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COMMODITY FUTURES TRADING

Preliminary Information on the Viability of the Cattle Futures Markets



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**Resources, Community, and
Economic Development Division****B-226079**

January 16, 1987

The Honorable Patrick J. Leahy
Chairman, Committee on Agriculture,
Nutrition, and Forestry
United States Senate

The Honorable E (Kika) de la Garza
Chairman, Committee on Agriculture
House of Representatives

As required by the Futures Trading Act of 1986, we are providing you with preliminary information on our continuing study of the cattle futures markets. The study was requested by the Senate Committee on Agriculture, Nutrition, and Forestry which, by letter dated July 23, 1986, asked that we investigate the cattle futures markets. More recently, the Futures Trading Act of 1986 (signed into law Nov. 10, 1986) contains a provision also requiring that we study the cattle futures markets and provide your committees with a preliminary report at this time and a final report by November 10, 1987.

The U.S. cattle industry is presently experiencing financial stress and there appear to be a number of underlying reasons for this. The cattle futures markets have been targeted by some as a chief culprit, and a growing number within and outside the industry would like to see the markets abolished. Before this is done, it appears to us that there are a number of issues that need to be examined regarding the cattle futures markets and their relationship with, and impact on, the cattle industry. The purpose of this report is to identify and explain some of these issues.

The sections that follow include (1) background information on the cattle industry in general and the cattle futures markets in particular and (2) our views on the scope and complexities of the study's issues and the approaches we plan to use in dealing with them. The information presented is preliminary and subject to refinement and change as we proceed with the study.

Background

The cattle industry has suffered serious financial stress in recent years. High interest rates, low cattle prices, and declining land values have put pressure on the equity position of many cattlemen. The industry has

been characterized by narrow profit margins in all segments of production and largely negative returns in the cow-calf sector. Although the price of cattle today is twice what it was in the 1950s and 1960s, the decline in purchasing power of the dollars cattlemen receive for their cattle has more than offset this price increase. Since 1980, the real price of cattle has dropped steadily; real prices in the 1980s have been more than a third lower than the average price received from 1954 through 1979.

What is the cause of this financial distress in the cattle industry? The various studies and contacts we have made to date suggest that at least part of the problem may be attributed to changes in the structure of the industry, changes in consumer attitudes toward beef, and competition from the poultry and other food industries that have developed new products and experienced gains in production efficiencies. Others, including many within the cattle industry, believe that cattle futures markets have been a significant cause of low cattle prices.

The Cattle Futures Markets

The cattle futures markets represent one part of the total marketing system through which cattle produced on the farm and ranch move toward retail outlets and the consumer's table. Futures markets, such as those for cattle, have been described as continuous auction markets and as clearing houses for the latest information about supply and demand. They represent meeting places of buyers and sellers of an ever-expanding list of agricultural and nonagricultural commodities. Their primary purpose, in addition to providing a means of price discovery, is to offer a mechanism for the management of price risks. By buying or selling futures contracts—contracts that establish a price level now for items to be delivered later—ranchers, feeders, and other members of the cattle industry, for example, can seek to lock in future prices and achieve what amounts to insurance against adverse price changes. This is called hedging. Other futures market participants are speculative investors who accept, in hopes of possible gain, the price risks that the hedgers wish to avoid.

There are currently 30 agricultural futures markets and 12 agricultural options markets (an option is a contract, paid for in the form of a premium, that gives the buyer the right but not the obligation to buy or sell a futures contract at a specific price within a specified time period). Regarding cattle, the live cattle futures market was created by the Chicago Mercantile Exchange (CME) in November 1964 as a response to the

low, unstable prices and narrow profit margins that were being experienced in the cattle industry at that time. The feeder cattle futures market was established by the CME in November 1971, and the live cattle options market in October 1984. Last year more than 5 million cattle futures and options contracts were traded at the CME, the second largest futures exchange in the United States and the largest exchange for trading livestock commodities.

