

AUTHOR'S NOTE

In the early 1960s, the Chicago Mercantile Exchange proposed the development of a live cattle futures market. It drew a lot of negative response from ranchers and cattle feeders and their trade associations. It was of the “don’t turn the fate of our industry over to gamblers in the futures markets” type. An invitation to address the subject at a meeting of the American Meat Institute seemed a fun outing and an opportunity to bring the facts of economic life to a group who should already know them.

It was another lesson in why economists should not take themselves seriously. I presented the paper and was asked to leave the room so they could discuss the question. When we reassembled for lunch, I discovered that they had voted unanimously to use their influence to oppose the development of a cattle futures market. But, it was a good lunch featuring martinis and filet mignon, and the inevitable market did develop and prosper. It was a lesson in economic inevitability.

THE DESIRABILITY OF A CATTLE FUTURES MARKET

CHAPTER 21

The general question of having some kind of cattle and beef risk-shifting system is not new. I note that there was an article in *Illinois Farm Economics* in January 1952 entitled "Hedging Cattle Feeding Operations," by Hieronymus, Scott, and Wills. It has been a long time since I read that article, but my recollection is that we explored the possibility of hedging cattle on feed in various existing media (commodity futures and securities). We were not successful. There has been forward trading in various kinds of products for a very long time. The history of futures trading in hogs goes back at least thirty years.

I think that the fundamental conditions for futures trading in the cattle complex are present and that some form of forward contracting is likely to develop. The most sophisticated and efficient system of forward contracting is futures trading, and so I expect that futures trading will develop if an effective contract can be worked out.

WHAT MAKES A FUTURES MARKET?

At the cost of oversimplification, I would answer this question by saying that futures markets evolve when there are risks present that the holders need and desire to shift to other people. Futures trading develops in the presence of risk shifting. All else—the speculation, the contract terms, and place of trading—falls into place around this central consideration. Futures markets are sometimes started where major risk shifting does not occur. In the past, these markets have faded and disappeared. I think that futures markets cannot exist if they do not serve the useful economic function of acting as a risk-shifting medium.

On the other hand, some kind of forward contracting system will evolve if a risk-shifting need is present. It may or may not take the formalized futures trading form, but it will nonetheless exist and be real. The question at hand, therefore, is not whether a futures market in the cattle complex is desirable, but what form of forward contracting in the cattle complex is most desirable.

We can best see the real nature of a futures market as we look at the structure of the open interest. There are hedgers on one side and speculators on the other.

T. A. Hieronymus is professor of agricultural economics, University of Illinois. Talk presented to the American Meat Institute, August 13, 1964.

Hedgers sell for deferred delivery, and speculators buy for deferred delivery. Hedgers are predominantly short, and speculators are predominantly long. In well-established futures markets, the total of the open interest tends to equal the amount of inventory that is in hedgeable position. In the grains, the open interest varies seasonally as the inventories vary, rising to a peak at harvest and reaching a minimum just before the next harvest.

Forward contracting in grains and other commodities preceded formalized futures trading. The establishment of futures markets has been nothing more nor less than codifying already existing trade practices.

The second major aspect of futures trading is that of establishing prices. In the hedging process, speculators gain effective control of inventory. Either they take today's price, encouraging the outflow of inventory, or they hold for a higher price at a later time. Thus, the job of establishing the short-term price is in the hands of speculators. Futures markets tend to become the central focus point of the pricing system. This arrangement has worked out satisfactorily in commodities in which there are viable futures markets. This proposition is necessarily true because an unsatisfactory pricing arrangement will not be used. Thus, futures prices are necessarily real commercial prices.

ARE FUTURES TRADING CONDITIONS PRESENT IN THE CATTLE COMPLEX?

We must look at the cattle complex in four parts: stocker and feeder cattle, cattle on feed, dressed beef carcasses, and boneless beef. The question is where the inventory risks exist. On January 1, there were 79 million head of beef cattle in the United States. In addition, there are typically 200 to 250 million pounds of beef in storage. The prices of cattle and meat change substantially over time—there is no question but that there are large aggregate risks.

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The logical hedgers in stocker and feeder cattle futures market would be ranchers, but I would be surprised to find that they would make substantial use of such a market. Primary producers are logical risk bearers—I have particularly observed this fact in grains. They do not really have a great interest in shifting risks to speculators and thus, in effect, producing to contract. The basic reason is that they have a 100 percent equity in the product they sell. Price variation is usually moderate in relation to the total value. Thus, the gross returns are not greatly affected by price variation.

