# Survey of Accounting, 9e

Carl S. Warren and
Amanda G. Farmer

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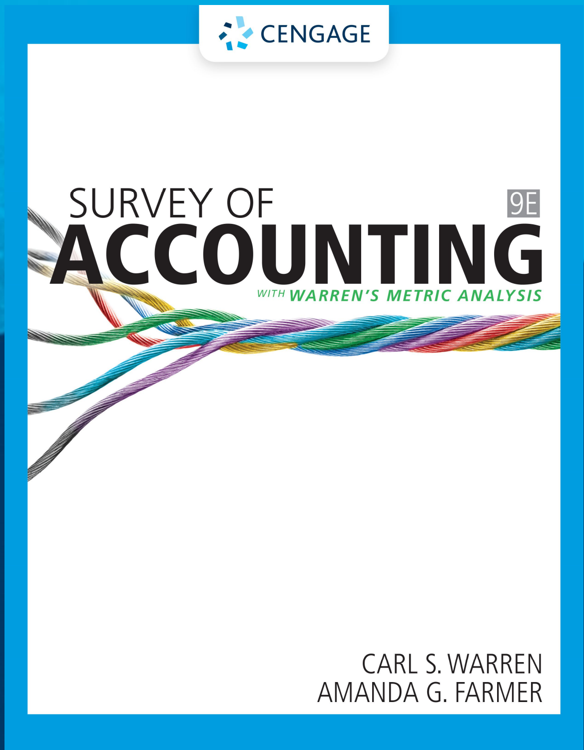


# Chapter 9

# Metric-Analysis of Financial Statements

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# Learning Objectives

- Describe the usefulness of financial statements and methods of analysis
- Describe and illustrate global analysis of financial statements
- Describe and illustrate metrics used to analyze liquidity
- Describe and illustrate metrics used to analyze solvency
- Describe and illustrate metrics used to analyze profitability
- Describe corporate annual reports

# Learning Objective 1

Describe the usefulness of financial statements and methods of analysis

# Financial Statements

- Objective
  - To provide information to a company's stakeholders about the company's financial condition and performance
- Stakeholders use **general-purpose financial statements**

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# Characteristics Useful for Analysis and Interpretation of Financial Statements

| | |
|---|---|
| **Liquidity** | • Ability of a company to convert assets into cash |
| **Solvency** | • Ability of a company to pay its debts as they become due over a long period of time |
| **Profitability** | • Ability of a company to generate net income related to its invested assets |

# Methods of Analysis

**Global Analysis**

- Computes changes in amounts, percentages of amounts, and percentage changes in amounts for each financial statement

**Component Analysis**

- Computes metrics for liquidity, solvency, and profitability for components of financial statements

# Learning Objective 2

Describe and illustrate global analysis of financial statements

# Global Analysis: Horizontal Analysis

- Percentage analysis of increases and decreases in related items in comparative financial statements
- Each item on the most recent statement is compared with the related item on one or more earlier statements in terms of:
  - Amount of increase or decrease
  - Percentage of increase or decrease

# Exhibit 1: Comparative Balance Sheet—Horizontal Analysis

Mooney Company
Comparative Balance Sheet
December 31, 20Y6 and 20Y5

| | Dec. 31, 20Y6 | Dec. 31, 20Y5 | Increase (Decrease) Amount | Increase (Decrease) Percent |
|---|---|---|---|---|
| **Assets** | | | | |
| Current assets | $ 550,000 | $ 533,000 | $ 17,000 | 3.2% |
| Long-term investments | 95,000 | 177,500 | (82,500) | (46.5%) |
| Property, plant, and equipment (net) | 444,500 | 470,000 | (25,500) | (5.4%) |
| Intangible assets | 50,000 | 50,000 | — | — |
| Total assets | $1,139,500 | $1,230,500 | $ (91,000) | (7.4%) |
| **Liabilities** | | | | |
| Current liabilities | $ 210,000 | $ 243,000 | $ (33,000) | (13.6%) |
| Long-term liabilities | 100,000 | 200,000 | (100,000) | (50.0%) |
| Total liabilities | $ 310,000 | $ 443,000 | $(133,000) | (30.0%) |
| **Stockholders' Equity** | | | | |
| Preferred 6% stock, $100 par | $ 150,000 | $ 150,000 | — | — |
| Common stock, $10 par | 500,000 | 500,000 | — | — |
| Retained earnings | 179,500 | 137,500 | $ 42,000 | 30.5% |
| Total stockholders' equity | $ 829,500 | $ 787,500 | $ 42,000 | 5.3% |
| Total liabilities and stockholders' equity | $1,139,500 | $1,230,500 | $ (91,000) | (7.4%) |

