

Creating a Successful Financial Plan



Basic Financial Reports

- Balance Sheet - Estimates the firm's worth on a given date; built on the accounting equation:

$$\text{Assets} = \text{Liabilities} + \text{Owner's Equity}$$

- Income Statement - Compares the firm's expenses against its revenue over a period of time to show its net profit (or loss):

$$\text{Net Profit} = \text{Sales Revenue} - \text{Expenses}$$

- Statement of Cash Flows - Shows the change in the firm's working capital over a period of time by listing the *sources* of funds and the *uses* of these funds.

Twelve Key Ratios

- Liquidity Ratios - Tell whether or not the small business will be able to meet its maturing obligations as they come due.
 1. Current Ratio - Measures solvency by showing the firm's ability to pay current liabilities out of current assets.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{\$686,985}{\$367,850} = 1.87:1$$

Twelve Key Ratios

- Liquidity Ratios - Tell whether or not the small business will be able to meet its maturing obligations as they come due.
- 2. Quick Ratio - Shows the extent to which the firm's most liquid assets cover its current liabilities.

$$\text{Quick Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}} = \frac{\$231,530}{\$367,850} = .63:1$$

Twelve Key Ratios

- Leverage Ratios - Measure the financing provided by the firm's owners against that supplied by its creditors; a gauge of the depth of the company's debt.
- 3. Debt Ratio - Measures the percentage of total assets financed by creditors rather than owners.

$$\text{Debt Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}} = \frac{\$580,000}{\$847,655} = .68:1$$

Twelve Key Ratios

- Leverage Ratios - Measure the financing provided by the firm's owners against that supplied by its creditors; a gauge of the depth of the company's debt.
4. Debt to Net Worth Ratio - Compares what the business "owes" to what it "owns."

$$\text{Debt to Net} = \frac{\text{Total Debt}}{\text{Tangible Net Worth}} = \frac{\$580,000}{\$264,155} = 2.20:1$$

Worth Ratio

Twelve Key Ratios

- Leverage Ratios - Measure the financing provided by the firm's owners against that supplied by its creditors; a gauge of the depth of the company's debt.
- 5. Times Interest Earned - Measures the firm's ability to make the interest payments on its debt.

$$\text{Times Interest Earned} = \frac{\text{EBIT}^*}{\text{Total Interest Expense}} = \frac{\$80,479}{\$19,850} = 4.05:1$$

*Earnings Before Interest and Taxes

Twelve Key Ratios

- Operating Ratios - Evaluate the firm's overall performance and show how effectively it is putting its resources to work.
- 6. Average Inventory Turnover Ratio - Tells the average number of times the firm's inventory is "turned over" or sold out during the accounting period.

$$\text{Average Inventory Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}^*} = \frac{\$1,290.117}{\$630,600} = 2.05 \text{ times a year}$$

$$*\text{Average Inventory} = \frac{\text{Beginning Inventory} + \text{Ending Inventory}}{2}$$

Twelve Key Ratios

- Operating Ratios - Evaluate the firm's overall performance and show how effectively it is putting its resources to work.
- 7. Average Collection Period Ratio - Tells the average number of days required to collect accounts receivable.

Two Steps:

$$\text{Receivables Turnover Ratio} = \frac{\text{Credit Sales}}{\text{Accounts Receivable}} = \frac{\$1,309,589}{\$179,225} = 7.31 \text{ times a year}$$

$$\text{Average Collection Period Ratio} = \frac{\text{Days in Accounting Period}}{\text{Receivables Turnover Ratio}} = \frac{365}{7.31} = 50.0 \text{ days}$$

Twelve Key Ratios

- Operating Ratios - Evaluate the firm's overall performance and show how effectively it is putting its resources to work.
8. Average Payable Period Ratio - Tells the average number of days required to pay accounts payable.

Two Steps:

$$\text{Payables Turnover Ratio} = \frac{\text{Purchases}}{\text{Accounts Payable}} = \frac{\$939,827}{\$152,580} = 6.16 \text{ times a year}$$

$$\text{Average Payable Period Ratio} = \frac{\text{Days in Accounting Period}}{\text{Payables Turnover Ratio}} = \frac{365}{6.16} = 59.3 \text{ days}$$

Twelve Key Ratios

- Operating Ratios - Evaluate the firm's overall performance and show how effectively it is putting its resources to work.
9. Net Sales to Total Assets Ratio - Measures the firm's ability to generate sales given its asset base.

$$\text{Net Sales to Total Assets} = \frac{\text{Net Sales}}{\text{Total Assets}} = \frac{\$1,870,841}{\$847,655} = 2.21:1$$

Twelve Key Ratios

- Operating Ratios - Evaluate the firm's overall performance and show how effectively it is putting its resources to work.
10. Net Sales to Working Capital Ratio - Measures how many dollars in sales the company generates for every dollar of working capital.

$$\text{Net Sales to Total Assets} = \frac{\text{Net Sales}}{\text{Working Capital}^*} = \frac{\$1,870,841}{\$847,655} = 5.86:1$$

*Working Capital = Current Assets - Current Liabilities

Twelve Key Ratios

- Profitability Ratios - Measure how efficiently the firm is operating; offer information about the firm's "bottom line."

11. Net Profit on Sales Ratio - Measures the firm's profit per dollar of sales revenue.

$$\text{Net Profit on Sales} = \frac{\text{Net Income}}{\text{Net Sales}} = \frac{\$60,629}{\$1,870,841} = 3.24\%$$



Twelve Key Ratios

- Profitability Ratios - Measure how efficiently the firm is operating; offer information about the firm's "bottom line."
12. Net Profit to Equity Ratio - Measures the owner's rate of return on the investment in the business.

$$\text{Net Profit to Equity} = \frac{\text{Net Income}}{\text{Owner's Equity}^*} = \frac{\$60,629}{\$267,655} = 22.65\%$$

* Also called net worth

Interpreting Ratios

- **Sam's Appliance Shop**

Current ratio = 1.87:1

- **Industry Median**

Current ratio = 1.50:1

Although Sam's falls short of the rule of thumb of 2:1, its current ratio is above the industry median by a significant amount. Sam's should have no problem meeting short-term debts as they come due.

