AUTHOR'S NOTE

There was a major drought in 1983 which, as was to be expected, was accompanied by a high level of volatility in futures prices and subsequent complaints about futures markets. The Congress was sensitive to complaints, and the Joint Economic Committee held hearings. Senator Jepson posed a list of questions to be answered by the people invited to testify before the committee.

My paper was an attempt to appraise the quality of speculation and to make a case for research into the nature and quality of speculation. At the hearing, the questions from the committee were moderate and showed a much better appreciation of the role of markets than I had experienced at earlier hearings. No legislative proposals came forth. That was downright encouraging.

IMPROVING THE EFFICIENCY OF COMMODITY FUTURES MARKETS

CHAPTER 41

Grain and soybean prices have been unusually volatile during the past year. This has led to criticism of and questions about the pricing performance of futures markets. The central question should go to the quality of speculation in futures markets because these are indeed speculative markets. Has the quality of speculation measured up to the standard of performance that we have come to expect? How can speculative performance be improved? These are the questions on which we should focus.

The past year has been an unusually difficult challenge to the market because of the combined effects of government programs and adverse weather on the supply of grain and soybeans. Evaluating the quality of the job that markets have done is very difficult because these are not established standards of excellence—such as par on a golf course—by which we can measure performance. We can establish an ideal and then observe that it was not met, but how close we should reasonably expect the market to come to the ideal has not been established. Ideally, the markets should have quickly appraised the impact of programs on acreage and adjusted prices. Then, as the adverse growing season developed, they should have moved up to a level that would have pulled carryovers down to minimum pipeline levels and held stable until the next harvest. Some modification of the ideal is necessary. In actuality, it is necessary to put prices above the equilibrium levels to get users' attention and get them to make adjustments. Thus, historically we have had price patterns of early seasonal peaks during short crop years. And such peaks have been essential to effective market performance. Lacking performance standards, we can only look at what has happened and make some qualitative judgments. We can take a cursory look at wheat, corn, and soybean price performance.

May 1984 wheat futures started trading at about $4.15 in April 1983 and decreased to $3.75 in July. Early on, the market overestimated the impact of government programs on production and corrected its mistake. The mistake was not large. With the drought, the price rose rapidly from $3.75 in July to a $4.20 to $4.30 range in late August through early September. These then followed a decline to

T. A. Hieronymus is professor emeritus of agricultural economics, University of Illinois. Testimony before the Joint Economic Committee of Congress, April 25, 1984.

$3.30 in February and a recovery to $3.75 in early April. I should judge this as a poor price performance. The market should have recognized that there would be a large carryover and gone no higher than necessary to pull wheat out of the reserve and then gone no lower than necessary to hold substantial quantities in the reserve. The basic mistake that the wheat market made was to follow the lead of corn and soybeans, which were in real shortage.

May 1984 corn futures decreased from $3.20 in May 1983 to $2.90 in late June. The decrease was the result of overestimating the effect of government programs on production. The planted acreage was larger than expected. Beginning in early July, the price rose to more than $3.80 in late August as the drought continued, and its effects became apparent. The price stayed in a $3.65 to $3.85 range for several weeks before falling to $3.40 by the third week of October. There followed an increase to $3.60 by the third week of November, a subsequent decrease to about $3.22 in February, and a rise to $3.60 in early April.

How good was this performance? First, it is too early to tell because I don't know where this thing is going to wind up. Is the current price just right to make the existing supply last until the new crop is available, or is it so high as to result in an excessive carryover, or is it so low that an increase will be necessary to make supplies last until harvest? I don't know. One reason is that I don't know how large existing supplies are. This comment is necessarily written before April 23, and on the afternoon of April 23 the USDA estimate of stocks of corn on April 1 will be released. At that time I will have a more accurate measure of the rationing problem. I do know that there will have to be a major reduction, on the order of 32 percent, in feed use from the average of the past three years. Even when I know the size of the estimate of existing stocks, I will not have the price that will be required to just run out at the end of the year. We have not had enough experience with an adjustment of this magnitude to make a reliable estimate.

When the crop year has ended, we can look back and form some judgments about the market's performance. At this time, the rapid rise from $2.90 to $3.80 does not appear excessive because of the magnitude of the short fall in supply. The volatility of prices during the August–September period with limit-up days followed by limit-down days does appear large. The length of time that the price stayed high does appear to be briefer than we should think necessary to get users of corn to make adjustments. The rally in late October and early November was the result of an unexpectedly small carryover from last crop year. It was not evidence of poor market performance. At this time the decline from November to February appears to have been excessive and a speculative error. But I can only say that since the price has gone back up to its November level. The market may have to go back up to a level that will pull CCC corn out of inventory. It may not. I don't know.

