WHEAT STUDIES

OF THE

FOOD RESEARCH INSTITUTE

VOL. VII, NO. 4 (Price $1.00) FEBRUARY 1931

SPECULATION, SHORT SELLING, AND THE PRICE OF WHEAT

LOW producers' prices for raw materials, and especially for primary agricultural products, provoke legislative efforts designed to effect changes in the practices of trade. Quite generally, current practices in transportation, distribution, and banking are regarded by producers as responsible for, or contributory to, low prices. The Hoch-Smith resolution and the Agricultural Marketing Act resulted from agitations provoked by low producers' prices. Since the passage of the Agricultural Marketing Act, farm prices for agricultural products have further declined. To this is to be ascribed the recent intensification of agitation against speculation on the grain exchanges. Bills already introduced into the Congress make it evident that strong efforts will be exerted in the first session of the Seventy-second Congress to curtail speculation by direct legislative action and to establish far-reaching regulations by the Department of Agriculture. During recent months particular agitation has been directed against short selling and open short commitments by speculators. It is sought to preserve hedging for millers, private grain merchants, and the subsidiaries of the Federal Farm Board, while curtailing speculation on the selling side. It is not our intention at the present time to examine in detail the relation of speculation to price level. The circumstances of the last three crop years, including the present one, offer, however, a favorable opportunity for a limited examination. This limited examination is confined to the relations of the American price of wheat to the world price of wheat during recent years, with reference to the influence of speculation. The discussion includes such references to the current practices of exporting wheat as serve to elucidate the price relations.

STANFORD UNIVERSITY, CALIFORNIA

February 1931

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Entered as second-class matter February 11, 1925, at the post-office at Palo Alto, Stanford University Branch, California, under the Act of August 24, 1912.
Published by Stanford University for the Food Research Institute.

SPECULATION, SHORT SELLING, AND THE PRICE OF WHEAT

INTRODUCTION

The subject of speculation and short selling in the commodity markets is receiving added attention under the operations of the Agricultural Marketing Act. Years ago, naïve observers made the inference that speculation on grain exchanges would decline with the advent of wheat growers' co-operative associations. This inference has not been confirmed. In Canada, where the provincial wheat pools control over half the crop, the (unreported) volume of futures trading, relative to the crop, is understood not to have been reduced; also, the wheat pools themselves have traded in futures on occasions. In this country, the Grain Stabilization Corporation entered into trading in futures in midwinter of the crop year 1929–30 and re-entered the speculative market on a determinative scale in the fall of the crop year 1930–31. Experienced observers have recognized from the outset that, so long as speculation is practiced on established exchanges, no merchant (producer or middleman) extensively engaged in distributing wheat to millers and exporters can abstain from trading in futures. Trading in futures, outside of hedging, may become necessary, on occasions, either in defense of a price level or in furtherance of a merchandising policy.

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A general comment on the trade in raw materials is perhaps in place. Producers of raw materials dispose of their products in one of several ways. The products may be held at points of origin, to be sought out and bought by representatives of the proximate consumers, who are the processors. This primitive method still prevails in many communities. Even in the United States the practice has survived; thus a considerable proportion of livestock is sold by husbandmen to drovers who buy in the country, take possession, and assume all risks. Dissatisfied with the results secured by local sale at sites of production, producers of raw materials have developed auction markets. Of these, perhaps the best illustrations are the auction markets for wool. The auction markets for fruits and vegetables constitute a good national illustration. Another long-established method has been for producers to maintain sales offices in centers of distribution and consumption. This system still holds for many raw materials, but requires either large units or co-operation between producers. Auction markets and terminal distribution by producers having been found more or less unsatisfactory, there was evolved the system of spot and forward markets. This system of distribution is less known in the United States (buying unhedged wheat to arrive in Europe is a form of it), but it has been so important both in theory and in practice abroad as to have been recently given a detailed appraisal by J. M. Keynes.[1] Finally, the system of trading in cash and futures was evolved on established exchanges, a development of the forward market. This system has been significantly expanded since the war and most of the important raw materials are now distributed and price registration effected through commodity exchanges. The problem of distribution of raw materials is much simpler within a self-contained country than between countries. Gradually, however, as a result of geographical localization of natural resources and comparative advantage, the trade in raw materials

[1] *A Treatise on Money* (London, Harcourt, Brace & Company, 1930), II, 135–44.

is becoming more international and less national.

The two prominent risks in international commerce in raw materials are those of exchange fluctuations and of price fluctuations. Exchange fluctuations may be minimized with the use of a special form of futures (forward exchange) which was widely used in Europe after the war, but which has become less important with the restoration of the gold standard and the development of gold-exchange standards. The risk of price fluctuations may be minimized through the use of the forward market or, preferably, through futures trading. As the markets of the world become more fluid for movement of raw materials, the trading interests of all classes and countries become more interrelated. Thus, the supporting and stabilizing effects of speculation, in price registration and in promoting insurance against risks, permeate more and more the world trade in raw materials.

Foreign trade, foreign buying and selling, like foreign lending and borrowing, are sensitive to small changes. Within a country, however, the prices of many goods passing outward into world trade or being brought in from abroad do not move up and down as easily as rates of interest; movements of goods cannot be expanded and contracted by price changes as quickly and easily as movements of capital can be expanded or contracted by changes in interest rates. It is one contribution of speculation on commodity exchanges that domestic prices are made more sensitive to changes in international prices, while at the same time they are protected from the extremes of influence of domestic variations in supply and demand.

There is an element of risk in every stage of commercial transactions. Risk is usually underestimated in the theory of economics and in the practice of business. In general and in the long run, producers, distributors, and processors must receive a return on investment, a reward for enterprise, and a coverage of risk. There are those, however, who delight to take risks and who will pay for the privilege. There are probably many who refuse to take risks in connection with their usual business ventures except with prospects for a substantial long-run reward for their risk-taking, but who pay for the opportunity of taking smaller risks outside of their regular business. The prevalence of gambling in connection with races, athletic contests, games of chance, and lotteries evidences conclusively the existence of a large public willing to pay a price for the opportunity of taking risks of the kind and magnitude it enjoys.

One of the most readily observable merits of futures markets is the opportunity they afford for business men, through hedging, to transfer a large part of their risks from their own shoulders to the shoulders of those more willing to carry them. 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 we are 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 they assume. Whether speculators in the wheat markets pay for the privilege of carrying the risks of wheat price changes, or 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. Were the latter as willing as speculative traders to carry the risks of price change, they would not so universally practice hedging.

In the long run, the country grain dealer, the terminal grain dealer, the miller, and others in the grain and flour trade must each receive a return on investment, a reward for enterprise, and a coverage of risk. Covering the entire process of the handling of wheat and flour from producer of wheat to consumer of flour, the item of coverage of risk, in the absence of hedging, would constitute an important part of the charge for the distributive services. With the risk of general wheat price changes removed through hedging, the item of coverage for such risks is eliminated. Its place is taken by the relatively insignificant item of cost of hedging. All along the line from farmer to consumer, risks of wheat price changes are shifted, by hedging, to speculators in the futures markets, who carry the risks at little or no charge to the grain and flour trade, with the result of a substantial nar-

rowing in the price spread between the wheat grower and the household. It has been made clear in the recent Senatorial investigation into the price of bread that the price of flour follows the price of wheat closely; it was not, however, adequately recognized that this concordance, due to hedging, rests largely on speculation.

Not all countries have grain futures markets. This is due in part to the state of development of their trading practices. But it is also due in part to the existence of exchanges in other countries. The facilities extended to foreigners in Liverpool, Chicago, and Winnipeg make exchanges in other countries unnecessary, since for most purposes these exchanges provide the facilities for futures trading.

This reduction in risk cost is strikingly reflected in the cost and availability of bank credit for hedged and unhedged transactions. In view of the historical development of marketing, whenever anyone suggests that some day and in some way the grain exchanges will be supplanted by some other system of marketing, this sounds like suggesting a cash-and-carry system for raw materials.

It is not to be believed that the inclusive cost of hedging amounts to a cent a bushel on the crop of wheat and it is not demonstrated that this falls on the farm price of wheat. The cost of speculation in wheat (including the support of the physical structures, the operative forces, the outlays for communications, and the charges on capital and credit) has never been computed to our satisfaction; but whatever the cost, this is carried primarily and directly by speculators and not by producers, and it seems clear that speculators cannot pass it back to producers.

There are two groups of critics of the system of marketing on established commodity exchanges. The critics of the first group fear that the rules of the exchanges are designed to promote the profits of middlemen; they hold also that the rules of the exchanges permit speculators to manipulate transactions and bring about changes in prices to the injury of producers or consumers. The critics of the second group incline to regard direct merchandising, without insurance against risks, as preferable to merchandising through commodity exchanges. Manufacturers who do not hedge their purchases or stocks of raw materials and whose operations are not conditioned by limitation of bank credit on that ground, often fail to appreciate the broader relations of risk in the distribution of raw materials. It was possibly his experiences as a manufacturer of agricultural implements that led the Chairman of the Federal Farm Board in the United States to remark at a hearing[1] on December 16, 1930, "that those commodities in which there are no exchange grades, agricultural commodities, are relatively better off than those where there are." We take it this expression did not represent the plenary wisdom of the Federal Farm Board, but was an *obiter dictum* of Chairman Legge.

In order to check the declining domestic price of wheat in the fall of 1930, the Grain Stabilization Corporation undertook to peg the price of wheat in the United States through purchase of futures. The wheat price level of the world was regarded as unjustifiably low. Also, the domestic wheat price level was regarded as relatively too low, on internal grounds. It was assumed and implied in some quarters that short selling was a conspicuous factor in the price decline. In particular, reference was made to short selling on Russian account. In part, possibly, the Grain Stabilization Corporation became a long buyer in order to offset (and check) short selling. The circumstances aroused widespread interest outside of wheat-trading circles and provoked suggestions for legislative control of grain exchanges. Such control, it has been suggested, might take the form of (1) control of co-ordinated and manipulated short selling by policing committees of the grain exchanges, (2) limitation of open accounts, (3) embargo against government accounts, (4) special restriction applied to private foreign accounts, or (5) a drastic rule against short selling as such, to be applied by the Congress through the Grain Futures Administration. Convinced that the topic is receiving a somewhat oblique illumination, we take the occasion to direct attention to certain circumstances in relation to wheat

[1] *Hearing before the Subcommittee of House Committee on Appropriations*, Seventy-first Congress, Third Session, p. 29.

prices which strike us as of practical importance—in particular, the relationship of the American to the world wheat price, and the place of the United States among the world's wheat-exporting countries.

In the current agitation against short selling it has been assumed that during recent years, and especially during the crop years 1929–30 and 1930–31, short selling has determinatively depressed the American wheat price.[1] So far as we are aware, no statistical verification of this assumption is available. The latest technical investigation on wheat of the Grain Futures Administration deals with 1927 and is devoted largely to showing that suspension of the reporting requirements imposed on the grain exchanges (and suspended for some eight months at the request of grain traders, in order to encourage speculation which, it was urged, would improve the wheat price) did not result in improvement of the American wheat price. When one reviews the relations of American and foreign wheat prices during recent years, one is led to question the assumption that American wheat prices have been depressed by short selling.

At the same time we must recognize that under certain circumstances the trading in futures may have the effect of intensifying short-term price fluctuations and possibly even of exaggerating the seasonal price curve. The grain exchanges have recognized that futures trading may be abused and have attempted such regulation of the conduct of the exchanges as they believe preserves the advantageous effects and tends to minimize abuse by manipulation or other misuse of their facilities.[2]

What must strike the detached observer as rather curious is the concordant opinion in the contending parties that the price of wheat for the crop years 1929–30 and 1930–31 has been "lower than it ought to have been." A decade from now, the historian will doubtless ponder as to the reason for the violent controversy over the responsibility for occurrences in themselves not defined or measured at the time of the argument.

For the purpose of the present study we are fortunately able to dispense with a basic consideration of the nature, effect, and scope of speculation in wheat. It seems agreed by proponents and opponents of speculation that trading in wheat futures influences the price of wheat. That is, long buying and short selling of wheat are not merely factors in the settlement and registration of market prices, but they also influence prices upward or downward over longer or shorter intervals. Speculators have for years contended that restrictions on trading have prevented speculation from exercising greater influence in the elevation of wheat prices. Critics of speculation have for years contended that short selling is used to depress the price of wheat during the period of farm marketing. To be consistent, both proponents and opponents of speculation would need to agree that under appropriate circumstances speculation may influence wheat prices upward or downward. Without reference to the ultimate question, this position is adopted as the basis of the present discussion.

Speculation on the grain exchanges in the United States exercises influence on the price and the disposition of the fraction of the crop domestically consumed; it has also a separate influence on the price and the disposition of the exportable surplus. The tariff on wheat provides in a sense a private arena for speculators; but this does not eliminate foreign actions and interactions. Speculation, whether short selling or long buying, has an influence extending into foreign markets, and this must not be overlooked in agitations for control of speculation in grain futures. The practices of export of wheat from the several surplus-producing countries and the relations of price registration abroad are rather closely bound up with speculation on the American grain exchanges. It is possible without

[1] It has been intimated that bear raiders had operated alternately, or simultaneously, on the stock exchanges and on the grain exchanges, employing decline in stock prices to force decline in grain prices and using decline in grain prices to force decline in stock prices.

[2] There is considerable trade opinion in support of the view that under certain circumstances it is not so much the primary transaction—the long buying or the short selling—that influences the market price as the reversal of position of the open account, the secondary transaction—the liquidation of the open long account or the covering of the open short account. Also, this seems to be the view held by the Grain Futures Administration. The Business Conduct Committee of the Chicago Board of Trade has an agreement with the Secretary of Agriculture to prevent open accounts in excess of 5 million bushels.

great detail to analyze these circumstances in order to indicate their relations to the question of short selling of wheat.

We wish to emphasize that it is only as basis for the present discussion that we employ the assumption accepted by both sides that futures trading influences the price level of wheat. We would not adopt this categorical position in a specific appraisal of the relations of exchange trading to price level. The term "price level" would need to be closely defined and qualified, and there is a great deal to be said for the view that futures trading on commodity exchanges displays its effects largely in rapidity and accuracy of price registration, in the support of holding of stocks, and in narrowing the spread between producer and consumer through reduction of risk. Under a discriminating definition of price level, it is possible to envisage the raising of the farm price of wheat and the lowering of the family price of bread and flour without changing the price level of wheat.

I. THE PUBLIC ATTITUDE TOWARD SPECULATION

It is illuminating at the outset to contrast investigations in importing and exporting countries on the effects of speculation—for example, in the United Kingdom and in the United States. In the United States speculation in wheat is charged with lowering the farm price of wheat. In the United Kingdom speculation in wheat has been charged with raising the urban price of bread. Speculation is thus charged with taking a heavy toll, of which the incidence varies. In rebuttal to the charge that speculation preys on producers in the United States and on consumers in the United Kingdom, speculators make the same rejoinder: that speculation is a factor in the settlement and registration of market prices, that it supplies the basis for holding stocks, that it establishes an insurance of processors through hedging, that it sustains and enforces mobility in international markets, that it provides an immediate seller for every buyer and an immediate buyer for every seller, that it promotes equilibrium between supply and demand and minimizes fluctuations of prices, and that it reduces the spread between raw material and finished product, between producer and consumer. The rejoinder is widely accepted as sound on general principles; but the wheat growers in the United States and the bread consumers in the United Kingdom cling to the fear that under special circumstances, which arise naturally or can be created artificially, speculation is used for their exploitation. It is not explained how speculation can narrow the spread between producer and consumer and at the same time exploit either or both groups.

