N.E. 87 (1896).

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."[45] 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. . . ."[46]

The reason that powers of discipline are less broad than powers exercised over admission is the general legal principle that the courts do not favor forfeitures.[47] 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.[48]

Consequently, discipline by 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; the making or reporting of false or fictitious sales or purchases; practices inconsistent with just and equitable principles of trade; 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.[49]

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.[50] 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, therefore, 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

[45] *Id.* at 428–29, 44 N.E. at 92.
[46] *Id.* at 428, 44 N.E. at 91, 92.
[47] White v. Brownell, 4 Abb. Pr. (N.S.) 162 (N.Y. 1868).
[48] 23 C.J., Exchanges, Sec. 16 n. 11, *et seq.,* and 33 C.J.S., *id.,* Sec. 7.
[49] 23 C.J., Exchanges, Sec. 18; 33 C.J.S., *id.* Sec. 7 (3) and numerous cases cited.
[50] State v. Milwaukee Chamber of Commerce, 47 Wis. 670, 3 N.W. 760 (1879).

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." [51] 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 malicious motives, both the exchange and the members of the disciplining body may be severally liable.[52] 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.[53]

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.[54] 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 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 instituted 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

[51] Melady v. South St. Paul Live Stock Exchange, 142 Minn. 194, 196; 171 N.W. 806, 807 (1919).

[52] Olds. v. Chicago Open Board of Trade, 18 Ill. App. 465 (1886); Albers v. St. Louis Merchants' Exchange, 138 Mo. 140, 39 S.W. 473 (1896); Lurman v. Jarvie, 82 App. Div. 37, 81 N.Y. Supp. 468 (1st Dep't 1903), *affirmed without opinion,* 178 N.Y. 559, 70 N.E. 1102 (1904).

[53] Green v. Chicago Board of Trade, 63 Ill. App. 446 (1896), *affirmed,* 174 Ill. 585, 51 N.E. 599 (1898).

[54] See earlier section in this chapter on Commodity Exchanges and the State.

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." [55]

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.[56] 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 commodity exchange is at an end. "An application for reinstatement would not in any way involve a review of the question determined on his expulsion. It would be a matter of grace and not a reversal of the determination." [57]

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 as to 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

[55] Moyse v. New York Cotton Exchange, 143 App. Div. 265, 268–69; 128 N.Y. Supp. 112, 114–15 (1st Dep't 1911); Board of Trade v. Riordan, 94 Ill. App. 298 (1900).

[56] Quentell v. New York Cotton Exchange, 56 Misc. 150, 106 N.Y. Supp. 228 (Sup. Ct. 1907); Leech v. Harris, 2 Brewst. 571 (Pa. 1870).

[57] Lamborn v. New York Cotton Exchange, 203 App. Div. 565, 571; 197 N.Y. Supp. 57, 62 (1st Dep't 1922).

cannot examine the merits of the controversy." [58] 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.[59] 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 rule.[60] The weight of authority, however, is probably to the contrary.[61] 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.[62] 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;[63] on the other hand, the courts of Minnesota[64] have held that an exchange seat is personal property. A brief review of the authorities may be quoted from *Illinois Law Review*.[65]

"Nearly all courts call a membership in an exchange 'property': *Hyde*

[58] National League of Commission Merchants v. Hornung, 148 App. Div. 355, 360; 132 N.Y. Supp. 871, 875 (4th Dep't 1911).

[59] Albers v. St. Louis Merchants' Exchange, 39 Mo. App. 583 (1890).

[60] Greer, Mills & Co. v. Stoller, 77 Fed. 1 (C.C.W.D. Mo. 1896).

[61] See American Live Stock Commission Co. v. Chicago Live Stock Exchange, 143 Ill. 210, 32 N.E. 274 (1892).

[62] Haebler v. New York Produce Exchange, 149 N.Y. 414, 44 N.E. 87 (1896).

[63] San Francisco v. Anderson, 103 Cal. 69, 36 Pac. 1034 (1894).

