

## Liquidity Ratios

Focus on the company's ability to meet its financial obligations in a short-term

Ratio	Calculation	Interpretation
1. Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$	<ul style="list-style-type: none"> <li>• Indicates whether the company has enough short-term assets to cover its short-term debts.</li> <li>• A ratio &gt; 1 (or 2) indicates that working capital is positive (current assets exceed current liabilities).</li> <li>• A ratio &lt; 1 (or 2) indicates that working capital is negative (current liabilities exceed current assets).</li> <li>• Generally, the higher the ratio, the greater the financial stability and the lower the risk for both creditors and owners. <b>1.5:1</b> is considered to be an acceptable ratio for most industries.</li> <li>• However, ratio should not be too high as this may indicate:               <ol style="list-style-type: none"> <li>1. The company is not reinvesting in long-term assets to maintain future productivity; and/or</li> <li>2. Too much inventory on hand or collection of receivables is slow.</li> </ol> </li> <li>• Interpretation of ratio (how high/low it should be) really depends on specific circumstances of each company.</li> </ul>
2. Quick ratio	$\frac{\text{Cash} + \text{A/C Rec.} + \text{ST Invest.}}{\text{Current liabilities}}$	<ul style="list-style-type: none"> <li>• Indicates whether current liabilities could be paid without having to sell inventory</li> <li>• Ratio is the same as the current ratio except inventory is removed from the numerator.</li> <li>• Benchmark is <b>1</b>.</li> <li>• More useful measure than the current ratio for companies that cannot convert inventory into cash quickly if necessary.</li> </ul>
3. Current cash debt coverage	$\frac{\text{Net Cash from Operating Activities}}{\text{Average current liabilities}}$	<ul style="list-style-type: none"> <li>• A higher current cash debt coverage ratio indicates a better liquidity position.</li> <li>• Generally a ratio of <b>0.40:1</b> is considered cause for additional investigation.</li> <li>• Combines cash and accrual figures.</li> </ul>
4. Receivable turnover	$\frac{\text{(Net Credit) Sales}}{\text{Average A/C Receivable}}$	<ul style="list-style-type: none"> <li>• Indicates the effectiveness of credit collection policies.</li> <li>• Measures the number of times trade receivables are converted into cash in a year or a single period.</li> </ul>

5. Average collection period	$\frac{\text{Average A/C Receivable}}{(\text{Net Credit}) \text{ Sales}} \times 365$ <p style="text-align: center;">or</p> $\frac{365}{\text{Receivable Turnover}}$	<ul style="list-style-type: none"> <li>Measures the average number of days taken by the company to collect a day's sales revenue.</li> <li>A large ratio is a negative signal, raising questions about the company's policies of granting credit and the vigor of its collection attempts. It also suggests there may be an increased risk of bad/doubtful debts.</li> <li>A smaller ratio is therefore preferable.</li> </ul>
6. Inventory turnover (Times per year)	$\frac{\text{COGS}}{\text{Average Inventory}}$	<ul style="list-style-type: none"> <li>Relates the level of inventory to the volume of activity and therefore indicates the liquidity of inventory.</li> <li>Measures the number of times inventory was sold on average during the period.</li> </ul>
7. Average days in inventory	$\frac{365}{\text{Inventory Turnover}}$	<ul style="list-style-type: none"> <li>Indicates how long, in days, inventory is held on average.</li> <li>An increase in this ratio from one year to the next may indicate that inventory is taking longer on average to sell and raise questions as to why.</li> </ul>
<b>Solvency Ratios</b>		
Focus on the company's ability to survive over a long period of time		
8. Debt to Assets ratio	$\frac{\text{Total Liabilities}}{\text{Total Assets}}$	<ul style="list-style-type: none"> <li>Indicates the proportion of assets financed by liabilities</li> <li>Indicate the degree of leverage (percentage of total assets funded through debt)</li> </ul>
9. Times Interest Earned (Interest Coverage)	$\frac{\text{Earnings before Interest and Tax}}{\text{Interest Expense}}$	<ul style="list-style-type: none"> <li>Indicates the company's ability to meet its interest payments out of current profits.</li> <li>A general rule of thumb is that earnings should be at least <b>3-4</b> times the interest expense.</li> <li>A low coverage ratio (especially &lt; 1) indicates: <ol style="list-style-type: none"> <li>The company is not operating at a sufficiently profitable level to cover the interest obligations comfortably; and/or</li> <li>Solvency problems.</li> </ol> </li> </ul>
10. Cash Debt Coverage	$\frac{\text{Net Cash from Operating Activities}}{\text{Average of Total Liabilities}}$	<ul style="list-style-type: none"> <li>Indicates entity's ability to repay liabilities from cash generated from operating activities, without having to liquidate assets used in operations.</li> <li>Reflects the whole period, not just a single point in time.</li> </ul>

