Financial Risk Management

Steve Makarevich
First Pioneer Farm Credit

Financial Risk Management Components

- ✍Managing and Understanding Financial Risk
  - – Three Components
    - ✍Cost and Availability of Debt Capital
    - ✍Ability to meet cash-flow needs in a timely manner
    - ✍Ability to maintain and grow equity

Importance of Financial Records in Risk Management

- ✍Well-maintained financial records are a necessity
  - – Evaluate past performance and plan for the future
  - – Records provide information needed to understand financial risk
  - – Good decisions require adequate, accurate and timely information.

Essential Financial Records

- Essential financial records
  - – Balance Sheet
  - – Income and Expense Statement
  - – Cash Flow Statement
  - – Proforma Financial Statements

Financial Records Defined

- Balance Sheet
  - Takes a picture of a certain date of the assets, liabilities and equity of a business
  - Should be completed in detail at every year end.
  - Track the progress from year to year

Financial Records Defined

- ✍Income and expense statement
  - – Provides annual income and expense information and net profits
  - – Should be monitored throughout the year and compared to prior years to detect any variances that must be managed

Financial Records Defined

✍Cash flow statement

- This report accounts for all money coming in and going out of the business on a monthly basis.
- This closely mirrors the “checkbook” of the business.
- It includes operational activities, financing activities and investment activities.

Financial Records Defined

- Proforma Financial Statements
  - Balance Sheet
    - This is a balance sheet that accounts for a proposed change in assets and/or liabilities.
    - Will inform business manager of the effect on the business's balance sheet of a particular investment, refinance etc.
    - Perform "what if" scenarios

Financial Records Defined

- Projected income and expense statement
  - ✍This is the budget that accounts for all projected business income and establishes a budget for expenses for the upcoming year.
  - ✍This should be compared to actual results monthly
  - ✍Variances from budget should be addressed by management

Financial Records Defined

– Projected Cash Flow Statement

- Outlines all sources and uses of cash taking into consideration internal and external financial factors for upcoming year.
- Takes into consideration timing of cash flows on a monthly basis and the cash flow effect of an investment.
- Identifies the required working capital for the business

Financial Records Purpose

- Critical for management planning and monitoring progress
  - Good monitoring system helps to target variance from budget so corrections can be made
- Critical for Profit Sustainability of the Business and Equity Growth Planning

Financial Risk Management Category

Cost and Availability of Debt Capital

- Cost and Availability of Debt Capital
  - – Borrowing is a vital part of most farming businesses.
  - – Interest rate risk – cost of debt capital
    - Fixed rate for term debt
    - Typically variable rate for operating debt

Cost and Availability of Debt Capital

✍Minimizing interest rate

- Term debt – consider fixing the interest rate
- Operating debt – complete a projected cash flow budget to determine when debt actually needed and when it can be repaid.
- Earn sustainable sufficient profits annually to meet debt servicing requirements – Requires development of income and expense budget

Cost and Availability of Debt Capital

– Maintain debt to asset ratio less than .5 to 1.
– Enhanced working capital will reduce need for operating debt. Working capital is current assets minus current liabilities.
– Current ratio goal of 2 to 1. Current ratio is current assets divided by current liabilities.
– Balance sheet provides this information. Track it annually.

Cost and Availability of Debt Capital

- ✍Establish and maintain a good relationship with your lender.
- ✍Provide a business plan that projects the need and timing for financing in the future.
- ✍This will ensure that debt capital is available when needed.

Cost and Availability of Debt Capital

- Business owner must determine the rate of return of an investment taking into consideration debt capital.
- Partial budget required.
- Rate of return of investment must exceed interest rate.

Partial Budget Worksheet

Identify what will: (annual basis)

- ✍ Increase income / reduce costs

$__________
$__________
$__________ Total "Gains" $_________

- ✍ Reduce income / increase costs

$_________
$_________
$_________ Total "Losses" $_________

Net Effect of Investment / Worth Doing? $_________

- ✍ Rate of Return = Net Return/Income / Investment Cost

Financial Risk Management Category

Ability to meet cash-flow needs in a timely manner

- Develop a Projected Cash Flow Statement
  - Outline expected:
    - Monthly income and expenses
    - Monthly borrowings on line of credit
    - Monthly repayment on line of credit
    - Capital investment
    - Use of business working capital to meet cash needs

Ability to meet cash-flow needs in a timely manner

- ✍Monitor the cash flow budget on a monthly basis
- ✍Make monthly adjustments as needed throughout the year
- ✍Focus on meeting or exceeding the budget
- ✍This is independent from managing for a profit.

Ability to meet cash-flow needs in a timely manner

- Liquidity is required to meet obligations timely.
  - Liquidity measures the firm’s ability to meet financial obligations as they come due without disrupting normal operations.
  - Liquidity measures are current ratio and working capital which are computed using a balance sheet.