Although many initiatives have been taken in recent years to increase understanding of futures markets, some within the cattle industry are uncertain of these markets in terms of (1) how to use them and/or (2) what impact the markets have on the cash prices they receive for their cattle. Some claim that such markets have lowered cattle prices, made prices more volatile, and been the subject of manipulation. The Department of Agriculture's (USDA's) announcement of the dairy whole-herd buyout program at the end of March 1986 (a program designed to reduce milk production by reducing the size of the dairy herd) and the ensuing negative impact it temporarily had on cattle prices (both futures and cash) seemed to heighten such anti-futures sentiment. Since then, considerable opinion both within the cattle industry and the Congress has formed that sees the markets as ineffective and unfair; many, in fact, have called for their demise.

Scope and Methodology

Our inquiries thus far have been directed toward obtaining information about the cattle futures markets from a variety of sources. We have, for example, met with officials from (1) the National Cattlemen's Association (NCA), Cattle-Fax, and the Western Livestock Research Information Project in Denver, Colorado; (2) CME and the Commodity Futures Trading Commission (CFTC) in Chicago, Illinois; and (3) CFTC, USDA, the American Cowman's Association, and congressional staff in Washington, D.C. We have also talked with a number of other cow-calf operators, stockers, feeders, packers, futures traders and brokers, agricultural lenders, academicians, and economists. We have also obtained several reports plus other documentation that help explain the workings of and some of the problems with the cattle industry and the related futures markets.

This data-gathering phase of our inquiry is still in process. In addition, we want to determine the extent of research and analysis that has thus far been done relative to many of the concerns that are being discussed about cattle futures. We will evaluate these studies to determine if any

conclusions can be drawn regarding the impact of the cattle futures markets on the cattle industry. We will also determine if there are areas in which prior study appears to be insufficient or lacking. If we identify such areas, we plan to perform our own independent analyses relative to some of these concerns, to the extent that time and our resources and expertise allow.

Areas to Be Included in Our Study

On the basis of our work to date, we have established the following as broad areas we plan to cover during our study. These areas have been discussed with staff from both the Senate and House agriculture committees.

I. Questions in the request letter and subsequent legislation

The letter we received from the Senate agriculture committee asking us to study the cattle futures markets and the subsequent legislation mandating such a review each contained a series of similar questions related to the reaction of the cattle futures markets to the dairy whole-herd buyout program, price relationships between the cattle futures markets and cash markets, the use of forward contracting by packers, and the present delivery system for the live cattle futures contract.

We are in the process of obtaining and analyzing information and preparing our responses to each of these questions.

II. The changing structure of the U.S. cattle industry

The structure of the cattle industry has changed dramatically over the years. There has been movement, for example, from medium-sized cattle herds to herds that are either very small or very large. In fact, 75 percent of the nation's beef cows are now in herds of less than 200 and their owners do not generally depend on the cows as their sole source of income. (A herd size of 250 is thought to be the minimum a full-time cattle producer needs.) The nation's total herd size increased from the mid-1800s until 1975, when it peaked at 132 million head. The trend has been downward since then and now stands at about 101 million head. Average annual per capita beef consumption rose from 66 pounds in the 1950s to a peak of 88 pounds in the 1970s. This trend has since reversed, with the average annual per capita consumption in the 1980s running at 80 pounds. Changes in consumer preferences and increased competition from other food industries help explain why the demand for

beef has been dropping. Although herd size and beef demand (or consumption) have dropped, beef supplies (resulting from herd liquidations and increased slaughter weights) have remained relatively steady. Supplies are expected to begin dropping in 1987. As this happens, assuming that beef demand does not drop further, prices would be expected to rise. Increased prices, however, could lead to a further drop in demand if consumers opt to purchase cheaper, alternative meats or other food products.

Obtaining a better understanding of such changes should help explain why the cattle industry is in a distressed financial condition.

III. Changes in and regulation of cattle market mechanisms

The way in which cattle have been marketed has changed over time. In the mid- to late 1800s, for example, cattle were marketed by dealers who purchased the animals from ranchers and sold them to packers throughout the nation. Cattle were herded great distances, causing weight losses and injuries. With the advent of railroads, cattlemen could move their herds shorter distances to railheads for shipment to larger terminal markets. Packing plants, located adjacent to these markets, purchased about 90 percent of their cattle through 80 such terminal markets during the 1920s.