Behind the arena of contending opinions stands a background of changing public sentiment. To a surprising extent, during recent years, the American public has come to regard price as something more, or other, than the equation of supply and demand. The raising of price is often referred to as creation of value, the lowering of price as destruction of value. Agriculture is in distress; lower prices for farm products are taken to mean lower wages, lower standards of living, and lower land values; higher prices for farm products are taken to mean better wages, improved standards of living, and higher land values. Higher prices bring semblance of relief; lower prices carry implication of suffering. Therefore, higher prices come to be looked upon as a social improvement, while lower prices spell social deterioration. To forecast a higher price has become praiseworthy, but to forecast a lower price is blameworthy. We do not expect the weather forecaster to provide us with the weather we desire, but we expect the business forecaster to provide the prices we desire. From secretaries of agriculture down to county agents runs the fear of being held responsible for price decline and the desire to function as prophets of price advance. Thus, in many quarters (and especially in American political circles), long buying has come to be regarded quite as something akin to creation of capital value, short selling as destruction of capital value; short selling of the shares of a manufacturing concern is regarded as comparable with sabotage in the plant, short selling of wheat as comparable with robbery of the wheat grower. In short, to a surprising extent in recent years long

buying and short selling of wheat have ceased to be regarded mainly as factors in the settlement and registration of wheat prices.

Before the war speculative buying and selling, buying long and selling short, stood more on a par in public esteem. So far as the grain exchanges were concerned, corners were more feared than bear raids. Also, before the war, there was a generally accepted distinction between speculation and investment. Since the war, changes in public sentiment are in evidence on both points, and the subject is important in the present evaluation of speculation and investment.

Unless one is content with narrow formal definitions, which would relate investment solely with earnings and speculation solely with settlement of market prices, it becomes obvious that speculation merges into investment. The investor who seeks a certain long-term dividend return hopes also for appreciation of the market price of his shares; the speculator buying in expectation of appreciation of market price also has regard for the dividend return in the interval. Speculation and investment have usually been associated in agricultural land. Farms were bought in expectation of rising land values, worked with varying returns, and finally sold for more than the original investment plus improvements, and the increment was called "deferred compensation." There is a degree only of difference between the real estate speculator who holds land idle while waiting for appreciation and one who cultivates it during the interval. The man who buys a share of stock for a rise is quite in the same position as the man who buys cash wheat for a rise, except that the owner of the wheat is put to expense in carrying it. The man who buys cash wheat for a rise is quite in the same position as the man who buys wheat futures for a rise, except for the difference in carrying charges. Since the war the term "investment" has been broadened in common parlance to include much that was once speculation. Buying wheat futures is spoken of as "investment in wheat"; but one does not speak of selling wheat short as "investment in wheat." Along with this distinction has been evolved the change in public sentiment which extols the buying of futures and deprecates the selling of futures.

The Capper bill, introduced on January 6, 1931, proposes amendment of the Grain Futures Act. The objective of the bill is stated in Section 4*J*, as follows:

"SEC. 4*J*. 'Short selling' in amounts which the market is unable to absorb readily, by persons having only a speculative interest in the market, upsets and disturbs prices and is an unnecessary burden upon interstate commerce and against public interest in that such short selling is and may be used to manipulate grain prices. Purchases and sales of grain for future delivery on any contract market for speculative purposes are hereby prohibited (*a*) when made in amounts in excess of two million bushels in any one future during any one business day, and/or (*b*) when they will result in giving a speculator a net position, long or short, in any one future in excess of two million bushels at any one time: *Provided, however*, That the Secretary of Agriculture may from time to time, by order and notice thirty days prior to the effective date thereof, fix limitations in lesser amounts upon the rate of buying and/or selling and upon net positions if after investigation he finds and determines that such limitations are necessary: *And provided further*, That said prohibition shall not apply to bona fide hedging transactions, but shall apply to transactions known as 'spreads' or 'straddles.'

"This section shall not be construed to prevent any person from buying or selling for future delivery on any contract market in any amount at any time upon authority from or at the direction of the United States or any agency thereof engaged in stabilizing grain prices. It shall be unlawful for any person to act for or in behalf of any government, or political subdivision thereof, other than that of the United States in buying or selling grain for future delivery on any contract market, regardless of purpose and regardless of the amount involved, except and unless such person shall first obtain permission from the Secretary of Agriculture after a full disclosure of all of the facts and information called for."[1]

It is to be observed that long buying by persons having only a speculative interest in the market was not charged with upsetting or disturbing prices and being an unnecessary burden upon interstate commerce, or denounced as against public interest because it might be used to manipulate grain prices. Nevertheless, in the limitation on open accounts, this was applied both to purchases and sales of futures for speculative purposes. Apart from Section 4*J*, the bill proposed an enlargement

[1] *S. 5542*, "A Bill to Amend the Grain Futures Act," Seventy-first Congress, Third Session, pp. 8–9.

of the powers of the Department of Agriculture[1] over the grain exchanges and in particular proposed a series of regulations for the purpose of preventing what may be termed "bootlegging" in the selling of futures in the event of enactment of the bill. Dealing in "privileges" was also abolished. Those engaged in "stabilizing grain prices" (governmentally or through growers' co-operative associations, inferentially) were specifically exempted.

A careful perusal of the Capper bill provokes two reflections. First, the scope of administration accorded to the Department of Agriculture in the regulation and control of grain exchanges does not seem to take into adequate account the risks involved in the lapse of time, or lag, between planting and harvesting, harvesting and selling to millers, purchase by millers and completion of the manufacture of flour, completion of processing and sale of flour, sale of flour and completion of manufacture of bread, and sale of bread to final consumers. The time relations in the use of credit and in the exposure to risks in so far-flung an operation as the planting of wheat by some six million farmers, the manufacture of flour by over a thousand large mills, and the purchase (or home baking) of bread by over a hundred and twenty million people constitute a congeries of variabilities in which equilibrium is so essential that a bureaucratic control is out of place because not sufficiently responsive to reactions of price, cost, and risk.

Second, the regulations proposed are particularly rigid in respect to merchandising operations involving the export of wheat. Frequent and short-term changes in administration, to which the domestic trade might conceivably adapt itself, would be found intolerable to wheat importers in foreign countries and would be turned to the disadvantage of our product in foreign markets. An anomalous feature of the bill is that it apparently places under indirect control the trading in cash wheat in terminals with contract markets, but not in other terminals.

It was the intent of the Congress in passing the Agricultural Marketing Act that the Farm Board should minimize speculation in grain. In this respect, the administration of the Act has failed.[2] A curbing of speculation has not been attained except temporarily and incidentally in consequence of the pegging of the price of old-crop wheat futures. Speculation has been changed but not minimized; the volume of trading in wheat futures in 1929–30 was nearly 20 billion bushels, the largest in the last nine years. The subsidiaries of the Farm Board operated extensively on the grain exchanges during the crop year 1929–30 and are at present engaged in an unprecedented speculation in cash wheat and wheat futures. Established grain exchange practices and futures trading have made possible the price-supporting operations of the Grain Stabilization Corporation; these could not have been executed on the cash grain market except with huge direct outlay of money and virtual monopoly of terminal facilities. In the first annual report of the Federal Farm Board there was no statement of endeavors undertaken by the Farm Board and its subsidiaries to minimize speculation, though on the first page of the report the minimizing of speculation was the first objective stated under the "mandate of Congress."

In the *United States Daily* of December 29, 1930, there is a verbatim reprint of a letter written by Chairman Legge to Senator McNary, explaining and defending the transactions of the Farmers' National Grain Corporation and the Grain Stabilization Corporation on the grain exchanges. It was pointed out that the hedging of wheat receipts by the Farmers' National Grain Corporation was necessary to reduce risk and to provide to wheat growers who were members of co-operative associations the same facilities and services extended by the private trade to wheat growers not marketing through co-operative associations. It was urged that it was simpler and more economical to influence cash prices by buying futures than by accumulating cash wheat in terminal markets. Finally, it was conceded that, if the risks were not carried by the existing long-established marketing ma-

[1] For a recent statement of the views of the Secretary of Agriculture, see *Report of the Secretary of Agriculture, 1930,* pp. 54–55.

[2] On a strict construction of the law, the Farmers' National Grain Corporation and the Grain Stabilization Corporation may have been engaged in "manipulation" of the market.

chinery, this would react disastrously upon the growers unless the entire burden were to be assumed by the Board and its subsidiaries. In short, while not subscribing to "a recommendation on our part in support of the present system of future trading," the letter of the Chairman of the Farm Board to Senator McNary contained the broad admission that the price-varying risks of wheat trading must be carried by speculators or by producers (including the Farm Board and its subsidiaries), and under existing conditions it was regarded as advisable for the Farmers' National Grain Corporation and the Grain Stabilization Corporation to deal in futures as well as in cash wheat and thus, in effect, permit speculators to carry a share of the risks.[1]

Senate Bill 5542 is perhaps to be regarded as a change of tack by the farm bloc in the Congress. The enactment of the bill would (in a sense) be the answer of the Congress to the letter of Chairman Legge to Senator McNary. The bill places control of speculation in the Department of Agriculture, with exemption of approved co-operative associations, who would obtain from the Secretary of Agriculture the visas necessary to enter the wheat pit for unlimited operations. Professing to safeguard hedging, the bill would make hedging difficult or impossible in its present scope. The intent of the proposal in the bill is consistent with the popular view that speculation based on the opinion that price is to rise has a better social standing than speculation based on the opinion that price is to decline.

Literally interpreted by a Secretary of Agriculture who disbelieved in speculation as carrier of risks and regarded it as preferable to have producers and consumers carry the risks, the Capper bill, if enforced to the hilt, would close the grain exchanges, since the powers given to the head of the Department of Agriculture are such as to make continuity of exchange operations dependent on executive orders. The bill goes far beyond the strictures on exchange trading contained in the criticism to be found on pages 54–55 of the last *Report of the Secretary of Agriculture* (1930). It strikes us that the Capper bill is not to be classed with the numerous other bills proposed for the control of speculation, but is of a different order and is to be regarded as the third of three legislative steps, of which the previous two were the Hoch-Smith resolution and the Agricultural Marketing Act.

II. METHODS AND MOTIVES IN SPECULATION

Speculators on the grain exchanges include (*a*) large traders and small traders (overlapping and not to be segregated except in an arbitrary manner), whose operations involve open accounts; (*b*) spreaders (a specialized group, who shift from month to month, from market to market, and from grain to grain); and (*c*) the scalpers of the pits, who usually close out each day, or in any event carry no open accounts of consequence. The large traders are the leaders, except as small traders may be mobilized by commission houses specializing in speculation. The small speculators and the scalpers commonly endeavor to follow the lead of the large speculators, but, broadly speaking, the small speculators tend to sell when the large speculators buy, and vice versa. The buying offers of one or more large speculators raise the price to levels at which small speculators choose to sell, and the selling offers of large speculators lower the price to levels at which small speculators stand ready to buy. Probably small speculators commonly follow the large speculators in their price ideas, but with a lag that leads them to be commonly on the opposite side in their actual transactions. Which group is more commonly on the profitable side has never been statistically demonstrated. The

[1] On February 9, 1931, the Senate debated (*Congressional Record*, pp. 4418–35) an amendment to the Independent Offices Appropriations Bill, designed to prevent the Farm Board and its subsidiaries from using the revolving fund for the purpose of dealing in futures. The amendment was voted down 26 to 55. Most of the Senators from states in which wheat is a prominent crop voted against the amendment, which aimed to curtail the freedom of action of the Board and its subsidiaries. But the vote is not to be regarded as the expression of Senatorial opinion on futures trading, because a significant proportion of the Senators voting in the negative did so for the stated reason of preventing the Farm Board from making the excuse later that the Congress had jeopardized the successful operation of the Agricultural Marketing Act by imposing conditions on the Board.

common impression that the large trader is usually the winner and the small trader the loser may be sound in general, but it is certainly subject to the qualification that all large traders make a substantial percentage of errors in judgment, that many once large traders have lost their fortunes in the market, and that many once small traders have made fortunes in the market. Hedging is not speculation, but hedging accounts are sometimes employed in conjunction with speculation.

It is important to realize the influence of time and space on the relations of the different speculative activities to each other and of hedging to speculation. In Chicago probably less than 5 per cent of the transactions in wheat futures represent hedging; in Duluth, Minneapolis, and Kansas City the proportion of hedging is much higher. If it were possible to picture only one grain exchange in the United States, as is the case in Canada,[1] the question of the volume of speculation required to support hedging would not appear so important. As it is, on account of circumstances of time and place, a large but variable volume of speculation in Chicago is not used in the support of hedging, while millers and cash dealers in other cities find difficulties in placing their hedges. In short, the large gross figure for speculation reported for all United States markets combined by the United States Grain Futures Administration does not mean that at all times and in all places the volume of speculation is large enough to support the volume of hedging.[2]

[1] Facilities for futures trading are maintained in Vancouver and quotations are regularly published, but the prices are largely nominal and the trading has never been active enough to be a factor in influencing Winnipeg prices.

[2] There is much loose talk on the volume of speculation necessary to absorb the hedges. The volume of hedging can only be guessed at, since the bushel of wheat that is finally consumed as bread may be hedged one or several times. The grain trade is inclined to exaggerate the volume of speculation needed; the opponents underestimate the volume needed and some of them talk as though the buying hedge could cancel the selling hedge without speculation. It is not the total volumes of speculation and hedging but the volumes at particular times and places that are important. But in the absence of statistical treatment, the entire controversy evaporates in special pleading.

[3] In the *Treatise on Money*, by J. M. Keynes (cited on p. 231 above), are to be found discriminating and significant interpretations of the factors of bullishness and bearishness as influences in the trade cycle.

A great deal of both criticism and defense of speculation includes special pleading; also, with inadequate account of the broad relations, bullishness and bearishness are treated as the particularized attitudes of small groups. Bullishness and bearishness are variable attributes of entrepreneurs of all sorts — of bankers, producers, and consumers, as well as of distributors. In every state of investment, of bank deposits, of interest rates, of production and consumption, of invention and improvement, there is a bullish and a bearish attitude, and the import of bullishness and bearishness is far larger than the mere registration of prices.[3] Bullishness and bearishness express attitudes toward the use of funds, particularly in short-term employment. In general, bearishness inclines the owner for the time being to prefer to keep his money on loan or on time deposit instead of invested in securities or futures. Individuals and corporations who are in position to employ funds in short-term uses are either bullish or bearish or in transition from one to the other. Bullishness encourages the carrying of stocks, bearishness discourages it. The one predominates in a boom, the other rules in a slump, but the sentiment is never unanimous. The more selective the group under observation, the more likely are bullishness and bearishness to correspond with the later developments; the more heterogeneous and untutored the individuals in the group, the less likely are bullishness and bearishness to correspond with the later developments. The general public is constitutionally bullish; the awakening of latent bullishness and transformation into active buying is the objective of promotion in the development of a bull market.

