A Checkup On Your Financial Health

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Bruce Sherrick

http://www.farmdoc.uiuc.edu/
Outline

• Key performance measures

• What lenders look at?

• Tools to monitor your health and assist decision making
Questions -- Perceptions

Why do you maintain records?

Why are financial statements needed?

What do lenders need?

Good Records and Financial Statements are Critical Diagnostic Pieces of Equipment
Terminology Primer

- Assets
  - Current
  - Noncurrent
- Liabilities
  - Current
  - Noncurrent
- Net Worth
- Accrual Income
- Cash flow budget
Interrelationships Among Financial Statements

Time

Historical

Assets
Liabilities
Net Worth

Income Statement
Statement of Cash Flows
Statement of Owner Equity

Projected

Assets
Liabilities
Net Worth

Projected Income Statement
Projected Statement of Owner Equity
Cash Flow Budget
Financial Health

• Level of debt use (leverage)
• Liquidity
• Profitability
• Ability to pay debt
• Efficiency
Leverage
Financial Structure

Relative ownership structure of your business Level depends
- Relationship between levels of return and cost of debt
- Risk of returns
- Variability of cost of debt
<table>
<thead>
<tr>
<th>Ownership Category</th>
<th>Percentage</th>
<th>Very Strong</th>
<th>Stable</th>
<th>Vulnerable</th>
<th>Stressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own less than 20% acres operated</td>
<td>0.10</td>
<td>0.35</td>
<td>0.55</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>Own between 21 and 50% of acres operated</td>
<td>0.10</td>
<td>0.30</td>
<td>0.50</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td>Own more than 50% of acres operated</td>
<td>0.10</td>
<td>0.25</td>
<td>0.45</td>
<td>0.65</td>
<td></td>
</tr>
</tbody>
</table>
Liquidity – Meet Cash Flows

Three Purposes of Liquidity
1. Transactions
2. Meet uncertainties
3. Investment opportunities

Liquidity needs may vary by
• Type of farm (business)
• Risk faced by the operation
• Stage of business (age)
# Measures of Liquidity

- **Current Ratio** = \( \frac{\text{Current Assets}}{\text{Current Liabilities}} \)

## Current Ratio

<table>
<thead>
<tr>
<th>Value</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.50</td>
<td>Very Strong</td>
</tr>
<tr>
<td>1.50</td>
<td>Stable</td>
</tr>
<tr>
<td>1.10</td>
<td>Vulnerable</td>
</tr>
<tr>
<td>1.00</td>
<td>Stressed</td>
</tr>
</tbody>
</table>

## Working Capital to VFP

<table>
<thead>
<tr>
<th>Value</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>0.45</td>
<td>Very Strong</td>
</tr>
<tr>
<td>0.30</td>
<td>Stable</td>
</tr>
<tr>
<td>0.15</td>
<td>Vulnerable</td>
</tr>
<tr>
<td>0.10</td>
<td>Stressed</td>
</tr>
</tbody>
</table>

- \( \frac{\text{Current Assets} - \text{Current Liabilities}}{\text{Gross Revenue}} \)
Profitability
Life of the Business

• Need an **Accrual**-based measure of net farm income

• **Accrual**-based measures are more than 25% different than cash-based measures

Like measuring your temperature with a room thermometer
Schedule F (cash basis) is **not** a reliable indicator of profit
Key Accrual Adjustments

Schedule F

Cash Sales

Accrual Adjustments

+/- Change in inventories
+/- Change in receivables

Cash Expenses

+/- Change in prepaid expenses
+/- Change in accounts payable
+/- Change in accrued interest

FAST Tool
Cash to Accrual Income Approximation
Uses of Net Income

- Family Living
- Replace Assets
- Pay Off Debt
- Invest in Additional Assets
Profitability Measures

- Net Farm Income
- Rate of Return on Assets
  \[
  \frac{\text{Net Farm Income} + \text{Interest Paid} - \text{Family Withdrawals}}{\text{Average Farm Assets}}
  \]
- Rate of Return on Equity
  \[
  \frac{\text{Net Farm Income} - \text{Family Living Withdrawals}}{\text{Average Farm Equity}}
  \]
- Profit Margin
  \[
  \frac{\text{Net Farm Income} + \text{Interest Paid} - \text{Family Living Withdrawals}}{\text{Gross Revenue or (VFP)}}
  \]
## Profitability Benchmarks
### Return on Farm Assets (ROA)

