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## Pricing Issues in Agricultural Markets

Paul Peterson

Department of Agricultural and Consumer Economics  
University of Illinois

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A previous article ([farmdoc daily, June 25, 2014](#)) discussed the difference between price discovery and price determination, and the trend toward price determination in many agricultural markets. In short, price discovery is the process of finding the price through the interaction of buyers and sellers. It allows the forces of supply and demand to arrive at a transaction price, and typically involves some type of negotiation process between buyers and sellers, such as a central market, an auction, or a commodity exchange where multiple buyers and multiple sellers compete for each transaction.

Negotiated prices are considered to be the fairest for both parties because they provide the highest selling price and the lowest buying price at any particular point in time. In contrast, price determination establishes the price by some other means, or simply relies on some benchmark price – such as a negotiated price reported by someone else – and buyers and sellers agree beforehand to accept whatever that price turns out to be. To better appreciate the drawbacks of price determination, it is useful to examine recent events in the financial markets.

### Price Fixing Methods

So-called "fixing" methods for establishing prices have come under increasing scrutiny as various abuses have come to light, particularly in the financial markets. In certain markets some type of survey, poll, or sampling method is used to arrive at an "official" price, while in other markets a formal committee discusses market conditions and reaches a consensus price. Both methods have weaknesses, beginning with the fact that the price determination process is not open to the general public. This lack of transparency creates suspicion whenever prices move the "wrong" way.

Both methods – surveys and committees – also suffer from the fact that the participants may be able to influence the results by artificially raising or lowering the prices they contribute in an effort to put an upward or downward bias on the final value. Various statistical methods may be used to eliminate extreme values. The "Olympic average" is one such example, in which the highest and lowest scores are eliminated before the final value is calculated. But this won't be effective if the bias occurs in more scores than the number of scores eliminated. In other words, if two or more scores are biased in the same way (up or down) and only one of the scores is eliminated, the final value still will be biased.

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Bias can occur when a number of individuals involved in the price determination process work together to move the price in a certain direction. There may be a formal agreement, but the risk of getting caught and the severe penalties on all parties involved in the scheme make these agreements fairly rare. More common – and much more difficult to detect – are the informal situations where participants in the price-setting process have the same incentive to push the price in a certain direction. The participants work independently, and may or may not be aware of the actions of the other participants. Most or all participants are “on the same side” in this game, so simply adding more participants or requiring each participant to report more information won’t fix the problem.

These informal situations include the manipulation methods used with the London InterBank Offered Rate (LIBOR), a series of widely-used benchmark interest rates. Investigators have found that a number of major banks had the same market positions (long or short) in certain financial instruments and stood to benefit from the same types of price changes (up or down). Each bank reported values to improve its own position, which in turn improved the positions of most, if not all, banks that participated in the LIBOR survey. To date, at least seven financial institutions have reached legal and financial settlements with US and European authorities in connection with the LIBOR investigation.

## **Electronic Trading**

There is a common misconception that electronic trading, by itself, can solve these problems. A good example is the LBMA Silver Price – the new name for what previously was called the London Silver Fix – which uses a series of 30-second trading periods to match buy and sell orders until it finds an equilibrium price, which it then publishes as the “official” value. The only major changes are that trading is now conducted on an electronic platform rather than on a conference call, and the matching process is now performed by a computer algorithm rather than by a person. But according to the [London Bullion Market Association](#), only five firms participate in the process that sets this important benchmark price (LBMA, 2014). Simply transferring a thinly traded market to an electronic platform will not result in a competitive market with competitive prices.

A similar situation exists for the London Gold Fix, a century-old benchmark used to determine the price for the world’s \$18 trillion gold market. Currently just four firms participate in the process that sets this price. A recent [Bloomberg News article](#) reported that 12 firms are competing for the chance to overhaul this market. If the solution turns out to be nothing more than creating an electronic version of the existing market, little will be accomplished.

