

# Evaluating a Company's Financial Position before Selling Grain on Deferred Price Contracts

Grain producers, and the firms to which they sell grain, use a number of contract types to transact, including cash or spot purchase contracts, forward contracts, and deferred price contracts, more broadly termed “credit sale contracts.” Credit sale contracts (CSC) differ from cash and priced forward contracts because they create a unique relationship between the parties: the seller becomes an unsecured creditor of the buyer, creating a potential for counterparty risk to the seller. As with all contracts, it is incumbent on all parties that they be aware of what the contract means and also the risk involved. This publication is intended to serve as a resource for producers who wish to evaluate the financial strength of the creditor company and the potential risk of default for grain sold on a credit sale.

Credit sale contracts are common tools for producers and grain marketing firms, and serve the important functions of managing grain movements and cash flows. They are contracts by which the sale of grain is arranged such that the sale price is to be paid—and in some cases determined—at some time in the future. CSCs are commonly known by other names, including deferred payment contracts, deferred price contracts, price later, basis-only, and minimum price contracts. Importantly, for all these, title of the grain passes to the buyer when the contract is signed, thus establishing the seller as a creditor of the buyer. The same unsecured credit relationship and counterparty risk is established when producers prepay for inputs.

Producers using CSCs often understand the associated price risk, but they should also be aware of the nature of the credit risk faced. The credit risk exists when the firm buying the grain does not have sufficient cash to pay for the grain purchased on contract, or is at risk of defaulting on secured loans. In both of these cases, the CSC becomes a vehicle by which a firm already in financial trouble can issue additional CSCs and sell the newly owned grain to generate cash to pay secured loans. However, without additional cash inflow, the firm is at risk of not having cash to pay the CSC when the time comes. While this is not common, there have been isolated cases of this in Iowa.

In Iowa, the Grain Warehouse Bureau of the Iowa Department of Agriculture and Land Stewardship (IDALS) oversees grain dealer licensing and monitors the financial soundness of grain dealers authorized to issue credit sale contracts in Iowa.<sup>1</sup> The bureau serves as a monitoring function on behalf of producers. Some producers incorrectly believe that Iowa's Grain Indemnity Fund (GIF) will cover any losses associated with CSCs; however, this is not the case and this is stated on all CSCs issued by licensed

grain dealers. The Grain Indemnity Fund covers grain “stored in a warehouse licensed by IDALS and persons who sell grain to a grain dealer licensed by IDALS.” Grain transferred under a CSC is considered “sold grain” and the GIF lists CSCs as an exception to coverage, stating, “No coverage is provided on grain sold to a grain dealer on a credit-sale contract.”<sup>2</sup>

## Key financial indicators

Producers may wish to evaluate the financial position of a firm with whom they will potentially establish a credit relationship. Doing this is straightforward and requires only a few calculations using basic information from a firm's financial statements or annual reports.<sup>3</sup> While a number of financial measures and ratios can be useful, there are five common financial indicators that, taken together, can give producers insight into the firm's ability to meet future obligations. These are liquidity, solvency, and profitability measures. The calculations and guidelines are provided in Table 1 and an accompanying spreadsheet calculator will compute the measures for cooperatives and non-cooperative firms with user-entered information. A brief explanation of each follows:<sup>4</sup>

### Liquidity Measures

**Working Capital or Current Ratio** – working capital and the current ratio convey an idea of size (or relative size) of current assets to current liabilities, and therefore the short term (within 12 months) ability of the firm to liquidate assets to pay for liabilities. Working capital is current assets minus current liabilities and as a dollar value is not particularly useful without information about size of the firm, sales, or other normalizing measures. For this reason, working capital is commonly stated

<sup>1</sup> IDALS maintains resources on grain licenses, grain warehouses, and the Grain Indemnity Fund at <http://www.iowaagriculture.gov/grainWarehouse.asp>.

<sup>2</sup> For details, see IDALS's rules for Grain Indemnity Fund Coverage in the State of Iowa: <http://www.iowaagriculture.gov/grainWarehouse/GrainIndemnityFund.asp>.