Opinion on value has a more or less pronounced influence on price, for the time being. The "time being" holds a lesser meaning for land, buildings, mines, forests, and securities, but it holds a large meaning for goods seasonally produced for continuous consumption, since short-term rises and declines in price find direct expression in gross producer's return. In the case of durable goods, over- or underestimation of value will be rectified later; but if the value of a wheat crop is over- or underestimated in price during the marketing season, there

is no later rectification, and the growers have gained or lost. Intensity of opinion in the different domains of speculation affects directly the volume of trading. One of the difficulties on the grain exchanges during the crop year 1928–29 lay in their being able to offer little prospect of gain to the general public, in contrast with the inducements of the putative "new era" on the stock exchange.

On the grain exchanges, bullishness and bearishness not only facilitate prompt registration of price, but are also functions in the equation of supply and demand in price. The physical values of a statistical supply and demand are not tangible enough to be promptly equated in price; opinions are more mobile than data and supplement them in the equilibrium. Bullishness and bearishness in grain trading are conditioned by technical knowledge of the commodity; but speculation in grains is in one way favored over speculation in securities, because the physical unit of grain is not transferred as is the physical certificate of stock. In the case of cash grain, the willingness to carry stocks is modified by bullishness and bearishness. The more speculation is dominated by professionals, the more likely are prices to reflect values later justified by events.

There are three (overlapping) degrees of bearishness, progressively more pronounced. In the first degree, the speculator who is naturally bullish declines to enter the market. Bearishness of this sort means merely lack of bullishness and results in inaction. It is a common attribute of small speculators on grain exchanges that they commit themselves to an open long account of modest dimensions, and when they become bearish they close out the account and retire.

The second degree of bearishness involves the liquidation of open long accounts of some standing, which are closed to avoid anticipated losses. This involves more than staying out of the market with small purchases; it implies closing out open long accounts, often relatively or absolutely large. The liquidation of an open account of large dimensions is under some circumstances equivalent to, or worse than, short selling. There are some speculators who operate only on one side of the market, liquidating their open long accounts when they become bearish, but who never sell short.

The third degree of bearishness is short selling. Most speculators are long buyers or short sellers, according to circumstances, and are equally facile in both directions. Other short sellers are, so to speak, constitutionally bearish; if they do not see the possibility of profits by selling short a security or a grain which they expect to see sink lower in price, they tend to remain out of the market. There exists among speculators a sort of axiom that some talents are fitted to bullish operations, others to bearish operations. Bears of this degree are always professionals, and their operations must be conducted without the help of the general public.

On an active market we find intermingled primary buying to establish an open long account and secondary buying to cover a short position. Conversely, there is primary selling to establish an open short account and secondary selling to liquidate a long position. The primary buying and selling are by no means necessarily more influential on prices than the secondary buying and selling. The converse often holds. A great deal depends upon the attendant circumstances.

The holding of stocks (beyond minimal administrative needs) is essentially a manifestation of bullishness. The miller and the cash grain dealer must carry stocks; but, beyond certain minimal operating requirements, the quantity carried depends upon the expectation of gain from carrying, or the fear of loss. Gain or loss, for miller or grain dealer carrying grain hedged, depends not upon the general change in wheat prices, but upon changes in cash prices relative to the future in which he is hedged. These changes depend in part on the cash grain situation (premiums) and in part on relations in the futures which reflect the bullishness or bearishness of futures speculators. Holding of stocks by millers and cash grain dealers is thus a manifestation either of bullishness of the holders on premiums or of bullishness of speculators, or of both. A bullish miller tends to increase his hedged stocks, whereas a bearish miller may reduce his hedged stocks. The grower holds back his wheat or cleans out the bin,

markets early or late, again as expression of bullishness or bearishness. The holding of speculative wheat futures is sheer bullishness. The cumulative result of inclinations to carry or not to carry wheat stocks is a pronounced factor in the wheat movement and in the behavior of prices. The world-wide disinclination to carry wheat during the crop year 1929–30 and the present crop year has been a large though unmeasurable element in the price situation. As one stands in the wheat pit, short selling makes an exaggerated impression; in the world-wide view, disinclination to carry wheat appears more important than short selling on exchanges.

Since the war a very much enlarged proportion of the general public has become familiar with speculation, a development which has been supported by the dissemination of forecasting by information services. Since the general public is inclined to act on the bullish side, if it speculates at all, there has been built up a large potential force of bullishness which can be made active under certain circumstances. As is well known, it is this circumstance which constitutes the field of operation of bear raiders. The attitude of the American public in this regard was picturesquely illustrated to Europeans by Sir Herbert Robson in his testimony before the Royal Commission on Food Prices, as follows:

> The public in the United States and in Canada open their newspapers and they read about wheat at such and such a price, and one prophet says that wheat is going up and will go so far, and another says it is going down, and some follow one prophet and others follow another prophet, and at other times all the prophets say it is going up and at other times that it is going down.[1]

Short selling (a contract to deliver grain at a certain price in a certain future month) is distinguished from selling for the forward market (a contract to deliver goods at a certain price in a certain future month) only by the intent of the seller, since in neither case need the seller possess the goods at the time the contract is entered into. He who has sold wheat short, if not engaged in the production or distribution of wheat, intends to cancel his contract to sell wheat by making a new contract to buy wheat, though under certain circumstances he may elect to buy cash wheat and deliver on his short-selling contract. He who sells for the forward market is either a producer or a regular distributor whose routine business is to fulfil his contract for forward sale, though on occasion he may fulfil an agreement to sell on the forward market by transferring a contract to buy on the forward market.

Wheat may conceivably be sold short for three reasons, disregarding, of course, hedging operations to which no objection can be raised and which are necessary in the conduct of North American milling. For the sake of emphasis, we separate these reasons arbitrarily, although in fact they overlap. The speculator, on the basis of analysis of the market, believes the wheat price is being, or is to be, forced to decline, in an equation of supply and effective demand. He makes a contract to sell wheat at a specified price at a stated future time, intending to take a commercial advantage of the natural occurrence in price movement, expecting to make a profit when his contract is due by buying a wheat future at a lower figure or by buying cash wheat at a lower figure and making delivery on his contract. He is an opportunist, trying to outguess his fellow-traders; an opportunist in the same sense as the man who buys a wheat future with no desire to accept delivery.

In the second case, men endeavor to provoke a price fluctuation, not to take advantage of one naturally under way; they endeavor to make a profit in the interval before the natural forces again take control. This is manipulation. The bull pool and the bear raid on the stock exchange may create artificially high prices or artificially low ones, the operators endeavoring to extricate themselves with profit before the natural corrective influences of the market restore the normal prices. Corners and attempted corners form outstanding points of dramatic interest in the history of the grain exchanges. Only a year ago a group of financiers in New England, in exclusive possession of misinformation, cornered the rye market of North America, to the reduction of their income taxes and to the amusement of the trade. Bear raids on the grain exchanges, which might be termed "re-

[1] *First Report of the Royal Commission on Food Prices, Minutes of Evidence* (London, 1925), II, 40.

versed corners," are less conspicuous and not susceptible of easy proof, as in the case of a corner. It would be absurd to deny that bear raids have occurred on the grain exchange; at times of market uncertainty (either involving the grains alone or including all business) concentrated short selling may induce a feeling of panic, with dropping of prices profound and prolonged enough to enable the speculators conjoined in the operation to cover at a profit before the market rebounds. Under the circumstances that existed during the crop year 1929–30, the psychology of the market was favorable to raiding, and we have no doubt that bear raids of unknown dimensions occurred. Nor does the fact that the price level of wheat was naturally declining (for world-wide reasons) controvert the inference that manipulative short selling also occurred. At the same time, the careful observer would provisionally infer that such short selling affected the fluctuations rather than the general course of price decline during the year.

The third conceivable case of short selling represents selling for purpose of disorganization of the market. The Soviet government of Russia has been repeatedly accused in European countries of perversive marketing practices, done without motive of profit directly or indirectly, but for the purpose of disorganization of markets. It is assumed that this is one form of provoking revolution in capitalistic countries, the markets being disorganized through a form of sabotage to provoke dissatisfaction with the system of capitalism. Some such motive was popularly imputed to the Soviet government of Russia when in September 1930 wheat was sold short on the Chicago Board of Trade for Russian account. Political short selling, if it might be so termed, has no bearing on the present discussion; but in recognition of public interest in the episode, we include in the Appendix a statement of the facts with what we believe to be an objective interpretation.[1]

Combining now a consideration of the motives and effects of speculation, we may summarize the appraisal as follows. The motive of speculation is private profit; the effects are price registration, shifting and possibly reduction of risk, and facilitation of carriage of stocks. The profits of the speculator may come in part as a return for risk-bearing, representing a portion of the legitimate costs of distribution. Such profits cannot be large and may be nonexistent or negative. In the main, the profits of one speculator come from other speculators. In the nature of the operation of exchanges, speculation is open to exaggeration and misinterpretation; the gains of price registration, reduction of risk, and facilitation of carriage of stocks are not readily susceptible of demonstration and measurement. Under these circumstances, exchange trading, which has become the last stage in the world-wide development of marketing of commodities, is frequently misrepresented as a parasitic social abuse.

III. TERMS USED IN THE ARGUMENT

It is important in a discussion of this subject to employ terms accurately and not loosely, and to this end it seems advantageous to define and qualify three terms: basis wheat, export shipping differential, and wheat export price parity.

Basis Wheat

The term "basis wheat" we apply to the wheat which constitutes the base-line of trading transactions in a country. In the United States, basis wheat includes the varieties and grades deliverable without premium or discount at sellers' options on future contracts, for wheat in store at Chicago. For the purpose of this study we regard Chicago as the ruling market. Basis wheat may be either No. 1 Northern Spring, No. 1 or No. 2 Soft Red Winter, or No. 1 or No. 2 Hard Winter wheat. With due regard for the particular advantages of the exchanges in Minneapolis, Kansas City, and other cities, in respect to cash wheat, the fact that 80 per cent of the annual volume of trading in wheat futures in the United States is done in Chicago suffices to make the price of Chicago futures the base-line of export transactions. The majority of export transactions are conducted on the

[1] See Appendix, pp. 262–66.

basis of bids or tenders with the price of Chicago futures as base-line. For the better grades of wheat, premium differentials are set up for delivery against futures.

For Canada, basis wheat is No. 1 Northern Manitoba futures quotation on the Winnipeg grain exchange, for wheat in store at the head of the Great Lakes. For the grades of wheat below No. 1 a set of differential discounts apply, less frequently changed than differentials at Chicago.

Basis wheat in Argentina rests on Fair Average Quality as determined for the crop, despite the fact that there is a futures market in Buenos Aires. Basis wheat in Australia rests upon Fair Average Quality. For Russia, the Danube states, India, and other occasional wheat-exporting countries no generally accepted definitions of basis wheat are in effect at the present time.

Basis wheat in Liverpool is determined largely by weight, with consideration of condition. The weights specified on the future delivery contract of the Liverpool Corn Trade Association are in terms of the imperial Winchester bushel, for wheat in store in Liverpool or at the Manchester docks, or in Birkenhead with a stated discount. Within the definition of weight and condition, all varieties and types of wheat are tenderable, with the required weights varying slightly. The minimum weight is strictly observed and no wheat more than one pound under its stated basis weight may be tendered. Once the basis weight and condition are established, each lot tendered is examined and the price adjudicated by a grading committee. There is a range of premiums and discounts established, but no fixed differentials, which contributes to the flexibility of the system. The maximum premium is 3*d.* per cental, the minimum discount is 1*d.* per cental; no matter how good a premium wheat may be, it cannot secure more than the maximum premium, and if a wheat is so poor it will not grade on a discount of 1*d.*, it is rejected. As a rule, the United States basis wheats, when shipped to Liverpool from American ports, are graded without premium or discount, which does not hold for shipments through Canadian ports. As a rule, No. 1 Manitoba carries the maximum premium of 3*d.* per cental, No. 2 carries 2*d.* or something over, No. 3 usually carries 1*d.*, No. 4 may or may not grade; if it grades it may carry the discount of 1*d.*, but it occasionally grades without discount. The fair average quality wheats of Australia and Argentina grade at basis, or with premium or discount, as the case may be. The system is so flexible that, within the limits of weight and condition, the export wheats of all countries find a market according to milling values in terms of English flour, and are tenderable against futures contracts. The international wheat merchant is able, within a narrow range, to adjudge the basis wheat of the wheat-exporting countries in relation to the basis-wheat requirement of Liverpool.

The Shipping Differential

The term "shipping differential" corresponds to the aggregate of the costs from the elevator in the departing point of price registration, particularly Chicago, to the receiving port of price registration in western Europe, particularly Liverpool. It is a frequent understatement to combine the land freight and the ocean freight and regard the sum as the shipping differential, an erroneous procedure, since it neglects incidental but unavoidable costs of considerable amounts. There are fobbing costs in the terminal of origin which include elevation, inspection, and weighing. To the rail freight must be added an allowance for shortage of weight. At the port of departure there are again fobbing charges, including elevation, inspection, weighing, and commission. To the ocean freight must be added marine insurance and outturn insurance. Finally, the exporter adds interest from the date of sale to the date of delivery to consignee in the port of destination. The land freights are a constant, except for announced changes; most of the fobbing charges are also constant. Insurance and interest vary with price level. Lake and ocean freight rates are variable, often foreseeable but sometimes changed on short notice.

Wheat from Argentina, Australia, Russia, and India moves largely in tramp steamers; to some extent in freighters with scheduled sailings; to no significant extent in liners. From the north Atlantic Coast large amounts of wheat go in liners; from Gulf and Pacific ports North American

wheat moves largely in tramps or scheduled freighters. Rates for carrying grain need not be the same with different kinds of vessels, and indeed usually are not the same; nor are the fluctuations in rates proportional among them. For years the charter market has had the complexion of a buyer's market, but an excess of space over cargo has not the same effect with parcels and with cargoes.[1]

We have secured representative shipping differentials to serve as illustrations. In February 1931, it cost, to take wheat out of store in Chicago and deliver it c.i.f. in the hold of the vessel in the harbor of Liverpool, 21.25 cents per bushel, via Baltimore. The cost via Philadelphia or New York was a fraction of a cent higher, which figure also represented the cost of moving Canadian wheat from store in Buffalo, adjusted for the difference in interior transfer. In November 1930, before the close of lake navigation, the inclusive shipping differential from Chicago to Liverpool was 18.3 cents. In November, the inclusive shipping differential from the head of the Lakes to Liverpool was 17.55 cents per bushel. The ocean rate for wheat from Galveston is usually a little higher than from Atlantic ports; the inclusive shipping differential would vary considerably with the interior terminal involved.