By 1930 some 200 local auction markets had emerged to allow cattle producers a greater role in cattle sales. By 1975 the number of these types of markets totaled about 2,000, with packers purchasing 20 percent of their cattle through these markets.

Until the late 1940s most cattle marketed in the United States were fed on grass or forage. At that time cattle feeders began "finishing" cattle on excess grain. In 1977 less than 2 percent of 132,000 feedlots were marketing 68 percent of the cattle between the producer and the packer.

The evolution of the feedlot and the relocation of packing houses, near feedlots, facilitated the growth of the direct sale of cattle, increasingly bypassing the auction markets. This increase in direct sales led to the development of forward contracting as a means to provide producers, feeders, and packers with an ability to contract for future delivery of cattle, thus helping both buyers and sellers plan their operations in advance.

Agricultural futures market mechanisms have been an integral part of the marketing of a number of agricultural products for over a century and, with respect to cattle, for over 20 years. These markets evolved primarily in response to unstable cash markets with wide price swings resulting from a glut of low-priced commodities at harvest time and high-priced commodities after harvest.

Cash markets (involving both direct and auction sales), forward contracts, and futures markets are the market mechanisms used today to facilitate commerce in the cattle industry.¹ The evolution of these mechanisms has not been without controversy. As concerns and problems have become known, adjustments have been made to existing mechanisms or new mechanisms have been added. Today, concern has been expressed about the worth of the cattle futures markets to the cattle industry. It is interesting to note that some of the reasons given for establishing the cattle futures markets in the first place are the same reasons now being used by some to suggest that the markets be eliminated. For example, volatile prices and narrow profit margins were conditions that the cattle futures markets were supposed to help alleviate in the 1960s and 1970s. These same conditions exist today.

To help us better understand this apparent irony, we want to study the establishment and evolution of the cattle futures markets in some detail, comparing the conditions that existed in the early 1960s with those that exist today. We want to describe some of the aspects that make the cattle futures markets different from other futures markets. We also plan to obtain information on the changes that have been made to the live cattle and feeder cattle futures contracts since these were first established, including the adoption of a certificate of delivery system with respect to live cattle in 1983 and a cash settlement system for feeder cattle in 1985. Each of these changes was designed to improve the respective contracts by eliminating certain problems and, by so doing, attract additional market participants.

GAO has performed a considerable amount of work examining the regulatory controls over futures trading, but has not focused specifically on

¹Forward contracts add a time dimension to cash markets. Like a cash contract, a forward contract is specific as to location, quality, and amount. Commodity ownership is not transferred, however, on the date the contract is entered into; rather, a forward contract sets the transfer sometime in the future, although the price is often established on the contracting date.

Futures contracts are standardized forward contracts, and futures markets are the organized trading of those contracts. Unlike cash or forward contracts, futures contracts are rarely used to transfer actual ownership of commodities.

the cattle futures markets. In this assignment, we will draw from this prior work, update it, and explain how and by whom the cattle futures markets are regulated. We plan to obtain information regarding past violations in cattle futures and contrast the results with the violations in other futures markets. In this regard, we will examine the oversight of these markets, and in the event that we find weaknesses in this oversight, we will disclose them and recommend actions to correct them.

IV. Concerns about cattle futures markets

There are many who believe that the cattle futures markets are functioning properly and are in the public's best interest. Others, however, do not share this belief and have expressed concerns about these markets and their impact on the cattle industry. The number and breadth of these concerns support our view that the issues are complex, each having many ramifications. Much research and many studies have previously been done, but little effort has been made to consider the results of this research in total. Doing so, we believe, will help answer a number of questions, such as those that follow.

- Do cattle futures and cash prices accurately reflect true supply/demand conditions, or are these prices artificially distorted for any of a number of reasons?
- Should the cattle futures markets be blamed for today's low cattle prices, or are there other economic causes?
- How would discontinuing cattle futures trading affect the health of the cattle industry?
- If cattle futures trading were discontinued, are there other mechanisms that would have to be developed to facilitate cattle marketing and assist in price discovery and risk shifting? What are the pros and cons of any such mechanisms?
- If cattle futures are to continue to be traded, are there changes that could and should be made to improve the cattle futures markets?

