Section Five
Financial Ratios

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Profitability Ratios:

Ratios that reflect the net result of all of the firm's financing policies and operating decisions.

1. **Operating Margin**
2. **Profit Margin**
3. **Return on Total Assets**
4. **Basic Earning Power (BEP) ratio**
5. **Return on Common Equity**

1. Operating Margin:

This ratio measures operating income, or EBIT, per dollar of sales.

$$\textbf{Operating Margin ratio} = \frac{EBIT}{Sales}$$

Example 1:

Suppose a company generated \$ 10 million in revenue with \$ 4 million in COGS and \$ 2 million in operating expenses, the operating profits is \$ 4 million.

Calculate the operating margin for the company.

Answer:

Operating profit (EBIT) = \$ 10 million - \$ 4 million - \$ 2 million = \$ 4 million

Operating Margin (%) = $\dfrac{\boldsymbol{EBIT}}{\boldsymbol{Sales}} = \dfrac{\boldsymbol{\$\,4\ million}}{\boldsymbol{\$\,10\ million}}$

$= \mathbf{40\ \%}$

2. Profit Margin:

This ratio measures net income per dollar of sales.

$$\text{Profit Margin} = \frac{\textit{Net Income}}{\textit{Sales}}$$

Example 2:

Imagine a company that reports the following numbers on its income statement:

Revenue = $ 100000

Operating cost = $ 20000

COGS = $ 10000

Tax Liability = $ 14000

Calculate The Profit Margin

Answer:

Profit Margin = $\frac{\boldsymbol{Net\ Income}}{\boldsymbol{Sales}}$ = $\frac{100000-20000-10000-14000}{100000} = \frac{56000}{100000} = 56\%$

3. Return on Total Assets:

$$\text{Return on Total Assets} = \frac{\textit{Net Income}}{\textit{Total Assets}}$$

Example 3:

	Company 1	Company 2
Net Income	50000000	10000000
Start of period assets	505000000	14000000
End of period assets	495000000	16000000
Average Assets	500000000	15000000
ROA	10.0 %	66.7 %

4. Basic Earning Power (BEP) ratio:

This ratio indicates the ability of the firm's assets to generate operating income.

Basic Earning Power (BEP) = $\frac{EBIT}{Total\ Assets}$

Example 4:

Suppose you're tasted with calculating the basic earnings power ratio of a company given the following data:

