

### Formulae of ratios with their brief interpretations

Name of ratio	Formula	Interpretation
Gross margin (profit ratio)	Gross Margin $\div$ Net sales revenue	It reflects the gross margin earned by the firm through manufacturing or trading as a proportion of revenue. The gross profit margin reflects the company's performance based on the cost of production and the efficiency of reducing the manufacturing cost. It is believed that this ratio should be constant or show an upward trend, which in turn reflects the operational and cost efficiency of the organization. This ratio in most cases is useful for manufacturing organizations.
Profit margin	Net Income or PAT $\div$ Sales revenue	The net profit ratio is computed to measure the overall efficiency of the organization based on its revenue. This ratio can be calculated with profit before tax or profit after tax, and it reflects the overall organizational efficiency.
Return on assets	Profit after tax $\div$ Total assets  <b>Or</b> [Net Income + Interest (1 – Tax rate)] $\div$ (Total assets)	It indicates the profit earned on assets used.
Return on invested capital (ROIC)	[Net income + Interest (1 – Tax rate)] $\div$ (Long Term liabilities + Shareholders' equity)  <b>Or</b> EBITDA $\div$ [Debt (Outside liabilities) + Equity]	The objective of ROIC is to use permanent capital. It assesses how efficiently a company is able to get the cash flow relative to the capital it has invested in its business.
Return on shareholders' equity (ROE)	Net income or PAT $\div$ Shareholders' equity	This ratio reflects the earnings on the shareholders' fund, i.e., equity, reserves, and surpluses. It indicates the return of the owners' fund and shows the management and owners of the company the trend of profits generated by the company.
Earnings per share (EPS)	Net income or PAT $\div$ Number of shares outstanding	This is the amount of profit available to each equity shareholder after payment of all other expenses. This ratio is useful to potential investors for making investment decisions and is also used to give shareholders information about the earnings on their shares.

Price earnings ratio (P/E ratio)	Market price per share ÷ Net income per share (EPS)	The P/E ratio is a prominent indicator of a firm's performance vis-à-vis the market price of its common stock. The P/E ratio indicates the performance of the company as anticipated/judged by investors. It also indicates how the company will perform in the future in the view of the market and investors.
Assets turnover ratio	Sales revenue ÷ Total assets	It indicates efficiency in asset use and explains the revenue- generating capacity with the help of total assets.
Fixed assets turnover	Sales revenue ÷ Fixed assets	This explains the revenue-generating capacity of the firm with respect to the fixed assets employed.
Capital intensity	Sales revenue ÷ PPE (property, plant & equipment)	Companies with large investments in PPE (such as petrochemical firms, refineries, and steel firms) focus on this ratio. Investments in PPE severely impact the cyclical fluctuations in the business activity of a firm. This ratio indicates the contribution by PPE to the revenue of the company.
Invested capital turnover	Sales revenue ÷ (Long term liabilities + shareholders' equity)	This ratio is analyzed in comparison with return on investment (ROI). ROI is the firm's profit margin × investment turnover.
Inventory turnover	$\frac{\text{Cost of goods sold or Cost of sales}}{\text{Average inventory}}$	This ratio explains the movement of inventories in relation to revenue. A high inventory turnover ratio indicates fast movement of inventory. A low inventory turnover ratio indicates slow movement of inventory, which further indicates the firm's efficient movement of inventory.
Inventory days	$\frac{365 \text{ days or } 52 \text{ weeks or } 12 \text{ months}}{\text{Inventory turnover}}$ <p style="text-align: center;"><b>Or</b></p> $\frac{\text{Inventory}}{\text{Cost of sales} \div 365}$	This ratio indicates the movement of the firm's inventory in days.