In the use of the shipping differential in the United States it is to be kept in mind that little wheat is exported from store in Chicago and a considerable proportion is shipped at relative costs somewhat lower than the Chicago basis. This is especially true of shipments of hard winter wheat through Galveston. It is indeed the particular province of the fobber to uncover parcels of wheat in positions from which the cost of transfer is lower than from Chicago. Also, not infrequently parcels of wheat are for one reason or another in distress and a part of the distress appears in reduction of the shipping differential. Finally, a particular parcel of wheat may have milling value superior to the basis grade in Chicago or may have been purchased for cash at less than the price of Chicago futures for basis wheat. Broadly considered, therefore, the inclusive shipping differential tends to represent the outside figure of cost. The actual figure of cost is often (perhaps usually) lower, by varying amounts. Each active exporter knows what is, for the time being, the formal inclusive shipping differential; he also knows by how much he is able at the moment to work under that figure.

In the case of the wheats of Canada, Argentina, and Australia, similar qualifying circumstances influence the shipping differential. In Canada, on account of the choice between American and Canadian Atlantic ports, the shipping differentials resemble those of the United States, though tending to be lower except for parcels on liners. In the case of Canadian shipments through Vancouver, different influences apply and surprisingly low shipping costs are sometimes observed. For wheat from Argentina and Australia the costs of transfer to Europe depend directly on the international position in charters, which lately has been so easy that wheat from the Southern Hemisphere has been shipped to Europe at astonishingly low rates.

Wheat Export Price Parity

The term "export price parity" is a convenient designation of a price relation, but one to be employed strictly in accordance with definition. Export price parity has a different meaning applied to futures markets and cash markets. Also, it has a different meaning applied on the one hand to products regularly bought and sold on commodity exchanges under futures trading, and on the other to commodities not so dealt in. With some commodities the prices are largely fixed in the importing country, and the exporting country accepts the price minus the shipping differential. With other commodities the prices are largely fixed in the exporting country, and the importing country accepts the price plus the shipping differential. For wheat we have price registration for international wheats in Liverpool and London and also price registration for domestic wheat in the exporting country, in particular North America. Wheat prices have a fairly wide range, but in each market there is a basis wheat. Price regis-

[1] The owner of a vessel in England with a firm tender of a cargo of coal for Argentina may rarely find himself compelled to buy wheat and become a shipper for the return voyage, in order to get the work.

tration on both sides of the Atlantic is sensitive and selective. Prices in Chicago and Liverpool influence each other directly but not exclusively. There are influences acting on Liverpool directly which act on Chicago only indirectly and to less extent; there are influences acting on Chicago directly which act on Liverpool only indirectly and to less extent. The price of wheat in every country engaged in international trade is influenced by the price of wheat in every other country engaged in international trade; but these influences are variable between countries, within countries, and at different times. In the broad sense it may be said that wheat prices in countries engaged in international trade in wheat are irregularly oscillating within a range and around a point; but the oscillations vary in extent and in irregularity.

Wheat export price parity means such a price in an exporting country as will enable the wheat merchant in the customary course of trade to purchase wheat and deliver it c.i.f. port of destination, so that the importer may unload it and sell it to millers and merchants at going prices as of type, grade, and quality, with a profit to the exporter and the importer. The definition does not apply to occasional or exceptional transactions, but to the customary course of trade.

How is wheat export price parity determined to exist? The occurrence of exports implies a presumption that wheat export price parity exists, unless the exports represent deferred deliveries on earlier sales. Secondly, the quotations of prices of wheat futures in the exporting countries and in Liverpool, with consideration of cash prices at both ends, serve in general to indicate the position, when taken in connection with the shipping differential. It is a range rather than a line, is modified by many circumstances, and is determined day by day through bids and tenders between importers and exporters.

Several points are important in qualification. When wheat export price parity exists between the United States and Liverpool, it does not follow that wheat must go freely into export. That depends on millers' choices in the importing country and on the bullishness or bearishness displayed in the importing country in relation to the holding of stocks. If, for example, Canada, the United States, Argentina, and Australia should all stand in positions of wheat export price parity, Europe would import proportionately much more from some than from others and might conceivably import from the United States only small or even negligible amounts. Type and quality of wheat tend to govern the transactions, prices equal. Given a sufficiently large accumulation of wheat stocks in the United Kingdom, it is possible that for a brief period export price parity might not be found in any export country.

A second point relates to the scope of exporters' activities when wheat export price parity exists. It is not implied, when a full shipping differential exists between Chicago and Liverpool futures, that an American exporter, without making a sale in Liverpool, can purchase a cargo of wheat at the price of the Chicago futures, sell futures in Liverpool, ship the wheat unsold to Liverpool, and deliver it against the contract for sale on the Liverpool Corn Trade Association exchange. This does not obtain because the shipping differential terminates when the vessel arrives in port, and does not include the expense of unloading, storage, and delivery on the exchange. Delivering wheat against futures in Chicago merely involves transferring a warehouse receipt; but delivering wheat from a vessel lying in the harbor against a futures contract on the Liverpool grain exchange involves a series of expensive operations. The local merchant under favorable conditions is able to deliver against futures in Liverpool for a cent a bushel above the c.i.f. price; but the shipper in an exporting country, working under unfavorable conditions, might need to pay as much as 6 or 7 cents per bushel to deliver from the vessel on futures in the Liverpool market. From time to time, the Liverpool importer is able to buy wheat c.i.f., sell a future, and deliver the wheat at a profit. On highly exceptional occasions, shippers in wheat surplus countries have sold futures in Liverpool and delivered on the contracts, of which perhaps 1929 furnished the best illustration with Argentine wheat. If in some exceptional manner the spread between Chicago and Liverpool futures should ever widen to such an extent as to make it practicable to buy

wheat in the United States, sell futures in Liverpool, and ship the wheat over and deliver it against the contract, the position would be promptly corrected by decline in the Liverpool price. Otherwise, Liverpool would be "holding the bag" for the wheat of the world, and the system of futures trading does not work out that way.

A third qualification relates to the lag between sales for export and the exports reported by the Department of Commerce. There is no public record of sales for export. Departures of export wheat are reported for the month in the *Monthly Summary of Foreign Commerce,* and can be secured by weeks in mimeographed reports. A sale for export may be made for immediate shipment. The terms of sale may allow a limited term (say, several weeks) for the convenience of the exporter in securing ocean space. The sale may be for deferred shipment, several months later. If one will compare the exports of the month with the position during that month of the spread between Chicago futures and Liverpool futures, one will encounter months in which it is clear that the exports could not have represented sales during the month.

Finally, when wheat is exported from east of the Alleghenies, from Pacific ports, or from northern Texas and southern Oklahoma through Galveston, the shipping differentials from Chicago (and Kansas City) do not apply. Not infrequently, certain types of wheat are so cheap on the Pacific Coast as to facilitate export to Europe when the margin between Chicago futures and Liverpool futures is narrow. Of more importance is the relation of the country tributary to Galveston. When the lower fringe of the hard winter-wheat belt raises more wheat than the local mills are able to absorb, this wheat must go abroad or to Kansas City. The distance to Galveston is short and the freight rate relatively low; the distance to Kansas City is considerably longer and the freight rate relatively high. Directly after the harvest the exportable surplus of wheat tributary to Galveston is apt to be in "distress," in the sense that exports are sought in order to avoid carrying charges. Therefore, both for wheat and flour, July–September are favorable months for export from Galveston, and within limits quite irrespective of the spread between Chicago and Liverpool. The notable exports during July–September 1929 were largely the result of shipments from Galveston, consequent on the relatively abundant crop in Texas and southern Oklahoma.

It is of course to be recognized that weekly averages offer merely general indications. The exporter does not work on averages but on specific bids and quotations. It is possible for the average spread of a week to appear unfavorable for export, while on one day the spread was wide enough to enable exports to be worked. Strictly speaking, one ought perhaps to contrast the closing price of Liverpool with the lowest Chicago quotation subsequently on the same day. For the purpose of the present discussion these refinements are unnecessary, since the averages of spreads correspond with the trends of export.

There is a natural seasonal trend in export price parity. At the time of the year most appropriate for export there is marketing pressure, which tends to depress the price of domestic futures and widen the spread between domestic futures and Liverpool, and also often drives cash wheat to a significant discount under the future. This seasonal relation is to be seen more or less distinctly during the crop year in each major wheat-exporting country. When for any reason domestic merchants accumulate stocks at the time when marketing pressure usually depresses the domestic price, the spread between domestic futures and Liverpool does not widen and the seasonal flow of exports does not occur.

An apparent contradiction to the statement that wheats flow from exporting countries to western Europe only with export price parity is to be found in the familiar experience that it is usually possible to purchase on the spot market in the large cities of western Europe parcels of wheat at prices lower than the prices of the day in the countries of origin, adjusted to the c.i.f. basis. This circumstance, which was considered in detail in the investigations of the British Royal Commission on Food Prices in 1925, if taken at its face value, would imply either that the merchants engaged in international trade are working for nothing (or at a loss) or that the rule of export price parity does not hold. When

the circumstance is analyzed, neither of these inferences obtains. The amounts of wheat involved are usually not large and all varieties are not thus available. Second-hand prices, rather than first-hand, are conspicuous in such transactions. There is usually more or less distressed wheat in, or headed for, western European markets. A miller or a grain dealer may have imported more than the cash market readily absorbs. Arbitrage and forward selling influence cash prices. Differences in cost between unloading into storage and unloading "over side" directly to the processor enter into the situation. Sometimes the Liverpool futures contract is quoted under the parity of c.i.f. cost (Liverpool futures usually represent the cheapest wheat, quality considered, in Europe), and under these circumstances hedging may operate to make certain parcels of wheat salable at a lower spot price. There is considerable reselling in these markets, which is a speculation in cash wheat, and the reseller often tires of holding certain parcels. Not infrequently parcels arrive in Europe at extraordinarily low liner rates; a shipowner may have bought wheat in order to get a cargo and may wish to unload on arrival. The reseller, in actuality, may be an exporter or a fobber in distress in the country of origin. The exceptions only prove the rule, though the circumstance serves to make the observer cautious in applying the inclusive shipping differential to the futures quotations in Chicago and Liverpool. Numerous indeed are the reasons why small amounts of wheat continue to move from the United States when the Chicago and Liverpool futures stand somewhat closer together than export price parity would suggest.

Traditionally, the large European grain-importing houses were conventional merchants. Drawing wheat to Europe before the war from six prominent sources of supply, in close touch with exporters' surpluses and importers' requirements, they "played" the selling countries against each other and the buying countries against each other. Conversant with home stocks and transportation facilities, they secured the best terms for charters and avoided the carrying of stocks in storage. Under these circumstances, they were in position to buy for cash (either f.o.b. country of origin or c.i.f. Europe) and to sell for cash without hedging, and it was the going rule of the trade that an experienced international grain merchant ought to outguess the market seven times out of twelve. It was traditional that the cheapest wheats in the world were secured by British merchants; and while these wheats were often sold to Continental countries on price bulges, so much remained in the United Kingdom that they enjoyed the cheapest bread in the world. In the decade before the war, however, European importers began to pay more attention to hedging.

Since the war, conditions have changed in favor of the extended use of hedging by European importers. Imports from India and from Russia have been inconspicuous, except for the current year in the case of Russia. Imports from the Southern Hemisphere are largely under the control of the European importers. Imports from North America are closely connected with trading on the grain exchanges of the United States and Canada. There is one active futures market in Europe, at Liverpool, the ruling market. Liverpool futures register the basis on which there is conducted an international trade in wheat approaching or exceeding half a billion bushels. Sometimes cash wheat sells in Winnipeg, Chicago, and Kansas City significantly above or below futures; in Europe, spot prices may fluctuate above or below Liverpool futures. The cash price is what the exporter pays in the United States, directly or indirectly; the spot price is what the importer receives in Europe, directly or indirectly. Nevertheless, futures prices represent the base-line of operations on each side. Hedging has gradually become more advantageous to the European importer as an insurance and in facilitation of transactions. Probably the commonest method of importing wheat into Europe at present (especially into the United Kingdom and particularly from North America) is to close the deal on bid or on tender c.i.f., with hedging in Liverpool, or Chicago, or Winnipeg, delivery of the wheat in the vessel in port to the importer, and final closing out of the hedge at the most favorable date before maturity. Thus, exporter and importer meet at the port of destination and here the price computations apply. This holds even when

the European importer hedges in Chicago, as is often the case. On account of the high costs of delivery from vessel against wheat futures in Liverpool, practically all business is done on the c.i.f. basis. Importers do not hedge all transactions, but mix hedged trading with speculative trading; and when the importer uncovers what he regards as a bargain, he is inclined not to hedge the transaction.

When a wheat-exporting country has a small exportable surplus, the domestic price may rise above export parity; on the other hand, even with a small exportable surplus, the domestic wheat price may remain on the export level. Under such circumstances, particular factors influence the domestic price in one or the other direction, and the case need not detain us here. When a wheat-exporting country has a large exportable surplus, the domestic price must approximate export parity (shipping differential and quality considered), or wheat remains unshipped to appear in an enlarged carryover. When an exporting country disposes of its surplus, this indicates that export price parity has obtained; looking forward, if export price parity does not obtain, this indicates that if the relation continues an unusual amount of the surplus will be carried over into the new crop year.

Whenever two countries (let us say Argentina and Australia) disposed of their surpluses and entered the new crop year with the customary low carryover, while two other countries (let us say Canada and the United States) did not dispose of their surpluses but entered the new crop year with unusually high carryovers, three possible explanations are available: (1) The wheats of North America were so poor and those of the Southern Hemisphere so good that Europe preferred wheat from the Southern Hemisphere, with Canada and the United States refusing to take appropriate discounts for low quality; (2) The wheats of Argentina and Australia stood below export parity, while those of Canada and the United States stood at export parity, on the basis of price quotations, quality considered; (3) The wheats of Argentina and Australia stood at export parity, while those of Canada and the United States stood above export parity, quality considered. When the situation is appraised from the side of the importers, of these three possible explanations, the last one has held in recent years. The spread between Chicago and Liverpool necessary to establish export parity can never be stated to the cent. Only occasional exports can be consummated when futures in Chicago stand within 10 cents of futures in Liverpool; when the spread is 15 cents, considerable amounts of wheat can be exported, type and quality considered; when the spread is 20 cents, European importers can pick and choose freely in the United States. Below a certain point exports are practicable only by reason of particular circumstances — quality, adaptability, position, distress of holders, or extraordinarily low freight rate, with the circumstances expertly exploited by ingenuity of exporters. These may be not ineptly called "specialty" exports. Above a certain point, exports become more or less routinely practicable, and the movement depends on competitive circumstances of quality and type in the importing country. Such exports may be not ineptly termed "bulk" exports. Export price parity implies not specialty exports, but bulk exports, the free movement of United States wheat into European markets in competition there with wheats of other countries on the basis of quality and type. The line of export price parity, the spread between futures in Chicago and Liverpool necessary to permit of free movement of wheat across the Atlantic Ocean, is not rigid but flexible, and the range varies from time to time. It is largely due to the lack of accurate and timely data that wheat export price parity cannot be sharply defined at any time; but the experts of the trade know when wheat is on the export basis and when not.