[64] State v. McPhail, 124 Minn. 398, 145 N.W. 108 (1914).

[65] 19 ILL. L. REV. 469 (1925).

v. Woods, (1876), 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* (1906), 102 Md. 489, 62 Atl. 808. Others call it property without qualification: *State v. McPhail* (1914), 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* (1884), 110 Ill. 146. By the great weight of authority a seat is an asset in bankruptcy: *In re Page* (1901 D.C.), 107 Fed. 89. It may be assigned or pledged by the holder: *Nashua Savings Bank v. Abbott* (1902), 181 Mass. 531, 63 N.E. 1058. It is subject to inheritance or transfer taxes: *In re Hellman's Estate* (1903), 174 N.Y. 254, 6 N.E. 809. Nevertheless, it has been uniformly held that a membership in an exchange, because of its intangibility, is not subject to levy and execution: *Thompson v. Adams* (1879), 93 Pa. St. 55. But the majority of the courts have held that such membership can be made subject to the claims of creditors through creditors' bills, or their equivalent proceedings supplementary to execution: *Eliot v. Merchants' Exchange* (1883), 14 Mo. A. 234; *Rittenband v. Baggett* (1877 N.Y.), 4 Abb. N.C. 67; *Habenicht v. Lissack* (1889), 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. "A 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." [66]

Bankruptcy of a Member. Since the Bankruptcy Act is uniformly 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 may come into question in the following 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

[66] State v. McPhail, 124 Minn. 398, 401, 145 N.W. 108, 109 (1914); quoted from with approval in Rogers v. Hennepin County, 240 U.S. 184, 189; 36 Sup. Ct. 265, 267 (1916). See also the more recent case of New York *ex rel.* Whitney v. Graves, 299 U.S. 366, 372; 57 Sup. Ct. 237, 238-39 (1937), in which the Court, speaking of a Stock Exchange seat, observed: "Here we are dealing with an intangible right of a peculiar nature. It embraces . . . a valuable right of property which . . . may survive resignation, expulsion, or death.

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 v. Edmunds,*[67] 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: "But 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 that the trustee is vested with whatever the bankrupt can convey." [68]

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 *Chicago Board of Trade v. Johnson,*[69] the contention of the bankrupt was that the seat was only a *chose in action,* that is, something which the trustee could not reduce to manual possession, 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.* . . . 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 personal enjoyment. By operation of the bankruptcy law, the membership passes, subject to 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

[67] 187 U.S. 596, 23 Sup. Ct. 200 (1903).
[68] *Id.* at 605, 23 Sup. Ct. at 203.
[69] 264 U.S. 1, 44 Sup. Ct. 232 (1924).

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 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 that court to be administered by it as part of his estate." [70]

From the foregoing it is evident that the trustee may compel either the 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 as preferred creditors, the preference of some creditors as against others being contrary to the provisions of the Bankruptcy Act. The leading case on this question is that of *Hyde v. Woods.*[71] 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." [72] Consequently, a by-law providing that claims of member creditors are to be paid out of the proceeds of the sale of a seat which was "entered into and became an incident of the property when it was created and remains 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." [73] The agreement to limit or bind a membership thus constitutes no preference within the purview of the Bankruptcy Act. "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 incumbrance 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

[70] Chicago Board of Trade v. Johnson, 264 U.S. 1, 12; 44 Sup. Ct. 232, 234–35 (1924).
[71] 94 U.S. 523 (1876).
[72] *Id.* at 525.
[73] *Ibid.*

burden. It was imposed by those who had a right to do it and to make it an accompaniment of any title which they gave to it." [74]

Members of an exchange may have claims against a bankrupt member arising from transactions on its floor or 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 must "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." [75] 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 v. Keppler*[76] is in point. The matters under review in that case 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 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 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 circumstance that both should be members of the Exchange when one of them dies." [77]

It has been held, however, that loans of a business character made from one member to another, 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.[78] 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 not 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

[74] Hyde v. Woods, 94 U.S. 523, 526 (1876).