May soybean futures decreased from $7.25 in April 1983 to $6.35 at the end of June. The impending shortage took over and put the price above $9.50 by the end of August. There was a quick, vigorous, and fully justified response to supply conditions. The market traded in a $9.00 to $9.70 range for six weeks. Prices were quite volatile during the period. Much of the criticism of market performance during the past year is focused on this volatility, and it did seem excessive. However, the range was only 7.5 percent of the median for the period. This is not large when we recall that estimates of the equilibrium ranged from $8.00 to $12.00 and higher. It is quite small when compared to volatility in securities markets thus far in 1984.

The May futures price decreased from $9.00 in late September to $7.10 in mid-February and has since recovered to the $8.00 area. The future is uncertain. The April 1 stock report is uncertain and of critical importance. At this time and with the benefit of hindsight it appears that the decrease from September to February was greater than justified by the supply-demand conditions. But we cannot evaluate the pricing performance of the soybean market until the season has ended.

How good has the pricing performance of grain and soybean futures markets been since last summer? Compared to what? Compared to optimum, it has moved excessive amounts and been too volatile. But these markets have operated in situations of unprecedented uncertainty. The supply-demand-price situation is much less uncertain today than it was last fall, but great uncertainty remains. What will be the average price of corn and soybeans between now and harvest? I have some thoughts about it, but I would not be so pretentious as to think that I could come within 10 percent. What I am saying is that we may expect and demand too much from speculative markets. It has been a frustrating year for us fundamental-type market analysts. We have had a lot of surprises. There may be a lot of "sour grapes" in some of the current criticism of markets.

I would now turn my attention to the specific questions that Senator Jepsen posed.

1. HAS THE MARKET MOVED AWAY FROM "FUNDAMENTALS?"

No. First, there is no way that a market can move away from fundamental forces. There is one inevitable equilibrium, market-clearing price. The market makes errors in anticipating the equilibrium price and moving to it, but the errors are always corrected. Some of the lines of causation run from speculation in futures markets to their influence on cash prices. To the extent that speculators control inventory, they influence interim prices. However, the primary lines of causation in interim price behavior are between producers and consumers. Producers almost always hold a high proportion of the existing inventory and the rate at which they feed it on the market is the dominant factor in interim prices. Processors and end users take a lot or a little forward cover and thereby influence interim prices. The decisions that these people make are speculative. They form judgments on the basis of their perception of market fundamentals. Second, the USDA supply-demand releases get widespread attention and reaction and, I sometimes think, too much credence. Commission houses spend a lot of money on fundamental analysis, and most of their releases treat with fundamentals. The statistical releases of the USDA are anticipated and responded to. It is my impression that there has been an ever-increasing amount of information about supplies, rates of use, and prices during the past thirty-five years.

2. Has the quality of trading behavior changed?

I don't know. I have the general impression that is held by many people that much position taking is based on past price patterns and "technical" considerations. If this impression is correct, the quality of trading has deteriorated. These are speculative markets; and the essence of speculation is foresight, the anticipation and discounting of futures events into current prices. However, to the best of my knowledge no one knows who takes and holds positions or the basis on which judgments are made. There need to be studies made of market composition similar to the old Commodity Exchange Authority cross-section surveys.

3. What role and influence does "system-type" trading have in today's futures markets?

Again, I don't know. Judging from the proliferation of commodity funds and the amount of money involved, I should judge that it is a growing role and influence. It is my impression that a high proportion of these use "system-type" trading. The funds are a significant source of new speculative capital, but I doubt that they are of major influence on price behavior. I think that in the aggregate the funds break even gross and lose net by the cost of commission and management fees. I suspect that they largely offset each other in a given market. But again, the answers are not known. There needs to be more information developed and studies made.

4. Is there a need to improve the accessibility, quality, and timeliness of market information?

The amount of supply, use, and price information has increased rapidly and is instantly available. The communication revolution is alive and well. Volume of trading and open interest are available. However, information about the composition of open interest is collected by the CFTC, but only a little is made available and it is quite late. More and timely information would be useful.

5. How can the liquidity of the market be improved?

Major markets are adequately liquid. Volume of trading is quite large in relation to changes in open interest. In some markets in some contract months, a reasonable amount of prudence is required in placing orders. The patience required is not an undue burden on out-of-pit traders. It should be kept in mind that there is a cost of liquidity.

6. Are self-policing methods and CFTC rules and regulations adequate to promote market activity yet ensure the protection of the public interest?

