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MEASURING FINANCIAL PERFORMANCE (A Critical Key to Managing Risk)

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The essence of managing risk is making good decisions. Correct decision making depends on accurate information and proper analysis. This article discusses common financial information and performance measures frequently used by owners and lenders to evaluate financial health and make risk management decisions. By conducting regular checkups on financial condition and performance, you are more likely to treat causes rather than address only symptoms of problems.

FINANCIAL STATEMENTS

Financial statements help assess the financial well-being of the overall operation. Information about the financial results of each enterprise and physical asset is important for management decisions, but by themselves are inadequate for some decisions because they do not describe the whole business. An understanding of the overall financial situation requires three key financial documents: the balance sheet, the income statement and the cash flow statement.

The **balance sheet** summarizes the values of the owned assets and liabilities. The difference between the two totals is the owners' equity (net worth). Leased assets are not included in the balance sheet because the operation does not own them (even though these assets are part of the operation's productive capacity).

One question that arises in preparing a balance sheet is what values should be used. Frequently used valuation methods include: historical--what the asset cost when it was acquired; market--what one could sell it for today; replacement--what one would have to pay to acquire a replacement today; and, book value--the historical cost minus depreciation. For various reasons, owners and their lenders often use market value whereas accountants generally prepare a balance sheet using the asset's book value. An increasingly common practice is to prepare a balance sheet with two columns of values – one for book value and the other for market value.

Sometimes businesses develop more than one balance sheet. One balance sheet is to reflect their business and another is prepared for their personal situation. Differentiating between personal and business assets helps to recognize which assets are part of the business and which are outside the business. Two balance sheets also separate business debts from personal debts. Similarly, it may be necessary to prepare several balance sheets to show the portion of the operation that is attributable to a co-owner of the business.

A completed balance sheet shows information such as the total value of assets, total indebtedness, equity, available cash and value of liquid assets. This information can then be analyzed to determine the business' current ratio, its borrowing capacity and opportunities to attract equity capital.

An **income statement** reports the amount of profit the business generates. Usually statements are prepared on an annual basis. An accrual income statement often provides a better measure of the operation's performance and profitability because it considers changes in inventory rather than only cash transactions. It is for this and other reasons that an income tax return should not be relied on as measuring the operation's profit.

A **cash flow statement** reports the sources and uses of the operation's cash resources. Such statements not only show the change in the operation's cash resources throughout the year, but also when the cash was received or spent. An understanding of the timing of cash receipts and expenditures is critical in managing the whole operation. Neither an income tax return nor an income statement provides the same information as a cash flow statement. Because cash flow analysis is only concerned with covering cash expenses, it is important to remember long-term survivability depends on covering important non-cash needs. For example, machinery depreciation and unpaid management and labor are two critical non-cash expenses. The business that does not generate sufficient cash to cover depreciation, and that provides its management and labor for free, is on a dangerous downhill slide. For this reason, carrying a level of insurance that helps to consistently generate a positive cash flow, is critical to long-term survival of the operation. Using cash flow analysis as a means of determining an appropriate level of insurance coverage is therefore important.

USING THE INFORMATION FROM FINANCIAL STATEMENTS

The primary objective of financial record keeping and analysis is to make better business decisions. Identifying emerging problems and initiating timely corrective action, as well as identifying potential opportunities for increased profit, are some of the obvious benefits of financial analysis. Hopefully, ongoing analysis will help the operation's manager identify past mistakes and learn from them by not repeating those same mistakes again. A word of caution: the need for accurate record keeping is critical because decisions are no better than the information they are based on. Financial measures derived from incomplete or inaccurate information are typically misleading and can lead to bad business decisions. The value of accurate records is therefore very important.

Several types of analysis are appropriate. At a minimum, you should evaluate your performance over time. Comparing financial documents from past years is useful because they reveal trends or patterns. Comparing current statements to past statements reveal what has been happening to the business' financial situation. The balance sheets show changes in owner's equity and risk exposure (whether they have been increasing, decreasing or remaining the same); the income statements reveal trends in profit; and, the cash flow statements can help the operation understand the timing of cash availability and needs. The information from these three financial statements also can be used to prepare additional financial measures that reveal the strengths and

weaknesses of the operation. These additional financial measures can be used to make several comparisons.

First, the current performance of the operation can be compared to its historical and budgeted performance. This comparison helps you understand how and why the actual outcome of the business differs from what you had expected.

Second, the operation's performance can be compared to that of its peers, or similar businesses, to determine the relative status. An operation's performance that is below the average indicates that additional profits are possible because others (peers) are proving it is possible to be more productive. The key is to identify why and take appropriate management action. These comparisons are very useful but sometimes difficult to do because of the personal nature of the information. However, financial information that can be used to compare businesses is available through various on line reports and record-keeping organizations.

A third comparison can be made between the performance of the business and other business alternatives. This last comparison identifies opportunities, if any, that are lost or relinquished because one has invested their time and capital in owning and operating a particular business.