		<ul style="list-style-type: none"> <li>• A general rule of thumb is that a ratio below <b>0.20</b> is considered as cause for additional investigation.</li> </ul>
11. Free Cash Flow	Net Cash from Operating Activities - Capital Expenditures	<ul style="list-style-type: none"> <li>• Indicates entity's ability to pay dividends or expand operations.</li> <li>• Provides an estimation of discretionary cash.</li> <li>• Combines cash and accrual figures.</li> </ul>
<b>PROFITABILITY Ratios</b>		
Focus on the company's effectiveness in terms of earning profits and providing a return on shareholders' investments		
12. Return on Equity	$\frac{\text{Profit after tax}}{\text{Average Shareholders Equity}}$	<ul style="list-style-type: none"> <li>• Indicates the company's return on shareholders' investment.</li> <li>• Generally, ROE values range from 5%-20%.</li> <li>• High ROE values are preferred as the higher the ratio, the greater the company's return on shareholders investments.</li> </ul>
13. Return on Assets	$\frac{\text{Profit after tax}}{\text{Average Total Assets}}$	<ul style="list-style-type: none"> <li>• Indicates how much return the company is generating on the assets under its control.</li> <li>• Generally, ROA values range from 5%-20%.</li> <li>• High ROA values are preferable as the higher the ratio, the greater the Company's return on the operation of its business resources.</li> </ul>
14. Profit Margin	$\frac{\text{Profit after tax}}{\text{Net Sales}}$	<ul style="list-style-type: none"> <li>• Ratio represents the average net profit on each dollar of sales (e.g. a 10% profit margin would mean that on average, each dollar of sales generated 10 cents in net profit after expenses and income tax).</li> <li>• Adequacy of ratio depends on industry i.e. a supermarket chain would have a low profit margin ratio, compensated by a large volume of sales whereas a jewellery store would generally have a high profit margin, offset by a low sales volume.</li> </ul>
15. Asset Turnover	$\frac{\text{Net Sales}}{\text{Average Total Assets}}$	<ul style="list-style-type: none"> <li>• Indicates how much sales volume is associated with a dollar of assets.</li> <li>• Provides a measure of the effectiveness of the company in using its assets during the period.</li> </ul>
16. Gross Profit Rate	$\frac{\text{Gross Profit (Sales - COGS)}}{\text{Net Sales}}$	<ul style="list-style-type: none"> <li>• Ratio represents the average gross profit on each dollar of sales.</li> </ul>

		<ul style="list-style-type: none"> <li>Any declines in ratio over time should be monitored as these could indicate selling price reductions or increased COGS.</li> </ul>
17. Operating Expenses to Sales ratio	$\frac{\text{Operating Expenses}}{\text{Net Sales}}$	<ul style="list-style-type: none"> <li>Measures costs incurred to support each dollar of sales.</li> </ul>
18. Cash Return on Sales Ratio	$\frac{\text{Net Cash from Operating Activities}}{\text{Net Sales}}$	<ul style="list-style-type: none"> <li>Similar to net profit ratio.</li> <li>Use cash number instead of accrual profit.</li> </ul>
19. Earnings per Share	$\frac{\text{Profit after tax}}{\text{Weighted Average \# of Ordinary Shares}}$	<ul style="list-style-type: none"> <li>Indicates the profit earned on each ordinary share by relating earnings attributable to ordinary shares to the number of ordinary shares issued.</li> </ul>
20. Price-earnings Ratio	$\frac{\text{Market Price per Ordinary Share}}{\text{Earnings per Share}}$	<ul style="list-style-type: none"> <li>Indicates the amount investors are paying for a dollar of earnings.</li> <li>Based on the idea that market price should reflect the market's expectation of future performance, the ratio compares present performance with those expectations.</li> <li>On this basis, a company with a high P/E is expected to show greater future performance than its present level, while one with a low P/E is not expected to do much better in future.</li> </ul>
21. Cash Dividend Payout Rate	$\frac{\text{Dividends}}{\text{Profit}}$	<ul style="list-style-type: none"> <li>Indicates the percentage of profits paid out to ordinary shareholders.</li> <li>e.g. a ratio of 40% indicates that 40% of profit was distributed to shareholders and the remaining 60% represents retained profits.</li> <li>A stable ratio over time suggests the company has a policy of paying dividends based on profits whereas a variable ratio suggests factors other than profit are important in deciding whether to declare dividends.</li> </ul>