<table>
<thead>
<tr>
<th>Ownership Range</th>
<th>Very Strong</th>
<th>Stable</th>
<th>Vulnerable</th>
<th>Stressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own less than 20% acres operated</td>
<td>15%</td>
<td>11%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Own between 21 and 50% of acres operated</td>
<td>12%</td>
<td>7%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Own more than 50% of acres operated</td>
<td>10%</td>
<td>5%</td>
<td>1%</td>
<td>0%</td>
</tr>
</tbody>
</table>
# Profitability Benchmarks

**Return on Farm Equity (ROE) and Operating Profit Margin**

<table>
<thead>
<tr>
<th>ROE</th>
<th>25%</th>
<th>10%</th>
<th>3%</th>
<th>0%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very Strong</td>
<td>Stable</td>
<td>Vulnerable</td>
<td>Stressed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Profit Margin</th>
<th>0.40</th>
<th>0.25</th>
<th>0.10</th>
<th>0.00</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Stressed</td>
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</tbody>
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Sources of Profitability

Problems

Assets  Revenue

Liabilities  Expenses
**Assets**

**Problems**
Inefficient use of assets
- too many assets
- wrong mix of assets
- price of assets too high

**Measures**

\[
\text{Asset Turnover} = \frac{\text{VFP (Gross sales)}}{\text{Total Farm Assets}}
\]

Machinery Cost per Acre

Machinery Investment per Acre
Problems

- Too much leverage (debt)
- Cost of debt is too high
- Wrong mix of debt

Measures:

\[
\frac{\text{Debt}}{\text{Assets}} \Rightarrow \frac{\text{Current Debt}}{\text{Current Assets}} \Rightarrow \frac{\text{Noncurrent Debt}}{\text{Noncurrent Assets}}
\]

The allocation of debt (current & noncurrent) should be comparable to allocation of assets.

Cost of Debt: Average interest rate paid on debt
Problems

- Low production
- Poor marketing

Measures

- Average yield per acre
- Livestock production measures
- Average price received per unit produced
Problems

- High Crop Costs
- High Machinery Costs
- High Land Rent
- High Interest Costs
- High Other Costs

Measures

Cost as a proportion of total income = \( \frac{\text{Cost Item}}{\text{Gross Revenue (VFP)}} \)

Examples:
- \( \frac{\text{Machinery Cost}}{\text{Gross Revenue (VFP)}} \) or \( \frac{\text{Interest Expense}}{\text{Gross Revenue (VFP)}} \)

Cost items per acre

Examples:
- \( \frac{\text{Machinery Cost}}{\text{Acre}} \) or \( \frac{\text{Interest Expense}}{\text{Acre}} \)
Repayment Capacity

• What cushion does your operation have after paying taxes, debt, and family living expenses?

• How sensitive is this cushion to changes in prices, yields or costs in the future?

• How much cushion do you have relative to the level of debt payments?
Repayment Capacity Measures

Net farm income
+ non-farm income
+ depreciation
- income taxes
- family living
- scheduled principal payments on term debt

= Capital Replacement & Term Debt Repayment Margin (CRDRM)

Cushion
Repayment Capacity Sensitivity

- Repayment Margin/Gross Revenue
- Repayment Margin/Operating Expense
- Repayment Margin/Interest Expense

How sensitive is your cushion to changes in the future?
Repayment Capacity Measures
Term Debt and Lease Coverage Ratio

Net farm income
+ non-farm income
+ depreciation
+ interest on term debt
- income taxes
- family living
SUM

Divided by scheduled principal and interest payments on term debt
Repayment Capacity Benchmarks

Term Debt and Lease Coverage Ratio

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Very Strong</th>
<th>Stable</th>
<th>Vulnerable</th>
<th>Stressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00</td>
<td>1.50</td>
<td>1.10</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>
Efficiency
Get smarter about your business

- Often broken down into
  - Financial efficiency: financial statements
  - Operations efficiency
    Machinery cost per acre
    Yield per acre
    Price per bushel sold
    Cost per cwt
Financial Efficiency Measures

Asset Turnover = \( \frac{\text{Gross Revenue (VFP)}}{\text{Assets}} \)

Components of Income Statement
Per Dollar Revenue

- Net Farm Income 17%
- Operating Expense 57%
- Interest 9%
- Depreciation 17%
Financial Efficiency Benchmarks

• Benchmarks depend heavily on the type of farm, farm size, and farm ownership

• Use Ratio Analysis FAST Tool to generate benchmarks for your farm

• Examples
Machinery Values
How much iron?