FINANCIAL PERFORMANCE MEASURES

The recommended measures for financial analysis are grouped into five broad categories: liquidity, solvency, profitability, repayment capacity and financial efficiency. These standard performance measures, sometimes referred to as the “sweet 16”, are discussed below and their formulas are summarized at the end of this paper. Obviously, past and present financial information are not the only factors affecting financial performance. Keep in mind that monitoring the “sweet 16” measures as a group is more important than focusing on only one or two measures at the exclusion of others.

Liquidity measures the ability of the business to meet financial obligations as they come due, without disrupting the normal, ongoing operations of the business. Liquidity can be analyzed both structurally and operationally. Structural liquidity refers to balance sheet measures of the relationships between assets and liabilities and operational liquidity refers to cash flow measures. A frequent cause of liquidity problems occurs when debt maturities are not matched with the rate at which the business' assets are converted to cash. Two recommended measures of liquidity are the current ratio and working capital. The current ratio measures the relationship between total current assets and total current liabilities and is a relative measure rather than an absolute dollar measure. The higher the ratio, the more liquid the operation is considered to be. Working capital is a measure of the amount of funds available to purchase inputs and inventory items after the sale of current assets and payment of all current liabilities. Working capital is expressed in absolute dollars; therefore, determining adequate working capital is related to the size of the operation.

Solvency measures the amount of borrowed capital used by the business relative the amount of owner's equity capital invested in the business. In other words, solvency measures provide an indication of the business' ability to repay all indebtedness if all of the assets were sold. Solvency measures also provide an indication of the business' ability to withstand risks by providing information about the operation's ability to continue operating after a major financial

adversity. Unlike liquidity, solvency is concerned with long-term as well as short-term assets and liabilities. Solvency measures evaluate what would happen if all assets were sold and converted into cash and all liabilities were paid. The most straightforward measure of solvency is owner equity, using the market value of assets and including deferred taxes in the liabilities. As with working capital, adequacy of equity depends on business size, making comparisons difficult without using ratios.

Three widely used financial ratios to measure solvency are the debt-to-asset ratio, the equity-to-asset ratio (sometimes referred to as percent ownership) and the debt-to-equity ratio (sometimes referred to as the leverage ratio). These three solvency ratios provide equivalent information, so the best choice is strictly a matter of personal preference. The debt-to-asset ratio expresses total liabilities as a proportion of total assets. The higher the ratio, the greater the risk exposure of the operation. The equity-to-asset ratio expresses the proportion of total assets financed by the owner's equity. The debt-to-equity ratio reflects the capital structure of the operation and the extent to which debt capital is being combined with equity capital. It is a measure of the degree to which you are leveraging your equity.

Profitability measures the extent to which a business generates a profit from the factors of production: labor, management and capital. Profitability analysis focuses on the relationship between revenues and expenses and on the level of profits relative to the size of investment in the business.

Four useful measures of profitability are the rate of return on assets (ROA), the rate of return on equity (ROE), operating profit margin and net income. The ROA measures the return to all assets and is often used as an overall index of profitability, and the higher the value, the more profitable the business. The ROE measures the rate of return on the owner's equity employed in the business. It is useful to consider the ROE in relation to ROA to determine if the operation is making a profitable return on its borrowed money.

The operating profit margin measures the returns to capital per dollar of gross revenue. Recall, that the two ways an operation has of increasing profits is by increasing the profit per unit produced or by increasing the volume of production while maintaining the per unit profit. The operating profit margin focuses on the per unit produced component of earning profit and the asset turnover ratio (discussed below) focuses on the volume of production component of earning a profit.

Net income comes directly off of the income statement and is calculated by matching revenues with the expenses incurred to create those revenues, plus the gain or loss on the sale of capital assets. Net income represents the return to the operation for unpaid operator and family labor, management and owner's equity. Like working capital, net income is an absolute dollar amount and not a ratio, thus comparisons to other operations is difficult because of size differences.

Repayment capacity measures the ability to repay debt from both operation and non operation income. It evaluates the capacity of the business to service additional debt or to invest in additional capital after meeting all other cash commitments. Measures of repayment capacity are developed around an accrual net income figure.

The short-term ability to generate a positive cash flow margin does not guarantee long-term survivability. Long-term survivability requires the operation to be profitable. The only way for an unprofitable operation to survive long-term is for income infusions from non- operation

sources to offset operating losses. These cash infusions usually come from off operation employment, inheritances and gifts or from a lender when the operation's assets appreciate faster than the operation is losing money and the operation can then successfully refinance its debts. Two measures of repayment capacity are the term debt and capital lease coverage ratio and the capital replacement and term debt repayment margin. The term debt and capital lease coverage ratio provides a measure of the ability of a borrower to cover all required term debt and capital lease payments. The higher the ratio is over 1:1, the greater the margin to cover the payments. Higher ratio values also indicate greater flexibility on the part of the operation to withstand and adjust to temporary adverse economic conditions. Even though the operation may be generating sufficient accrual earnings to cover all term debt and capital lease payments, there may not be sufficient cash to make the payments on a timely basis; thus cash flow analysis is needed as well. The capital replacement and term debt repayment margin is used to evaluate the ability of the borrower to generate funds needed to service existing term debts and replace capital assets. It also enables users to evaluate the ability to acquire additional capital, service additional term debt and to evaluate the risk margin.