[75] LEGG, THE LAW OF COMMERCIAL EXCHANGES, 126 (1913).

[76] 34 Misc. 321, 69 N.Y. Supp. 803 (Sup. Ct. 1901). See also Matter of Seymour, Johnson & Co., 37 Misc. 264, 75 N.Y. Supp. 312 (Sup. Ct. 1902); Cochran v Adams, 180 Pa. St. 289, 36 Atl. 854 (1897).

[77] Bernheim v. Keppler, 34 Misc. 321, 323; 69 N.Y. Supp. 803, 804–05 (Sup. Ct. 1901).

[78] *In re* Fisk & Robinson, 185 Fed. 974 (D.C.N.Y. 1911).

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, the 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.[79] An earlier New York case containing implications to the contrary can be distinguished in that the debt arose prior to the insolvent's membership.[80]

In the distribution of the estate of a deceased member, a seat is likewise treated as property. After the claims of 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 by which a creditor may levy directly upon property of the debtor, in cases permitted by law, and thereby be protected until his case is decided.[81] 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.[82] 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.[83] But the weight of authority is that, although 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 in the Cotton Exchange was property. That it had value was proved and is conceded;

[79] *In re* Gregory, 174 Fed. 629 (C.C.A. 2d 1909); *cf.* Middleton v. Fidelity-Phila. Trust Co., 35 F. 2d 851 (C.C.A. 3d 1929).

[80] Cohen v. Budd, 52 Misc. 217, 103 N.Y. Supp. 45 (Sup. Ct. 1906), *affirmed,* 117 App. Div. 922, 102 N.Y. Supp. 1133 (1st Dep't 1907).

[81] 7 C.J.S., Attachment, 1.

[82] Pancoast v. Houston, 5 Week. Notes Cas. 36 (1877); Evans v. Wister, 32 Leg. Int. 354.

[83] 23 C.J., Executions, Sec. 58 n. 12; 33 C.J.S., *id.*, Sec. 26 n. 33. But compare Press & Co. v. Fahy, 313 Ill. 262, 145 N.E. 103 (1924), *affirming* 231 Ill. App. 193 (1923).

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 nevertheless a valuable right, capable of transfer and correctly decided to be property."[84] Accordingly the seat passed to a receiver appointed in supplementary proceedings. 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.[85] 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.[86] In *Matter of Gruner*[87] the New York Court of Appeals had occasion to consider the attributes of a seat on the New York Stock Exchange and, what is more relevant here, the rights of an assignee both of the seat itself and of the proceeds realized from its sale. The court observed that "although the assignment (of the seat itself) purported to give the trust company power to sell the seat with or without notice to the assignor, that power could not be exercised except by the interposition of a court of equity by decree *in personam* compelling the co-operation of the assignor . . . since there is no provision in the constitution or rules of the exchange which makes co-operation of the committee on admissions available as to a non-member. . . . When we come to the question of the *proceeds* of the *sale,* a different question is presented. Each member of the exchange has a right to the proceeds of the *sale* of his seat, and that right may be assigned. . . . The interest which passed to the trust company here by reason of the assignment was the right to receive the proceeds *when they became available.* . . ."[88] The pledgee or assignee

[84] Powell v. Waldron, 89 N.Y. 328, 331 (1882), and see cases cited in 23 C.J., Executions, Sec. 58 n. 13, and in 33 C.J.S., *id.,* Sec. 26 n. 34. Language in the text from the *Powell* case, *supra,* was quoted with approval in Matter of Gruner, 295 N.Y. 510, 516; 68 N.E. 2d 514, 517 (1946).

[85] See earlier section in this chapter on Admission of Members, and Keyer v. Memphis Cotton Exchange, 135 Tenn. 414, 186 S.W. 593 (1916).

[86] Ketcham v. Provost, 156 App. Div. 477, 141 N.Y. Supp. 437 (1st Dep't 1913), *affirmed without opinion,* 215 N.Y. 631, 109 N.E. 1080 (1915).

[87] 295 N.Y. 510, 68 N.E. 2d 514 (1946).

