



Using Financial Ratios

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The financial statements, profit and loss statement, balance sheet and statement of cash flows, offer a glimpse into the financial health of a company. It is important to understand that these income statements are in many ways, just an estimate of the actual performance. For example, we record revenue at the moment the sales invoice is generated, often without regard to whether the invoice will actually be paid. Many other balance sheet items are also estimates of the actual performance of an individual asset or liability. Usually, the performance difference between the estimate and actual is so small that has relatively little bearing on the bottom line. Sometimes, the difference is material.

It is often challenging to get a complete picture of a company's financial health by just looking at the financials. It's difficult to compare past performance to current performance by just looking at these statements. Financial ratios offer a short-cut to understanding financial performance. Ratios are especially good at creating trends of performance and comparing one company to another or to an industry average.

Financial ratios simply indicate the relationship of one number to another. They are easily calculated by dividing one number by another and expressing the result as a percentage or a number of times relationship represented by a decimal. The beauty of financial ratios is that they provide comparisons that reveal more about the financial health of the company than just the numbers in the financial statements alone.

Within each category of ratios, there are dozens of formalized ratios used by one or another group or agency. Many of these ratios are specifically geared towards public companies. As our practice is limited to private companies, we have consolidated those hundreds of ratios into thirteen ratios that we believe are most appropriate for small and medium sized privately-held companies. These ratios are easy to calculate from standard published financial statements and are best if used over time. That is, they reveal the most when looked at in a trend over several years.



The interpretation of financial ratios can be skewed by the intentional mismanagement of a company's financial statements. The CFOs who participate in this sort of activity usually make the news and have unhappy futures. Offering interpretations in the individual ratio listings for such cases would make this guide long and unnecessarily complicated. This guide is offered as a tool for small and medium business owners to evaluate the performance of their own company. The guide assumes that management is using its best efforts to run a business in a legal and ethical manner.

PROFITABILITY RATIOS

Profitability ratios measure a company's ability to generate profits and control expenses.

Gross Profit Margin Percentage

Computation: gross profit (revenue minus cost of goods sold) divided by revenue.

$$\text{Gross Margin \%} = \text{Gross Profit} \div \text{Revenue}$$

Interpretation: Gross Margin % shows the profitability of the company's products or services themselves, without other overhead expenses. This ratio can be applied to the company as a whole or all the way down to a specific product of SKU. It is a key measure of profitability, because it is difficult to increase the gross margin of a product. On a trend basis, an increase in the gross margin reflects the company's ability to pass along raw material increases to the customer or may be an indication that they are facing little competition or have a superior sales force. Decreasing gross margins indicate that the company is under severe competitive pressures and is having to lower its prices to generate sales or that it's not able to pass along increases in raw materials or labor wage increases. As such, the gross margin serves as an early warning signal of the company's health.

Operating Profit Margin Percentage

Computation: operating margin (gross profit minus operating expenses) divided by revenue.

$$\text{Operating Margin \%} = \text{Operating Profit} \div \text{Revenue}$$

Interpretation: Operating Margin % shows the basic profitability of the company's business, or in other words, how well the company's managers are managing the business. The operating margin % is best compared on a trend basis and falling or negative trends indicate that expenses are increasing faster than sales.



Net Profit Margin Percentage

Computation: net profit divided by revenue.

$$\text{Net Profit Margin \%} = \text{Net Profit} \div \text{Revenue}$$

Interpretation: Net Profit Margin %, also known as return on sales, reflects the company's bottom line performance. It tells how much profit a company gets to keep after paying all the bills. Like the other two profit margin ratios, it's best considered in a trend and compared to companies in a similar industry or industry averages by company size.

Return on Assets (ROA)

Computation: net profit divided by total assets

$$\text{Return on Assets} = \text{Net Profit} \div \text{Total Assets}$$

Interpretation: This ratio expresses the return on total assets and measures the effectiveness of management in employing the resources available to it. It expresses the percentage of every dollar invested in the business that was returned to the owner as profit. It also allows for the comparison of company performance across size categories. While a high percentage is good, a ROA that is too high may reflect profits being stripped from the company and not being reinvested for future profits. If a company doesn't continue investing in new assets, its long-range profitability will suffer.

Return on Equity (ROE)

Computation: net Profit divided by Shareholder's Equity

$$\text{Return on Equity} = \text{Net Profit} \div \text{Shareholder's Equity}$$

Interpretation: This ratio expresses the rate of return on invested capital. While it can serve as an indicator of management performance, you are cautioned to use it in conjunction with other ratios. A high return, normally associated with effective management, could indicate an under-capitalized form. Whereas, a low return, usually an indicator of inefficient management performance, could reflect a highly capitalized, conservatively operated business. In any event, it's a good indication of whether a company is capable of returning a profit that is worth the risk.

