

Farm Financial Scorecard

Using Recommended Measures from the Farm Financial Standards Council (FFSC)

Year: 20__

Your Farm:

Desired
Trend

Liquidity

Current Ratio

Vulnerable 1.3 2.0 Strong



↑

Working Capital as % of

_____ %

10% 30%



↑

Working Capital as % of
Operating Expense*

_____ %

20% 40%



↑

Solvency

Debt-to-Asset Ratio

_____ %

Vulnerable 60% 30% Strong



↓

Equity-to-Asset Ratio*

_____ %

40% 70%



↑

Debt-to-Equity Ratio*

1.5 0.43



↓

Profitability

Rate of Return on Assets

_____ %

Vulnerable 4% 8% Strong



↑

Rate of Return on Equity

_____ %

3% 10%



↑

Operating Profit Margin Ratio

_____ %

15% 25%



↑

Asset Turnover Ratio

_____ %

30% 45%



↑

Repayment Capacity

Debt Coverage Ratio

Vulnerable 1.25 1.75 Strong



↑

Replacement Coverage Ratio

1.1 1.5



↑

Term Debt & Finance Lease
Coverage Ratio*

1.25 1.75



↑

Financial Efficiency

Operating Expense Ratio

_____ %

Vulnerable 80% 60% Strong



↓

Depreciation Expense Ratio

_____ %

10% 5%



↓

Interest Expense Ratio

_____ %

10% 5%



↓

Net Farm Income Ratio

_____ %

10% 20%



↑

* Denotes Acceptable Alternate Measures of the FFSC (<https://ffsc.org/>)

Recommended Farm Financial Ratios

Explanations of the FFSC recommended measures on the scorecard and where to find the information for each measure

Measures from the Balance Sheet

The *balance sheet* provides information on both a business's both **liquidity** and **solvency** positions. **Liquidity** is the ability of the farm business to meet financial obligations as they came due, or to generate enough cash to pay for family living expenses, taxes, and to make on-time debt payments. **Solvency** is the ability of the farm business to meet all of its debts if it were sold at the current point in time.

Recommended Liquidity Ratios

- Current Ratio
Measures the extent to which current farm assets, if sold tomorrow, would pay off the farm's current liabilities.
- Working Capital as % of Gross Revenue
Measures the operating capital available against the size of the business.
- Working Capital as % of Operating Expense*
Measures the operating capital available against the amount of the business's operating expenses.

Recommended Solvency Ratios

- Debt-to-Asset Ratio
Is the bank's share of the farm business. Compares total farm debt to total farm assets. A higher ratio indicates greater financial risk & lower borrowing capacity.
- Equity-to-Asset Ratio*
Is the farmer's share of the business. Compares total farm equity to total farm assets. *Debt-to-Asset ratio + Equity-to-Asset ratio must = 100%.*
- Debt-to-Equity Ratio*
Compares the creditor's investment to the farm owner's investment. It also indicates how much the farmer has leveraged their equity in the business.

Measures from the Income Statement

The *income statement* is a financial statement which provides information regarding the **profitability** of the farm business. **Profitability** is the difference between the value of goods produced and the cost of the resources used in their production.

Recommended Profitability Measures

- Rate of Return on Assets
Can be thought of as the average interest rate being earned on all (yours and the creditor's) investments in the farm.
- Rate of Return on Equity
Represents the interest rate being earned by your investment in the farm. This interest rate or return can be compared to returns available if your equity were invested elsewhere, such as a Certificate of Deposit or the stock market.
- Operating Profit Margin Ratio
Shows the operating efficiency of the farm business. If expenses are low relative to the value of farm production, or revenue, the business will have a healthy operating profit margin. A low profit margin ratio can be caused by low product prices, high operating expenses, or inefficient production.
- Asset Turnover Ratio
Measures efficiency in using capital. You could think of it as a measure of capital productivity. Generating a high level of production with a low level of capital investment will show as a high asset turnover rate. If, on the other hand, the turnover is low you will want to explore methods to use the capital invested more efficiently or sell some low-return investments. It could mean getting rid of that swampy parcel on the back 40 and getting something that produces income.

* Denotes Acceptable Alternate Measures of the FFSC (<https://ffsc.org/>)

Recommended Farm Financial Ratios (cont.)