IV. THE EXPORT TRADE AND THE FUTURES MARKETS

Before we proceed to examine the recent relationship between Chicago and Liverpool futures prices, let us examine and contrast the methods of exporting wheat from the principal wheat-surplus countries. It is only when the methods employed in exporting wheat from other countries are kept in mind that we are in position to appre-

ciate the relationship between the export of wheat from the United States and wheat export price parity.

The export wheats of Argentina are sold on classification of Fair Average Quality, weight usually stated, determined by an established procedure, with some shading of the specifications in years of extreme variations in quality. The F.A.Q. grading for the individual export transaction is assured by inspection by the representative of the importer, in Argentina, or by outturn insurance, with eventual arbitration in the country of destination in the event of dispute. The wheat growers of Argentina, who are mostly large landowners operating on shares with tenants, often protect their grain by hedging (for which purpose the futures market in Buenos Aires was really established) and cancel the hedge when the wheat is disposed of. Or, the grower may sell his grain and purchase an option, hoping to make a profit when the option is closed. Often the wheat is sold at a price to be agreed on later. The grower cannot sell futures and deliver on the contract, since the procedure is impracticable on account of lack of grading and for other reasons. The Buenos Aires futures tend to be notably higher than the price of wheat at country points, and this leads to the circumstance that occasionally the price of country wheat may be on export parity at a time when the price of the Buenos Aires futures is not on export parity. Despite the extent of their operations, Argentine growers are rarely shippers.

Transportation conditions have a great deal of influence over wheat movements and prices. Wheat is purchased by exporters both for immediate sailing and for deferred shipment. Shipment of wheat on "orders," and to arrive, is frequent. To some extent wheat is shipped on open consignment, destination fixed but unsold. The wheat in a cargo may be sold several times en route, or even before it is loaded. Argentine shippers usually need to book charters long in advance to the extent of a considerable fraction of their expected tonnage; when the ships arrive, they must be loaded whether the wheat is sold or not. The concerns most conspicuously engaged in the export of wheat from Argentina are representatives of, or connected with, large French and Belgian wheat-importing houses. Domestic factors are on occasions important in the trade and in some years take the risk of moving wheat to Europe which the regular shippers are disinclined to handle.

Argentine shippers, when they hedge, do so at home or in Liverpool,[1] but rarely in Chicago. The large shippers often buy spot wheat and sell for immediate, early, or distant shipment, or ship on open consignment unhedged, because they try to avoid accumulation of stocks. Exporting grain from Argentina is to a large extent an unhedged cash business, with rapid transactions, done in large volume, and concentrated as much as possible. Thus the price of Argentine wheat (adjusted for exchange rates) is really controlled by the price in Europe, type and quality considered; under what are called normal conditions, export price parity rules between Argentina and Europe, though often modified by fluctuations in ocean freight rate. At times, wheat from the hold is delivered against futures. European importers, when they hedge importations of Argentine wheat, do not do so in Buenos Aires. When Buenos Aires futures stand to the extent of a full shipping differential under Liverpool futures, the shippers are highly favored. A great deal of Argentine wheat is sold directly to millers. In the negotiation for purchase of Argentine wheat by Europeans the futures quotations in Buenos Aires are contrasted with those in Liverpool and also with those in North America. Despite the existence of futures quotations at Buenos Aires, the European importer is still in reality buying in a cash market in Argentina.

The export of Australian wheat is largely in the hands of British and dominion shippers, though continental houses participate actively. These houses sell in Europe direct to millers as well as to local merchants. The business is partly hedged and partly speculative. When Australian shippers hedge, it is usually in Liverpool; when British importers or millers import Australian wheat, they hedge in Liverpool. All things considered, the exportation of Australian wheat proceeds in a more orderly manner than does that of Argentine. In the negotiation for purchase of Australian

[1] As was especially the case in 1929.

wheat by Europeans, there are no Australian futures quotations to be compared with Liverpool. The European importer, in effect, is buying in a sample market in Australia; but he gives attention to the futures in Liverpool, in North America, and in Buenos Aires. He may hedge in Chicago.

For both Argentina and Australia the continuous exchange of tenders and bids on the basis of futures quotations is much less conspicuous than in the trade with North America.

Before the war, the movement of Russian wheat into western Europe was largely in the hands of importers in the consuming countries, whose agents in Russia assembled the grain on the basis of Fair Average Quality, arranged the charters, and expedited the shipments on schedules largely determined by climatic considerations. Since the war, the Soviet government controls the exports of wheat. The large Russian exports of the current season have been delivered in part against previous sales to European importers, but to a large extent have been shipped on open consignment to Russian agents in European countries, to be sold to the best advantage under the circumstances. To a considerable extent, this Russian wheat fell into distressed positions and was closed out on unfavorable terms, in order to secure needed bills of exchange and curtail carrying charges. It is our understanding that the technical experts on the Russian wheat commission would like to hedge their transactions, but this is not favored by those in political control of Russia.

The wheats of the United States and Canada are sold for export on the basis of statutory grade expressed in a final certificate of inspection. Wheat is bought largely for immediate or early shipment; sale for deferred shipment is a less prominent method of merchandising. Only under rare circumstances, so exceptional as to be termed abnormal, is wheat shipped from North America to Europe on open consignment. To some extent, the wheat-exporting concerns of North America are the representatives of, or are connected with, the wheat-importing concerns of Europe. So far as is known (outside of the Central Selling Agency of the Canadian Pool and, we infer, the Farmers' National Grain Corporation), North American wheat exporters do not maintain distributive offices in Europe. The movement of wheat from North America to Europe is largely the expression of daily negotiations. The shipping differential being approximately known to each party, European importers make bids and North American exporters make tenders. Out of the interchange of bids and tenders emerge sales, which are not matters of report until the wheat is loaded at the ports. Large European millers do their own importing, but otherwise millers purchase from importers, placing firm orders in the importing markets; the wheat may be purchased in the exporting country first and hedged afterward or futures are purchased first and the wheat secured later. The more or less accurate gossip on the magnitude of export sales is one of the price-influencing factors on the grain exchanges.

The wheat export transactions between North America and Europe are largely founded on the price of basis wheat; in fact, a specified futures quotation is usually the base-line. The importer, the exporter, and the fobber are all protected by hedging. The importers usually hedge in Liverpool, but may hedge in Chicago or Winnipeg. The exporters hedge in the country of export, since they are engaged in c.i.f. deliveries. This method of price agreement holds with adjustments for all grades of wheat in the United States and Canada. Sometimes wheat gets out of line in a locality or at a terminal, sometimes a fobber picks up a parcel of distressed wheat in a position favorable for export, sometimes a propitious purchase has been made on an earlier cash market; but for the most part the significant movement of wheat depends upon wheat export parity as revealed in quotations of futures in Chicago and Liverpool. There is export of wheat when the North American futures quotations stand somewhat above export parity; but the broad movement of wheat into export (qualified by exceptions noted on pages 242–48) is usually observed only with export price parity between the futures.

Two particular circumstances in the European wheat trade are at once the expres-

sion of varying prices and an influence on prices. There is considerable diversion of wheat from country to country, importers purchasing wheat shipped on orders, with destination to be determined during the voyage. There is also considerable diversion through a system of arbitrage between dealers, to equalize shipments sent to some parts in excess of need and to others below needs, such diversions being cheaper than transshipments.

The extraordinary efficiency of the international distribution of wheat through the present system of exchange trading is perhaps best illustrated by the fact that in free-trade Great Britain the price of bread is lower than the average price of bread (type considered) in the four principal wheat-exporting countries from which the import supply of Great Britain is drawn.

European importers, whether merchants or millers, are nowadays inclined to hedge transactions of considerable volume. There is also active speculation on the Liverpool exchange, usually sufficient to absorb the hedges, though Liverpool is a market which is likely to be affected by an unusual concentration of buying or selling. The volume of wheat futures speculation in Chicago is at least ten times, and probably more than twenty times, as much as in Liverpool; therefore, price in Liverpool is sensitive to hedging as well as to speculation, far more than in Chicago. In connection with speculation and hedging, a comparatively small volume of wheat is delivered against futures in Liverpool. For the most part, this is not North American wheat but Southern Hemisphere wheat, and especially Argentine wheat. The record of deliveries against futures during the past six years, in thousand bushels, is as follows:[1]

1925	4,336
1926	2,424
1927	2,016
1928	7,680
1929	16,936
1930	5,648
Average	6,507

We take it these deliveries represented largely transfers of physical wheat to millers, not transfers of warehouse certificates. When one contrasts the volume of deliveries with the volume of imported wheat milled in Great Britain, one arrives at the inference that deliveries against futures contracts essentially represent adjustments incident to a large cash wheat business. When a local merchant, having sold a futures contract, wishes to make delivery on the Liverpool exchange, he has a wide choice of wheats, since practically every recognized wheat of the world, of standard weight, may be delivered with the use of premiums and discounts adjusted to the tender by the grading committee. It is this flexibility which so greatly aids in maintaining the fluidity of the British wheat market. British millers may import on their own purchases in the country of origin, but they are more likely to purchase from grain importers on c.i.f. terms, take delivery on the boat, and enter the wheat as the importers; to a lesser extent they purchase wheat already entered through Customs by an importing grain merchant.

V. RECENT RELATIONS OF FUTURES PRICES IN CHICAGO AND LIVERPOOL

An outstanding feature of the American wheat position during recent years has been the gradual accumulation of wheat in the carryover at the close of the crop year. This is shown as follows, in million bushels:

Crop year July–June	Crop	Net wheat and flour exports	Carryover out on June 30
1926–27	831	209	113
1927–28	878	194	128
1928–29	915	146	247
1929–30	806	143	275
1930–31	851	?	?

We have, therefore, the situation of a wheat-exporting country failing to export its surplus and allowing it to accumulate.[2] Unless the disposition of the supply during the present crop year (through extra feeding or otherwise) is large, the outbound

[1] For these data, and other advices, we are indebted to Sir Herbert Robson.

[2] To the proponents of the export debenture, the accumulation of unexported exportable surplus of wheat constitutes a reproach to the existing system; even the opponents of the export debenture incline to agree that exports would be facilitated by it.

carryover will be heavy on June 30; and unless the new crop is short, the supply for the crop year 1931–32 will be large and will contain a heavy exportable surplus. To understand the increase in carryovers, let us examine the price relations during the last three crop years, including 1930–31.

In considering these prices season after season several circumstances are to be kept in mind. The working relation of the Chicago and Liverpool markets is not rigidly fixed, since ocean freight rates and other items in cost vary. Also, the basis wheat represented in Chicago futures varies from time to time, and the desirability of American wheats in Europe (considered directly and in comparison with other export wheats) is not constant throughout the crop year. Further, considerations of quality may modify the movement without direct relations to quoted price. Finally, the relation of the cash price to the futures price may change from month to month and modify the trading application of price parity between Chicago and Liverpool. In any such comparison it is advantageous to include Winnipeg and Buenos Aires. During recent years a tendency has often been in evidence in the Chicago price to rise out of line with the Liverpool price, under which circumstance the free flow of American wheat for export has been impeded, and this has been one of the factors, perhaps the chief factor, contributing to the accumulation of the unexported surplus in the United States.

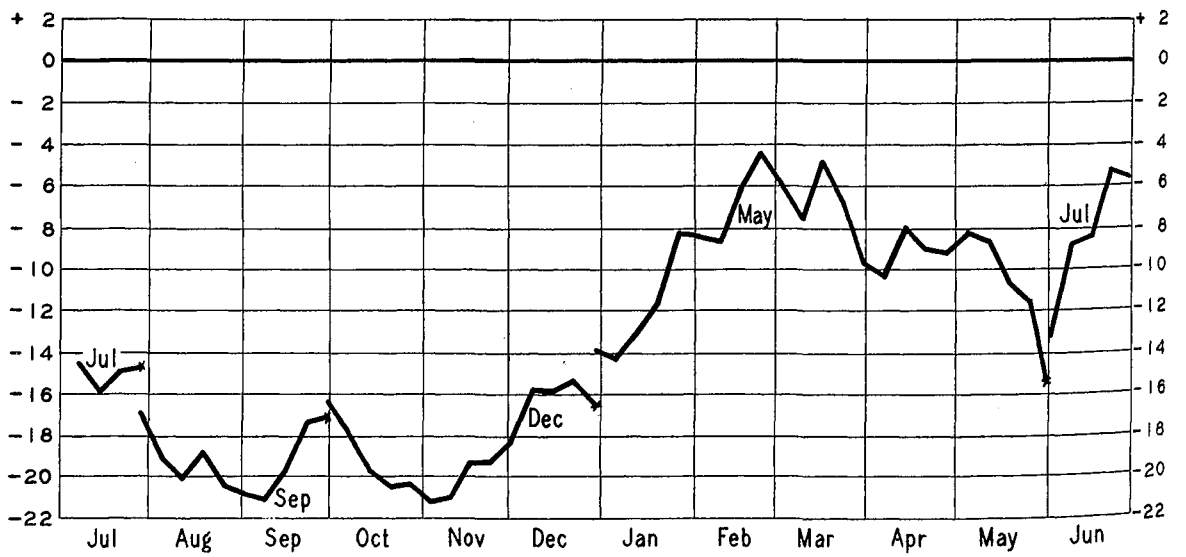
Crop Year 1928–29

During the early weeks of the crop year 1928–29, as appears from Chart 1, the spread between Liverpool and Chicago tended to be wide enough to permit of exports, in view of the premiums obtainable in the United Kingdom for No. 2 Hard Winter wheat over No. 3 Manitoba. Even so, United States exports went largely from Pacific ports.

The Chicago–Liverpool spread narrowed as the spring-wheat crop came to harvest, largely as a result of a relative increase in American price. During October–December the spread between Chicago and Liverpool was too narrow to permit of a sustained export movement of wheat; during this time Winnipeg stood above Chicago, while Buenos Aires declined still further relative to Liverpool. From early in January until the middle of February prices rose in all four markets, but much more in Chicago and Winnipeg than in Buenos Aires and Liverpool, so that by the middle of Febru-

Chart 1.—Deviations of Weekly Averages of Successive Futures Prices at Chicago from Corresponding Liverpool Futures, 1928–29*

(*U.S. cents per bushel*)



* Based on data from *Daily Trade Bulletin*, Chicago.