Interpreting Ratios

- Sam's Appliance Shop

Quick ratio = 0.63:1

- Industry Median

Quick ratio = 0.50:1

Again, Sam is below the rule of thumb of 1:1, but the company passes this test of liquidity when measured against industry standards. Sam relies on selling inventory to satisfy short-term debt (as do most appliance shops). If sales slump, the result could be liquidity problems for Sam's.

Interpreting Ratios

- **Sam's Appliance Shop**

Debt ratio = 0.68:1

- **Industry Median**

Debt ratio = 0.64:1

Creditors provide 68% of Sam's total assets. very close to the industry median of 64%. Although the company does not appear to be overburdened with debt, Sam's might have difficulty borrowing , especially from conservative lenders.

Interpreting Ratios

■ Sam's Appliance Shop

Debt to net worth ratio
= 2.20:1

Industry Median

Debt to net worth ratio
=1.90:1

Sam's owes \$2.20 to creditors for every \$1.00 the owner has invested in the business (compared to \$1.90 to every \$1.00 in equity for the typical business. Many lenders will see Sam's as "borrowed up," having reached its borrowing capacity. Creditor's claims are more than twice those of the owners.



Interpreting Ratios

- **Sam's Appliance Shop**

Times interest earned
ratio = 2.52:1

- **Industry Median**

Times interest earned
ratio = 2.0:1

Sam's earnings are high enough to cover the interest payments on its debt by a factor of 2.52:1, slightly better than the typical firm in the industry. Sam's has a cushion (although a small one) in meeting its interest payments.

Interpreting Ratios

■ Sam's Appliance Shop

Average inventory
turnover ratio = 2.05
times per year

Industry Median

Average inventory
turnover ratio = 4.0
times per year

Inventory is moving through Sam's at a very slow pace. What could be causing such a low turnover in the business?



Interpreting Ratios

■ **Sam's Appliance Shop**
Average collection
period ratio = 50.0 days

■ **Industry Median**
Average collection
period ratio = 19.3 days

Sam's collects the average account receivable after 50 days compared to the industry median of 19 days – more than 2.5 times longer. What is a more meaningful comparison for this ratio?



Interpreting Ratios

- Sam's Appliance Shop

Average payable period
ratio = 59.3 days

- Industry Median

Average payable period
ratio = 43 days

Sam's payables are nearly 40 percent slower than those of the typical firm in the industry. Stretching payables too far could seriously damage the company's credit rating. What are the possible causes of this discrepancy?



Interpreting Ratios

■ **Sam's Appliance Shop**
Net sales to total assets
ratio = 2.21:1

■ **Industry Median**
Net Sales to total assets
ratio = 2.7:1

Sam's Appliance Shop is not generating enough sales, given the size of its asset base. What could cause this?



Interpreting Ratios

- **Sam's Appliance Shop**

Net sales to working capital ratio = 5.86:1

- **Industry Median**

Net Sales to working capital ratio = 10.8:1

Sam's generates just \$5.86 in sales for every \$1 of working capital, just over half of what the typical firm in the industry does. The message is clear: Sam's is not producing an adequate volume of sales. Possible causes . . . ?



Interpreting Ratios

- **Sam's Appliance Shop**

Net profit on sales
ratio = 3.24%

- **Industry Median**

Net profit on sale
ratio = 7.6%

After deducting all expenses, Sam's has just 3.24 cents of every sales dollar left as profit – less than half the industry average. Sam may discover that some of his operating expenses are out of balance.



Interpreting Ratios

- **Sam's Appliance Shop**

Net profit on equity
ratio = 22.65%

- **Industry Median**

Net profit on equity
ratio = 12.6%

Sam's return on his investment in the business is an impressive 22.65%, compared to an industry median of just 12.6%. Is this the result of high profitability or is there another explanation?

Breakeven Analysis

- **The breakeven point is the level of operation at which a business neither earns a profit nor incurs a loss.**
- **It is a useful planning tool because it shows entrepreneurs the minimum level of activity required to stay in business.**
- **With one change in the breakeven calculation, an entrepreneur can also determine the sales volume required to reach a particular profit target.**

Calculating the Breakeven Point

- Step 1: Determine the expenses the business can expect to incur.
- Step 2: Categorize the expenses in step 1 into fixed expenses and variable expenses.
- Step 3: Calculate the ratio of variable expenses to net sales. Then compute the contribution margin:

$$\text{Contribution Margin} = 1 - \frac{\text{Variable Expenses}}{\text{Net Sales Estimate}}$$

- Step 4: Compute the breakeven point:

$$\text{Breakeven Point} = \frac{\text{Total Fixed Costs}}{\text{Contribution Margin}}$$

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Calculating the Breakeven Point: The Magic Shop

- Step 1: Net Sales estimate is \$950,000 with Cost of Goods Sold of \$646,000 and total expenses of \$236,500.
- Step 2: Variable Expenses of \$705,125; Fixed Expenses of \$177,375.
- Step 3: Contribution margin:

$$\text{Contribution Margin} = 1 - \frac{\$705,125}{\$950,000} = .26$$

- Step 4: Breakeven point:

$$\text{Breakeven Point} = \frac{\$177,375}{.26} = \underline{\underline{\$682,212}}$$

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