

Financial Analysis

Financial Ratios Calculations

Step 1: Given and Introduction

The given financial information from the firm's accounting records on December 31, 20X1:

- **Net Sales:** \$420,000
- **Net Income Before Income Tax:** \$26,000
- **Income Tax Expense:** \$3,900
- **Net Income After Income Tax:** \$22,100
- **Total Assets:** \$172,000

The goal is to determine the following financial ratios:

1. Rate of return on net sales.
2. Rate of return on total assets.
3. Asset turnover.

Step 2: Calculating the Rate of Return on Net Sales

Formula:

$$\text{Rate of Return on Net Sales} = \left(\frac{\text{Net Income After Income Tax}}{\text{Net Sales}} \right) \times 100$$

Calculation:

$$\text{Rate of Return on Net Sales} = \left(\frac{\$22,100}{\$420,000} \right) \times 100$$

$$\text{First, divide net income after income tax by net sales: } \frac{22,100}{420,000} = 0.0526$$

$$\text{Then, multiply by 100 to express it as a percentage: } 0.0526 \times 100 = 5.26\%$$

Explanation:

The Rate of Return on Net Sales measures the percentage of net income generated from each dollar of net sales. This ratio is an indicator of the firm's profitability in generating net income from net sales.

Supporting Statement:

The company's rate of return on net sales is 5.26%.

Step 3: Calculating the Rate of Return on Total Assets

Formula:

$$\text{Rate of Return on Total Assets} = \left(\frac{\text{Net Income After Income Tax}}{\text{Total Assets}} \right) \times 100$$

Calculation:

$$\text{Rate of Return on Total Assets} = \left(\frac{\$22,100}{\$172,000} \right) \times 100$$

$$\text{First, divide net income after income tax by total assets: } \frac{22,100}{172,000} = 0.1285$$

$$\text{Then, multiply by 100 to express it as a percentage: } 0.1285 \times 100 = 12.85\%$$

Explanation:

The Rate of Return on Total Assets measures how effectively a company uses its assets to generate net income. This ratio provides insight into the firm's efficiency in managing its assets.

Supporting Statement:

The company's rate of return on total assets is 12.85%.

Step 4: Calculating the Asset Turnover**Formula:**

$$\text{Asset Turnover} = \frac{\text{Net Sales}}{\text{Total Assets}}$$

Calculation:

$$\text{Asset Turnover} = \frac{\$420,000}{\$172,000}$$

$$\text{Divide net sales by total assets: } \frac{420,000}{172,000} = 2.44$$

Explanation:

The Asset Turnover ratio measures how efficiently a company uses its assets to generate sales. A higher ratio indicates better utilization of the firm's assets.

Supporting Statement:

The company's asset turnover ratio is 2.44.

Final Solution

- **Rate of Return on Net Sales:** 5.26%
- **Rate of Return on Total Assets:** 12.85%
- **Asset Turnover:** 2.44