<sup>3</sup> In most cases, for example, a member of a grain and farm supply cooperative can use information in the cooperative's annual report which contains a condensed balance sheet and operating statement. If the buyer is not a cooperative, a producer can likewise request to see basic financial statements. Also, producers may wish to request full audit reports, the notes and footnotes of which provide additional insight on the firm's financial position and liquidity, including the unused portion of their credit line.

<sup>4</sup> Each of these is best viewed as an historical trend (at least three years), as single-year anomalies due to investments or local economies can have significant impacts.

relative to sales in dollars. In the case of grain marketing and input supply firms, a minimum guideline for working capital dollars is 1.5 percent of grain sales dollars plus 7.0 percent of non-grain sales dollars. The guideline calculation is:

$$\text{WC Guideline} = 0.015 * \text{Grain Sales Dollars} + 0.07 * \text{Non-Grain Sales Dollars}$$

The current ratio is current assets divided by current liabilities and should generally be greater than 1.0, but how large is sufficient is firm dependent. Current ratio and working capital fluctuate considerably within a year. The timing of the measure relative to the firm's marketing year and its product mixes (agronomy, feed, grain) should be considered. A full financial audit and the accompanying notes will contain information about unused operating lines, which also signals the ability to access additional working capital.

**Working Capital to Sales** – this ratio establishes the relative size of working capital to dollar sales volume. Working capital requirements are typically higher for input supply enterprises than for grain because input supply inventories are less liquid; therefore, this ratio should be viewed in the context of the company's product mixes. The guideline as noted above is that working capital should be 1.5 percent of grain sales and 7.0 percent of non-grain sales. Therefore, working capital to sales is a weighted measure, where the weights are the relative sizes of the grain and non-grain enterprises in terms of total sales dollars. The enterprise mix of a company is calculated by dividing grain sales (in dollars) by total sales and all non-grain sales (in dollars) by total sales, and those values are used to weight working capital to sales. The guideline calculation is:

$$\text{WC to Sales Guideline} = 0.015 * \left( \frac{\text{Grain Sales \$}}{\text{Total Sales \$}} \right) + 0.07 * \left( \frac{\text{Non-Grain Sales \$}}{\text{Total Sales \$}} \right)$$

This indicates that a mixed company's working capital-to-sales ratio should normally fall in the 1.5-7.0 percent range, though this is company specific. Look for trends over time.

### Solvency Measures

**Leverage** – leverage indicates the extent to which a company's business or revenue-generating assets are financed with debt versus equity capital. Leverage is calculated by dividing long-term (or term) debt by equity. In the case of a cooperative company, *local equity* should be used as the equity measure. Local equity is total equity minus investments in other cooperatives (regional cooperatives, usually). In this case, the ratio is called *local leverage*. If the firm is not a cooperative, total equity is the appropriate value. Generally speaking, leverage or local leverage should be  $\leq 0.50$  ( $\leq 50$  percent), though firms ordinarily exceed this during periods of investment when new fixed assets are financed by longer-term debt. The ratio's time trend and the context of changes in fixed assets are useful in interpreting leverage.

**Term Debt to Net Fixed Assets** – this ratio identifies the extent to which fixed assets are financed with long-term debt (term debt), and therefore the degree of collateralization of fixed assets. The calculation is long-term (or term) debt to fixed asset value net of depreciation. Generally speaking, this ratio measure should be  $\leq 0.50$  ( $\leq 50$  percent), though firms typically exceed this during periods of investment when new fixed assets financed by longer-term debt. A low (high) ratio can signal that a small (large) amount of the fixed assets are collateralized in debt, and the likelihood of recouping on defaulted lines is higher (lower). This is best viewed as a trend over time in concert with leverage.