Cattle move from ranges and farms into corn-belt farms and feed yards for fattening. The total tonnage of beef produced in feedlots is large. The length of the feeding period varies, but the average length of time is long, and for the higher priced

animals it is quite long indeed. Thus, the total inventories carried by feeders are large. Fed cattle prices are variable. The combination of large inventories and variable prices makes feeders subject to large risks.

Cattle feeders buy and sell cattle. They operate on a feeding margin. Their gross revenue is much less than the total value of the product. This is especially true for short-fed cattle. Although the proportion of produced values in calf programs is high, the feeding program is quite long, and the chances of price variation are thus great. It follows that cattle feeders are more logical hedgers than are ranchers.

The processor—and here the analogy applies to the cattle feeder—can shift his risks to someone else while proceeding with his ordinary manufacturing processes. The flour miller, for example, must carry large inventories of wheat which vary by season. In the absence of a hedging opportunity, he must concentrate on speculation as the major determinant of his gross margin. In the presence of a hedging opportunity, he can compute his operating margin quite closely, concentrate on technical efficiency in manufacturing, reduce his financing costs substantially, and operate on lower margins than would otherwise be feasible.

If cattle feeders could effectively fix their selling prices at the outset of the feeding period, they could make tight calculations of their raw material cost (feeder cattle), feed costs, and operating costs, and concentrate on efficient cattle feeding. As matters now stand, the biggest factor in contemplating a cattle-feeding operation is the uncertain selling price of cattle.

Cattle feeders are logical hedgers. I think that they are becoming more so and that this trend will continue. The reason for the change is the increasing scale of cattle-feeding operations. The operators of large feed yards and of large scale farm cattle-feeding operations are less logical risk bearers than are the small-lot feeders. The northern Illinois farmer who owns and operates a 240-acre farm and feeds sixty cattle a year is in a much stronger position to assume the risks of price change than is the operator of a commercial feed yard. Although painful, losses of the sort taken during the past year do not seriously endanger his financial position or make a huge difference in his gross income. If he feeds six hundred cattle on the same basis, the increasing need to shift risk becomes readily apparent.

I think that the increase in scale of cattle feeding and the accompanying need to shift risk are such that some kind of forward contracting system for fed cattle will evolve. Thus, the question at issue is not "if" but, rather, what kind.

A comparable basis for shifting risks on dressed carcasses does not seem to exist. I doubt that meat packers have a serious risk-shifting problem. The inventories of dressed beef are not large, and they are fairly constant over time. Price variations can be isolated and absorbed with a modest inventory reserve. A last-in-first-out inventory system seems to work well.

The boneless beef inventories are not large in relation to total beef production. The price is fairly stable and shows a predictable seasonal variation. On the basis of the domestic situation, there seems little need for a hedging medium.

There is a large volume of international trade in boneless beef. The inventories in process at any given time are large. The question of whether an international futures market in boneless beef could be made to work is an interesting one but is apart from the present discussion.

CAN AN EFFECTIVE CONTRACT BE DEVELOPED?

We have traditionally tended to impose a list of conditions that must be met before a futures contract is feasible. I am not convinced that the matter is so troublesome. If a commercial contract for deferred delivery is feasible, so is a futures contract. Commercial feasibility for deferred delivery implies only the need to be able to accurately describe the commodity. The only condition beyond commercial feasibility that I would impose is the absence of monopoly conditions on either the supplier or user side of the market; that is, the price must be competitive. Clearly, the large number of suppliers and users makes control of price impossible.

It appears that under present arrangements, live cattle cannot be effectively traded by description. Yet, it is the very market that has a real need for a risk-shifting medium.

It does appear that cattle carcasses can be traded on the basis of description. There is a substantial amount of trading by description now in the market. Most of it is on the basis of buyers' standards. Generally speaking, it is at the low-choice quality level. This quality level includes a large amount of feedlot beef.

It also appears that a stable bridge exists between carcass beef prices and live cattle prices. That is, cattle prices are a nearly constant percentage of the prices of the carcasses they will make.

These considerations indicate that a live cattle futures based on carcass quality standards is feasible. My inclination is to recommend that all segments of the cattle industry concerned proceed with the development of a workable contract.

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Beyond making these general comments about the contract terms, I do not wish to do more than state a general principle about futures contracts: they must not become a medium of exchange but, rather, must be a hedging and pricing medium. At the same time, they must be deliverable so that the prices will be commercial prices. The ideal contract is one that is so perfectly balanced in advantages of making and taking delivery that delivery is neither made nor taken. Markets that are consistently delivered are not good hedging markets.