

Financial Performance: How Do I Measure It?

The large swings in farm commodity prices and incomes that have become a part of agriculture make it important to closely monitor the financial position of the farm business. Low prices and incomes cause many farm business managers to ask questions about how to measure their financial performance. “Am I in financial trouble?” “Do I have the financial capacity to weather the storm?” “How do I know?” Assessing financial performance is not difficult if you know what to look for.

Table 1 lists the key measures used in a financial description of the farm business. Using these measures, you can develop an assessment of your current financial position. You either already have access to these measures, or you can calculate them from documents you use to report financial information for income taxes or to support a loan request.

Table 1. Descriptive Measures of Financial Position and Performance

Financial Description		
Measure		Interpretation
Total Assets	— The market value of all financial and capital resources owned by the business as reflected on the year-end balance sheet.	The size of the business’s financial resources in terms of overall plant capacity.
Total Liabilities	— The value of total debt obligations at year-end as reflected on the balance sheet.	The financial claims of lenders, input suppliers, and others on the business.
Owner’s Equity	— The value of the owner’s financial claims on total assets as determined by subtracting total liabilities from total assets. Often referred to as “net worth.”	The owner’s financial stake in the business — his or her financial claim to the business.
Gross Revenues	— The total value of products produced by the business on an accrual basis (i.e., whether sold for cash or held in inventory) as reflected on principal the income statement.	The income from sales and other sources available annually to cover expenses, loan payments, family living, income taxes, expansion, etc.
Total Expenses	— The total of fixed and variable expenses incurred during the year as measured by the accrual income statement.	The total costs incurred in producing the revenue this year.
Net Farm Income	— The net income available on an accrual basis after fixed and variable expenses have been deducted. This income is available to compensate unpaid family labor, management, and equity capital.	The basic measure of the profitability of the sole proprietor farm operation, that is, income available for family living, income taxes, capital investments, and term debt repayment. In order to make financial progress, net income must exceed the owner withdrawals from the business.

So what should you look for in terms of financial performance? Table 2 describes common financial performance measures used by analysts and lenders, indicates what they mean, and provides useful benchmarks for comparison. In the “Financial Performance: How Am I Doing?” section you will find worksheets to calculate these measures for your farm. Use these worksheets to develop an assessment of your farm business.

Table 2 (p.10) provides benchmarks for both average farms and high-profit farms. What is benchmarking, and what are benchmarks? Benchmarking is the practice of looking for those businesses that are the best at doing something and learning how they do it in order to emulate that performance. Financial benchmarking involves looking for actual performance data from farms that are comparable to your own. Financial benchmarking often provides crucial evidence for answering the question, “How should my farm be doing if it is going to be competitive in the farming industry?”

At a very minimum, your farm needs to perform better than the average of farms that are similar to your own. The average benchmark provides a reference point for recognizing better-than-average performance. More likely than not, that level of performance will not be good enough long term, so farm business managers should benchmark against the top-performing or so-called “high-profit” farms whenever they are establishing performance standards or targets for their farms. Benchmarks of this type should at least be in your sights, even if your own measures indicate that you are currently falling short of the mark.

Farm business managers have several alternatives available for setting performance standards or benchmarks. Generally, it is important to assess your current performance relative to performance in prior years. This can often lead to valuable insights into trends in business performance. It is also important to try to control financial performance by projecting expected values for the key performance measures for your farm. You can then use these projections to systematically evaluate variations between planned performance and actual performance. However, neither of these inward-looking approaches to assessing business performance necessarily tells farm business managers much about farm competitiveness. In order to feel comfortable that your farm is competitive, you need to look at how other farms in the farming industry are performing.

Financial benchmarks for farms are almost always derived by averaging the actual performance data from a large group of farms. The high-profit benchmarks are typically derived by selecting the one-fourth or one-third of the farms in that large group that are the most profitable and averaging the financial performance measures from those farms. Farm Business Associations in Illinois, Iowa, and other Midwestern states are important sources of such data. Often, these associations work with enough farms that they can sort farms into different groups based on differences in size, major enterprises, etc. This allows the farm business manager who is looking for appropriate financial benchmarks to choose benchmarks from farms that are very similar to his or her own farm.

Make an effort to know as much as possible about the source of the benchmarks against which you plan to measure your farm's performance. Some benchmarks are highly variable in terms of what constitutes top performance, based on factors such as the type of farm commodities produced. For example, the value of production per man on a high-profit dairy or swine farrow-to-finish operation typically will be lower than for high-profit cash-grain farms.