Ability to meet cash-flow needs in a timely manner

- ✍Current ratio equals current assets (assets that can readily convert to cash) divided by current liabilities (liabilities due within one year)
- ✍Working capital equals current assets minus current liabilities
- ✍In general agricultural businesses should have a current ratio of at least 2 to 1.

Ability to meet cash-flow needs in a timely manner

- ✍Working capital is built by earning annual cash profits and keeping the cash in the business.
- ✍Determine the dollars of working capital needed to support the gross sales of the business.
  - – Working capital divided by gross sales equals ratio required
  - – If sales increase, working capital must increase.

Financial Risk Management Category

Ability to maintain and grow equity

✍Know your equity (net worth) on a cost basis and fair market value basis

– Cost basis is simply based on your cost of assets minus annual depreciation minus liabilities.

– Fair market value basis is what you could sell the assets for on the open market minus liabilities.

Ability to maintain and grow equity

- Know your net worth percentage
  - Net worth percentage equals net worth divided by total assets
  - Agricultural business should have a net worth percentage above 50%.
  - This is also known as solvency. If net worth percentage (fair market value) is negative the business is insolvent/bankrupt.

Ability to maintain and grow equity

- ✍Make the right investment decisions
  - – Use partial budget form – Invest in assets with high return on investment
  - – Understand the effect of an investment on the rest of the business – “Ripple Effect”
  - – Complete an enterprise analysis to determine profitability/losses within each enterprise.
    - ✍Eliminate the enterprise losing money and focus on profitable enterprise.

Test Your Farm's Financial Health

Farm Financial Standards Ratios and Indicators Defined

✍Asset Turnover Ratio

- Measure of how efficiently farm assets are being used to generate revenue
- Gross revenue divided by average total assets equals asset turnover ratio
- The higher the ratio the more efficiently assets are being used to generate revenue

Farm Financial Standards Ratios and Indicators Defined

- ✍Capital Replacement & Term Debt Repayment Margin
  - – Measures the business's ability to generate funds necessary to repay debts with maturity dates longer than one year and to replace capital assets.
  - – Calculation:

Farm Financial Standards Ratios and Indicators Defined

- Net farm income
  - +non-farm income
  - +depreciation
  - -total income tax expense
  - -family living expense
  - =capital replacement and term debt repayment capacity
  - -principal pmt on current portion of term debt & capital leases
  - =Capital replacement & term debt repayment margin

Farm Financial Standards Ratios and Indicators Defined

✍Current Ratio

– Indicates the extent to which current assets, if liquidated, would cover current farm liabilities.

– The higher the ratio, the greater the **liquidity.**

– Current assets divided by current liabilities equals current ratio

Farm Financial Standards Ratios and Indicators Defined

✍Debt to Asset Ratio

- Measures financial position – expresses what proportion of farm assets is owed to creditors.
- One way to measure the risk exposure of a farm business. Can use cost or market value approach.
- The higher the ratio the more risk exposure of the farm business.
- Calculation

Farm Financial Standards Ratios and Indicators Defined

- Total farm liabilities divided by total farm assets equals debt/asset ratio

✍Debt to Equity Ratio

- Reflects the extent to which farm debt capital is being combined with farm equity capital
- The higher the value of the ratio, the more total capital supplied by the creditors and less by the owner.

Farm Financial Standards Ratios and Indicators Defined

– Total farm liabilities divided by total farm equity equals debt/equity ratio

- Equity to Asset Ratio
  - Measures financial position and the proportion of total farm assets financed by the owner's equity capital.
  - The higher the value the more total capital supplied by the owner and less by the creditors.
  - Total farm equity divided by total farm assets equals equity/asset ratio.

Farm Financial Standards Ratios and Indicators Defined

- Net Accrual Farm Income
  - Cash income
  - + or – change in crop inventory
  - + or – change in accounts receivable
  - = gross income
  - -cash farm expenses
  - + or – prepaid expenses, change in accounts payable
  - = Net accrual farm income

Farm Financial Standards Ratios and Indicators Defined

- Net Cash Farm Income
  - Cash Income
  - -cash expenses
  - =net farm income

Farm Financial Standards Ratios and Indicators Defined

✍ Operating Profit Margin Ratio

- Measures financial efficiency in term of return per gross revenue.
- This ratio multiplied by the asset turnover ratio equals the rate of return on assets.
- Net farm income plus farm interest expense minus family living expense divided by gross income = Operating Profit Margin Ratio

Farm Financial Standards Ratios and Indicators Defined

- Operational Ratios
  - Reflect the relationship of expense categories to gross income
    - Operating Expense Ratio
      - Total operating expenses minus depreciation divided by gross income
    - Depreciation Expense Ratio
      - Depreciation expense divided by gross income
    - Interest Expense Ratio
      - Total interest expense divided by gross income

Farm Financial Standards Ratios and Indicators Defined

✍Rate of Return on Farm Assets

- Typically used as an overall index of farm profitability
- Most meaningful for comparisons between farms when the market value approach is used.
- Most meaningful for individual farm on a year to year cost approach.
- The higher the value the more profitable the farm.