Receivable turnover	$\text{Credit sales} \div \text{Average accounts receivable}$	This indicates the movement of debtors with reference to credit revenue. It is computed to assess the efficiency in the management/collection of accounts receivable.
Receivable days	$\frac{365 \text{ days or } 52 \text{ weeks or } 12 \text{ months}}{\text{Receivable turnover}}$ <p style="text-align: center;"><b>Or</b></p> $\frac{\text{Average accounts receivable}}{\text{Credit sales} \div 365}$	This indicates the management of receivables in days.
Payable turnover	$\frac{\text{Credit purchases}}{\text{Average accounts payable}}$	This indicates payables with reference to credit purchases. It is computed whether payables are paid on time or not.
Payable days	$\frac{365 \text{ days or } 52 \text{ weeks or } 12 \text{ months}}{\text{Payable turnover}}$ <p style="text-align: center;"><b>Or</b></p> $\frac{\text{Average accounts payable}}{\text{Credit sales} \div 365}$	This indicates how many days' payment is made to suppliers. It assesses the efficiency in the management/payment of accounts payable.
Working capital turnover (where Working capital is Current assets - Current liabilities)	$\text{Sales revenue} \div \text{Working capital}$	This ratio explains how quickly the working capital, i.e., the net current assets, rotates. The higher the turnover, the better the working capital utilization.
Current ratio	$\text{Current assets} \div \text{Current liabilities}$	This ratio indicates the company's ability to pay its short-term liabilities (payables). The higher the ratio, the more capable the company is of paying its current obligations. However, a high current ratio also indicates a large portion of working capital, which may reduce the firm's profitability. Hence, the ratio should be neither too high nor too low.
Acid test (quick) ratio	$\text{Quick assets} \div \text{Current liabilities}$	This ratio is calculated to assess the liquidity position of the firm. How fast can the firm pay its present obligations? This ratio is a more rigorous test of liquidity than the current ratio.

Financial leverage ratio	Assets ÷ Shareholders' equity	This ratio measures the total debt load of a company and then compares it with either assets or equity. It indicates the ratio of assets owned by shareholders and creditors. When the majority of the assets are owned by shareholders of the company, it is believed that the firm is less leveraged. When creditors own the majority of the assets, it is said to be highly leveraged. This indicator is required to assess the riskiness in the capital structure of any organization in order to decide whether the investment in such a firm should be undertaken or not.
Debt-to-equity ratio	Long term liabilities ÷ Shareholders' equity  Or  Total liabilities ÷ Shareholders' equity	Debt usually has a lower cost than cost of equity; hence, it is used to improve ROE. Raising financing through debt increases the fixed liabilities in terms of the payment of interest. It also adds to financial risk. Such liability has to be met even if the business is not performing well. The entity may suffer a loss if the ROI is lower than the cost of debt (interest); therefore, the debt-to-equity ratio should be reasonable.
Debt capitalization	$\frac{\text{Long term liabilities}}{\text{Long term liabilities} + \text{Shareholders' equity}}$	This ratio indicates the financial risk taken by the company. It indicates to investors the risk of investing in the business.
Times interest earned or the interest coverage ratio	$\frac{\text{Pretax operating profit} + \text{Interest}}{\text{Interest}}$ Or $\frac{\text{Earnings before interest and taxes}}{\text{Interest}}$	The lower the interest coverage ratio, the higher the company's debt burden and the higher the possibility of default. This ratio determines how easily the company can make payments of interest on outstanding loans. A high interest coverage ratio indicates the strength of the company to pay interest.
Proprietary fund ratio	$\text{Proprietary funds} \div \text{Total assets}$ Or $\text{Net worth} \div \text{Total assets}$ Or $\text{Proprietary funds} \div \text{Total funds}$	A proprietary fund means equity (i.e., share capital, free reserves of the firm, net of losses, and fictitious assets like preliminary expenses). Total assets exclude fictitious assets. This ratio explains the proportion of total assets financed out of proprietary funds. The higher the ratio, the lower the dependence on outside funds and the more stable the position of the company is in the long run.

Dividend yield	Dividend per share ÷ Market price per share	This ratio indicates the dividend paid by the company each year relative to its share price.
Dividend payout	<div style="text-align: center;">           Dividends ÷ Net income            Or            Dividends ÷ Earnings per share         </div>	This ratio indicates the amount of profit distributed to the shareholders and the amount kept as retained earnings in the business. When compared with the industry and previous years, it shows good future prospects of the company if the retained earnings are high and the payout is low.