### Profitability Measure

**Local Savings (Profits)** – this ratio indicates the ability of the firm to generate profits from its sales. For cooperatives, the appropriate ratio numerator is local savings before taxes, which are profits that do not include income from regional cooperative partners. If local savings before taxes is not provided on the financial summaries, it can be calculated by subtracting from *net income before taxes the patronage refunds received or regional income*. For non-cooperative firms, the appropriate ratio numerator is pre-tax income (profits). For both firm types, the guideline is that local savings or profits be 1.0 percent of grain sales plus 2.5 percent of non-grain sales; therefore, the ratio of local savings to profits should fall typically between 1.0 and 2.5 percent depending on the company's enterprise mix. This can vary significantly year-over-year and a trend is useful in analyzing a single firm's ongoing propensity for profitability. The mix of grain and non-grain sales can be calculated as given above.

### An example

You wish to establish a CSC with your local cooperative, Midwest Ag Co-op, Inc., and before doing so, want to understand the cooperative's financial situation to assess the risk of default prior to execution of the contract. The contract is for approximately 150,000 bushel of corn, with a current value of \$480,000, to be delivered between September 1, 2017 and July 31, 2018. Transferring ownership of the grain via CSC represents an eight-month credit relationship with the cooperative. The general manager of the cooperative shared the company's recent annual financial statement with you (Figures 1 and 2). The calculations of the key financial indicators above are in Table 2 and based on the 2016 financial information.

### Liquidity

Midwest Ag Co-op has good liquidity as indicated by the three liquidity measures. Its current ratio is 3.28 – three times the minimum of 1.0; working capital is \$10,177,260 – significantly higher than the guideline of \$3,896,266 based on the proportions of sales approach; and the working capital-to-sales ratio of 9.02 percent is well above the guideline 3.4 percent. Note the latter of these two measures incorporate that grain

**Table 1. Key Financial Indicators**

Measures	Calculation	Guideline
Working Capital (liquidity)	= Current Assets - Current Liabilities	At least 1.5% of grain sales plus 7% of non-grain sales; operating line and loan covenant info useful
Current Ratio (liquidity)	= Current Assets / Current Liabilities	Varies, but at least greater than 1.0
Working Capital to Sales (liquidity)	= Working Capital / Total Sales	Minimum ranges from 1.5% to 7% depending on business mix (grain versus non-grain).
Local Leverage (solvency)	= Long-Term Debt / Local Equity	≤ 50%
Term Debt to Net Fixed Assets (solvency)	= Long-Term Debt / Total Fixed Assets	≤ 50%
Local Savings-to-Sales (profitability)	= Local Savings / Sales	Ranges from 1% for grain companies to 2.5% for non-grain companies. Use sales mix to establish the minimum guideline.

<b>Midwest Ag Co-op Inc.</b>					
Balance Sheet					
For the Years Ending December 31, 20__					
	2015	2016		2015	2016
<b>ASSETS</b>			<b>LIABILITIES</b>		
Current Assets			Current Liabilities		
Cash on hand	\$1,542,630	\$4,971,560	Accounts Payable	\$1,887,010	\$82,530
Accounts Receivable	\$5,792,150	\$4,178,530	Operating Line	\$0	\$0
Inventories	\$6,090,410	\$4,697,820	Current portion of long-term note	\$1,420,000	\$1,420,000
Others	\$2,362,500	\$777,560	Accrued Expenses	\$2,118,930	\$2,945,680
<b>Total Current Assets</b>	<b>\$15,787,690</b>	<b>\$14,625,470</b>	<b>Total Current Liabilities</b>	<b>\$5,425,940</b>	<b>\$4,448,210</b>
Fixed (Long-Term) Assets			Term (Long-Term) Liabilities		
Land	\$1,751,110	\$1,751,110	Mortgages / Term Notes	\$9,219,800	\$7,799,800
Building and Equipment	\$35,245,720	\$35,608,220	Member Notes	\$0	\$0
Less: Accum Depreciation	\$13,930,270	\$15,605,890	<b>Total Long Term Liabilities</b>	<b>\$9,219,800</b>	<b>\$7,799,800</b>
<b>Total Fixed Assets</b>	<b>\$23,066,560</b>	<b>\$21,753,440</b>			
Other Assets			<b>EQUITY</b>		
Investments in Co-ops	\$8,774,160	\$9,078,390	Common Stock	\$156,500	\$156,500
			Deferred Patronage Refunds	\$24,046,010	\$23,980,270
			Retained Earnings	\$8,780,160	\$9,072,520
			<b>Total Equity</b>	<b>\$32,982,670</b>	<b>\$33,209,290</b>
<b>Total Assets</b>	<b>\$47,628,410</b>	<b>\$45,457,300</b>	<b>Total Liabilities and Equity</b>	<b>\$47,628,410</b>	<b>\$45,457,300</b>

