

Profitability Ratios

	Formula	Definition
Gross profit margin	$\frac{\text{Sales} - \text{Cost of Goods Sold}}{\text{Sales}}$	An indication of the total margin available to cover operating expenses and yield a profit.
Operating profit margin [or return on sales]	$\frac{\text{Profits before taxes and before interest}}{\text{Sales}}$	An indication of the firm's profitability from current operations without regard to the interest charges accruing from the capital structure.
Net profit margin [net return on sales]	$\frac{\text{Profits after taxes}}{\text{Sales}}$	Shows after-tax profits per dollar of sales. Subpar profit margins indicate that the firm's sales prices are relatively low or that costs are relatively high, or both.
Return on total assets	$\frac{\text{Profits after taxes}}{\text{Total assets}}$ or $\frac{\text{Profits after taxes + interest}}{\text{Total assets}}$	A measure of the return on total investment in the enterprise. It is sometimes desirable to add interest to after-tax profits to form the numerator of the ratio since total assets are financed by creditors as well as by stockholders; hence, it is accurate to measure the productivity of assets by the returns provided to both classes of investors.
Return on stockholder's equity [return on net worth]	$\frac{\text{Profits after taxes}}{\text{Total stockholders' equity}}$	A measure of the rate of return on stockholders' investment in the enterprise.
Return on common equity	$\frac{\text{Profits after taxes} - \text{Preferred stock dividends}}{\text{Total stockholders' equity} - \text{Par value of preferred stock}}$	A measure of the rate of return on the investment the owners of the common stock have made in the enterprise.
Earnings per share	$\frac{\text{Profits after taxes} - \text{Preferred stock dividends}}{\text{Number of shares of common stock outstanding}}$	Shows the earnings available to the owners of each share of common stock.

(continued)

**Table 3.7** Key Financials Ratios (*Continued*)

Liquidity Ratios		
	Formula	Definition
<b>Current ratio</b>	$\frac{\text{Current assets}}{\text{Current liabilities}}$	Indicates the extent to which the claims of short-term creditors are covered by assets that are expected to be converted to cash in a period roughly corresponding to the maturity of the liabilities.
<b>Quick ratio</b>	$\frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}}$	A measure of the firm's ability to pay off short-term obligations without relying on the sale of its inventories.
<b>Inventory to net working capital</b>	$\frac{\text{Inventory}}{\text{Current assets} - \text{Current liabilities}}$	A measure of the extent to which the firm's working capital is tied up in inventory.
Leverage Ratios		
<b>Debt-to-asset ratio</b>	$\frac{\text{Total debt}}{\text{Total assets}}$	Measures the extent to which borrowed funds have been used to finance the firm's operations.
<b>Debt-to-equity ratio</b>	$\frac{\text{Total debt}}{\text{Total stockholders' equity}}$	Provides another measure of the funds provided by creditors versus the funds provided by owners.
<b>Long-term debt-to-equity ratio</b>	$\frac{\text{Long-term debt}}{\text{Total stockholders' equity}}$	A widely used measure of the balance between debt and equity in the firm's long-term capital structure.
<b>Times-interest-earned</b>	$\frac{\text{Profits before interest \& taxes}}{\text{Total interest charges}}$	Measures the extent to which earnings can decline without the firm becoming unable to meet its annual interest costs.
<b>Fixed-charge coverage</b>	$\frac{\text{Profits before interest \& taxes} + \text{Lease obligations}}{\text{Total interest charges} + \text{Lease obligations}}$	A more inclusive indication of the firm's ability to meet all of its fixed-charge obligations.

	Formula	Definition
Inventory turnover	$\frac{\text{Sales}}{\text{Inventory of finished goods}}$	When compared to industry averages, it provides an indication of whether a company has excessive or perhaps inadequate finished goods inventory.
Fixed assets turnover	$\frac{\text{Sales}}{\text{Fixed assets}}$	A measure of the sales productivity and utilization of plant and equipment.
Total assets turnover	$\frac{\text{Sales}}{\text{Total assets}}$	A measure of the utilization of all of the firm's assets; a ratio below the industry average indicates the company is not generating a sufficient volume of business, given the size of its asset investment.
Accounts receivable turnover	$\frac{\text{Annual credit sales}}{\text{Accounts receivable}}$	A measure of the average length of time it takes the firm to collect the sales made on credit.
Average collection period	$\frac{\text{Annual credit sales}}{\text{Total sales} + 365}$ or $\frac{\text{Accounts receivable}}{\text{Average daily sales}}$	Indicates the average length of time the firm must wait after making a sale before it receives payment.

**Other Ratios**

Dividend yield on common stock	$\frac{\text{Annual dividends per share}}{\text{Current market price per share}}$	A measure of the return to owners received in the form of dividends.
Price-earnings ratio	$\frac{\text{Current market price per share}}{\text{After-tax earnings per share}}$	Faster-growing or less-risky firms tend to have higher price-earnings ratios than slower-growing or more-risky firms, traditionally.
Dividend payout ratio	$\frac{\text{Annual dividends per share}}{\text{After-tax earnings per share}}$	Indicates the percentage of profits paid out as dividends.
Cash flow per share	$\frac{\text{After-tax profits} + \text{depreciation}}{\text{Number of common shares outstanding}}$	A measure of the discretionary funds over and above the expenses that are available for use by the firm.