Also, other factors, such as the time period over which the performance information was gathered, will influence the values for certain measures. Even methods used to summarize income, expenses, assets, and liabilities can have a big impact on the reliability, consistency, and comparability of the resulting measures. For example, the value of farm production is a popular alternative to gross farm income for computing financial efficiency measures in some areas of the country. These two alternative measures of farm revenues can produce significantly different values for financial efficiency measures on a farm with significant feed and/or feeder livestock purchases. Furthermore, the value of farm production tends to be computed in several different ways. It's essential to know where the benchmarks come from, how the raw farm data was summarized, and how the benchmarks were calculated before you rely on them.

Ratios rather than absolute financial measures are often used for benchmarking. Ratios present financial information in the form of a relative relationship between two absolute measures of performance. This removes the influence that business size has on the measure, making ratios easier to compare and interpret than absolute measures. For example, liquidity can be measured by working capital (current assets minus current liabilities), but in order to know if the level of working capital is adequate, the size of the farm must be known. It is difficult to make comparisons among farms because of the differences in size. In Table 2, we suggest measuring liquidity using the current ratio (current assets ÷ current liabilities). Because these two measures are now compared in the form of a relative relationship, adjustments for size are not necessary, and meaningful comparisons across farms of different sizes can be made.

Table 2. Key Financial Measures

	MEASURE	INTERPRETATION	Average
Profitability			
Operating Profit Margin	Calculated as net farm income plus interest expense minus family living and income taxes divided by gross revenues.	The proportion of earnings or revenues that is operating profit and thus available to compensate debt and equity capital. Indicates the operating margins and reflects the ability to generate revenues and control costs in such a way as to generate a profit.	32% 16%
Return on Assets (ROA)	The net income generated by all assets, after labor has been compensated but before interest payments, divided by total assets.	A measurement of profitability that indicates the profitability per dollar of assets, thus allowing comparisons over different size farms and different types of businesses/investment.	7% 14%
Return on Equity (ROE)	The net income after all labor and interest charges, that is, the residual return to the owner's investment divided by the equity investment.	A measurement of the return the owner of the business receives on his/her money invested. Can be compared to rates of return in other investment opportunities such as stocks, bonds, or savings accounts. A rate of return on equity that is less than the rate of return on assets indicates unproductive use of borrowed funds.	6% 18%
Liquidity			
Current Ratio	Calculated as current assets (inventories, cash, accounts receivable, etc.) divided by current liabilities (operating loan payments, accounts payable, unpaid taxes due, this year's payments on term loans, accrued interest and rent, etc.).	A basic indicator of short-term debt servicing and/or cash flow capacity. It indicates the extent to which current assets, when liquidated, will cover current obligations. It does not predict the timing of cash flows during the year or the adequacy of future fund inflows in relation to outflows.	3.1 3.3
Solvency			
Debt-to-Asset Ratio	Total liabilities divided by total assets.	The basic leverage of the business, (i.e., what proportion of total farm assets is owed to creditors). Measures the ability of the business to repay all financial obligations if all assets were sold.	32% 26%
Financial Efficiency			
Asset Turnover Ratio	Gross revenues divided by total assets.	Reflects how efficiently farm assets generate revenues; indicates the volume of business generated by the asset base (i.e., the flow of revenue through the asset pipeline). Can show wide variation depending on the proportion of owned land or other assets.	35% 43%
Revenue per Full-Time Labor (FT)	Gross revenue divided by the person years of labor (both operator and hired) used in the farming operation.	The fundamental measure of labor efficiency; reflects how productive labor is and whether or not it is fully employed.	\$227,518 —
Operating Expense Ratio	Total operating expenses minus depreciation divided by gross revenue.	The proportion of total revenues that is absorbed by operating expenses.	63% 52%
Depreciation Expense Ratio	Depreciation expense divided by gross revenue.	The proportion of total revenues that is absorbed by depreciation expense.	8% 7%
Interest Expense Ratio	Total farm interest expense divided by gross revenue.	The proportion of total revenues that is absorbed by interest expense.	8% 6%
Net Farm Income Ratio	Net farm income divided by gross revenue	The proportion of total revenue that remains as net income after all expenses are paid.	20% 37%

¹ Benchmarks are from Edwards, William. "Interpreting Financial Performance Measures," Ag Decision Maker, File C3-56, November 1998. These benchmarks were developed from data for the years of 1990-1996