

Toward Business Literacy: Accounting Outlines



Finance and Ratios

NPV, IRR: projects and required rate of return

- Net Present Value (NPV): The present value of the future cash flows are matched to the original outlay of capital to screen projects
 - A required rate of return is the discount rate used in evaluating present value; positive amount is acceptable
- Internal Rate of Return (IRR): **all** cash flows associated with a project or investment are used to derive a rate of return
- If the IRR = required rate of return, then NPV = \$0
- Return on Investment (ROI):
$$\frac{\text{Net income from investment}}{\text{investment}}$$
- Accounting Rate of Return:
$$\frac{\text{Increase in average operating income less depreciation}}{\text{Initial investment}}$$

Capital Asset Pricing Model

The expected return of a capital asset includes its Beta (sensitivity to non-diversified risk), the expected market return (R_m) & risk-free rate (R_f)

B is beta (how closely the asset moves with the market).

$$E(R_i) = R_f + \beta_{im}(E(R_m) - R_f).$$

Liquidity Ratios

The ability of a company to pay its bills when they come due and to meet any needs for cash that a company may not foresee

- The **Current Ratio** shows the ability that current assets have to meet current liabilities

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

- The **Quick Ratio** measures the ability to pay short-term debts

$$\frac{\text{Cash} + \text{Marketable Securities} + \text{Receivables}}{\text{Current Liabilities}}$$

- **Times Interest Earned** shows if earnings are enough to cover interest

$$\frac{\text{Operating Income}}{\text{Interest Expense}}$$

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Efficiency Ratios: To find the average number of days for each turnover, divide 365 days by these ratios

- To know how to measure the size of accounts receivable and the effectiveness of collecting, then look at **Receivables Turnover**

$$\frac{\text{Net Sales}}{\text{Average Accounts Receivable}}$$

- The **inventory turnover** is how many times a full lot of inventory is sold

$$\frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

- **Payables turnover** tells the quickness that purchases are paid for. A higher number, the shorter the time. A lower number means that cash is short or there is a delay in the company paying.

$$\frac{\text{Cost of Goods Sold}}{\text{Average Accounts Payable}}$$

Safety Ratios

- The **Debt to Equity** ratio shows the capital structure of funds provided by lenders in relation to funds provided by owners:

$$\frac{\text{Total Liabilities}}{\text{Total Equity}}$$

- **Debt coverage** indicates if cash flow can cover debt and if the company has the ability to take on further debt:

$$\frac{\text{Net Profit} + \text{Non-cash expenses}}{\text{Debt}}$$

Profitability Ratios

- **Sales Growth** shows the percentage increase or decrease in sales between two time periods:

$$\frac{\text{Current period's sales} - \text{Previous period's sales}}{\text{Previous period's sales}}$$

- **Cost of Goods Sold to Sales** shows what percentage of sales revenue was taken by the cost of the goods sold:

$$\frac{\text{Cost of Goods Sold}}{\text{Total Sales}}$$

- **Gross Profit Margin** shows what percentage of profits were earned on products themselves:

$$\frac{\text{Gross Profit (Sales} - \text{Cost of Goods Sold)}}{\text{Total Sales}}$$

- **Return on Equity** gives the rate of return for investor's contribution

$$\frac{\text{Net Profit}}{\text{Shareholder's Equity}}$$

- **Return on Assets** shows how effectively the assets generate a return

$$\frac{\text{Net Profit}}{\text{Total Assets}}$$