Explanations of the FFSC recommended measures on the scorecard and where to find the information for each measure

Measures from the Cash-Flow Statement

The *cash-flow statement* provides information on a business's **repayment capacity**. **Repayment capacity** shows the borrower's (i.e. your) ability to repay debts on time. It includes non-farm income and as such is **not** a measure of business performance alone.

Recommended Repayment Capacity

- Debt Coverage Ratio
Indicates whether your business generated enough income to cover current interest expense and all intermediate and long-term debt payments.
- Replacement Coverage Ratio
A ratio of less than 1.0 indicates that you did not generate enough income to cover debt payments and unfunded capital purchases.
- Term Debt & Finance Lease Coverage Ratio*
Indicates whether your business generated enough income to cover all intermediate and long-term debt payments. A ratio of less than 1.0 indicates the business had to liquidate inventories, run up open accounts, borrow additional funds, or sell assets to make scheduled payments.

Measures from *all* the Financial Statements

Using all the financial statements can provide valuable insight into the **financial efficiency** of a farm business. These measures show where each dollar of income generated is spent.

Recommended Financial Efficiency

- Operating Expense Ratio
Shows the proportion of farm income that is used to pay operating expenses, excluding depreciation and interest expense.
- Interest Expense Ratio
Shows how much of gross farm income is used to pay for interest on borrowed capital.
- Depreciation & Amortization Expense Ratio
Indicates how fast the business wears out capital. It tells what proportion of gross farm income is needed to maintain the capital used by the business. It is important to note that a depreciation expense ratio of less than 3% **could** indicate the operation is not replacing inefficient assets and may have higher repair expenses.
- Net Farm Income (Income from Operations) Ratio
Compares profit to gross revenue. It shows how much is left after all farm expenses, except for unpaid labor and management, are paid.

* Denotes Acceptable Alternate Measures of the FFSC (<https://ffsc.org/>)

Other Important Farm Financial Measures

Other important measures (and their calculations) that are utilized in the scorecard

Working Capital

Measures the operating capital available in the short-term from within the business.

$$\begin{aligned} &\text{Total Current Farm Assets} \\ &(-) \text{Total Current Farm Liabilities} \\ &= \text{Working Capital} \end{aligned}$$

Net Farm Income (NFI)

Represents the return to three things that you have invested in the farm business:

- 1) Your labor
- 2) Your management, and
- 3) Your equity.

NFI is the reward for investing your unpaid family labor, management, and money in the farm instead of elsewhere. Anything left in the business and not taken out to pay for family living expenses or taxes, will increase the net worth of the farm.

$$\begin{aligned} &\text{Gross Accrual Farm Revenue} \\ &(-) \text{Total Accrual Operating Expense (including} \\ &\quad \text{Depreciation \& Amortization Expense)} \\ &= \text{Income from Operations} \\ &(-) \text{Farm Interest Expense} \\ &= \text{Net Farm Income} \end{aligned}$$

Value of Farm Production (VFP)

VFP is a measure of the value a farm operation has added to products sold.

$$\begin{aligned} &\text{Gross Cash Farm Revenue} \\ &(-) \text{Feeder Livestock Purchased} \\ &(-) \text{Purchased Feed} \\ &(+/-) \text{Changes in Inventories} \\ &= \text{Value of Farm Production} \end{aligned}$$

Repayment and Replacement Capacity Calculations

$$\begin{aligned} &\text{Income from Operations} \\ &(+/-) \text{Miscellaneous Revenue / Expenses} \\ &(+)\text{ Non-farm Income} \\ &(+)\text{ Depreciation / Amortization Expenses} \\ &(-)\text{ Income Tax Expense} \\ &(-)\text{ Owner Withdrawals} \\ &= \text{Repayment and Replacement Capacity}^1 \end{aligned}$$

$$\begin{aligned} &\text{Repayment and Replacement Capacity} \\ &(-)\text{ Interest Expense on Current Debt} \\ &= \text{Term Debt Repayment \& Replacement Capacity} \end{aligned}$$

$$\begin{aligned} &\text{Prior Year Current Portion of Long-Term Debt} \\ &(+)\text{ Prior Year Current Portion of Finance Leases} \\ &(+)\text{ Interest Expense on Term Debt} \\ &(+)\text{ Interest Expense on Finance Leases} \\ &= \text{Total Principal \& Interest on Term Debt} \\ &\quad \text{and Finance Leases} \end{aligned}$$