In addition to the concerns we were specifically asked to address (as discussed earlier), and in conjunction with questions such as those above, several specific concerns that we see as important and plan to consider include:

Downward bias. There have been charges within the cattle industry that the cattle futures markets exert downward pressure on cattle prices. This is thought to be caused, in part, by an imbalance in the cattle futures markets from the standpoint that commercial hedgers are

predominantly found on the short (or "sell") side of the market, rather than balanced between the short and long (or "buy") sides of the market. Market theory suggests that since all "short" sales must be covered by "long" buys, the imbalance of hedgers is not material. However, since the long buys are covered predominantly by speculators whose investment philosophy is markedly different from that of the hedgers, a number of questions arise.

Are cash prices for cattle lower than they would otherwise be because of the imbalance between selling hedgers and buying speculators in the cattle futures markets? What is the relationship between futures and cash prices? Do futures prices drive cash prices or vice versa or do they both affect each other? Is the difference, or basis, between futures and cash prices consistent over time or does it vary during price upswings and downswings?

Price variability. It has been said that cattle prices today are more variable than before cattle futures were traded. Since the purpose of futures markets is to buffer extreme price swings, an increase in variability is something that should be investigated. Empirical work has been done estimating the amount of price variability in the cattle markets that is unexplained by supply and demand factors. We plan to evaluate the validity of this work and, by so doing, address the question: Have the cattle futures markets resulted in increased variability in cattle prices?

Manipulation. There are those who express confidence in the integrity of the cattle futures markets. Others, however, are less confident and express concern about the susceptibility of these markets to manipulation. Manipulation of a market by a single trader or a group of traders operating together destroys the integrity and credibility of the market and could make it useless as an exchange mechanism. Markets must operate fairly and efficiently to be of optimum use to all participants. Theoretically, a small group could manipulate a market in the short run but the CFTC and the exchanges try to guard against this because of the very negative consequences that could result. In analyzing this concern, the following questions will be considered:

What controls exist to guard against manipulation or other wrongdoing? How many instances of manipulation or wrongdoing have been disclosed and rectified? Is there correlation between the positions of a large trader—or group of traders—and particular price movements? What size trade would it take to move or influence cattle futures prices?

Economic purpose. Before CFTC approves a futures contract for trading, the contract must satisfy a public interest test. To pass this test, the futures exchange must show that the industry the contract is intended to serve is likely to use it to hedge or base prices upon. There is recognition that many members of the cattle industry, for a number of reasons, do not participate directly in the cattle futures markets. As a result, the economic purpose of cattle futures trading has been questioned.

Do the cattle futures markets serve an economic purpose? Do these markets aid in price discovery and provide an opportunity for the cattle industry members to pass on risks to speculators? Were the markets considered to serve an economic purpose when they were first established? Has the question of economic purpose for both the live and feeder cattle contracts been reevaluated since then? Have recent computer-based innovations in stock and futures trading altered the operation and purpose of the markets?

In summary, it is fair to say that cattle futures' proponents and opponents are poles apart. Each side appears to be adamant in its beliefs about cattle futures trading. As the debate about cattle futures continues, there is a need for rational, objective analysis.

We have thus far gathered a considerable amount of information about the cattle industry and cattle futures trading; at the same time, much remains to be done. We will attempt to address as many of these questions as possible, and trust that our final report will be useful to industry and government policymakers who must ultimately decide the course of the cattle industry and the fate of cattle futures.

Because of the preliminary, informational nature of this report, we did not seek comments on a draft of the report from CFTC, CME, or other involved staff. We are sending copies of this report to the Commissioner, Commodity Futures Trading Commission; the President and Chief Executive Officer, Chicago Mercantile Exchange; the Director, Office of Management and Budget; and other interested parties.



Brian P. Crowley
Senior Associate Director

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