# Exhibit 2: Comparative Schedule of Current Assets—Horizontal Analysis

**Mooney Company**
**Comparative Schedule of Current Assets**
**December 31, 20Y6 and 20Y5**

| | Dec. 31, 20Y6 | Dec. 31, 20Y5 | Increase (Decrease) | |
|---|---|---|---|---|
| | | | Amount | Percent |
| Cash | $ 90,500 | $ 64,700 | $ 25,800 | 39.9% |
| Temporary investments | 75,000 | 60,000 | 15,000 | 25.0% |
| Accounts receivable (net) | 115,000 | 120,000 | (5,000) | (4.2%) |
| Inventories | 264,000 | 283,000 | (19,000) | (6.7%) |
| Prepaid expenses | 5,500 | 5,300 | 200 | 3.8% |
| Total current assets | $550,000 | $533,000 | $ 17,000 | 3.2% |

# Exhibit 3: Comparative Income Statement—Horizontal Analysis

**Mooney Company**
**Comparative Income Statement**
**For the Years Ended December 31, 20Y6 and 20Y5**

| | | | Increase (Decrease) | |
|---|---|---|---|---|
| | **20Y6** | **20Y5** | **Amount** | **Percent** |
| Sales | $ 1,498,000 | $1,200,000 | $ 298,000 | 24.8% |
| Cost of goods sold | (1,043,000) | (820,000) | 223,000 | 27.2% |
| Gross profit | $ 455,000 | $ 380,000 | $ 75,000 | 19.7% |
| Selling expenses | $ (191,000) | $ (147,000) | $ 44,000 | 29.9% |
| Administrative expenses | (104,000) | (97,400) | 6,600 | 6.8% |
| Total operating expenses | $ (295,000) | $ (244,400) | $ 50,600 | 20.7% |
| Income from operations | $ 160,000 | $ 135,600 | $ 24,400 | 18.0% |
| Other revenue and expense: | | | | |
| Other revenue | 8,500 | 11,000 | (2,500) | (22.7%) |
| Other expense (interest) | (6,000) | (12,000) | (6,000) | (50.0%) |
| Income before income tax | $ 162,500 | $ 134,600 | $ 27,900 | 20.7% |
| Income tax expense | (71,500) | (58,100) | 13,400 | 23.1% |
| Net income | $ 91,000 | $ 76,500 | $ 14,500 | 19.0% |

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# Exhibit 4: Comparative Analysis of Retained Earnings—Horizontal Analysis

**Mooney Company**
**Comparative Retained Earnings**
**For the year ended December 31, 20Y6 and 20Y5**

| | Retained Earnings | | | |
|---|---|---|---|---|
| | | | Increase (Decrease) | |
| | 20Y6 | 20Y5 | Amount | Percent |
| Balances, Jan. 1 | $137,500 | $100,000 | $37,500 | 37.5% |
| Net income | 91,000 | 76,500 | 14,500 | 19.0% |
| Dividends: | | | | |
| Preferred stock | (9,000) | (9,000) | 0 | 0.0% |
| Common stock | (40,000) | (30,000) | (10,000) | 33.3% |
| Balances, Dec. 31 | $179,500 | $137,500 | $42,000 | 30.5% |

# Global Analysis: Vertical Analysis

- Percentage analysis of the relationship of each component in a financial statement to a total within the statement
- Percentages in the balance sheet are computed as follows:
  - Each asset item is stated as a percent of the total assets
  - Each liability and stockholders’ equity item is stated as a percent of the total liabilities and stockholders’ equity

# Exhibit 5: Comparative Balance Sheet—Vertical Analysis

**Mooney Company**
**Comparative Balance Sheet**
**December 31, 20Y6 and 20Y5**

| | Dec. 31, 20Y6 | | Dec. 31, 20Y5 | |
|---|---|---|---|---|
| | **Amount** | **Percent** | **Amount** | **Percent** |
| **Assets** | | | | |
| Current assets | $ 550,000 | 48.3% | $ 533,000 | 43.3% |
| Long-term investments | 95,000 | 8.3 | 177,500 | 14.4 |
| Property, plant, and equipment (net) | 444,500 | 39.0 | 470,000 | 38.2 |
| Intangible assets | 50,000 | 4.4 | 50,000 | 4.1 |
| Total assets | $1,139,500 | 100.0% | $1,230,500 | 100.0% |
| **Liabilities** | | | | |
| Current liabilities | $ 210,000 | 18.4% | $ 243,000 | 19.7% |
| Long-term liabilities | 100,000 | 8.8 | 200,000 | 16.3 |
| Total liabilities | $ 310,000 | 27.2% | $ 443,000 | 36.0% |
| **Stockholders' Equity** | | | | |
| Preferred 6% stock, $100 par | $ 150,000 | 13.2% | $ 150,000 | 12.2% |
| Common stock, $10 par | 500,000 | 43.9 | 500,000 | 40.6 |
| Retained earnings | 179,500 | 15.7 | 137,500 | 11.2 |
| Total stockholders' equity | $ 829,500 | 72.8% | $ 787,500 | 64.0% |
| Total liabilities and stockholders' equity | $1,139,500 | 100.0% | $1,230,500 | 100.0% |