Revenue = $ 50 million

COGS = $ 20 million

R & D = $ 15 million

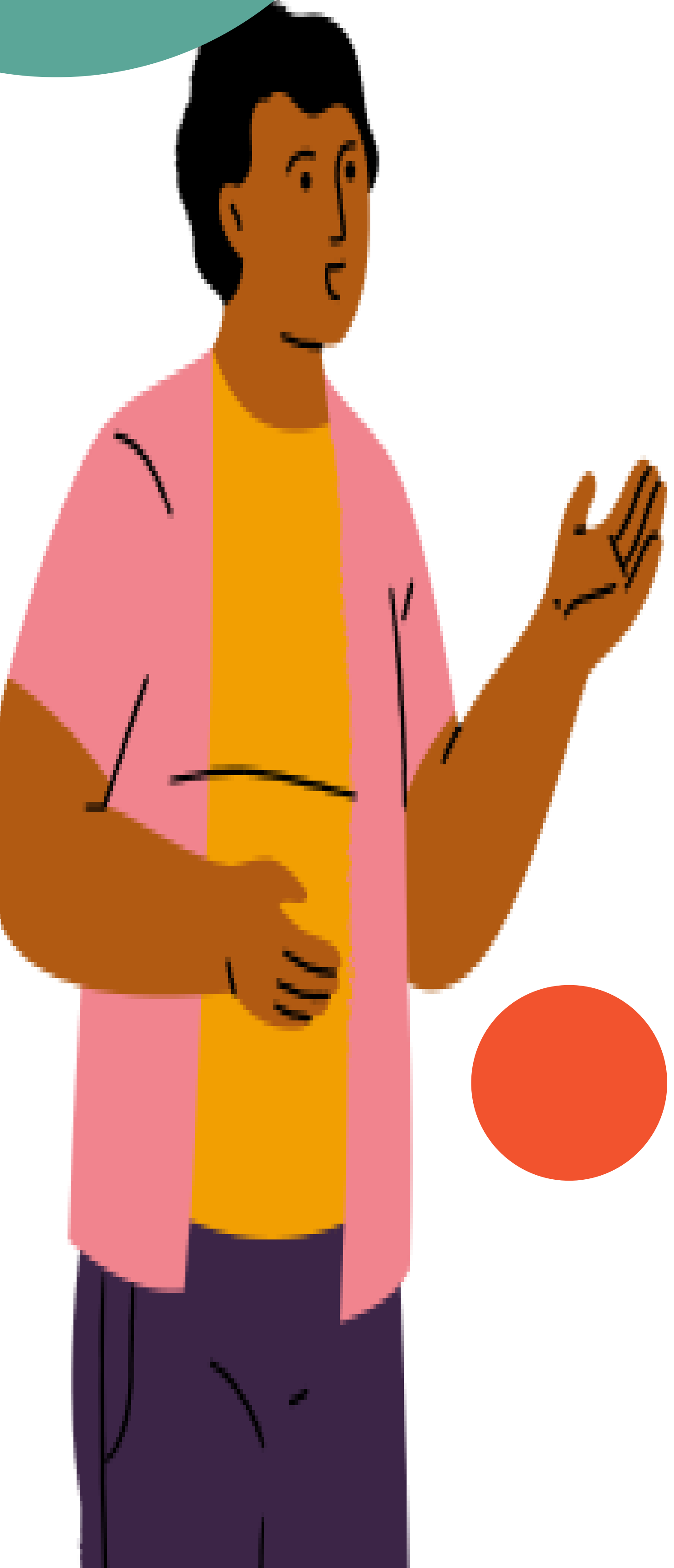
Current assets = $ 40 million

Non-current assets = $ 85 million

Answer:

Basic Earning Power (BEP) = $\frac{EBIT}{Total\ Assets} = \frac{50-20-15}{125} = 0.12$

5. Return on Common Equity (ROE):



This ratio measures the rate of return on common stockholders' investment

$$ROE = \frac{Net\ Income}{Common\ Equity}$$

Example 5:

Imagine a company has the following financial information:

Financial period: April 2023 – March 2024

Net income: \$ 100000, Total assets: \$ 500000, Total liabilities: \$ 100000

Calculate the ROE ratio

Answer:

Equity = Assets – Liabilities

Equity = 500000 – 100000 = 400000

$$ROE = \frac{Net\ Income}{Common\ Equity} = \frac{100000}{400000} = \mathbf{0.25}$$

Market Value Ratios:

Ratios that relate the firm’s stock price to its earnings and book value per share.

1. Price/ Earnings Ratio
2. Market/ Book Ratio

1. Price/ Earnings Ratio

The ratio of the price per share to earnings per share; shows the dollar amount investors will pay for $1 of current earnings.

$$= \frac{\textit{Price per share}}{\textit{Earnings per share}}$$

Example 6:

Suppose a company's last closing share price is $ 20 and its earning per share in the last twelve months is $ 2.

Calculate Price- Earning Ratio.

Answer:

$$= \frac{\boldsymbol{Price\ per\ share}}{\boldsymbol{Earnings\ per\ share}} = \frac{\mathbf{20}}{\mathbf{2}} = \mathbf{10.0}\ \boldsymbol{x}$$

2. Market/ Book Ratio:

The ratio of a stock's market price to its book value gives another indication of how investors regard the company.

$$\textbf{Book Value Per Share} = \frac{\textit{Common Equity}}{\textit{Shares Outstanding}}$$

$$\textbf{Market/ Book (M/B) Ratio} = \frac{\textit{Market Price per Share}}{\textit{Book Value per Share}}$$

Thank For Your Good Listening!