Key Financial Ratios: How to Calculate Them and What They Mean

Ratio	How Calculated	What It Shows
Profitability Ratios		
1. Gross profit margin	$\frac{\text{Sales revenues} - \text{Cost of goods sold}}{\text{Sales revenues}}$	Shows the percentage of revenues available to cover operating expenses and yield a profit. Higher is better and the trend should be upward.
2. Operating profit margin (or return on sales)	$\frac{\text{Sales revenues} - \text{Operating expenses}}{\text{Sales revenues}}$ or $\frac{\text{Operating income}}{\text{Sales revenues}}$	Shows the profitability of current operations without regard to interest charges and income taxes. Higher is better and the trend should be upward.
3. Net profit margin (or net return on sales)	$\frac{\text{Profits after taxes}}{\text{Sales revenues}}$	Shows after-tax profits per dollar of sales. Higher is better and the trend should be upward.
4. Total return on assets	$\frac{\text{Profits after taxes} + \text{Interest}}{\text{Total assets}}$	A measure of the return on total monetary investment in the enterprise. Interest is added to after-tax profits to form the numerator since total assets are financed by creditors as well as by stockholders. Higher is better and the trend should be upward.
5. Net return on total assets (ROA)	$\frac{\text{Profits after taxes}}{\text{Total assets}}$	A measure of the return earned by stockholders on the firm's total assets. Higher is better, and the trend should be upward.
6. Return on stockholder's equity (ROE)	$\frac{\text{Profits after taxes}}{\text{Total stockholders' equity}}$	Shows the return stockholders are earning on their capital investment in the enterprise. A return in the 12–15% range is "average," and the trend should be upward.
7. Return on invested capital (ROIC)—sometimes referred to as return on capital employed (ROCE)	$\frac{\text{Profits after taxes}}{\text{Long-term debt} + \text{Total stockholders' equity}}$	A measure of the return shareholders are earning on the long-term monetary capital invested in the enterprise. A higher return reflects greater bottom-line effectiveness in the use of long-term capital, and the trend should be upward.
8. Earnings per share (EPS)	$\frac{\text{Profits after taxes}}{\text{Number of shares of common stock outstanding}}$	Shows the earnings for each share of common stock outstanding. The trend should be upward, and the bigger the annual percentage gains, the better.
Liquidity Ratios		
1. Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$	Shows a firm's ability to pay current liabilities using assets that can be converted to cash in the near term. Ratio should definitely be higher than 1.0; ratios of 2 or higher are better still.
2. Working capital	Current assets – Current liabilities	Bigger amounts are better because the company has more internal funds available to (1) pay its current liabilities on a timely basis and (2) finance inventory expansion, additional accounts receivable, and a larger base of operations without resorting to borrowing or raising more equity capital.
Leverage Ratios		
1. Total debt-to-assets ratio	$\frac{\text{Total debt}}{\text{Total assets}}$	Measures the extent to which borrowed funds (both short-term loans and long-term debt) have been used to finance the firm's operations. A low fraction or ratio is better—a high fraction indicates overuse of debt and greater risk of bankruptcy.
2. Long-term debt-to-capital ratio	$\frac{\text{Long-term debt}}{\text{Long-term debt} + \text{Total stockholders' equity}}$	An important measure of creditworthiness and balance sheet strength. It indicates the percentage of capital investment in the enterprise that has been financed by both long-term lenders and stockholders. A ratio below 0.25 is usually preferable since monies invested by stockholders account for 75% or more of the company's total capital. The lower the ratio, the greater the capacity to borrow additional funds. Debt-to-capital ratios above 0.50 and certainly above 0.75 indicate a heavy and perhaps excessive reliance on long-term borrowing, lower creditworthiness, and weak balance sheet strength.

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Ratio	How Calculated	What It Shows
3. Debt-to-equity ratio	Total debt / Total stockholders' equity	Shows the balance between debt (funds borrowed both short term and long term) and the amount that stockholders have invested in the enterprise. The further the ratio is below 1.0, the greater the firm's ability to borrow additional funds. Ratios above 1.0 and definitely above 2.0 put creditors at greater risk, signal weaker balance sheet strength, and often result in lower credit ratings.
4. Long-term debt-to-equity ratio	Long-term debt / Total stockholders' equity	Shows the balance between long-term debt and stockholders' equity in the firm's *long-term* capital structure. Low ratios indicate greater capacity to borrow additional funds if needed.
5. Times-interest-earned (or coverage) ratio	Operating income / Interest expenses	Measures the ability to pay annual interest charges. Lenders usually insist on a minimum ratio of 2.0, but ratios progressively above 3.0 signal progressively better creditworthiness.
Activity Ratios		
1. Days of inventory	Inventory / Cost of goods sold ÷ 365	Measures inventory management efficiency. Fewer days of inventory are usually better.
2. Inventory turnover	Cost of goods sold / Inventory	Measures the number of inventory turns per year. Higher is better.
3. Average collection period	Accounts receivable / Total sales ÷ 365 or Accounts receivable / Average daily sales	Indicates the average length of time the firm must wait after making a sale to receive cash payment. A shorter collection time is better.
Other Important Measures of Financial Performance		
1. Dividend yield on common stock	Annual dividends per share / Current market price per share	A measure of the return that shareholders receive in the form of dividends. A "typical" dividend yield is 2–3%. The dividend yield for fast-growth companies is often below 1% (maybe even 0); the dividend yield for slow-growth companies can run 4–5%.
2. Price-earnings ratio	Current market price per share / Earnings per share	P-E ratios above 20 indicate strong investor confidence in a firm's outlook and earnings growth; firms whose future earnings are at risk or likely to grow slowly typically have ratios below 12.
3. Dividend payout ratio	Annual dividends per share / Earnings per share	Indicates the percentage of after-tax profits paid out as dividends.
4. Internal cash flow	After-tax profits + Depreciation	A quick and rough estimate of the cash a company's business is generating after payment of operating expenses, interest, and taxes. Such amounts can be used for dividend payments or funding capital expenditures.
5. Free cash flow	Aftertax profits + Depreciation – Capital expenditures – Dividends	A quick and rough estimate of the cash a company's business is generating after payment of operating expenses, interest, taxes, dividends, and desirable reinvestments in the business. The larger a company's free cash flow, the greater its ability to internally fund new strategic initiatives, repay debt, make new acquisitions, repurchase shares of stock, or increase dividend payments.

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