Farm Financial Ratios and Guidelines

From the balance sheet

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

1. Current ratio
   - measures the extent to which current farm assets, if sold tomorrow, would pay off current farm/ranch liabilities.

2. Working capital
   - tells us the operating capital available in the short term from within the business.

3. Working capital to gross revenues
   - measures operating capital available against the size of the business.

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.

4. Farm/Ranch debt-to-asset ratio
   - is the bank's share of the business. It compares total farm debt to total farm assets. A higher ratio is an indicator of greater financial risk and lower borrowing capacity.

5. Farm/Ranch equity-to-asset ratio
   - is your share of the business. It compares farm equity to total farm assets. If you add the debt-to-asset ratio and the equity-to-asset ratio you must get 100%.

6. Farm/Ranch debt-to-equity ratio
   - compares the bank's ownership to your ownership. It also indicates how much the owners have leveraged (i.e., multiplied) their equity in the business.

From the income statement

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

7. Net farm/ranch income
   - represents return to 3 things,
     • Your labor,
     • Your management and
     • Your equity,
   that you have invested in the business. It is the reward for investing your unpaid family labor, management and money in the business instead of elsewhere. Anything left in the business, i.e., not taken out for family living and taxes, will increase your farm/ranch net worth.

8. Rate of return on farm/ranch assets
   - can be thought of as the average interest rate being earned on all (yours and creditors') investments in the farm. Unpaid labor and management are assigned a return before return on farm/ranch assets is calculated.

9. Rate of return on farm/ranch equity
   - represents the interest rate being earned by your investment in the farm/ranch. This return can be compared to returns available if your equity were invested somewhere else, such as a certificate of deposit.

10. Operating profit margin

    - shows the operating efficiency of the business. If expenses are low relative to the value of farm/ranch production, the business will have a healthy operating profit margin. A low profit margin can be caused by low product prices, high operating expenses, or inefficient production.

11. EBITDA
    - Earnings Before Interest Taxes Depreciation and Amortization. Measures earnings available for debt repayment.

From the cash-flow statement

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

12. <u>Capital debt repayment capacity</u>
    - measures the amount generated from farm and non-farm sources, to cover debt repayment and capital replacement.

13. <u>Capital debt repayment margin</u>
    - is the amount of money remaining after all operating expenses, taxes, family living costs, and scheduled debt payments have been made. It's really the money left, after paying all bills, that is available for purchasing or financing new machinery, equipment, land or livestock.

14. <u>Replacement margin</u>
    - the amount of income remaining after paying principal and interest on term loans and unfunded (cash) capital purchases.

15. <u>Term-debt coverage ratio</u>
    - tells whether your business produced enough income to cover all intermediate and long-term debt payments. A ratio of less than 1.0 indicates that the business had to liquidate inventories, run up open accounts, borrow money, or sell assets to make scheduled payments.

16. <u>Replacement margin coverage ratio</u>
    - A ratio under 1.0 indicates that you did not generate enough income to cover term debt payments and unfunded capital purchases.

From all the financial statements

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?

17. <u>Asset-turnover rate</u>
    - measures efficiency in using capital. You could think of it as capital productivity. Generating a high level of production with a low level of capital investment will give 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 much more efficiently or sell some low-return investments. (It could mean getting rid of that swamp and ledge on the back 40 and getting something that produces income.)

The last four ratios show how Gross Farm/Ranch Income is used. The sum of the four equals 100% (of Gross Farm/Ranch Income).

18. <u>Operating-expense ratio</u>
    - shows the proportion of farm/ranch income that is used to pay operating expenses, not including principal or interest.

19. <u>Depreciation-expense ratio</u>
    - indicates how fast the business wears out capital. It tells what proportion of farm income is needed to maintain the capital used by the business.

20. <u>Interest-expense ratio</u>
    - shows how much of gross farm/ranch income is used to pay for interest on borrowed capital.

21. <u>Net farm/ranch income ratio</u>
    - compares profit to gross farm/ranch income. It shows how much is left after all farm expenses, except for unpaid labor and management, are paid.

Liquidity

1. Current ratio
   = Total current farm/ranch assets
   / Total current farm/ranch liabilities
2. Working capital
   = Total current farm/ranch assets
   – Total current farm/ranch liabilities
3. Working capital to gross revenues
   = Working capital / Gross farm/ranch income

Solvency (market)

4. Farm/Ranch debt-to-asset ratio
   = Total f/r liabilities / Total f/r assets
5. Farm/Ranch equity-to-asset ratio
   = Farm/Ranch net worth / Total farm/ranch assets
6. Farm/Ranch debt-to-equity ratio
   = Total farm/ranch liabilities / Farm/ranch net worth

Profitability

7. Net farm/ranch income
   = Gross cash farm/ranch income
   – Total cash farm/ranch expense
   + / – Inventory changes
   – Depreciation
8. Rate of return on farm/ranch assets
   = Return on f/r assets / Average f/r assets
   Return on farm/ranch assets
   = Net farm/ranch income
   + Farm/Ranch interest
   – Value of operator labor & management
9. Rate of return on farm/ranch equity
   = Return on f/r equity / Average f/r net worth
   Return on farm/ranch equity
   = Net farm/ranch income
   – Value of operator labor & management
10. Operating profit margin
    = Return on farm/ranch assets / Value of farm/ranch production
    Value of farm/ranch production
    = Gross cash farm/ranch income
    + / – Inv change of crops, mkt lvst, brdg lvst & other income items
    – Feeder livestock purchased
    – Purchased feed
11. EBITDA
    = Net farm/ranch income
    + Interest expense
    + Depreciation and amortization expense

Repayment capacity

12. Capital debt repayment capacity
    = Net farm/ranch income
    + Depreciation
    + Net non-farm/ranch income
    – Family living & income taxes
    + Interest expense on term loans
13. Capital debt repayment margin
    = Capital debt repayment capacity
    – Scheduled principal & interest on term loans*
14. Replacement margin
    = Capital debt repayment margin
    – Unfunded (cash) capital replacement allowance
15. Term debt coverage ratio
    = Capital debt repayment capacity
    / Scheduled principal & interest on term loans*
16. Replacement margin coverage ratio
    = Capital debt repayment capacity
    / (Scheduled principal & interest on term loans*
    + Unfunded capital replacement allowance)

Financial efficiency

17. Asset-turnover ratio
    = Value of farm/ranch production
    / Average farm/ranch assets
18. Operating-expense ratio
    = (Total f/r operating expense excluding interest
    – Depreciation)
    / Gross farm/ranch income
19. Depreciation-expense ratio
    = Depreciation
    / Gross farm/ranch income
20. Interest-expense ratio
    = Farm/Ranch interest
    / Gross farm/ranch income
21. Net farm/ranch income ratio
    = Net farm/ranch income
    / Gross farm/ranch income
22. ***Includes payments on capital leases***

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