There are three levels of futures market regulation: CFTC, exchanges, and markets. The self-policing by exchanges is of greater importance than regulation by the CFTC. But the great regulator is the competition of the market itself. Futures markets are the closest approximation to pure competition in existence. Competition regulates itself into efficiency and equity.

We should look for places to deregulate rather than regulate. One first point of deregulation should be daily trading limits. Position limits may be desirable, but trading limits are not. I think that regulation of position limits should be removed from the CFTC and made a responsibility of exchanges. Problems of balance have arisen because of control of managed accounts. The exchanges are in a more flexible and thus a better position to maintain competitive balance than is the CFTC.

7. To what extent has speculative trading affected trading for hedging purposes?

It has enabled it. On the other side of a hedged position is a speculative position. Speculators have accommodated hedgers very well during the past year. Open interest in wheat, corn, soybeans, soybean oil, and soybean meal has been much larger than during the preceding two years. The same is true of both long and short reported hedges. The markets have fulfilled their risk-shifting function very well.

We should note in passing that the unusually large short hedges in corn and soybeans last fall had a lot of forward selling by farmers behind them. Open interest increased rapidly during July and August. Farmers were taking advantage of rising prices.

8. What are your views on the future prospects and potential benefits of computerized trading versus pit trading?

As everyone knows, electronic communication and data processing are increasing rapidly. Potential is limitless, thus some system may be devised that will supplant direct person-to-person trading. But the state of the art is not so advanced at this time. I think such a system will gradually evolve in bits and pieces.

9. Why have the futures markets failed to attract greater farmer participation?

They do not fail to attract farmer participation, and the amount of farmer participation has been increasing, especially during the past decade. Surveys indicate that farmers make relatively little direct use of futures markets in marketing their crops and livestock. I think that the primary reason is that they prefer to use forward contracts and delayed pricing arrangements. Thus, the use of futures markets by farmers is indirect. They make forward contracts with elevators, and the elevators hedge in futures.

Over time farmers have shown a great deal of interest in improving their marketing skills. This interest expanded rapidly during the price turbulence of the 1970s. I have worked closely with farmers in this connection. It is my observation that farmers are increasingly knowledgeable about factors affecting prices, increasingly skilled in price forecasting, and are doing an improved job of distributing sales over time so that they balance risks and aim toward high average prices.

I think that when the year is over, we will find that farmers have done a respectable job of marketing their 1983 crops. Reported short hedges in soybeans last September 30 were 399 million bushels compared to 211 the year before. Short hedges in corn were 532 million, up from 380 million the year before. Farmers sold more than a usual amount into what turned out to be high prices. Farmers are pretty respectable speculators and are improving.

10. How useful will options trading be for farmers?

It remains to be seen. Buying puts is a conceptually useful insurance system. It will be actually useful if it is cheap enough. Usefulness of options will depend on options prices, and that remains to be seen.

I would make a summary comment. The past year has been one of unusually great speculative stress in grains and soybeans. The futures markets have performed well in their basic risk-shifting functions. Their speculative pricing performance has been less than optimum, but given the extreme uncertainty of the supply-demand situation it is difficult to fault them, at least until we know at the end of the year what they should have done. My first point is that markets work well and that a basic principle should be observed: If it ain't broke, don't fix it.

We need to recognize, however, that improvement in the quality of speculation that would lead to greater price stability is desirable. How to achieve it? In my foregoing comments I have alluded to three things. First, some of the volatility of prices may have been the result of one set of thinking directing managed accounts that aggregate more than speculative limits. Resulting imbalance of power and countervailing power may have been responsible for some of the large and erratic price variations. If so, a first step is to remove CFTC speculative limits and add the maintenance of power balance to the responsibility of the exchanges.

Second, we do not know the relative importance of commodity fund trading or its influence on price behavior. The basic data are available to the CFTC, and I think that the CFTC should be responsible for making and encouraging others to make studies appraising the importance of the growth in fund trading.

Third, more and timely information about the composition of open interest in markets would be useful to market analysts, as would cross-section surveys of market composition. The CFTC has unique access to information, and more use should be made of it.

Finally, the central lesson to me from my own observations and deliberation is that we need to have faith in competitive markets. Exchanges succeed or fail (and more have failed than succeeded) on the basis of their ability to maintain competitive markets that serve the public interest. Futures trading is a zero-sum game. The better speculators gain and grow in importance, and the poorer speculators lose and go away. Markets are a continuous spelldown. They are very hard to beat, which is convincing evidence that they are quite good.