# Exhibit 6: Comparative Income Statement—Vertical Analysis

Mooney Company
Comparative Income Statement
For the Years Ended December 31, 20Y6 and 20Y5

| | 20Y6 | | 20Y5 | |
|---|---|---|---|---|
| | Amount | Percent | Amount | Percent |
| Sales | $ 1,498,000 | 100.0% | $1,200,000 | 100.0% |
| Cost of goods sold | (1,043,000) | 69.6 | (820,000) | 68.3 |
| Gross profit | $ 455,000 | 30.4% | $ 380,000 | 31.7% |
| Selling expenses | $ (191,000) | 12.8% | $ (147,000) | 12.3% |
| Administrative expenses | (104,000) | 6.9 | (97,400) | 8.1 |
| Total operating expenses | $ (295,000) | 19.7% | $ (244,400) | 20.4% |
| Income from operations | $ 160,000 | 10.7% | $ 135,600 | 11.3% |
| Other revenue and expense: | | | | |
| Other revenue | 8,500 | 0.6 | 11,000 | 0.9 |
| Other expense (interest) | (6,000) | 0.4 | (12,000) | 1.0 |
| Income before income tax | $ 162,500 | 10.9% | $ 134,600 | 11.2% |
| Income tax expense | (71,500) | 4.8 | (58,100) | 4.8 |
| Net income | $ 91,000 | 6.1% | $ 76,500 | 6.4% |

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# Global Analysis: Common-Sized Statements

- All items are expressed as percentages with no dollar amounts shown
- Often useful for comparing one company with another or for comparing a company with industry averages

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# Exhibit 7: Common-Sized Income Statement

| | Mooney Company | Lowell Corporation |
|---|---|---|
| Sales | 100.0% | 100.0% |
| Cost of goods sold | (69.6) | (70.0) |
| Gross profit | 30.4% | 30.0% |
| Selling expenses | (12.8)% | (11.5)% |
| Administrative expenses | (6.9) | (4.1) |
| Total operating expenses | (19.7)% | (15.6)% |
| Income from operations | 10.7% | 14.4% |
| Other revenue and expense: | | |
| Other revenue | 0.6 | 0.6 |
| Other expense (interest) | (0.4) | (0.5) |
| Income before income tax | 10.9% | 14.5% |
| Income tax expense | (4.8) | (5.5) |
| Net income | 6.1% | 9.0% |

# Learning Objective 3

Describe and illustrate metrics used to analyze liquidity

# Types of Metrics Used to Assess Liquidity

- Current Position Metrics
- Accounts Receivable Metrics
- Inventory Metrics

# Current Position Analysis

- Company’s ability to pay its current liabilities
- Includes the computation and analysis of:
  - Working capital
  - Current ratio
  - Quick ratio

# Working Capital

- Computed as follows:

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

- Illustration
  - Computation of working capital for Mooney Company for 20Y6 and 20Y5

| | 20Y6 | 20Y5 |
|---|---|---|
| Current assets | $550,000 | $533,000 |
| Less current liabilities | (210,000) | (243,000) |
| Working capital | $340,000 | $290,000 |

# Current Ratio

- Computed as follows:

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

- Illustration
  - Current ratio for Mooney Company for 20Y6 and 20Y5

| | 20Y6 | 20Y5 |
|---|---|---|
| Current assets | $550,000 | $533,000 |
| Current liabilities | $210,000 | $243,000 |
| Current ratio | 2.6 ($550,000 ÷ $210,000) | 2.2 ($533,000 ÷ $243,000) |

