

Debt obligations are regular payments made to creditors. If cash-flow problems persist, then the need to meet debt obligations may become a serious problem.

Alternative specifications of the transfer price

Tables 1, 2, and 3 outline three examples of alternative transfer prices for corn-based ethanol production. Table 1 outlines profitability over a range of commodity prices when the transfer price is the commodity price plus a \$0.05/bushel delivery premium. Tables 2 and 3 outline profitability, over a range of commodity prices, using window and cost-plus contracts, respectively.

The window contract allows the transfer price to fluctuate between \$2.25/bushel and \$2.75/bushel, but when the commodity price is below \$2.25/bushel, the transfer price stays at \$2.25/bushel and when the commodity price above \$2.75/bushel, the transfer price stays at \$2.75/bushel. In a cost-plus contract, the transfer price is the farm business cost of production plus a \$0.10/bushel premium. The cost of production should always be established before the start of new crop delivery.

An alternative to setting a cost-of-production price would be to use a set price ratio, say 0.50 as the ratio of ethanol price to corn price (ethanol price divided by corn price). For example, a \$1/gallon ethanol price and a \$2/bushel corn price would yield a ratio of 0.50. This ratio should be set prior to the start of delivery for each new crop year. Suppose the producer-owner board of directors set the target price ratio at 0.50 and there is a \$1/gallon contract for the sale of ethanol. Then the corn price paid to producer-owners per their delivery requirements to the ethanol plant is \$2/bushel.

When the transfer price is the commodity price plus a delivery premium (Table 1), profitability in the farm business and in the value-added business moves in opposite directions. The value-added business suffers financially when the commodity price moves upward. This situation would cause significant cash-flow

concerns and possible debt obligation problems when high prices are sustained over time.

When a window contract (Table 2) or cost-plus contract (Table 3) is established, the effects of fluctuations in commodity price on financial viability are spread between the farm business and the value-added business. Clearly, the cost-plus contract offers the value-added business more protection from price volatility. However, establishing a standard cost of production across producers can be difficult.

Final thoughts

Establishing an equitable method for determining the transfer price can reduce the need for the producer-owned, value added business to borrow additional operating funds or make additional equity calls. Moreover, shutting down the value-added business during rough financial times can lead to problems with output contracts and personnel. An issue that heightens the need for an equitable transfer price for livestock producers is that, unlike crop producers, they do not benefit from a price floor established by government farm programs. Much of the transfer price decision will depend on the percentage of the farm business output allocated to meeting contractual obligations of the value-added business. A larger percentage will complicate the transfer price issue, whereas a smaller percentage provides more flexibility.

Managers of the farm business and the producer-owned, value-added business could use risk management (hedging) strategies to lessen the effects of variability in commodity prices. However, such strategies may not be sustainable over extended periods.

Table 1. Producer-owned ethanol plant where the transfer price = commodity price + \$0.05/bushel delivery premium.

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
A. Farm business cost of production	\$2.40	\$2.40	\$2.40	\$2.40
B. Commodity price	\$2.00	\$2.50	\$2.95	\$3.95
C. Transfer price (B + \$0.05)	\$2.05	\$2.55	\$3.00	\$4.00
D. Ethanol plant price paid for corn needed to break even	\$2.70	\$2.70	\$2.70	\$2.70
Returns (\$/bushel)				
E. Farm business (C - A)	(\$0.35)	\$0.15	\$0.60	\$1.60
F. Producer-owned ethanol plant (D - C)	\$0.65	\$0.15	(\$0.30)	(\$1.30)

Note: Ethanol and co product prices assumed to be sold under long-term contracts.

Table 2. Producer-owned ethanol plant where the transfer price = window contract.

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
A. Farm business cost of production	\$2.40	\$2.40	\$2.40	\$2.40
B. Commodity price	\$2.00	\$2.50	\$2.95	\$3.95
C. Transfer price	\$2.25	\$2.55	\$2.75	\$2.75
D. Ethanol plant price paid for corn needed to break even	\$2.70	\$2.70	\$2.70	\$2.70
Returns (\$/bushel)				
E. Farm business (C - A)	(\$0.15)	\$0.15	\$0.35	\$0.35
F. Producer-owned ethanol plant (D - C)	\$0.45	\$0.15	(\$0.05)	(\$0.05)

Notes:

- Ethanol and co product prices assumed to be sold under long-term contracts.
- The window contract is a contract that allows the transfer price to fluctuate between \$2.25/bushel and \$2.75/bushel, but when the commodity price is below \$2.25/bushel the transfer price is fixed at \$2.25 and when the commodity price is above \$2.75/bushel the transfer price is fixed at \$2.75/bushel.

Table 3. Producer-owned ethanol plant where the transfer price = cost - plus contract.

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
A. Farm business cost of production	\$2.40	\$2.40	\$2.40	\$2.40
B. Commodity price	\$2.00	\$2.50	\$2.95	\$3.95
C. Transfer price	\$2.50	\$2.50	\$2.50	\$2.50
D. Ethanol plant price paid for corn needed to break even	\$2.70	\$2.70	\$2.70	\$2.70
Returns (\$/bushel)				
E. Farm business (C - A)	\$0.10	\$0.10	\$0.10	\$0.10
F. Producer-owned ethanol plant (D - C)	\$0.20	\$0.20	\$0.20	\$0.20

Notes:

- Ethanol and co product prices assumed to be sold under long-term contracts.
- Cost-plus contract is such that the transfer price is the farm business cost of production + \$0.10/bushel