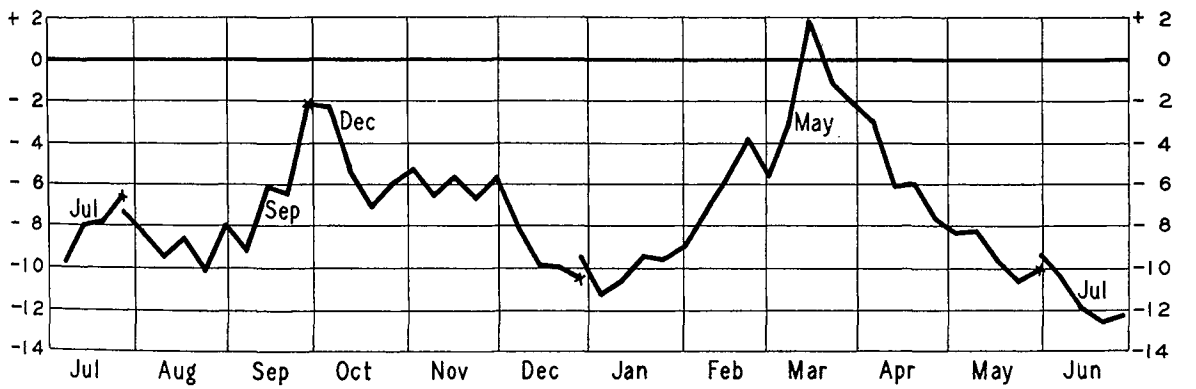
ary the spread between Chicago and Liverpool approached 5 cents. In the general decline of wheat prices from the middle of February until the end of May, Liverpool led, with Chicago and Buenos Aires following next and Winnipeg least of all. From the middle of February until early in May, the spread between Chicago and Liverpool was almost continuously less than 10 cents, with Winnipeg even higher than Chicago. Early in May the Winnipeg future equaled that at Liverpool and the margins between Chicago and Liverpool and Buenos Aires and Liverpool were both less than shipping differentials, quality considered. During May, the Liverpool price held fairly steady; the price declined in Winnipeg, but not to a shipping differential; prices at Chicago and Buenos Aires declined sufficiently to have the spread cover the shipping differential, quality considered. During June and July prices rose rapidly; the Winnipeg price rose far above Liverpool, the Chicago price rose so much more than the price at Liverpool as again to narrow the margin to less than the shipping differential, with the price at Buenos Aires remaining far enough below Liverpool to permit of free shipment. Throughout the year, but especially after October, it is clear that counterforces were in action, tending on the one hand to keep prices at Chicago and Winnipeg high relative to the price at Liverpool, and on the other to keep the price at Buenos Aires low relative to all three.

Crop Year 1929–30

Referring to Chart 2, one will observe that during July and August the spread was usually less than 10 cents. During September–October 1929 the Chicago future stood rather closer to the Liverpool future; Winnipeg occupied an anomalous position above them, and Buenos Aires was relatively constant but much below them, with the price in all three markets irregularly declining. During these months in Chicago the cash price stood at unusually large discounts below the prices of futures, and discounts at Gulf ports were extraordinarily large. During these months, in consequence of the low price of cash wheat at Gulf ports and other factors, export of wheat displayed the usual seasonal trend,[1] despite the relatively high position of the Chicago future in relation to the Liverpool future, probably aided by the anomalous position of the Winnipeg future.

Chart 2.—Deviations of Weekly Averages of Successive Futures Prices at Chicago from Corresponding Liverpool Futures, 1929–30*

(U.S. cents per bushel)



* Based on data from *Daily Trade Bulletin*, Chicago.

During November – December occurred a substantial rise in all markets. During November–December the American cash and futures prices were fairly close together and both of them were too close to the Liverpool future to admit of the usual shipping differential. From the beginning of January until the middle of March, prices in all markets declined steadily and irregu-

[1] But the level of export in relation to available supplies was low.

larly, Winnipeg standing close to Liverpool, with Buenos Aires below them to the extent of a full shipping differential. The American future declined relatively less than the others, and in the middle of March the futures prices in Winnipeg, Chicago, and Liverpool were practically identical. During the short rise that occurred during March–April the futures in Chicago, Winnipeg, and Liverpool retained their close approximation. From early April to early June, prices held fairly even, with the Liverpool future at the top, Winnipeg just below it, and Chicago and Buenos Aires close together just below Winnipeg, without a full shipping differential for any of them. The Farm Board was partly responsible for the relatively high price of Chicago futures during part of the time. During June all prices declined precipitously, the futures in the four markets remaining quite close together. During July the spreads between the futures widened, with Liverpool at the top and Chicago at the bottom, with spreads approaching the full shipping differential.

During this crop year the subsidiaries of the Farm Board made purchases of wheat and wheat futures to such an extent that at the close of the crop year the Grain Stabilization Corporation held wheat in storage to the extent of 65 million bushels. Purchases of cash wheat began in the autumn for the ultimate account of the Farmers' National Grain Corporation. Purchases of futures occurred largely during February–May. To the activities of the subsidiaries of the Farm Board there must be ascribed a part of the price influence which brought the May future at Chicago so close to Liverpool. At the same time, it is clear that more or less actively throughout the crop year the trade supported the movement for higher price. That is, the Grain Stabilization Corporation supplemented or supplanted speculative buying. The defensive adaptations forced on millers when the May future was driven to an artificial premium over the July future probably had little effect on the position of the Chicago price.

Crop Year 1930–31

At the opening of the crop year 1930–31, as appears from Chart 3, the price of the Chicago future tended, so to speak, to reflect export price parity, since the spread approached the shipping differential, quality considered. But the situation did not last long. In September, as the price of wheat declined abroad, the decline was resisted in Chicago. Gradually the spread between the Chicago futures and the Liverpool futures narrowed. Finally it was obliterated and the Chicago price rose above the Liverpool price on November 17, 1930. This position of Chicago futures was exaggerated after the Grain Stabilization Corporation entered the market and pegged the price of wheat. In consequence, May futures in Chicago during November and December soared above the Liverpool quotation, to the extraordinary extent at the outside of 20 cents. The July future, which was not supported but abjured by the Grain Stabilization Corporation, rose in November to a level practically approximating the price in Liverpool and has remained high.

Following the Canadian harvest, the holding movement was dissipated in Canada and the price of Winnipeg futures declined to a spread representing the full shipping differential, thus standing conspicuously lower than Chicago. In the last market of the calendar year 1930, the December future at Chicago closed at 77 cents and the December future at Winnipeg at 53 cents; the May future closed at Chicago at 81 cents, at Liverpool at 62 cents, and at Winnipeg at 56 cents.

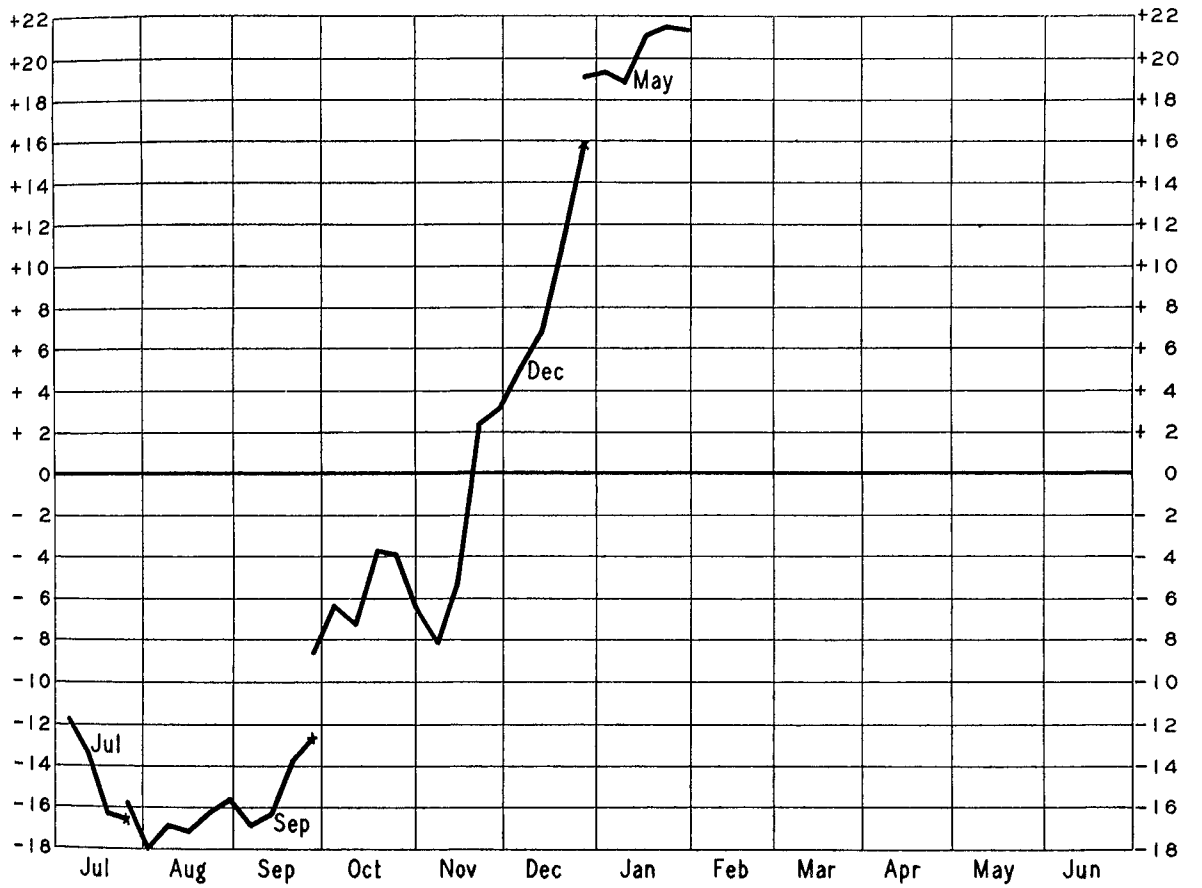
The new-crop futures have been determined on a free market, since the Grain Stabilization Corporation has not operated in the futures of the crop of 1931. The price influence of the prospective carryover in the hands of the Grain Stabilization Corporation and the Farmers' National Grain Corporation would be in the direction of supporting the July future, since with a heavy carryover July should stand with a premium over May. Speculation has been active in the new-crop futures, and from the beginning of quotations the July and September Chicago futures have stood high relative to Liverpool quotations for the new-crop futures. Indeed, Chicago July futures have stood above Liverpool July, and Chicago September has approached or exceeded the Liverpool October futures. The traders of the world have thus wit-

nessed the highly anomalous situation of old-crop Chicago futures pegged above Liverpool by the Grain Stabilization Corporation and the new-crop futures driven above Liverpool by speculation on a free market. Presumably, the prices on the new-crop futures are to some extent founded on the hope that the Grain Stabilization Corporation will later support prices of the new crop.

It seems reasonable to ascribe to the Grain Stabilization Corporation the relatively high position of the December and May futures over Liverpool during November and December 1930. Prior to November, the position of the December and May futures at Chicago, relative to Liverpool, is to be ascribed to the price influence of private trading. Throughout the period since July 1, 1930, the high position of the July future in Chicago relative to Liverpool and Winnipeg is to be ascribed to the influence of private trading, especially following the dissemination of the information (unreversed to date) that the Grain Stabilization Corporation would confine its attention to May wheat.

CHART 3.—DEVIATIONS OF WEEKLY AVERAGES OF SUCCESSIVE FUTURES PRICES AT CHICAGO FROM CORRESPONDING LIVERPOOL FUTURES, 1930–31*

(U.S. cents per bushel)



* Based on data from *Daily Trade Bulletin*, Chicago.

SUMMARY

Over the period it is evident in a comparison of American with foreign wheat prices that a considerable difference of market opinion obtained here and abroad. This difference of opinion applied both to current prices and to expected developments in the future. During 1928–29 and 1929–30 opinion in Canada tended to side with opinion in the United States; in the

present crop year, opinion in Canada is again siding with opinion in Liverpool. Throughout the period opinion in Argentina and Australia (crops considered) has tended to conform to opinion in Liverpool. American opinion, effectively displayed on the grain exchanges, found expression in Chicago futures. European opinion, most effectively displayed in cash transactions, found expression in Liverpool futures. Importing countries, guided by Liverpool futures, were able to make the purchases to fill their requirements at relatively low prices, broadly corresponding to the Liverpool futures. United States exporters, controlled by the prices of American futures, found themselves more or less continuously endeavoring to market wheats abroad at prices higher than export parity. Since the views of the European importers turned out to be more correct than the market-controlling views in the United States, American exports declined and carryovers expanded. How much wheat would have been exported from the United States since July 1, 1928, if Chicago futures had stood below Liverpool futures by the full shipping differential, quality considered, is conjectural (though roughly computable) and need not be considered here; but it is not to be doubted that much more would have been exported than was exported. Our low exports, high carryovers, and large visible supply are the consequences of the relative price positions: the price of basis wheat in the United States has stood too high above the world price level, and for the most part cash and futures wheat prices have stood above export parity.

The position of Chicago futures may be fairly taken to represent the preponderating opinion on wheat value and the cumulative effect of trading operations. Whenever, since July 1, 1928, the price of the Chicago futures has stood above export parity, this has been the result of domestic trading in cash wheat and wheat futures. And it may be assumed that the trading represented the operations of domestic merchants, since it is hardly to be believed that the net effect of foreign hedging has been to raise the Chicago price of futures or that foreign speculators were operating on the bull side of the speculative market in our country. To what type and class of trading is the bullish movement relative to Liverpool to be ascribed?

The driving up of the American wheat price relative to Liverpool cannot be ascribed to competitive bidding of American millers. On occasions, competition between American millers drives up the price of cash wheat; but these affect premium wheats, and not basis wheats. Millers bid up hard wheats of high protein content and soft red winter wheat of superlative quality and high flour yield. Millers have no incentive to bid up the cash price of basis wheats, least of all in seasons when the exportable surplus of such wheats accumulates in the country. So far as the three seasons under review are concerned, the premiums for the top-grade milling wheats have been conspicuously low.

The same reasoning applies with still greater force to the cash grain dealer at country points and in terminal markets. Cash grain dealers have no incentive to bid up cash prices except for wheats in particular demand by mills, that is, premium wheats. Certainly cash grain dealers acting as fobbers for exporters had no incentive to bid up the prices of basis wheats.

This leaves but one group of cash wheat buyers, the exporters. Certainly the exporters did not bid against each other above export price parity—that would be equivalent to an exporter bidding up the price of exportable wheat so as to make it unexportable.

Combining the various groups of cash wheat buyers in the country, we are unable to find any incentive impelling them during the period under review to bid up the price of basis wheat, or evidence that they have done so.

This leaves but one group of traders (apart from the Grain Stabilization Corporation)—namely, the speculators. It has been the preponderance of bullish sentiment over bearish sentiment, in respect both to open accounts and to holdings, which has kept the price of Chicago futures where it stood from day to day. American speculators have believed that wheat would be worth more than the level corresponding to export price parity at Liverpool. Or they may have felt that wheat was being undervalued in Liverpool

and that American speculators holding long open accounts would profit when the eventual rectification of the Liverpool position arrived. Put in another way, during these years American opinion on the value of wheat has tended to deviate from foreign opinion on the value of wheat. American opinion found expression in the Chicago futures, whereas foreign opinion found expression in Liverpool futures. Whenever the Chicago futures have been above export parity, urban Europeans have blamed American speculators for trying to hold up the price of their bread, and European wheat growers have praised American speculators for having helped to maintain the wheat price. Correspondingly, whenever the price of American wheat on a free market has been driven above export price parity, wheat growers should have given speculators the credit for having maintained the price of wheat and consumers should have blamed speculators for having increased the price of flour. If, now, during this period the net effect of trading in wheat futures has been to keep the price of American basis wheat above export price parity, what becomes of the contention that short selling has depressed the price of wheat?