**Figure 1. Consolidated Balance Sheet**

**Midwest Ag Co-op Inc.**  
**Operating Statement**  
For the Years Ending December 31, 20\_\_

	2015	2016
<b>Sales</b>		
Grain	\$110,898,520	\$72,721,940
Farm Supplies	\$36,995,170	\$40,077,100
<b>Total Sales</b>	<b>\$147,893,690</b>	<b>\$112,799,040</b>
<b>Cost of Goods Sold</b>	<b>\$140,314,000</b>	<b>\$105,545,570</b>
<b>Gross Margins</b>	<b>\$7,579,690</b>	<b>\$7,253,470</b>
<b>Other Income</b>		
Service Income	\$5,527,810	\$5,142,900
Finance Charges	\$702,040	\$566,220
<b>Total Other Income</b>	<b>\$6,229,850</b>	<b>\$5,709,120</b>
<b>Gross Income</b>	<b>\$13,809,540</b>	<b>\$12,962,590</b>
<b>Expenses</b>		
Personnel Expense	\$4,497,100	\$4,589,870
<b>Fixed Expenses</b>		
Interest	\$1,628,210	\$1,758,740
Depreciation	\$1,813,240	\$1,740,870
Insurance	\$261,130	\$251,400
Property Taxes	\$504,100	\$565,500
<b>Variable Expenses</b>	<b>\$2,066,520</b>	<b>\$3,338,980</b>
<b>Total Expenses</b>	<b>\$10,770,300</b>	<b>\$12,245,360</b>
<b>Local Savings (Loss)</b>	<b>\$3,039,240</b>	<b>\$717,230</b>
<b>Regional Patronage Income</b>	<b>\$239,900</b>	<b>\$477,700</b>
<b>Pre-Tax Net Savings (Loss)</b>	<b>\$3,279,140</b>	<b>\$1,194,930</b>

sales are 64.5 percent of total sales and non-grain sales account for 35.5 percent of total sales. Adequate liquidity is important information for shorter-term credit relationships; it indicates the ability to meet obligations within the next 12 months. In this example, your CSC value is \$480,000 and this represents a low proportion of its overall working capital and the gap between current working capital and the minimum suggested by the guidelines. Volatile commodity prices and high rates of customer defaults on accounts receivables can jeopardize working capital.

### **Leverage**

Midwest Ag Co-op's two leverage ratios signal a favorable leverage position. Local leverage and the debt-to-fixed assets ratios imply a majority of the company's assets are owned by the cooperative and therefore not collateralized by virtue of a note with the lender nor supported by equity that resides at the regional cooperative level through investments there. This also signals that if the company does experience short-term liquidity problems, it has sufficient asset value to warrant longer-term borrowing to bolster short-term cash needs.

### **Profitability**

While the company's liquidity and leverage positions indicate strong positions, its generation of profits from local operations in 2016 was relatively weak. Given this company's sales mix, the minimum guideline is 1.5 percent and it achieved only 0.6 percent. This may be a one-year occurrence due to unforeseen circumstances. In a single-year, relying on regional patronage, as this co-op did, to support operational income is not problematic; however, if this level of local profitability is typical over time, it indicates the cooperative will struggle to continue to invest while also revolving equity or that it must rely on patronage income from regional partners to support its operations.

Taken together, the producer contemplating a short-term credit relationship with this cooperative can be fairly confident in the co-op's ability to honor the contract. The co-op has sufficient working capital and is currently appropriately leveraged. Relatively low profitability in a single year is unlikely to disrupt the company's ability to meet its obligations within the next 12 months. Further, the size of the credit contract relative to the company's working capital indicates that this contract does not represent a significant impact to working capital. A deeper understanding of the firm's working capital position can be assessed by knowing the size of its credit sale portfolio and accounts receivable relative to total working capital.