Farm Financial Standards Ratios and Indicators Defined

– Net Farm Income plus farm interest expense minus family living expense divided by average total farm assets equals Return on Assets.

- Rate of Return on Farm Equity
  - ✍Rate of return on equity capital employed in the farm business.
  - ✍Most meaningful for comparisons between farms when the market value approach is used.
  - ✍Most meaningful for individual farm on a year to year basis based on cost approach.

Farm Financial Standards Ratios and Indicators Defined

- The higher the value of the ratio, the more profitable the farming operation.
- Net Farm Income minus family living expense divided by average total farm equity equals return on equity.

Farm Financial Standards Ratios and Indicators Defined

- Term Debt/Capital Lease Coverage Ratio
  - – Ratio that provides the measure of the ability of the borrower to cover all term debt and capital lease payments.
  - – The greater the ratio over 1:1 the greater the margin to cover the payments.
  - – Calculation:

Farm Financial Standards Ratios and Indicators Defined

- ✍Net farm income
  - + non-farm income
  - + depreciation
  - + interest on term debt and capital leases
  - - income tax expense
  - -family living expense
  - divided by annual payments on term debt equals term debt/capital lease coverage ratio

Farm Financial Standards Ratios and Indicators Defined

- Sensitivity Analysis
  - Determines how well a customer can handle increases or decreases in key financial sections of their operation before depleting debt servicing.
  - Examples:
  - 1) decrease in farm income
  - 2) increase in farm expenses
  - 3) increase in variable interest rate

Farm Financial Standards Ratios and Indicators Defined

- Working Capital
  - Measure of the amount of funds available to purchase inputs and inventory after the sale of current farm assets and payment of all current farm liabilities.
  - The amount considered adequate is in direct proportion to the size of the farm business.
  - Current assets minus current liabilities equals working capital.

Financial Standards Categories

- ✍Financial Standards Categories
  - – Liquidity
    - ✍Current Ratio
    - ✍Working Capital
  - – Solvency (market)
    - ✍Debt to asset ratio
    - ✍Equity to asset ratio
    - ✍Debt to equity ratio

Financial Standards Categories

- Profitability (cost)
  - Rate of Return on Assets
  - Rate of Return on Equity
  - Operating Profit Margin
  - Net Farm Income
- Repayment Capacity
  - Term debt coverage
  - Capital replacement margin

Financial Standards Categories

- Efficiency
  - Asset Turnover Ratio (cost)
  - Operating Expense Ratio
  - Depreciation Expense Ratio
  - Interest Expense Ratio

Important Financial Ratios for the Fruit Industry

	Industry Standard
Liquidity	
– Current ratio	>1.50
– Working Capital	>30% of expenses
Solvency	
– Debt to Asset Ratio	<.50
– Equity to Asset Ratio	>.65
– Debt to Equity Ratio	<.55

Important Financial Ratios for the Fruit Industry

	Industry Standard
Profitability	
– Return on Assets	>10%
– Return on Equity	>12%
– Oper. Profit Margin Ratio	>.15
Repayment Capacity	
– Term Debt Coverage Ratio	>1.4

Important Financial Ratios for the Fruit Industry

	Industry Standard
Financial Efficiency	
– Asset Turnover Ratio	>.50
– Operating Expense Ratio	<.75
– Depreciation Expense Ratio	<.06
– Interest Expense Ratio	<.05

Borrowing Money From the Bank
What Does the Bank Look For?

The Five C's
High Quality Financial Records are Paramount

- Character
- Capital
- Capacity
- Collateral
- Conditions

Character Characteristics

- Honesty, High Level of Responsibility
- Good Human Relations Skills
- Good Decision Making Ability
- Assessment of Management Ability
  - Technology Evaluation
  - Labor Management
  - Marketing Management
  - Production and Financial Management

Capital Characteristics

- Balance Sheet Strength
  - Equity to asset greater than 70%
  - Working capital exceeds 30% of annual expenses
  - Current ratio exceeds 2 to 1
  - History of improving equity annually
  - Ability to withstand adversity

Capacity Characteristics

- Sustained Accrual Earnings
- Analyze historical income and expense records
- Cash flow history
- Profitability
- Projections
  - Should have excess funds over debt payment requirements annually
  - Measure repayment capacity
  - Term debt coverage > 1.4

Capacity Characteristics

- Size and scope of business sufficient
- Production and price management
- Cost and control management
- Planning
- Marketing
- Return on Assets >10%
- Return on Equity > 12%

Collateral

- Collateral is asset(s) owned by farmer that have a lien filed against them to secure a loan
  - Examples: Real estate, livestock, equipment etc.
- Required for a loan
- Acts as a backstop for lender
- Valued by appraiser

Collateral

- Value must exceed loan amount
- Typically, loan amount divided by collateral value does not exceed 80%.

Conditioning

- Broad term that includes:
  - Loan terms – term of loan, revolving privileges etc.
  - Frames the loan and financial relationship with the farmer
  - Good communication between farmer and lender required