LEVERAGE RATIOS

Leverage ratios let you see how extensively a company uses debt, or leverage, in its operations. Leverage ratios refer to *financial leverage*, the extent to which a company's assets are financed with debt, as compared to *operating leverage*, which is the ratio of fixed costs to variable costs. Bankers love the leverage ratios.



Debt-to-Equity

Computation: total liabilities divided by shareholder's equity

$$\text{Debt-to-Equity} = \text{Total Liabilities} \div \text{Shareholder's Equity}$$

Interpretation: This ratio expresses the relationship between capital contributed by creditors and that contributed by owners. It is simple the ratio of how much debt the company has for every dollar of shareholder equity. The higher the ratio, the greater the risk being assumed by creditors. A lower ratio generally indicates greater long-term financial safety. A firm with a low debt-to-equity ratio usually has greater flexibility to borrow in the future. A more highly leveraged company has a more limited debt capacity.

Interest Coverage

Computation: total liabilities divided by shareholder's equity

$$\text{Interest Coverage} = \text{Operating Profit} \div \text{Annual Interest Charges}$$

Interpretation: This ratio measures the company's interest exposure; how much of its operating profit is needed just to cover the annual interest expense. A ratio of 1.0 means that all the company's operating profits are required just to pay the interest expense. A high ratio generally means that a company can afford to take on more debt.

LIQUIDITY RATIOS

Liquidity ratios reveal a company's ability to meet its financial obligations including debt, payroll, taxes and payments to vendors.

Current Ratio

Computation: current assets divided by current liabilities

$$\text{Current Ratio} = \text{Current Assets} \div \text{Current Liabilities}$$

Interpretation: This ratio is a rough indication of a firm's ability to service its current obligations in the short term. Generally, the higher the current ratio, the greater the "cushion" between current obligations and a firm's ability to pay them. A ratio less than 1.0 means that the company will run out of cash to meet its obligations in the short term. The composition and quality of current assets is a critical factor in the analysis of an individual firm's liquidity.



Quick Ratio

Computation: current assets minus inventory divided by current liabilities.

$$\text{Quick Ratio} = (\text{Current Assets} - \text{Inventory}) \div \text{Current Liabilities}$$

Interpretation: Also known as the “ACID TEST” ratio, it is a refinement of the current ratio and is a more conservative measure of liquidity. The ratio expresses the degree to which a company’s current liabilities are covered by the most liquid assets. Generally, any value of less than 1.0 implies a reciprocal “dependency” on inventory or other current assets to liquidate short-term debt.

Cash Conversion Cycle

Computation: days inventory plus days sales outstanding minus days payables.

$$\text{Cash Conversion Cycle} = \text{Days Sales Outstanding} + \text{Days Inventory} - \text{Days Payables}$$

Interpretation: The cash conversion cycle is the number of days negotiated financing is needed to support the operating cycle of a business. A business’s operating cycle is simply the number of days its goods are tied up in inventory plus the number of days its sales are tied up in receivables. Calculating the cash conversion cycle tells you a lot more about ability to pay than the quick or current ratio. In business, cash flow is the “life blood” of a company.

EFFICIENCY RATIOS

The efficiency ratios show how efficiently management runs certain base functions of the company; inventory, collections and payables.

Days Inventory

Computation: average inventory or ending inventory divided by cost of goods sold per day

$$\text{Days Inventory} = \text{Ending Inventory} \div (\text{Cost of Goods Sold} \div 360)$$

Interpretation: measures how many days of inventory are in the production or distribution system. Inventory flows through a company’s ‘system’ at a faster or slower rate, how fast it moves is an indication of how quickly the company can turn inventory into cash. Both the Days’ Inventory and the Inventory turns measure how efficiently a company utilizes its inventory.

Inventory Turns is a function of Days’ Inventory in that it measures how many times a company’s inventory turns over during a year. It is calculated by dividing the days’ inventor into 360.

$$\text{Inventory turns} = 360 \div \text{Days' Inventory}$$



Days Sales Outstanding (DSO)

Computation: ending A/R divided by revenue per day

$$\text{Days Sales Outstanding} = \text{Ending A/R} \div (\text{Revenue} \div 360)$$

Interpretation: DSO is a measure of how quickly a company's customers pay their bills. Generally, the greater number of days outstanding, the greater the probability of delinquencies in accounts receivable. A comparison of a company's daily receivables may indicate the extent of a company's control over credit and collections. The terms offered by a company to its customers, however may differ from terms within the industry and should be taken into consideration.

Days Payables Outstanding (DPO)

Computation: ending A/P divided by cost of goods sold per day

$$\text{Days Payables Outstanding} = \text{Ending A/P} \div (\text{Cost of Goods Sold} \div 360)$$

Interpretation: This figure expresses the average time in days that it takes a company to pay its vendors. Generally, the higher the number, the more cash a company is keeping on hand. However, the company has to strike a balance between preserving cash and keeping vendors happy.