The primary benefit of electronic trading in these markets comes from having a detailed record, or “paper trail,” of who did what and when they did it. However, it is unclear whether the deterrent effect of a paper trail is effective. Electronic trading can generate a staggering amount of data which is challenging and time-consuming to analyze, particularly in actively-traded markets where there may be millions of transactions each day. In part, some of the questions about the impact of high-frequency trading (HFT) have been difficult to address because the data can accumulate much faster than it can be analyzed. Furthermore, having a record of what someone did is not the same as understanding why they did it.

Having these data is better than not having them, which is the usual situation in telephone-based “voice trading.” Voice markets include everything from one-on-one telephone conversations between buyers and sellers to conference call-type venues and instant message groups that can resemble the “committee” price-setting activities described at the beginning of this article. As part of the changes to [CFTC](#) regulations under the Dodd-Frank Act, all oral communications that lead to the execution of a trade must be recorded and maintained for one year; all written communications including emails and text messages that lead to a cash or forward transaction must be maintained for five years.

## **Agricultural Market Issues**

Cash markets for agricultural commodities struggle with many of these same issues. For example, from the late 1980s until the late 1990s, the price of milk paid to farmers was directly linked to the price of cheese at the National Cheese Exchange in Green Bay, Wisconsin. Trading in Green Bay was conducted behind closed doors, and a steep drop in the price of cheese – and milk – fueled suspicions that prices were being manipulated. One pundit at the time compared it to seeing a school bus parked outside a tavern: you don’t

know that there's a problem, but it still gives you an uneasy feeling. In the end, the National Cheese Exchange closed and the federal government revamped its dairy pricing equations to use prices from USDA surveys.

In the hog market, the majority of transactions are based on prices paid for just 4% of all hogs. Pricing for some of the remaining 96% is based on pork prices and other hog-related values, but most pricing is based in one way or another on hog prices negotiated by someone else. One danger in this approach is that small, isolated pricing discrepancies in the 4% can affect prices in the other 96%. Another danger is that the dwindling number of buyers and sellers who participate in the price discovery process will eventually give up, leaving rest of the industry to fend for itself.

This describes recent events in the slaughter cattle market. More cattle are fed and marketed in the Texas-Oklahoma-New Mexico reporting area than any other, but there was no negotiated trade – none – for the week ending September 28. Furthermore, for five consecutive weeks in September and October fewer than 1,000 head each week were priced on a negotiated basis. For perspective, during this five-week period the total number of cattle priced by formula, forward contract and grid each week ranged from 82,000 to 97,000 head. Cash-basis trade in the Kansas and Colorado reporting areas also has been declining, leaving the Nebraska and Iowa-Southern Minnesota regions to provide the bulk of the price discovery for the nation's cattle industry.

### **Can These Markets Be Saved?**

The purpose of this article is not to tell readers how they should price the commodities they buy or sell, or to point fingers at various parties, or to suggest that the agricultural markets are being manipulated. Instead, the purpose is to point out some of the unintended and often-subtle consequences that can occur with common marketing and pricing practices. Recent examples from the financial markets highlight the serious problems that can result from the widespread use of non-competitive prices.

Negotiated prices that result from one-on-one dealings between buyers and sellers result in the best prices for both buyers and sellers. We realize that these negotiations can be a costly, time-consuming and sometimes uncomfortable process. We also understand that no one wants to receive the worst price, and how this can make some type of "average" price seem attractive, without stopping to think about where the "average" price comes from or how it is determined.

Part of the cost of having – and keeping – viable cash markets for agricultural commodities is to actually participate in them, and not just go along for the ride. Piggy-backing on someone else's price – the economic equivalent of saying "I'll have whatever they're having" – means that you are relying on someone else to decide your buying and selling prices. If you aren't comfortable letting a total stranger make these decisions, the solution is to take a more active role in pricing the commodities you buy and sell.

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