• One of the most critical areas that differentiate high performance farms is effective and efficient use of machinery

• Key questions:
  – What are your total machinery costs including repairs and fuel?
  – What is your machinery value per acre?
  – How do these values compare to benchmarks?
## Machinery Costs by Performance Group

<table>
<thead>
<tr>
<th></th>
<th>High Cost</th>
<th>Average</th>
<th>Low Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machinery hire/lease</td>
<td>9.46</td>
<td>7.93</td>
<td>5.82</td>
</tr>
<tr>
<td>Utilities</td>
<td>6.02</td>
<td>4.73</td>
<td>4.63</td>
</tr>
<tr>
<td>Machinery repairs</td>
<td>18.58</td>
<td>15.34</td>
<td>12.49</td>
</tr>
<tr>
<td>Fuel and oil</td>
<td>9.35</td>
<td>8.61</td>
<td>7.83</td>
</tr>
<tr>
<td>Light vehicle</td>
<td>2.65</td>
<td>1.95</td>
<td>1.64</td>
</tr>
<tr>
<td>Machinery depreciation</td>
<td>36.18</td>
<td>30.40</td>
<td>27.33</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>82.24</strong></td>
<td><strong>68.96</strong></td>
<td><strong>59.74</strong></td>
</tr>
</tbody>
</table>

High/low cost are the top and bottom 1/3 respectively

Source:

Schnitkey and Lattz
Illinois Farm Business Farm Management, 2003
Machinery Values

Average Machinery Values
FBFM Grain Farms

Total Machinery Value

Total Acres Farmed
Machinery Value Per Acre

Average Machinery Values
FBFM Grain Farms

Machinery Value Per Acre

Total Acres Farmed
A Growing Trend in Ag Lending is the Use of Consumer Credit Information

Primer
Use of Consumer Credit Bureau

- A credit bureau is a clearinghouse for consumer credit history information.

- The credit bureau is not a government entity

- Credit providers give the bureau information on how their customers pay their bills

- Credit bureau assembles the information along with public information into a customer-specific file

- In exchange, the credit providers can access credit reports and receive information about consumers
Lender

Provide information to credit bureau

Credit Bureau

Receive information about customers new or updating information on existing customers

Legal Information
bankruptcies, divorce settlements, child support, etc.

Public Records

Borrowers

Access Score and Reports
Responsible for reporting inaccuracies
Credit Bureau Facts

• Over 1,000 local and regional credit bureaus in the U.S.

• Most are owned by one of three private national credit reporting agencies:
  - TransUnion (www.transunion.com)
  - Equifax (www.equifax.com)
  - Experian (www.experian.com)
Products

• Credit Report
  – View of repayment history and judgments, and inquiries into your account

• Credit Score
  – Mathematical and statistical value based on proprietary models
Items on Credit Report

• Personal information
• Credit history from:
  – Retail stores
  – Banks
  – Finance companies
  – Mortgage companies
• Public records
  – Tax liens
  – Court judgments (divorce, child support)
  – Bankruptcies
• Number of previous inquires in your credit report
Items Not Contained in a Credit Report

- Farm assets or farm income information
- Farm business or other business lending
- Wage or salary information
- Deposit or savings account information
- Medical histories
- Loans from individuals (parents, friends, etc.)
- Race, gender or national origin
Credit Score

- Most frequently used are by Fair Isaac Company (FICO) – a leader in developing models for consumers and businesses.

- The score is a signal towards the ability or probability a borrower will repay a loan.

- The score is based on a proprietary mathematical equation.
How Long Is The Information Kept?
in general approximately 10 years

- Closed or inactive accounts 10 years
- Derogatory accounts 7 years
- Public records 7 years
- Bankruptcies (Chapter 7) 10 years
- May be reported indefinitely for loans, insurance policies > $50,000
Lenders’ Uses of Credit Score

- On small loans and credit card applications, it may be the major criteria.

- On home mortgages it is used as a hurdle requirement.

- Many lenders are using it as one factor in agricultural lending for loans less than $150,000 to 250,000.

- Used to determine interest rate of loan.
Loss Rates by Score

- range 365 to 850
- typically need score > 660
- assured if greater > 700

Source: Fair, Isaac, and Co.
Score Can Impact Interest Rates
Example: 30 Year Home Mortgage Loans in Illinois

<table>
<thead>
<tr>
<th>FICO Score</th>
<th>APR</th>
</tr>
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<tbody>
<tr>
<td>720-850</td>
<td>5.606%</td>
</tr>
<tr>
<td>700-719</td>
<td>5.730%</td>
</tr>
<tr>
<td>675-699</td>
<td>6.263%</td>
</tr>
<tr>
<td>620-674</td>
<td>7.402%</td>
</tr>
<tr>
<td>560-619</td>
<td>8.584%</td>
</tr>
<tr>
<td>500-559</td>
<td>8.996%</td>
</tr>
</tbody>
</table>

Source: www.myfico.com
Major Factors that Impact Score

- Payment History: 35%
- Amounts Owed: 30%
- Length of History: 15%
- New Credit: 10%
- Types of Credit: 10%
Payment History

Were payments made on time?
Variables:
- Payment information on each account
- Public record information on collections
- Details on late or missed payments
- Number of accounts with late payments
Amounts Owed

How much is too much?

