CFMA

The Basics of Construction Accounting Workshop

Key Financial Ratios

One key element in any financial analysis is the comparison of financial ratios; however, mere comparison to industry averages may have limited value. The real usefulness lies in comparing individual ratios to each other *over time.* For instance, an analysis that explains a change in the current ratio over the past two years will be more useful than an explanation of the variance between a company's current ratio and a published "industry average" current ratio. Industry averages of various ratios can be useful as a beginning benchmark for comparison purposes and as an indication of industry competition. The interpretation of financial ratios provided on the following pages is not intended to represent all possible interpretations and is only an example of how these ratios may be used. There may be other interpretations of these financial ratios.

LIQUIDITY RATIOS

Ratio	Formula	Interpretation
Current Ratio	Current Assets / Current Liabilities	Indicates the extent to which current assets are available to satisfy current liabilities. Usually stated in terms of absolute values (i.e., "2.1 to 1.0" or simply "2.1"). Generally, a minimum current ratio is 1.0, which indicates that current assets at least equal current liabilities.
Quick Ratio	(Cash and Cash Equivalents + Short-Term Investments + Receivables, net) / Current Liabilities	Indicates the extent to which the more liquid assets are available to satisfy current liabilities. Usually stated in terms of absolute values, a quick ratio of 1.0 is generally considered a liquid position.
Days of Cash	(Cash and Cash Equivalents) x 360 / Revenue	Indicates the number of days revenue in cash. Generally, a ratio of 7 days or more is considered adequate.
Working Capital Turnover	Revenue / (Working Capital) x (Current Assets - Current Liabilities)	Indicates the amount of revenue being supported by each $1 of net working capital employed. A ratio exceeding 30 may indicate a need for increased working capital to support future revenue growth.

PROFITABILITY RATIOS

Ratio	Formula	Interpretation
Return on Assets	Net Earnings / Total Assets	Indicates the profit generated by the total assets employed. A higher ratio reflects a more effective employment of company assets. Generally, this ratio is stated in terms of percentages (i.e., 10% return on assets).
Return on Equity	Net Earnings / Total Net Worth	Indicates the profit generated by the net assets employed. This ratio reflects the stockholders' return on investment and is generally stated as a percentage. A very high ratio may indicate an undercapitalized situation – or, conversely, a very profitable company!
Times Interest Earned	Net Earnings + Income Taxes + Interest Expense / Interest Expense	Indicates the company's ability to meet interest expense from operations. A low ratio may indicate an over-leveraged situation and a need for more permanent equity.

LEVERAGE RATIOS

Ratio	Formula	Interpretation
Debt to Equity	$\frac{\text{Total Liabilities}}{\text{Total Net Worth}}$	Indicates the relationship between creditors and owners. Generally, a ratio of 3 or lower is considered acceptable.
Revenue to Equity	$\frac{\text{Revenue}}{\text{Total Net Worth}}$	Indicates the level of revenue being supported by each $1 of equity. Generally, a ratio of 15 or less is considered acceptable.
Asset Turnover	$\frac{\text{Revenue}}{\text{Total Assets}}$	Indicates the level of revenue being supported by each $1 of assets. By reviewing the trend of this ratio, one can determine the effectiveness of asset expansion.
Fixed Asset Ratio	$\frac{\text{Net Fixed Assets}}{\text{Total Net Worth}}$	Indicates the level of stockholders' equity invested in net fixed assets. A higher ratio may indicate a lack of funds for current operations. Usually, a low ratio indicates a more favorable liquidity position; however, off balance sheet financing of equipment may offset this apparent positive indication.
Equity to General & Administrative Expenses	$\frac{\text{Total Net Worth}}{\text{General \& Administrative Expenses}}$	Indicates the level of overhead in relation to net worth. Generally, a ratio of 1.0 or more is considered acceptable.
Underbillings to Equity	$\frac{\text{Unbilled Work + Cost in Excess}}{\text{Total Net Worth}}$	Indicates the level of unbilled contract volume being financed by the stockholders. Usually stated as a percentage; a ratio of 30 % or less is considered acceptable.
Backlog to Equity	$\frac{\text{Backlog}}{\text{Total Net Worth}}$	Indicates the relationship of signed or committed work to total stockholders' equity. Generally, a ratio of 20 or less is considered acceptable. A higher ratio may indicate the need for additional permanent equity.

EFFICIENCY RATIOS

Ratio	Formula	Interpretation
Backlog to Working Capital	$\frac{\text{Backlog}}{\text{Current Assets - Current Liabilities}}$	Indicates the relationship between signed or committed work and working capital. A higher ratio may indicate a need for an increase in permanent working capital.
Months in Backlog	$\frac{\text{Backlog}}{\text{Revenue/12}}$	Indicates the average number of months it will take to complete all signed or committed work.
Days in Accounts Receivable	$\frac{\text{(Contract Accounts Receivable + Other Accounts Receivable - Allowance for Doubtful Accounts) x 360}}{\text{Revenue}}$	Indicates the number of days to collect accounts receivable. A lower ratio indicates a faster collection of receivables, i.e., more liquidity. Consideration should also be given to the days in accounts payable ratio because higher days in accounts receivable ratio may indicate a drain on cash flow.
Days in Inventory	$\frac{\text{Inventory x 360}}{\text{Cost of Sales}}$	Indicates the number of days required to sell inventory. A high ratio may indicate an overstocking of inventory.
Days in Accounts Payable	$\frac{\text{(Accounts Payable - Retainage) x 360}}{\text{Total Cost}}$	Indicates the average number of days it takes to liquidate trade payables. The ratio should be compared to credit terms of vendors. Retainage has been excluded.
Operating Cycle	Days in Cash + Days in Accounts Receivable + Days in Inventory – Days in Accounts Payable	Indicates the length of time it takes for the company to complete a normal operating cycle. A low ratio may indicate a need for more permanent working capital.

Financial Ratios CFMA's 2013 Annual Financial Survey

	2013 Participants Average	2012 Participants Average
Liquidity Ratios		
Current Ratio	1.6	1.4
Quick Ratio	1.4	1.3
Days of Cash	17.4	28.2
Working Capital Turnover	9.6	9.6
Profitability Ratios		
Return on Assets	5.0 %	5.5 %
Return on Equity	14.2 %	15.2 %
Times Interest Earned	11.4	16.7
Leverage Ratios		
Debt to Equity	1.5	1.7
Revenue to Equity	7.1	6.6
Asset Turnover	2.8	2.4
Fixed Asset Ratio	23.4 %	35.0 %
Equity to SG&A Expense	1.6	2.2
Underbillings to Equity	9.8 %	14.4 %
Backlog to Equity	2.7	5.6
Efficiency Ratios		
Backlog to Working Capital	3.4	8.2
Months in Backlog	4.8	10.2
Days in Accounts Receivable	51.9	50.1
Days in Inventory	4.4	3.0
Days in Accounts Payable	34.2	43.0
Operating Cycle	38.7	38.3