### **Summary**

In Iowa, it is common for producers and grain marketing firms to enter into credit sales contracts, and they establish the producer as an unsecured creditor of the company buying the grain. There are rarely occurrences of default on these contracts, but best practices in business suggest parties to a contract should understand the financial position of those with

**Figure 2. Statement of Income**

**Table 2. Midwest Ag Co-op, Inc.'s Financial Indicators, 2016**

Measures	Midwest Ag Co-op, Inc. 2016		Explanation
	Calculation	Value	
Working Capital (liquidity)	= \$14,625,470 - \$4,448,210	\$10,177,260	Sufficient given business mix (64.5% grain sales plus 35.5% non-grain sales); operating line and loan covenant information will dictate
Current Ratio (liquidity)	= \$14,625,470 / \$4,448,210	3.28	A current ratio greater than 1.0 indicates current liabilities can be met with expected liquidation of current assets
WC-to-Sales (liquidity)	= \$10,177,260 / \$112,799,040	9.02%	Well above guideline of 3.5% given the business mix (64.5% sales from grain, 35.5% sales from non-grain business)
Local Leverage (leverage)	= \$7,799,800 / (\$33,209,290 - \$9,078,390)	32.3%	Within the guideline, indicating the firm is not highly leveraged
Term Debt to Net Fixed Assets (leverage)	= \$7,799,800 / \$21,753,440	35.9%	Within the guideline; there is sufficient fixed asset value to cover the associated debt load
Local Savings-to-Sales (profitability)	= \$717,230 / \$112,799,040	0.6%	Below guideline of 1.5% based on sales mix; normal sales and gross margins may indicate unexpected or increased operational expenses

whom they establish credit relationships. This publication has provided the relevant key financial values from a firm's basic financial statements that producers can use to gauge particularly the short-term financial strength of the firms with which they contract. It is important to keep in mind the following:

- In evaluating the financial situation of any firm, historical trends offer more insight than single-year outcomes.
- A firm's mix of enterprises will have an impact on the ratios and how they should be interpreted.
- The financial statements represent information at a point in time and may have changed.
- Condensed financial statements can be supplemented with details in the full audit reports to learn more about a firm's financial position, particularly regarding the use of available credit and operating lines.
- The reference numbers and ranges are guides. Whether or not a firm is compliant with IDALS requirements for grain dealers or under financial stress cannot be discerned from the measures listed. A number of factors matter (i.e. business mix, trends, investments).
- Credit sale contracts always carry price or basis risks and also a default risk because the producer is an unsecured creditor of the firm writing the contract. The Grain Indemnity Fund does not cover these contracts.

### Additional resources

1. Iowa Department of Agriculture and Land Stewardship's Grain Indemnity Fund Coverage in the State of Iowa: <http://www.iowaagriculture.gov/grainWarehouse/GrainIndemnityFund.asp>
2. Iowa Department of Agriculture and Land Stewardship's Grain Warehouse Bureau: <http://www.iowaagriculture.gov/grainWarehouse.asp>
3. State of Iowa Code 203D – Grain Depositors and Sellers Indemnification: [https://www.lawserver.com/law/state/iowa/ia-code/iowa\\_code\\_chapter\\_203d](https://www.lawserver.com/law/state/iowa/ia-code/iowa_code_chapter_203d)
4. Ginder, Roger. 2002. "Grain Elevator Credit Sales Contracts and Alternatives to Reduce Their Risk to Producers." March 15, 2002. <https://www.extension.iastate.edu/grain/files/Migrated/02creditsale.pdf>

Written by Keri Jacobs, assistant professor and extension economist at Iowa State University.



This publication was peer-reviewed by two independent reviewers using a double-blind process.

This institution is an equal opportunity provider. For the full non-discrimination statement or accommodation inquiries, go to [www.extension.iastate.edu/diversity/ext](http://www.extension.iastate.edu/diversity/ext).