VI. CONCLUDING OBSERVATIONS

As is indicated by the spread between Chicago futures and Liverpool futures, the rate of flow of exports to Europe, the retardation of exports, and the gradual accumulation of exportable wheat, it is clear that since the opening of the crop year 1928–29 the price of American wheat has tended to stand above export price parity. We have held our wheat price too high to sell wheat freely (as did Canada during most of two crop years); other countries held their wheat price lower and disposed of their wheats in foreign markets. The effective force in maintaining the price of American wheat above export price parity has been the buying of wheat futures. Since July 1, 1928, this bullish influence has been contributed partly by private speculators and partly by the subsidiaries of the Federal Farm Board.

During the crop year 1928–29, the narrow spread between Chicago futures and Liverpool futures during the last half of the crop year could have been due only to private traders, because the Farm Board was not in existence. During the crop year 1929–30, private speculators supported the wheat price more or less continuously throughout the crop year. During the spring months, the subsidiaries of the Farm Board purchased futures and for a short time drove the May to a premium over the July. How much the wheat futures purchases of the subsidiaries of the Farm Board added to the bullishness of private speculators is not determinable. But since private speculators from the opening of the crop year until the first of February held the margin between Chicago futures and Liverpool futures within the limits of 5 and 10 cents for the most part, it seems fair to infer that the activities of the subsidiaries of the Farm Board found their expression largely during the time when the margin narrowed to less than 5 cents. During July–September 1930, the Chicago futures price of wheat approached export price parity. During September it rose sharply above export parity, under the influence of private speculation. The Grain Stabilization Corporation pegged the price of wheat in mid-November and since that time has been responsible for the high position of the old-crop Chicago futures relative to the Liverpool futures. With the price pegged by the Stabilization Corporation, private speculators had no incentive to buy or sell wheat futures of the present crop and transferred their attentions to the new-crop futures. With continuation of bullishness on the part of private traders, the Chicago futures for July and September have been maintained above export parity with Liverpool. One has but to contrast the February quotations of Chicago futures for July and September with those of Winnipeg for July and October and of Liverpool for July and October to appreciate the significant fact that American speculation is bullish and American estimates of new-crop wheat values are far higher than those controlling the Liverpool

prices. American speculators resisted the price decline, and when the turn comes will lead the price advance. This bullishness on the part of American speculators in the face of the impending carryover holds Chicago September futures above Liverpool October futures.

Disregarding the ultimate effect of the carryover, it is convenient to assume that the farm price of wheat has been benefited to the extent that the American price of wheat stands above the world price. When the Grain Stabilization Corporation buys wheat futures to prevent a price decline or to maintain a pegged price, it takes the credit for keeping the American price higher than it would otherwise have been. Since independent speculators leave the market when the Stabilization Corporation pegs the price, the entire price effect is usually ascribed to the Corporation. That the exportable surplus remains unexported does not at the time seem to detract from the utility of the elevated farm price of wheat.

The same reasoning ought to be applied when the American price of wheat stands above the world price in the absence of a Stabilization Corporation. When the price of basis wheat in Chicago has stood above export parity, despite the presence of large exportable surpluses, and there was no Stabilization Corporation pegging the price, this ought to be ascribed to purchase of wheat futures by speculators. If it is reasonable to ascribe a relatively high position of the American wheat price to futures trading by the Stabilization Corporation, then it is reasonable, when the position occurs without a Stabilization Corporation, to ascribe it to futures trading of speculators. When, under the conditions of a free market, the price of basis American wheat stands above export parity, this must be due (farm stocks equal) mainly to futures buying rather than to cash buying. Scalpers, spreaders, speculators with small open accounts, and speculators with large open accounts, all participate; but it is probably the open long accounts rather than transactions of scalpers and spreaders which are mainly influential. In any event, all are speculators. Therefore, we arrive at the inference that whenever, in the absence of the Stabilization Corporation, the price of American wheat stood above the world price of wheat (shipping differential and quality considered), this was the result of speculation. If the Stabilization Corporation is to receive credit for improving the farm price of wheat when it draws, or holds, the price of American wheat above the world price, then speculators must receive credit when they draw the price of American wheat above the world price. There is a difference in motive: the Stabilization Corporation acts in the name of the wheat grower, whereas speculators act in the hope of individual profit. The motives are different, the effects are the same.

Rather curiously, both proponents and opponents of trading in wheat futures have tended to neglect, or entirely to overlook, the outstanding criterion by which the net effect of futures trading may be judged—the relation of the American price to the world price. Without entering into the question of the extent to which the American crop and price influence the world price and conversely how the world crop and price influence the American price, it is agreed that so long as we have a large exportable surplus this can be competitively sold on the world market only when the American price stands at parity with the world price, transportation considered. When the American price stands on a parity with the world price, this might be regarded mainly as the effect of the world price upon the American price; yet an argument might still be advanced that trading practices on American exchanges had aided in driving the American price down to the world level. But when the American price stands above the world price relatively, this is hardly to be explained on any other assumption than the net effect of trading practices on American exchanges overcoming the otherwise occurring influence of the world price on the domestic price. To put it bluntly and without the qualification necessary in a careful exposition, short selling might be held responsible for keeping the American price down to the world level, while long buying would be held responsible for keeping the American price above the world level.

The picture can hardly be interpreted to indicate any significant depression of Chicago futures by short selling. Except for

temporary advantage in the price of cash wheat and occasional opportunities in respect to position, exporters have found it difficult to find parcels of wheat cheap enough to buy for sale to Europe on the basis of the Liverpool price. Whether American export transactions are initiated by bids of European importers or by tenders of American exporters, they are based upon, and within limits are controlled by, the relation of the Chicago (or Kansas City) futures to Liverpool futures. Whatever pounding of the market may have been accomplished under short selling, bear raids during this period have not brought the Chicago future[1] low enough to permit of an export movement in proportion to the supply. Whenever exports occur from regions outside of the direct influence of Chicago prices, these must be held relatively free of influence by Chicago quotations. Whether regarded from the standpoint of supply or price, the export movement of American wheat during recent years has disappointed all expectations.

One possible rejoinder may be made to this argument, and, though we feel that the rejoinder contains implications which defeat its application to the argument, it ought to be stated. This rejoinder runs to the effect that, if there had been no short selling during the period under review, the American price would have been still higher than it was and the position of the Chicago futures still closer to Liverpool than by the spread which actually occurred. Current discussions on short selling do not lead one to infer that the opponents regard the net effect on the farm price as insignificant (for example, a cent or two a bushel) but, instead, as substantial (for example, 10 cents a bushel). If, now, one will turn to the spread charts (aside from the times when the Grain Stabilization Corporation was supporting the price) and change the spreads by raising the Chicago futures by 10 cents, one will have a picture of what the opponents of short selling apparently believe might have been the position if short selling had been curtailed. Under such an assumed situation, the Chicago future would have stood within 10 cents of the Liverpool future practically throughout the entire crop year 1928–29, within 5 cents of it during a large part of the year, and approaching it during two months. During 1929–30, under such an assumed situation, the Chicago future would have approached or exceeded the Liverpool future except for a few weeks in mid-winter and at the close of the crop year. During 1930–31, under such an assumed situation, the Chicago future would have been within 10 cents of the Liverpool future or approaching it, up to the time when the Grain Stabilization Corporation pegged the price of wheat. The July and September futures would stand above Liverpool. Nothing but blind faith in higher price and persistence of future trading in accordance with disbelief in the possibility of declining prices could have served to effectuate such an assumed position. It would have implied the assumption of "hidden values" in wheat comparable with the "hidden values" ascribed to the shares of investment companies during 1929.

But if one were to make the unplausible assumption that in the absence of short selling the American wheat price would have been substantially higher than it was since the beginning of the crop year 1928–29, it follows that our exports would have been correspondingly reduced, the accumulated carryover at the close of each crop year correspondingly increased, and the prospective carryover on June 30, 1931 (which is now the immediate problem of the Farm Board), other things equal, would need to be adjudged still higher. Other countries would have sold still more wheat, the United States would have sold still less. Farm prices of wheat would have been slightly higher than they have been, the

[1] We have considered only the Chicago Board of Trade, which for the purpose of this discussion represents the American grain exchanges. It is of course possible to imagine that American speculators have been selling wheat short on exchanges outside of the United States. Through concerted action wheat could be sold short in Liverpool, though such transactions would involve unusual hazards. Wheat could easily be sold short in Winnipeg, where the operation would not involve unusual hazards. We have not heard the specific charge that American bear raiders have been selling wheat short in Winnipeg and Liverpool, and the course of prices in those markets is sufficiently explained without invoking short selling by American speculators. Unquestionably, however, if drastic regulations were enacted against short selling on American exchanges, speculators with financial resources, courage, and market foresight would engage in short selling on foreign grain exchanges whenever the prospect of a profit outweighed the risk.

price of flour would have been slightly higher than it has been, the price of bakers' bread probably the same. Exports of domestic wheat and of flour ground from domestic wheat would have been lower than they have been. The successive carryovers would have been still higher than actually occurred. The accumulated wheat would not have been fed to animals (apart from drought relief), unless it deteriorated, because of the high price. Such a contingency would have negated the obvious economic implication of our situation—that, so long as we are a wheat-exporting country, we must export the exportable surplus and cannot have it accumulate in the country to create a dilemma soluble only by exceptional crop failure.

It seems to us, in summarizing these considerations, that an objective interpretation of price occurrences during the crop years 1928–29 to 1930–31 can lead to but one conclusion. This runs to the broad effect that the course of the price level, and the seasonal movement, do not support the inference that speculative short selling operated significantly in the downward direction. When all is said and done, the outstanding effect of speculative operations on the American grain exchanges during 1928–29 to 1930–31 has been to raise the domestic price and restrain the export flow of wheat, permitting the Southern Hemisphere and the export regions of Europe to hold a strategic command of the world market. It is not possible, when one considers supplies and prices since 1928, to suggest that over the interval the speculative sellers have been in control of the market. On the contrary, over the interval the speculative buyers, for the most part, have been in control of the market. Over the interval, for the most part, American ideas as to the value of wheat have placed it above the value adjudged by European opinion. Over the interval it is apparent that to a controlling extent, as reflected in American exports, American opinions on wheat values have been backed by American speculators buying wheat futures. Even in the disastrous decline of world wheat price, American traders operative on the grain exchanges resisted the decline. Of this resistance, the relatively high position of the American price of wheat contrasted with the going price in the world market was the visible sign, and the high carryover was the obvious effect. The present relations of the new-crop futures in Chicago and Liverpool indicate our bullishness. We hear of "undigested securities"; in a very comparable sense we have an "undigested surplus" of wheat, remaining in the country largely because speculators adjudged the value too high. To what extent Farm Board opinion on higher wheat price contributed to long buying of wheat and resistance to price decline, must remain conjectural; but it is not to be doubted that on the American grain exchanges considerable speculative trading (largely by small traders) followed the Farm Board lead. If the net effect of futures trading on North American exchanges during 1928–31 had not been in the direction of resistance to price decline, the close of the crop year 1930–31 would have revealed smaller carryovers in North America and larger carryovers in other surplus-producing countries. For the carryover on June 30, 1931, the Farm Board shares the responsibility with private speculators.

Looking backward, one may conjecture what the present situation would be if regulations controlling short selling of wheat had been in operation in recent years. When the Grain Futures Administration recommends limitation of open accounts, that means both long and short accounts. But when those interested in obtaining a higher wheat price for growers recommend control of trading in futures, they mean control of short selling and freedom of long buying. Anything may happen in an experimental way in legislation. Possibly the day may come when the speculator who believes wheat is going up and desires to make a profit out of his foresightedness will be welcomed to the wheat pit, whereas the speculator who believes that wheat is going down and desires to make a profit out of his foresightedness will be barred.

It strikes us that the passage of the Capper bill by the Seventy-second Congress would be interpreted to reveal a loss of faith in the Agricultural Marketing Act and in the agencies set up to administer it. If, with a Farm Board in possession of a large revolving fund, a Grain Stabilization Corporation empowered to deal in wheat futures, and

a Farmers' National Grain Corporation equipped with a large number of country and terminal elevators and with representatives in every terminal market—if, under such circumstances, the Congress still feels it necessary to control short selling, then it would seem that Congressional faith in co-operative marketing with the financial support of the government is low indeed. It is pertinent to point out that the price insurance provisions of the Agricultural Marketing Act (Section 11) have never been invoked by the Federal Farm Board. It is possibly the intention of the farm bloc, when private speculation has been repressed, to replace futures trading with price insurance. We suspect that two years' experience with the Farm Board has been interpreted by the farm bloc as indicating a gap in the Agricultural Marketing Act. In the Act there was the intent to minimize speculation. This objective, however, the Farm Board has not been able to approach, because the Grain Stabilization Corporation and the Farmers' National Grain Corporation have become deeply involved in trading in futures, directly and indirectly. This putative gap in the working of the Act it is sought to close by new legislation, to be administered by the Department of Agriculture for the benefit of the subsidiaries of the Farm Board but without responsibility imposed on the Farm Board.

This study is the work of Alonzo E. Taylor

APPENDIX

SELLING FUTURES FOR RUSSIAN ACCOUNT

In the course of business on the wheat exchange in the Chicago Board of Trade on Tuesday, September 9, on Wednesday, September 10, and on Thursday, September 11, 1930, wheat futures contracts to the extent of 7,765,000 bushels were sold by members of the clearing house on orders from J. S. Bache and Company, Wachsman and Wassall, and A. Norden and Company, New York. Rumors relating to the eventual account of these sales having become disseminated in exchange circles, on September 12, 1930, J. W. Badenoch, chairman of the Business Conduct Committee of the Board of Trade, brought the transactions to the attention of the office of L. A. Fitz, supervisor of grain exchanges for the Department of Agriculture. On Monday, September 15, 1930, the Supervisor of Grain Exchanges reported to the Chairman of the Business Conduct Committee that the records of the Chicago office did not disclose reports bearing on the rumor of selling of wheat futures for the account of the Russian government. During that week representatives of the Department of Agriculture learned through direct inquiry in New York that the transactions under consideration had been carried out on the Chicago Board of Trade in accordance with orders received from the New York houses named above, acting for the All-Russian Textile Syndicate. The order to the All-Russian Textile Syndicate came from Chlebtorg, a Hamburg subsidiary of the Export Chleb, of Moscow, the Russian grain monopoly controlled by the Soviet government.

On Saturday, September 20, 1930, the Secretary of Agriculture sent the following telegram to President J. S. Bunnell, of the Chicago Board of Trade:

An inquiry was undertaken by the Department of Agriculture in consequence of certain rumors. This inquiry revealed beyond all question of doubt the heavy short selling of wheat upon the Chicago market by the Russian Government. There can be no question that this selling has contributed to the fall in the price of wheat and to the injury of American farmers now engaged in their intensive marketing season. Obviously it would be impossible for Soviet Russia to deliver grain in Chicago over our tariff of forty-two cents a bushel. I should be glad to know from you what provision your Exchange has made or can make for the protection of our American farmers from such activities.

