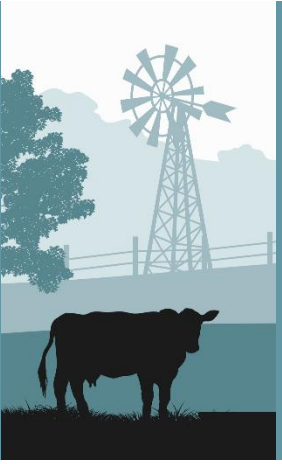

Cattle Markets, Price Discovery, and Emerging Issues

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Cattle Market Risks and Their Effect on Price Discovery

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Price discovery in negotiated sales requires a buyer to make bids and a seller to make offers until both parties agree on price. As fed cattle markets rely on privately negotiated transactions (negotiated cash and other types of agreements are negotiated), it is important to understand how some of the basic risks faced by both sellers and buyers impact price discovery. Research indicates three basic risks impact behavior when buyers and sellers privately negotiate price. Those three risks are advance production risk, matching risk, and negotiation failure risk.

Advance Production Risk

Advance production risk occurs when sellers incur production costs prior to any promise of revenue. Thus, sellers are at risk of losing some or all of their production costs if prices fall below cost of production or if they fail to reach an agreement with any buyer (Sabasi et al., 2013; Menkhaus et al., 2007).

Research finds sellers facing this risk are more likely to make concessions during bargaining and accept lower trade prices rather than risk losing all of their production cost for a product. Buyers know sellers face this risk, and because sellers make concessions during bargaining, signaling they are willing to accept lower prices, buyers are less likely to offer high bid prices (Menkhaus et al., 2007; Menkhaus, Phillips, and Bastian, 2003). Research compares prices in private negotiation market experiments where sellers only produce what they agreed to sell (i.e., produce only what they have forward sold) versus sellers producing inventory prior to negotiating price (Menkhaus, Phillips, and Bastian, 2003). They found price levels were near equilibrium when inventory was sold prior to incurring production cost (2.75 percent above equilibrium) and 7 to 10 percent below the competitive equilibrium when inventory was produced in advance (Menkhaus, Phillips, and Bastian, 2003; Rahman et al., 2019).

Matching Risk

Matching risk comes from 1) being matched with someone in the market who has already traded and feels less pressure to trade compared to their trading partner or 2) trading with someone who is better at bargaining. For example, if you as a seller are paired with a buyer who has already purchased cattle and is less interested in your cattle, that buyer may bid less aggressively, making it harder to reach agreement on price. This can also occur if a buyer meets with a seller who has already sold what he or she planned to sell in that period. This risk creates a potential cost for the trader to try and find someone else interested in trading. Research indicates that traders affected by this risk become more willing to make concessions when haggling over price to ensure a trade occurs rather than risk being matched with someone with whom they will be unable to trade (Menkhaus et al., 2007).

Research finds matching risk can have a significant impact on price discovery and price levels (Menkhaus et al., 2007). Results show that increasing the number of opportunities to match with a trading partner from three times to five times increased prices from about 9 percent under the competitive price to only 3 percent under the competitive price in private negotiation experiments where sellers produced products in advance of sale. Thus, the simple act of not being able to meet with a trade partner can make a significant difference in price discovery and resulting price levels.

Negotiation Failure Risk

Negotiation failure risk is the risk of not coming to agreement during negotiation. Even though time and effort are spent bargaining, there is a risk that no price or terms of trade will be agreed upon (Jones Ritten et al., 2020; Courtois and Subervie, 2015). If such a risk is realized, the buyer and seller involved must search for someone else to trade with. Valuable time has been lost, and an increased chance exists that the next trading partner has either acquired or sold what they need; that is, matching risk increases. In the case of the fed cattle market, this realized risk could result in sellers having to hold onto cattle longer, incurring more costs until a willing buyer is found. For buyers, it could mean not having the amount of cattle desired for the slaughter plant at a given time.

Focus group results in Wyoming found that producers generally felt they had to accept a buyer's terms rather than risk a failed negotiation (Bastian et al., 2018). Empirical research indicating the magnitude of impact from negotiation failure on prices was unavailable at the time of this writing. However, it is expected that negotiation failure risk amplifies the impact of both advance production and matching risks.

Concluding Remarks

Given the nature of these risks (advance production, matching, and negotiation failure), research suggests that sellers are more likely to be at a bargaining disadvantage than buyers when private negotiation is the way buyers and sellers agree on trade price (Bastian, 2019; Menkhaus, Phillips, and Bastian, 2003; Menkhaus et al., 2007). Other research related to producers and bargaining outcomes in other commodity markets supports these findings (Courtois and Subervie, 2015; Shokoohi, Chizari, and Asgari, 2019).

Price discovery within fed cattle markets, particularly for negotiated cash transactions, is impacted by these risks. Thus, when sellers indicate concern over the lack of negotiated cash transactions and related price discovery impacts, this may be, at least in part, because sellers are facing these risks. As the volume of Alternative Marketing Agreements (AMAs) has increased, matching and negotiation failure risks may have increased for feedlots selling exclusively via negotiated cash transactions. It is also important to recognize that AMAs reduce these risks for both buyers and sellers transacting in fed cattle markets. Thus, policy solutions which fail to recognize that these risks affect price discovery and also that AMAs may be a way of reducing these risks (for both buyers and sellers) may well have unintended consequences which make some actors in fed cattle markets better off while also making many others worse off.

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