$$\begin{aligned} &\text{Total Principal \& Interest on Term Debt and} \\ &\quad \text{Finance Leases} \\ &(+)\text{ Interest Expense on Current Debt} \\ &(+)\text{ Payment on Unpaid Operating Debt from Prior} \\ &\quad \text{Period (loss carryover)} \\ &(+)\text{ Annual Payments on Personal Liabilities} \\ &= \text{Total Debt Repayment} \end{aligned}$$

$$\begin{aligned} &\text{Repayment \& Replacement Capacity} \\ &(-)\text{ Total Debt Repayment} \\ &= \text{Repayment Margin} \end{aligned}$$

$$\begin{aligned} &\text{Repayment Margin} \\ &(-)\text{ Unfunded Capital Expenditures}^2 \\ &= \text{Replacement Margin} \end{aligned}$$

1 = Measures the amount generated from farm and non-farm sources, to cover debt repayment and capital replacement.

2 = Portion of depreciable capital asset purchases not funded by term debt and finance leases. This measure is the amount of internally generated funds used for investing activities related to depreciable capital assets.

Calculating Recommended Farm Financial Ratios

Calculations of the FFSC recommended measures on the scorecard

Liquidity

Current Ratio

$$\frac{\text{Total Current Farm Assets}}{\text{Total Current Farm Liabilities}}$$

Working Capital as % of Gross Revenue

$$\frac{\text{Working Capital}}{\text{Gross Farm Revenue}}$$

Working Capital as % of Operating Expense

$$\frac{\text{Working Capital}}{[\text{Total Operating Expense} (-) \text{ Depreciation/Amortization}]}$$

Solvency

Debt-to-Asset Ratio

$$\frac{\text{Total Farm Liabilities}}{\text{Total Farm Assets}}$$

Equity-to-Asset Ratio

$$\frac{\text{Farm Net Worth}}{\text{Total Farm Assets}}$$

Debt-to-Equity Ratio

$$\frac{\text{Total Farm Liabilities}}{\text{Farm Net Worth}}$$

Profitability**

Rate of Return on Assets

$$\frac{[\text{Income from Operations} (-) \text{ Value of Unpaid Operator Labor \& Management}]}{\text{Average Farm Assets}}$$

Rate of Return on Equity

$$\frac{[\text{Income from Operations} (-) \text{ Farm Interest Expense} (-) \text{ Value of Unpaid Operator Labor \& Management}]}{\text{Average Farm Net Worth}}$$

Operating Profit Margin Ratio

$$\frac{[\text{Income from Operations} (-) \text{ Value of Unpaid Operator Labor \& Management}]}{\text{Value of Farm Production}}$$

Asset Turnover Ratio

$$\frac{\text{Value of Farm Production}}{\text{Average Farm Assets}}$$

Repayment Capacity**

Debt Coverage Ratio

$$\frac{\text{Repayment \& Replacement Capacity}}{\text{Total Debt Repayment}}$$

Replacement Coverage Ratio

$$\frac{\text{Repayment \& Replacement Capacity}}{[\text{Total Debt Repayment} (+) \text{ Unfunded Capital Expenditure}]}$$

Term Debt \& Finance Lease Coverage Ratio

$$\frac{\text{Term Debt Repayment \& Replacement Capacity}}{\text{Total Principle \& Interest on Term Debt and Finance Leases}}$$

Financial Efficiency**

Operating Expense Ratio

$$\frac{[\text{Total Operating Expense} (-) \text{ Depreciation \& Amortization}]}{\text{Gross Farm Revenue}}$$

Depreciation Expense Ratio

$$\frac{\text{Depreciation \& Amortization}}{\text{Gross Farm Revenue}}$$

Interest Expense Ratio

$$\frac{\text{Farm Interest Expense}}{\text{Gross Farm Revenue}}$$

Net Farm Income Ratio

$$\frac{[\text{Income from Operations} (-) \text{ Farm Interest Expense}]}{\text{Gross Farm Revenue}}$$

Developed by: Devin Brand, Pauline Van Nурden, Dale Nordquist, Mark Cannella, Katherine Wilts Johnson \& Robert Craven

For more detailed information \& calculations, see the FFSC's Financial Guidelines for Agriculture: <https://ffsc.org/>

** See the previous page for additional calculations

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