The following telegram was sent in reply by the President of the Chicago Board of Trade:

Replying to your telegram to me. We will appreciate receiving the facts upon which telegram was based and suggest they be laid before our Business Conduct Committee immediately. Suggest you take up with Secretary of State rights of Soviet Russia to transact business in the United States through its corporate agents. It should be remembered that the Chicago Board of Trade is recognized world market and hedges protecting grain in all positions all over the world are customarily placed here.

On Saturday, September 20, 1930, the Secretary of Agriculture sent the following telegram to the President of the Chicago Board of Trade:

I am glad to afford your Business Conduct Committee full facts. However every bushel of short sales by the Soviet Government was sold by your members from whom no doubt you can get information. These transactions by the Russian Government are not based upon even a remote possibility of delivery upon your market or in the United States and have the effect of manipulating the price downward against every farmer who has sold his wheat since these short sales were executed. A new question of broad public policy lies before your Board to consider and it is thus primarily a question for the Chicago Board of Trade to consider its position as providing a free market for the American farmer and the consumers of the world. The law provides the Board of Trade shall make such regulations as "provide for the prevention of manipulation of prices." I should be glad to hear your action in respect to these transactions.

On September 15, 1930, the Business Conduct Committee of the Chicago Board of Trade instituted an inquiry into the nature of the orders executed on the Chicago Board of Trade on instructions from the three named New York houses. On the same day the President and Secretary of the Chicago Board of Trade were subpoenaed to appear before the committee of the House of Representatives set up "to investigate communist activities in the United States." On September 26, 1930, the directors of the Chicago Board of Trade adopted a resolution which was embodied in the following telegram sent to Secretary Hyde on that date:

Following the interview of our Committee with you yesterday and appreciating the courtesy extended to the Committee and the information you have furnished us, the Directors of the Chicago

Board of Trade at a meeting held this morning expressing the desire to co-operate with the Government to the fullest extent in protecting the interests of the people of our country and in furthering maintenance of the principles of our Government unanimously adopted the following resolution: "The Board has considered the situation brought to their attention by the Secretary of Agriculture respecting the short selling of wheat on the Chicago Board of Trade by the Russian Soviet Government. The Board wishes to show every evidence of co-operation in the protection of the American Farmer in the free grain markets. *It is the conclusion of the Board that the selling of futures upon our exchanges by any foreign government is a new development of commerce of seriously objectionable character and it must be brought to an end.* The Board through its Business Conduct Committee has always discountenanced bear raids and manipulation of prices and it again instructs that Committee to take particularly vigorous measures necessary to prevent such activities. In formulating their judgment as to such activities unduly large short selling as distinguished from hedging may be considered as evidence thereof." I trust the above action of our Board will meet with your approval and evidence a spirit of the fullest co-operation.... [Italics ours.]

The resolution of the Board of Trade makes no distinction between foreign and domestic private traders, but stands merely to prevent the selling of futures by a foreign government. Foreign governments, noting the limited extent of the resolution, will perhaps feel moved to express their appreciation of the favor accorded to them in being still permitted to buy futures on the American grain exchanges. The Russian sale is the first occurrence of a sale of futures by a foreign government, but many purchases have been made for account of foreign governments.

Thereafter, the House Committee held hearings in Chicago and in New York and examined officials of the Chicago Board of Trade, members of the three New York houses which handled the Russian orders, and E. Y. Belitsky, the vice-president and treasurer of the All-Russian Textile Syndicate. The testimony is to be found in the printed report of the *Hearings*[1] of the Committee.

On September 20 and 22, 1930, statements were released by E. Y. Belitsky. These statements, together with his testimony before the Congressional Committee, and a formal statement of the Russian position printed in the *Economic Review of the Soviet Union* under date of October 1, 1930, constitute the public case of the All-Russian Textile Syndicate.

[1] *Hearings before a Special Committee to Investigate Communist Activities in the United States of the House of Representatives* (Seventy-first Congress, Second Session), Part 3, Vol. IV, and Part 4, Vol. III.

Three questions are to be answered in a consideration of this episode. (1) What was the commercial nature of the transactions involved in selling the wheat contracts to the extent of 7,765,000 bushels on the three market days of September 9, 10, and 11, 1930? (2) Was there an ulterior intent in the original source of the selling orders, an intent and motive (equivalent to price manipulation) outside of the commercial characteristics of the transaction? (3) What was the effect on the price of wheat?

It is convenient to consider the last question first, thereafter the first question, and the second question last.

Table I (p. 264) presents the record of trading in wheat futures contracts on the Chicago Board of Trade during September 1930, including only the December, not the September, futures. The sales for Russian account were not in September futures. Apart from direct information to this effect, it is clear that this must have been the case because the volume of Russian sales was six times the volume of September sales during those three days. The sales were distributed through the December, March, and May futures in the following approximate amounts: December, 3.7 million bushels; March, 3.1 million bushels; and May, 1.0 million bushels. We take it as obvious that any possible influence on the autumnal farm price of wheat could have been attributable only to sales in the December market. We shall confine our analysis to the December prices, all the more since any influence through trading in March and May contracts was covered by the pegging of the wheat price in November.

Confining ourselves, therefore, to the sales of December futures, we have set the data for September 9, 10, and 11 in italics.

Regarding the data, one is first struck with the fact that the total volume of sales, and the average, were lowest for the month in the second week of the month, when the Russian sales occurred. Trade was high during the first week, fell off a third during the second week, rose during the third week, and rose still more during the fourth week, but did not reach the volume of the first week's trading, which contained only five trading days. September 10 was the fourth lightest trading day in wheat futures during September. During the three days September 9, 10, and 11, the total sales of December futures were nearly 71 million bushels, of which 3.7 million were executed on Russian orders. By chance, the Russian transactions occurred, therefore, not in a week of heavy sales but in a week of light sales. According to the testimony of the commission houses, the sales

were in small lots, no less than ninety-five, executed through eight members of the clearing house and the orders were limit orders, not orders to sell at the market.

TABLE I.—DECEMBER FUTURES PRICES AND VOLUMES OF TRADING IN DECEMBER FUTURES, AT CHICAGO, DURING SEPTEMBER 1930*

Date	Open	High	Low	Close	Volume of trading in December futures (*Thousand bushels*)
	(*Cents per bushel*)				
1930					
Sept. 1[a]	....	....	....	....	.....
2	90.4	90.8	88.6	88.8	40,253
3	88.9	89.6	88.0	88.3	26,760
4	88.2	88.6	86.8	87.3	27,895
5	88.1	89.2	88.0	89.1	27,470
6	89.2	93.0	88.4	90.8	37,017
Average	89.0	90.2	88.0	88.9	31,879
8	91.6	92.6	89.4	89.4	26,497
9	*88.9*	*89.6*	*87.6*	*88.1*	*27,893*
10	*88.8*	*89.1*	*88.0*	*88.6*	*18,120*
11	*87.2*	*87.6*	*86.5*	*87.2*	*24,922*
12	86.4	86.8	85.8	86.4	22,485
13	86.6	87.1	85.6	85.7	14,118
Average	88.2	88.8	87.2	87.6	22,339
15	86.7	87.0	84.4	85.1	28,651
16	84.7	88.6	84.4	87.1	36,843
17	86.9	87.6	86.2	87.3	25,888
18	87.1	87.8	86.6	86.8	16,483
19	85.7	85.9	84.8	85.3	25,172
20	85.2	86.9	84.6	85.1	17,707
Average	86.0	87.3	85.2	86.1	25,124
22	85.1	85.9	84.5	84.7	19,192
23	84.4	84.6	82.2	82.8	34,306
24	82.6	83.2	80.8	83.1	35,280
25	83.4	84.5	82.2	82.9	27,694
26	82.7	82.9	80.2	80.5	29,130
27	79.2	80.0	78.0	78.1	30,620
Average	82.9	83.5	81.3	82.0	29,370
29	76.8	78.9	75.9	77.4	38,643
30	78.6	79.8	77.2	78.2	29,773

* Data for futures prices from *Daily Trade Bulletin*, Chicago; data for volume of trading from *Chicago Journal of Commerce*. When a range of quotations is given, the average is taken as the price of that day.

[a] Holiday.

Looking over the table, one observes an irregular but progressive decline in the wheat price, amounting to about 10 cents for the month. During September the general atmosphere of the market was bearish. On September 10, 1930, the Crop Reporting Board of the Department of Agriculture issued a report that was interpreted as bearish. The sales and shipments of Russian wheat, exceeding all expectations, were a depressing factor in the European wheat market. European wheat merchants had sensed the impending decline in wheat prices. The depression of the trade cycle was deepening. In consideration of the background and of the particular circumstances of the market, we find ourselves unable, in the record of prices and transactions on the Chicago Board of Trade during September 1930, to make the inference that any particular price factor was in operation during the three days of September 9–11. No price decline of 10 cents per bushel during a month proceeds evenly; the irregularities in Table I are about what would be expected; the variations seem to us to disclose no indication that during the three days September 9–11 any particular influences of an outstanding and depressing nature were peculiarly in operation. One does not observe that there were particularly large declines in price between the opening and closing prices on either of these days.

In the telegrams of the Secretary of Agriculture it was urged that the transactions had "the effect of manipulating the price downward" and that the "selling has contributed to the fall in the price of wheat." These expressions bring up the distinction between a theoretical postulate and a practical effect. In the view of the members of the mathematical school of economists, the price of wheat in Chicago tends to be influenced by the price of every grain in Chicago and by the prices of wheat and of other grains in every country of the world engaged in international trade. But in the practical sense, it would not be contended that the current price of wheat in Chicago is sensibly or discernibly affected by each of these numerous and individual factors. In this sense, agreement with the theoretical postulate on the hypothetical effect of trading operations would not imply that a practical effect had been in evidence. There may be sound reasons of policy for prohibiting sales of wheat futures by foreigners (nationals or governments) on the Chicago Board of Trade; but in the price material of September 1930 we are able to find no indication that the downward course of wheat prices was sensibly accelerated or exaggerated by the Russian sales during September 9–11.

The next question (1) concerns the commercial nature of the transaction: was it short selling or hedging? It is important to invoke a strict interpretation of the facts and to avoid misconstruction of the technical interpretation. Without a tariff, the cost of

transporting wheat from Russia to Chicago would make delivery impossible. Also, wheat raised in the Pacific states, east of the Alleghenies, and in the fringe of the hard winter-wheat belt in Texas and southern Oklahoma cannot be delivered against futures in Chicago as a practical operation. Wheat is hedged regularly in Chicago and Winnipeg under conditions where delivery is practically impossible, without this fact disturbing the definition of the transactions as hedging. Domestic and international hedging are essentially identical, but differ in devices of execution. The scope of international arbitrage is not definitely conditioned on the physical facility of delivery or acceptance. There are reasons for believing that one of the Australian wheat pools once hedged receipts in the Winnipeg market. Grain exporters from the Southern Hemisphere and grain importers in western Europe (and indeed flour millers in central Europe) have frequently hedged in Chicago, and considerable international hedging of wheat has been done in Winnipeg. Trading in Canadian wheat futures is now being practiced on the New York Produce Exchange; this means speculation on a domestic exchange in a foreign commodity, the hedging of grain in transit or in store at Eastern lake ports. It is indeed one of the peculiar virtues of trading in futures that it facilitates international operations which would be otherwise conditioned by physical limitations.

The head of the All-Russian Textile Syndicate has made the categorical statement that the transactions in question were hedging. The Russian wheat export company was receiving large amounts of wheat and selling it upon a falling market. Such circumstances would naturally prompt hedging in a competent management. In fact, the Russian export company occupied a position which may be compared with that of the Farmers' National Grain Corporation when it hedged its receipts.

The Chicago market is so much larger than the Liverpool market that international hedgers regard it as the ruling market. The same volume of wheat sold in three days in Liverpool would have substantially lowered prices, other things equal; therefore, more would have been accomplished in depressing the Chicago price by selling the futures in Liverpool than by selling them in Chicago. We take it that the Syndicate is covering its sales of futures by buying futures at commercially opportune moments, with the March and May markets still at their disposal. December wheat futures to the extent of 430,000 bushels were bought on September 24, 1930.

Coming lastly to the remaining question (2), have we evidence of the possibility of an ulterior motive or intention on the part of the Russian grain exporting organization or the Soviet government? The initial public inference was that a disorganization of the wheat market was contemplated. We hold no brief for the national or international policies of the Soviet government of Russia. It is communistic policy and practice to employ sabotage and disorganization in capitalistic countries, in preparation for hoped-for revolution. Desirous of supplanting the capitalistic system with communism, the Soviet government in many countries has variously undertaken measures designed to create dissatisfaction with the existing order in capitalistic countries. A training school has been in operation for the purpose of instructing communistic emissaries in methods of disorganizing capitalistic processes and upsetting traditional forms of government. To disorganize the wheat market would have represented such a stirring up of disorder.

At the same time, one should hesitate to impute to Soviet Russia as an act of sabotage a transaction obviously futile in this regard. Futility is often represented as an outstanding Russian characteristic, but we do not believe the naïve ambition occurred to anyone in position of authority in Russia to upset the Chicago wheat market by secretly selling seven million bushels of wheat futures scattered from December to May. If the Russians desired to disorganize the wheat market of the world, they had a ready and effective method at hand, namely, the sale of cash wheat. Russian exports of wheat during the autumn of 1930 amounted to 73 million bushels. The movement began in August. According to Broomhall's *Corn Trade News*, in the four weeks of September the wheat exports from south Russia approached 8 million bushels. In addition, the program of exports was being publicly developed by accumulation of charters and wheat was being offered for deferred shipment. If one seeks for the influence of Russia on the wheat price, this is to be found in the exports of physical wheat and not in the sale of seven million bushels of wheat futures on the Chicago Board of Trade.

There is no way of determining at a distance whether the Russian wheat was exported in such a way as to secure the best price for it or in such a way as also to injure the European price. Assuredly, the futures sold in Chicago depressed the American price directly less than a sale of the same volume of futures in Liverpool would have depressed the American price indirectly. Certainly the

export movement was unskilfully handled, since charters were secured in advance of sales and a considerable proportion was shipped on consignment and in effect sold at auction to clear the boats. At the same time it was accepted in foreign trading circles that the Russians were short of foreign exchange to meet commitments; and though it probably suited the political bureau of the Russian government to have western European grain markets disorganized by their exports, it did not suit the administrators and engineers in charge of the Five-Year Plan, who were in need of foreign exchange to pay for equipment purchased abroad. The red International may desire to disrupt foreign markets; but the practical interest of the Piatiletka lies in the utilization of foreign markets. The second year of the Five-Year Plan brought an unfavorable turn in the foreign balance over the first year, since imports rose from 836 million to 1,069 million rubles, while exports rose from 878 million to 1,002 million rubles.

As a matter of historical record, the episode recounted above deserves mention. But in our view, the episode has no bearing upon the relation of short selling to the price of wheat.

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