Liquidity

Liquidity refers to the ability of a farm business to meet financial obligations as they come due - to generate enough cash to pay family living expenses and taxes, and make debt payments on time.

Only uses data from the balance sheet; specifically the current assets and current liabilities sections.

Liquidity Calculations

Current Ratio = \frac{\text{total current farm assets}}{\text{total current farm liabilities}}

Working Capital = \text{total current farm assets} - \text{total current farm liabilities}

Working Capital to Gross Income = \frac{\text{working capital}}{\text{gross farm income}}

Farm Finance Scorecard

Year 20___

Liquidity

1. Current ratio _______ Vulnerable 1.0 Strong 2.0
2. Working capital $_______ 10% 30%
3. Working capital to gross revenue _____% 10% 30%

Solvency

Solvency is the ability of your business to pay all its debts if it were sold tomorrow. Solvency is important in evaluating the financial risk and borrowing capacity of the business.

Data comes from the balance sheet and uses only the market column (not the cost column)
## Farm Finance Scorecard

### Solvency (market)

<table>
<thead>
<tr>
<th>4. Farm debt-to-asset ratio</th>
<th>60%</th>
<th>30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Farm equity-to-asset ratio</td>
<td>40%</td>
<td>70%</td>
</tr>
<tr>
<td>6. Farm debt-to-equity ratio</td>
<td>150%</td>
<td>43%</td>
</tr>
</tbody>
</table>

### Profitability

**Profitability**

Profitability is the difference between the value of goods produced and the cost of the resources used in their production.

Information for profitability measures comes from the income statement.

### Net Farm Income

Net farm income is calculated as the difference between gross cash farm income, total cash farm expenses, inventory changes, and depreciation.

\[
\text{Net farm income} = \text{Gross cash farm income} - \text{Total cash farm expenses} + \text{Inventory changes} - \text{Depreciation}
\]

### Income Statement

- **Profit on farm assets**
  - Net farm income
  - Farm interest
  - Value of operator labor & management

- **Rate of return on farm assets**
  - \(\frac{\text{Profit on farm assets}}{\text{Average farm assets}}\)

1. from beginning and ending balance sheets

### Rate of Return on Farm Equity

Net farm income

\[
\text{Net farm income} - \text{Value of operator labor & management}
\]

Return on farm equity

\[
\frac{\text{Net farm income} - \text{Value of operator labor & management}}{\text{Average farm net worth}}
\]

1. from beginning and ending balance sheets - also called owner equity
Operating Profit Margin

\[
\text{Gross cash farm income} \pm \text{Inventory changes}^1
- \text{Feeder livestock purchased}
- \text{Purchased feed}
\frac{\text{Value of farm production}}{\text{Return on farm assets}}
\frac{\text{Operating profit margin}}{\text{Value of farm production}}
\]

1. crops, market livestock, breeding livestock & other income items

Earnings before Interest, Taxes, Depreciation, and Amortization

\[
\text{Net farm income} + \text{Interest expense}
+ \text{Taxes}
+ \text{Depreciation and Amortization expense}
\]

EBITDA

Farm Finance Scorecard

Profitability

7. Net farm income $______
8. Rate of return on farm assets _____%
9. Rate of return on farm equity _____%
10. Operating profit margin _____%
11. EBITDA $______

Repayment Capacity

Repayment Capacity shows the borrower’s (i.e., your) ability to repay term debts (both farm and non-farm) on time. It includes non-farm income and so is not a measure of business performance alone.

Uses information from the Statement of Cash Flows

Capital Debt Repayment Capacity

\[
\text{Net farm income} + \text{Depreciation}
+ \text{Net non-farm income}
- \text{Family living & income taxes}
+ \text{Interest expense on term loans}
\]

Capital debt repayment capacity

Capital Debt Repayment Margin

\[
\text{Capital debt repayment capacity} - \text{Scheduled principal & interest on term loans}^1
\]

Capital debt repayment margin

1. Includes payments on capital leases
**Replacement Margin**

Capital debt repayment margin

\[ \text{Replacement Margin} = \text{Capital debt repayment margin} - \text{Unfunded (cash) capital replacement allowance} \]

Chris Bruynis, OSU Extension

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**Term-Debt Coverage Ratio**

Capital debt repayment capacity

\[ \text{Term-debt coverage ratio} = \frac{\text{Capital debt repayment capacity}}{\text{Scheduled principal & interest on term loans}^1} \]

1. Includes payments on capital leases

Chris Bruynis, OSU Extension

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**Replacement Margin Coverage Ratio**

Capital debt repayment capacity

\[ \text{Replacement margin coverage ratio} = \frac{\text{Capital debt repayment capacity}}{\text{Scheduled principal & interest on term loans}^* + \text{Unfunded capital replacement allowance}} \]

Chris Bruynis, OSU Extension

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**Financial Efficiency**

Financial efficiency shows how effectively your business uses assets to generate income. Past performance of the business could well indicate potential future accomplishments. It also answers the questions: Are you using every available asset to its fullest potential? What are the effects of production, purchasing, pricing, financing and marketing decisions on gross income?

Chris Bruynis, OSU Extension

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**Asset Turnover Rate**

Value of farm production

\[ \text{Asset turnover rate} = \frac{\text{Value of farm production}}{\text{Average farm assets}^1} \]

1. Market value from beginning and ending balance sheets

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Operating Expense Ratio
(Total farm operating expense [excluding interest]
– Depreciation)
+ Gross farm income
Operation expense ratio

Interest Expense Ratio
Farm interest
+ Gross farm income
Interest expense ratio

Net Farm Income Ratio
Net farm income
+ Gross farm income
Net farm income ratio

Farm Finance Scorecard
Year 20___

Financial Ratios
One year generally does not tell the whole story!

Financial ratios should be compared to
Similar businesses/farms
Industry standards
Past financial performance trends
Business targets
Questions

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