Variables:
- The amount owed on all accounts
- The amount owed on different types of accounts (credit card, installment, mortgage)
- A balance shown on certain types of accounts (example: balances on installment loans in good standing indicates responsible borrowing)
- The number of accounts with positive balances
- What proportion of the total credit lines are being used
- How much is still owed on installment loans vs. original balances
Length of Credit History

How established is the customer?

Variables

- Age of oldest account
- Average age of all accounts
- How long specific accounts have been established
- How long has it been since the accounts have been used
New Credit

Is the customer taking on new debt?

Variables
- The number of new accounts
- The length of time since the most recent time an account has been established
- The number of inquiries for credit that have been made and reported
- The length of time since credit report inquiries were last made
Types of Credit in Use

Does the customer have the right mix?

Variables

- proportion and use of different types of credit

  - credit card
  - installment loans
  - mortgage loans
Weaknesses -- Cautions

• The scores do not work well for people who have not borrowed in the past or borrowed under a spouse’s name

• Inaccuracies that can occur in reporting

• Does not include asset or income information

• Only information on consumer loans
How can I get my FICO score?

www.myfico.com

$12.95
Three FICO® Scores Can Paint Your Complete Credit Picture

The "Must-Have" Snapshot
Over 75% of credit applications in the U.S. use the FICO® score and most banks look at all three bureau scores. myFICO® gives instant access to all 3 FICO® scores and their related credit reports. Join the 3 million people who have made the move to myFICO®.

What's a FICO® score? Your FICO® score is the numeric representation of your financial responsibility, based on your credit history. Based on a scale of 300-850, there are three FICO® scores - one from each national credit bureau. These three FICO® scores are the measure that most lenders will look at when evaluating your credit or loan applications.

Here's how your FICO® scores could affect your interest rate:

<table>
<thead>
<tr>
<th>FICO® Score</th>
<th>Interest Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>720 - 850</td>
<td>5.856%</td>
</tr>
<tr>
<td>700 - 719</td>
<td>5.781%</td>
</tr>
<tr>
<td>675 - 699</td>
<td>6.319%</td>
</tr>
<tr>
<td>620 - 674</td>
<td>7.469%</td>
</tr>
<tr>
<td>560 - 619</td>
<td>8.531%</td>
</tr>
<tr>
<td>500 - 559</td>
<td>9.289%</td>
</tr>
</tbody>
</table>

*Information for 30-year fixed rate mortgages, updated daily

Why should you know all 3 scores?

See Sample $38.85 Buy Now

ID Fraud Intercept™ - Protect yourself from identity theft
Know when suspicious activity starts affecting your credit
Includes:
- FICO® score and Equifax Credit Report™ every three months
- Tips on checking your report for ID theft
- ID theft alert emails and monitors to keep you informed
- $25,000 Identity Theft Insurance coverage with toll-free hotline

Take a Tour $7.50 per month Buy Now

FICO® Saver for Homebuyers
Prepare to get the best mortgage by understanding how lenders will rate your

3 Bureau Report with One FICO® Score
See your complete credit history from all three bureaus and get a single FICO®

Single Bureau FICO®-Scored Reports
Get a single credit report with FICO® score from any of the three major national credit
Working With Lenders

- Communicate: early and often
- Share financial information
- Understand your financial position
- Listen
- Explore alternatives
- Ask questions
Tips from Lenders

“Get involved in financial statement analysis: it is your business”

“Accrual-based records are a very important”

“Cash flow projections are required for our decision process”

“Requirements of financial statements are simply best-practices for us as lenders, it is our machinery”

“Never to early to plan for the future (retirement)”
Planning for Retirement:
Keep up conditioning

• What are your estimated retirement needs?

• What does it take to get there?

• Not a good practice to rely on selling farm assets as the sole source of retirement

• If you are approaching retirement, what are the tax implications of selling farm assets?

• See blue handout
In the future …

… you will need to be responsive to changes occurring in agriculture. Position yourself by understanding your strengths and weaknesses.

You will need to

- Run Smart
- Run Lean
- Run Fast
Upgrade your Tool Kit

- FAST Tools Demo
  - Ratio analysis and sensitivity
  - Cash to accrual approximation
  - Savings analysis
  - Cash flow budgeting
  - Others
Questions

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