

Solvency Ratios

Solvency ratios measure the financial soundness of a business and how well the company can satisfy its short- and long-term obligations. D&B uses six key financial business ratios to measure a company's solvency:

- **Quick Ratio** – This ratio, also called "acid test" or "liquid" ratio, considers only cash, marketable securities (cash equivalents) and accounts receivable because they are considered to be the most liquid forms of current assets. A Quick Ratio less than 1.0 implies dependency on inventory and other current assets to liquidate short-term debt. This ratio is calculated using the following formula:

$$\text{Cash} + \text{Accounts Receivable} \div \text{Current Liabilities}$$

- **Current Ratio** – This ratio is a comparison of current assets to current liabilities, commonly used as a measure of short-run solvency, i.e., the immediate ability of a business to pay its current debts as they come due. Potential creditors use this ratio to measure a company's liquidity or ability to pay off short-term debts. This ratio is calculated using the following formula:

$$\text{Current Assets} \div \text{Current Liabilities}$$

- **Current Liabilities to Net Worth Ratio** – This ratio indicates the amount due creditors within a year as a percentage of the owners or stockholders investment. The smaller the net worth and the larger the liabilities, the less security for creditors. Normally a business starts to have trouble when this relationship exceeds 80%. This ratio is calculated using the following formula:

$$\text{Current Liabilities} \div \text{Net Worth}$$

- **Current Liabilities to Inventory Ratio** – This ratio shows, as a percentage, the reliance on available inventory for payment of debt (how much a company relies on funds from disposal of unsold inventories to meet its current debt). This ratio is calculated using the following formula:

$$\text{Current Liabilities} \div \text{Inventory}$$

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- **Total Liabilities to Net Worth Ratio** – This ratio shows how all of a company's debt relates to the equity of the owners or stockholders. The higher this ratio, the less protection there is for the creditors of the business. This ratio is calculated using the following formula:

$$\text{Total Liabilities} \div \text{Net Worth}$$

- **Fixed Assets to Net Worth Ratio** – This ratio shows the percentage of assets centered in fixed assets compared to total equity. Generally the higher this percentage is over 75%, the more vulnerable a concern becomes to unexpected hazards and business climate changes. Capital is frozen in the form of machinery and the margin for operating funds becomes too narrow for day-to-day operations. This ratio is calculated using the following formula:

$$\text{Fixed Assets} \div \text{Net Worth}$$

Efficiency Ratios

Efficiency ratios measure the quality of a business' receivables and how efficiently it uses and controls its assets, how effectively the firm is paying suppliers, and whether the business is overtrading or undertrading on its equity (using borrowed funds). D&B uses five key financial business ratios to measure a company's efficiency:

- **Collection Period Ratio** – This ratio is helpful in analyzing the collectability of accounts receivable, or how fast a business can increase its cash supply. Although businesses establish credit terms, they are not always observed by their customers. In analyzing a business, you must know the credit terms it offers before determining the quality of its receivables. While each industry has its own average collection period (number of days it takes to collect payments from customers), there are observers who feel that more than 10 to 15 days over terms should be of concern. This ratio is calculated using the following formula:

$$\text{Accounts Receivable} \div \text{Sales} \times 365 \text{ Days}$$

- **Sales to Inventory Ratio** – This ratio provides a yardstick for comparing stock-to-sales ratios of a business with others in the same industry. When this ratio is high, it may indicate a situation where sales are being lost because a concern is understocked and/or customers are buying elsewhere. If the ratio is too low, this may

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show that inventories are obsolete or stagnant. This ratio is calculated using the following formula:

$$\text{Annual Net Sales} \div \text{Inventory}$$

- **Assets to Sales Ratio** – This ratio rates sales to the total investment that is used to generate those sales. An abnormally high percentage may indicate that a business is not being aggressive enough in its sales efforts, or that its assets are not being fully utilized. A low ratio may indicate that a business is selling more than can be safely covered by its assets. This ratio is calculated using the following formula:

$$\text{Total Assets} \div \text{Net Sales}$$

- **Sales to Net Working Capital Ratio** – This ratio measures the number of times working capital turns over annually in relation to net sales. This ratio should be viewed in conjunction with the Assets to Sales Ratio. A high turnover rate can indicate overtrading (excessive sales volume in relation to the investment in the business) and also may indicate that the business relies extensively upon credit granted by suppliers or the bank as a substitute for an adequate margin of operating funds. This ratio is calculated using the following formula:

$$\text{Sales} \div \text{Net Working Capital}$$

- **Accounts Payable to Sales Ratio** – This ratio measures how a company pays its suppliers in relation to the sales volume being transacted. A low percentage would indicate a healthy ratio. A high percentage may indicate that the business may be using suppliers to help finance operations. This ratio is calculated using the following formula:

$$\text{Accounts Payable} \div \text{Net Sales}$$

Profitability Ratios

Profitability ratios measure how well a company is performing by analyzing how profit was earned relative to sales, total assets and net worth. D&B uses three key financial business ratios to measure a company's efficiency:

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- **Return on Sales (Profit Margin) Ratio** – This ratio measures the profits after taxes on the year's sales. The higher this ratio, the better prepared the business is to handle downtrends brought on by adverse conditions. This ratio is calculated using the following formula:

$$\text{Net Profit After Taxes} \div \text{Net Sales}$$

- **Return on Assets (ROA) Ratio** – This ratio shows the after tax earnings of assets and is an indicator of how profitable a company is. Return on assets ratio is the key indicator of the profitability of a company. It matches net profits after taxes with the assets used to earn such profits. A high percentage rate will tell you the company is well run and has a healthy return on assets. This ratio is calculated using the following formula:

$$\text{Net Profit After Taxes} \div \text{Total Assets}$$

- **Return on Net Worth Ratio** – This ratio measures the ability of a company's management to realize an adequate return on the capital invested by the owners in the company. This ratio is calculated using the following formula:

$$\diamond \text{ Net Profit After Taxes} \div \text{Net Worth}$$

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