[88] *Id.* at 517–18, 68 N.E. 2d at 517–18.

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.[89]

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.[90] 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 whether an exchange seat is property has come squarely before the courts in cases involving 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. . . ."[91] In another case the Supreme 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.[92] In *New York* ex rel. *Whitney v. Graves,*[93] decided in 1937, the Supreme Court held that the dominant attribute of a seat owned by a resident of Massachusetts on the New York Stock Exchange—that is, the privilege of buying and selling securities on the floor of the Exchange—brought the non-resident member within the taxing power of New York.

These decisions simply affirm the jurisdiction of the state courts to determine what interests are taxable under local statutes. In two states, Minnesota[94] and Ohio,[95] the courts have held squarely that an exchange

[89] Shannon v. Cheney, 156 Cal. 567, 105 Pac. 588 (1909); Gartner v. Pittsburgh Stock Exchange, 247 Pa. St. 482, 93 Atl. 759 (1915).

[90] McClain v. Pittsburgh Stock Exchange, 219 Pa. St. 435, 68 Atl. 1031 (1908).

[91] Rogers v. Hennepin County, 240 U.S. 184, 189; 36 Sup. Ct. 265, 267 (1916); *compare* New York *ex rel.* Whitney v. Graves, 299 U.S. 366, 57 Sup. Ct. 237 (1937).

[92] Citizens Nat'l Bank v. Durr, 257 U.S. 99, 42 Sup. Ct. 15 (1921).

[93] 299 U.S. 366, 57 Sup. Ct. 237 (1937).

[94] State v. McPhail, 124 Minn. 398, 145 N.W. 108 (1914).

[95] Anderson v. Durr, 100 Ohio St. 251, 126 N.E. 57 (1919), *affirmed sub nom.* Citizens Nat'l Bank v. Durr, 257 U.S. 99, 42 Sup. Ct. 15 (1921).

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.

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[96] 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.[97]

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.[98]

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 distributing agency limits the telegraph companies' right to transmit quotations. The exchange reserves the right to approve or 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,

[96] San Francisco v. Anderson, 103 Cal. 69, 36 Pac. 1034 (1894); Baltimore City v. Johnson, 96 Md. 737, 54 Atl. 646 (1903); People v. Feitner, 167 N.Y. 1, 60 N.E. 265 (1901).

[97] Matter of Hellman, 174 N.Y. 254, 66 N.E. 934 (1903).

[98] And see Weaver v. Fisher, 110 Ill. 146 (1884), which treated the interest as subject to a resulting trust.

the bucket shop cannot exist, for its prices must correspond with the prices made on the 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.[99]

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 that 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 to receive them." [100] This view, however, is contrary to the opinion expressed by most courts, and in a more recent case the courts of Illinois affirmed the right of the Chicago Live Stock Exchange 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 the 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).[101]

The question whether quotations are affected with a public interest has come before the federal courts,[102] and their decisions have been contrary to the Illinois opinion quoted above. " . . . 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

[99] See cases in following notes.

[100] The New York & Chicago Grain & Stock Exchange v. Board of Trade, 127 Ill. 153, 164; 19 N.E. 855, 859 (1889).

[101] Bowles Live Stock Co. v. Chicago Live Stock Exchange, 243 Ill. App. 71 (1926).

[102] Chicago Board of Trade v. Christie Grain & Stock Co., 116 Fed. 944 (1902).

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."[103] 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 the telegraph company which furnished its quotations to the St. Paul Grain Exchange and to the Equity Co-operative Exchange. This ruling was held invalid by the Circuit Court of Appeals of the Eighth Circuit.[104] 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 anyone 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."[105] The decision of the court was that, although 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 *Chicago Board of Trade v. Christie Grain & Stock Co.*[106] The Christie Grain & Stock Company was surreptitiously obtaining the quotations of the Chicago Board of Trade. The Board of Trade brought action to enjoin the defendant from obtaining and distributing its quotations. The defendant struck back with a counter-attack that the Board of Trade was the greatest of all bucket shops; that the transactions in futures

[103] *Id.* at 946. See also earlier section in this chapter on Commodity Exchanges and the State.