Financial efficiency measures the degree of efficiency in using labor, management and capital. Efficiency analysis deals with the relationships between inputs and outputs. Because inputs can be measured in both physical and financial terms, a large number of efficiency measures in addition to financial measures are usually possible.

Five measures of financial efficiency are the asset turnover ratio, operating expense ratio, depreciation expense ratio, interest expense ratio and net income from operations ratio. The asset turnover ratio measures how efficiently operational assets are being used to generate revenue. The higher the ratio, the more efficiently assets are being used to generate revenue.

The last four efficiency measures are operating ratios accounting for the composition of gross revenues. The sum of the operating expense ratio, depreciation expense ratio and interest expense ratio reflects the total direct expenses per dollar of gross revenue for each component—operating, interest and depreciation. Note that the operating expense ratio standards will vary between types of operations and operating systems. Taken together, these four ratios represent the total composition of gross revenues and in percentage terms accounts for 100 percent of the operation's gross revenues.

AVAILABLE CAPITAL AND CAPACITY TO ATTRACT CAPITAL

All businesses need capital to operate, to enter into new ventures or to expand the operation. A properly prepared balance sheet reports the amount of cash and other liquid assets available to meet cash needs. However, most operations have access to more cash than what they currently possess or realize. Nearly all businesses can borrow additional cash and the capacity to borrow (often called a credit reserve) is an asset. Similarly, the ability to attract investors is an asset that deserves to be recognized. The capacity to acquire additional cash allows a business to undertake new or expanded activities.

Assessing an operation's ability to attract additional capital may be difficult without someone who is willing to lend or invest. The financial ratios, and how they compare to similar operations, provide some indication of the business' credit reserve. Likewise, a visit with a lender may offer insight into the size of an operation's credit reserve. Implicit in this consideration is

the cost of capital, that is, the rate of interest the business must pay a lender or the return that must be paid to an investor. The higher the interest or dividend rate, the less capacity the operation has to acquire additional capital; thus, the market interest rate directly influences an operation's credit reserve.

Capacity to Assume Risk

The opportunity for any business to earn a profit requires assuming some risk. Although not described as a business asset, the ability and willingness to assume risk is critical. Types of risk businesses encounter include production, marketing, financial, legal and human resources. An operation likely will differ in its capacity to assume each type of risk exposure. Ability (or capacity) to assume risk differs from a willingness to assume risk, but either one can limit the risk exposure a firm accepts. Businesses that recognize and prudently use their capacity to assume risk are likely to enhance their chance for financial success. One way to consider an operation's capacity to assume risk is to describe it as a chain with five links. The first link is net earnings as a percent of the value of production, which shows the operation's capacity to absorb losses resulting from reduction in yields or price. The second link is the working capital of the business. This indicates if the business has sufficient cash flow (and current assets) to cover operating losses that occur in the first link. The third link is current debt repayment capacity, which shows the operation's ability to rely on a carryover operating loan to finance operating losses. The fourth link is owner's equity, which is the business' ability to sell assets to restructure its finances. The last link is collateral, which is the legal right to the owner's equity.

Summary

Financial measures are intended to help operations analyze their activities from a financial standpoint and provide useful information needed to make good management decisions. By themselves, the financial measures discussed don't provide answers—they need to be reviewed in relation to each other and to other non-operation activities. It is not possible to control or predict all of the factors that influence the final outcome of any operational decision. Nor is it possible to have available all of the information that would be ideal. But decision making can be improved through using available information and through effective financial planning and analysis.

SWEET 16' FINANCIAL MEASURES

LIQUIDITY

1. **Current ratio** = total current assets/total current liabilities
2. **Working capital** = total current assets - total current liabilities

SOLVENCY

3. **Debt/asset ratio** = total liabilities/total assets
4. **Equity/asset ratio** = total equity/total assets
5. **Debt/equity ratio** = total liabilities/total equity

PROFITABILITY

6. **Rate of return on assets** = (net income from operations + interest expense - value of operator and unpaid family labor)/average total assets.
7. **Rate of return on equity** = (net income from operations - value of operator and unpaid family labor)/average total equity
8. **Operating profit margin** = (net income from operations + interest expense - value of operator and unpaid family labor)/gross revenue
9. **Net Income**

REPAYMENT CAPACITY

10. **Term Debt and Capital Lease Coverage Ratio** = (net income from operations + total operation income + depreciation expense + interest on term debt and capital leases - total income tax expense - family living withdrawal)/principal and interest payments on term debt and capital leases
11. **Capital replacement and term debt repayment margin** = net income from operations + total operation income + depreciation expense - total income tax expense - family living withdrawal (including total annual payments on personal liabilities) - payment on prior unpaid operating debt - principal payments on current portion of term debt and capital leases

FINANCIAL EFFICIENCY

12. **Asset turnover ratio** = gross revenue/average total assets
13. **Operating expense ratio** = operating expense/gross revenue
14. **Depreciation expense ratio** = depreciation expense/gross revenue
15. **Interest expense ratio** = interest expense/gross revenue
16. **Net income from operations ratio** = net income from operations/gross revenue