[104] Chamber of Commerce v. Federal Trade Commission, 13 F. 2d 673 (C.C.A. 8th 1926).

[105] *Id.* at 688.

[106] 198 U.S. 236, 25 Sup. Ct. 637 (1905).

were mere wagering agreements and bets on price fluctuations; and, therefore, that, since the entire machinery of the Board of Trade was 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.[107] The right to complete control of its own quotations was made still stronger by the determination that, even if the 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."[108]

A later effort to assail the right of exchanges to control their quotations was founded on the contention that such control amounts to restraint of trade. This argument was brought forth in the case of *Moore v. New York Cotton Exchange*.[109] 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 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."[110] 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,

[107] Board of Trade of the City of Chicago v. Christie Grain & Stock Co., 198 U.S. 236, 250; 25 Sup. Ct. 637, 639 (1905).

[108] *Id.* at 251, 25 Sup. Ct. at 640.

[109] 270 U.S. 593, 46 Sup. Ct. 367 (1926).

[110] Moore v. New York Cotton Exchange, 270 U.S. 593, 602–03; 46 Sup. Ct. 367, 368 (1926).

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."[111]

Summarizing these decisions as to the scope of exchange control over quotations, it has been well established that (1) quotations are property, over which (2) the exchange may exercise exclusive control, and (3) this control 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,[112] it was contended that "the posting of the 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]."[113] This contention overlooks the fact that the boards on which the quotations appeared 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

[111] *Id.* at 605–06, 46 Sup. Ct. at 369–70.

[112] McDearmott Commission Co. v. Board of Trade, 146 Fed. 961 (C.C.A. 8th 1906).

[113] *Id.* at 962.

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 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." [114]

To constitute publication it is necessary either (1) that there be voluntary assent, or (2) that the circumstances of publication imply assent. To constitute publication it needs be shown that there has been a voluntary assent thereto or that the circumstances negate any intent not to do so—as in publication in the newspapers, for example.

[114] *Id.* at 964.

CHAPTER XV

The Legality of Clearing House Operations

The purposes of the clearing house and its operations have deen described in Chapter IX. The machinery of clearing associations is designed to provide the most expedient method of settling contracts either (1) by offset and substitution or (2) by delivery. The fact that a large proportion of transactions is 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 as follows: 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 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]

[1] Weld v. Postal Telegraph-Cable Co., 199 N.Y. 88, 103; 92 N.E. 415, 420 (1910).

[2] Clews v. Jamieson, 182 U.S. 461, 489–90; 21 Sup. Ct. 845, 856 (1901).

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 and 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 when 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 v. Christie Grain & Stock Co.*[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, as follows:

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 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 five thousand 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. . . .

[3] 198 U.S. 236, 246–48; 25 Sup. Ct. 637, 638–39 (1905).

[4] Italics are author's. No more important legal pronouncement affecting exchanges has ever been made than these seven words of Justice Holmes. See, however, section in Chapter XVI on Legality of Dealings between Member and Customer, note 16 and accompanying text.

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 houses without anyone 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 v. Christie* case were followed in a later 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—and, further:" [5] "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 v. Christie Grain & Stock Co.*, 198 U.S. 236, 246."[6]

The stamp of legality has been placed not only upon direct settlement

[5] United States v. New York Coffee & Sugar Exchange, Inc., 263 U.S. 611, 617; 44 Sup Ct. 225, 226 (1924).

[6] *Id.* at 619, 44 Sup. Ct. at 227.

and ring settlement, but also 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.[7] The contracts provide for actual delivery, and "set-off has all the effect of delivery."

The contention has sometimes been advanced that, although settlement by offset and substitution is legal among exchange members, the method would not be binding upon customers of members. This proposition involves the broad question of the extent to which the outsider is bound by rules of the exchange and its associated clearing house, a subject deserving of more extensive treatment.

[7] Clews v. Jamieson, 182 U.S. 461, 21 Sup. Ct. 845 (1901); Daniel v. Chicago Board of Trade, 164 F. 2d 815 (C.C.A. 7th 1947); Crowley v. Commodity Exchange, 141 F. 2d 182 (C.C.A. 2d 1944).

CHAPTER XVI

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 directly affect third parties. The non-member comes into touch with exchange by-laws and rules only because, when be 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. Thus his position 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 concerned not with the general principles of the law of agency, 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 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 negate the usage or custom.[3] 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.

1 See section on Contract of Membership in Chapter XIV.

2 Jemison v. C. S. Bank, 122 N.Y. 135, 142; 25 N.E. 264, 266 (1890).

3 3 WILLISTON, CONTRACTS, Sections 648–662 (Rev. ed. 1936), and 2 WILLISTON, SALES, Sec. 618 (2d ed. 1924).

The general rule on this question was stated in *Bibb v. Allen*,[4] as follows:

> 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 World War I forced the prices of corn up to $2.40 per 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-laws and all rules. The broker pointed to a legend that appears on all order blanks: "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."[5]

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

[4] 149 U.S. 481, 489–90; 13 Sup. Ct. 950, 953 (1893). To the same effect see Crowley v. Commodity Exchange, 141 F. 2d 182, 188 (C.C.A. 2d 1944), wherein the court made a similar observation, *viz.*: "When it (plaintiff non-member) gave orders to its carrying member-brokers for the execution of contracts on the Exchange, it tacitly agreed to be bound by all of the rules, regulations, and customs of the market." Also see Garcia Sugars Corp. v. New York Coffee & Sugar Exchange, 7 N.Y.S. 2d 532, *affirmed without opinion sub nom.* Rifkind v. New York Coffee & Sugar Exchange, 258 App. Div. 871, 16 N.Y.S. 2d 1023 (1st Dep't 1939).

[5] Thomson v. Thomson, 315 Ill. 521, 528–29; 146 N.E. 451, 454 (1925).

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 the rules although not fully informed concerning them (*Springs v. James,* 137 App. Div. 110; aff'd., 202 N.Y. 603).
>
> 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 the express instructions given. . . . Customs and usages which vary or contradict the contract entered into, or which 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 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

[6] *Id.* at 531, 146 N.E. at 455.

[7] Ford v. Snook, 205 App. Div. 194, 197; 199 N.Y. Supp. 630, 633 (4th Dep't 1923), *affirmed without opinion,* 240 N.Y. 624, 148 N.E. 732 (1925).

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 v. 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 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.

The binding effect of authorized acts of an exchange upon the customer of a member, even though the action may not have been spelled out in the by-laws and rules, is clearly supported by the decisions in *Garcia v. New York Coffee and Sugar Exchange* and *Crowley v. Commodity Exchange, Inc.*, supra. In these cases, customers of members were affected by the closing out of their contracts as a result of emergency liquidations ordered by the exchange. Although nothing appeared in the exchange by-laws specifically empowering the exchange in either instance to order contracts liquidated, the result was sustained as against non-members by virtue of the inherent power of the exchange to take reasonable action in regulation of trading in the emergencies presented.

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 that, therefore, 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:

[8] Irwin v. Williar, 110 U.S. 499, 514; 4 Sup. Ct. 160, 168 (1884).

[9] 149 U.S. 481, 13 Sup. Ct. 950 (1893); and see also Clews v. Jamieson, 182 U.S. 461, 21 Sup. Ct. 845 (1901).

[10] Springs v. James, 137 App. Div. 110, 121 N.Y. Supp. 1054 (1st Dep't 1910), *affirmed without opinion*, 202 N.Y. 603, 96 N.E. 1131 (1911).

[11] 2 WILLISTON, SALES, Sec. 664a (2d ed. 1924).

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 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 transactions 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 on 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 valid 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 futures 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

[12] Weld v. Postal Telegraph-Cable Co., 199 N.Y. 88, 103; 92 N.E. 415, 420 (1910).

order to invalidate a contract as a wagering one, both parties must intend that, instead of the delivery of the article, there 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 is 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.

It should be noted, however, that, as to the legality of futures contracts made with the intention of settling them by set-off and payment of differences, the courts have distinguished between those contracts made in the pits and those made between the broker member and its customers—the former being held valid, the latter invalid.[15] In the language of the Supreme Court of the United States, "It does not follow that, because the contracts between the members of the exchanges were valid, those entered into by the company . . . with Dickson and its customers were valid also."[16]

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

[13] Clews v. Jamieson, 182 U.S. 461, 489–90, 21 Sup. Ct. 845, 856–57 (1901).

[14] Nash-Wright Co. v. Wright, 156 Ill. App. 243, 252 (1910).

[15] Burke Grain Co. v. St. Paul–Mercury Indemnity Co., 94 F. 2d 458, 466 (C.C.A. 8th 1938), *cert. denied*, 303 U.S. 661, 58 Sup. Ct. 765 (1938), which distinguished Chicago Board of Trade v. Christie Grain & Stock Co., 198 U.S. 236, 250; 25 Sup. Ct. 637, 639 (1905), quoting with approval the following language of Mr. Justice Holmes: "We speak only of the contracts made in the pits, because in them the members are principals. The subsidiary rights of their employers where the members buy as brokers we think it unnecessary to discuss."

[16] Dickson v. Uhlmann Grain Co., 288 U.S. 188, 193–94; 53 Sup. Ct. 362, 364 (1933).

broad, and the questions involved have been extensively litigated. These cannot be covered completely in a book of this type, but some of the leading principles may be stated.

The rights and duties as between broker and customer are summarized in the leading case of *Markham v. Jaudon.*[17] 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 required of 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, 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 sums advanced by himself and the amount paid by the broker. In addition, of course, the customer is always bound 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, 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[18] 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

[17] 41 N.Y. 235 (1869), cited with approval in Richardson v. Shaw, 209 U.S. 365, 28 Sup. Ct. 512 (1908).

[18] Thompson v. Baily, 220 N.Y. 471, 116 N.E. 387 (1917).

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 or in the course of dealing of the parties."[19]

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 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."[20]

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."[21]

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.[22]

The question of what time is reasonable depends upon the 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; the condition of the margin account, the state of the market, and other factors have also influenced decisions on this point.

[19] Smith v. Craig, 211 N.Y. 456, 461; 105 N.E. 798, 799 (1917).

[20] Smith v. Craig, *supra,* note 20 at 464, 105 N.E. at 800 compare Land Oberoesterreich v. Gude, 109 F. 2d 635 (C.C.A. 2d 1940).

[21] Thompson v. Baily, 220 N.Y. 471, 477; 116 N.E. 387, 389 (1917).

[22] Markham v. Jaudon, 41 N.Y. 235 (1869). As to factors affecting a "reasonable" time, see Woodward v. Schiff, 236 App. Div. 598, 260 N.Y. Supp. 274 (1st Dep't 1932), *affirmed without opinion,* 261 N.Y. 670, 185 N.E. 786 (1933).

It is quite clearly established that on the broker rests the burden of proof that he made every effort to give notice of a margin call to the customer. If the customer does not respond to request-for-margin notices sent in the ordinary way, the broker should inquire at his home or office for an up-to-the-minute address. If, however, the broker has made every reasonable effort to communicate the demand for additional margin without result, or, if the customer defaults after he has actually received notice, the broker may then close out the transaction.[23]

If the broker has lawfully closed out the transaction, he is entitled to sue the customer for damages or for losses sustained. On the other hand, if he wrongfully closes out the transaction, he is liable to the customer.[24] 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.

[23] See Markham v. Jaudon, *supra,* note 23 for authorities.

[24] Content v. Banner, 184 N.Y. 121, 76 N.E. 913 (1906); Minor v. Beveridge, 141 N.Y. 399, 36 N.E. 404 (1894).

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