# Current Assets and Liabilities for Mooney Company and Wendt Corporation as of December 31, 20Y6

| | Mooney Company | Wendt Corporation |
|---|---|---|
| Current assets: | | |
| Cash | $ 90,500 | $ 45,500 |
| Temporary investments | 75,000 | 25,000 |
| Accounts receivable (net) | 115,000 | 90,000 |
| Inventories | 264,000 | 380,000 |
| Prepaid expenses | 5,500 | 9,500 |
| Total current assets | $550,000 | $550,000 |
| Total current assets | $550,000 | $550,000 |
| Less current liabilities | (210,000) | (210,000) |
| Working capital | $340,000 | $340,000 |
| Current ratio ($550,000/$210,000) | 2.6 | 2.6 |

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# Quick Ratio

- Computed as follows:

$$\text{Quick Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

- Computation of quick ratio for Mooney Company

| | 20Y6 | 20Y5 |
|---|---|---|
| Quick assets: | | |
| Cash | $ 90,500 | $ 64,700 |
| Temporary investments | 75,000 | 60,000 |
| Accounts receivable (net) | 115,000 | 120,000 |
| Total quick assets | $280,500 | $244,700 |
| Current liabilities | $210,000 | $243,000 |
| Quick ratio | 1.3* | 1.0** |

*1.3 = $280,500 ÷ $210,000
**1.0 = $244,700 ÷ $243,000

# Accounts Receivable Metrics

- Reflect the efficiency of a company to collect accounts receivable
- Include:
  - Accounts receivable turnover
  - Days' sales in receivables
- Quick collection of receivables:
  - Improves a company's liquidity
    - Cash collected from receivables may be used to improve or expand operations
  - Reduces the risk of uncollectible accounts

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# Accounts Receivable Turnover

- Computed as follows:

$$\text{Accounts Receivable Turnover} = \frac{\text{Sales}}{\text{Average Accounts Receivable}}$$

- Accounts receivable turnover for Mooney Company for 20Y6 and 20Y5

| | 20Y6 | 20Y5 |
|---|---|---|
| Sales | $ 1,498,000 | $1,200,000 |
| Accounts receivable (net): | | |
| Beginning of year | $ 120,000 | $ 140,000 |
| End of year | 115,000 | 120,000 |
| Total | $ 235,000 | $ 260,000 |
| Average accounts receivable | $117,500 ($235,000 ÷ 2) | $130,000 ($260,000 ÷ 2) |
| Accounts receivable turnover | 12.7 ($1,498,000 ÷ $117,500) | 9.2 ($1,200,000 ÷ $130,000) |

# Days' Sales in Receivables

- Computed as follows:

$$\text{Days' Sales in Receivables} = \frac{\text{Average Accounts Receivable}}{\text{Average Daily Sales}}$$

$$= 365 \text{ Days} \div \text{Accounts Receivable Turnover}$$

$$\text{Average Daily Sales} = \frac{\text{Sales}}{365 \text{ days}}$$

- Computation of days' sales in receivables for Mooney Company

| | 20Y6 | 20Y5 |
|---|---|---|
| Average accounts receivable | \$117,500 (\$235,000 ÷ 2) | \$130,000 (\$260,000 ÷ 2) |
| Average daily sales | \$4,104 (\$1,498,000 ÷ 365) | \$3,288 (\$1,200,000 ÷ 365) |
| Days' sales in receivables | 28.6 (\$117,500 ÷ \$4,104) | 39.5 (\$130,000 ÷ \$3,288) |

# Inventory Metrics

- Reflect the efficiency of purchasing and selling inventory
- Include:
  - Inventory turnover
  - Days' sales in inventory
- Excess inventory:
  - Decreases liquidity by tying up funds in inventory
  - Increases the risk of losses due to price decline
  - Increases the risk of obsolescence of inventory

# Inventory Turnover

- Computed as follows:

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

- Inventory turnover for Mooney Company for 20Y6 and 20Y5

| | 20Y6 | 20Y5 |
|---|---|---|
| Cost of goods sold | $1,043,000 | $820,000 |
| Inventories: | | |
| Beginning of year | $ 283,000 | $311,000 |
| End of year | 264,000 | 283,000 |
| Total | $ 547,000 | $594,000 |
| Average inventory | $273,500 ($547,000 ÷ 2) | $297,000 ($594,000 ÷ 2) |
| Inventory turnover | 3.8 ($1,043,000 ÷ $273,500) | 2.8 ($820,000 ÷ $297,000) |

# Days' Sales in Inventory

- Computed as follows:

$$\text{Days' Sales in Inventory} = \frac{\text{Average Inventory}}{\text{Average Daily Cost of Goods Sold}}$$

$$= 365 \text{ Days} \div \text{Inventory Turnover}$$

$$\text{Average Daily Cost of Goods Sold} = \frac{\text{Cost of Goods Sold}}{365 \text{ days}}$$

- Computation of days' sales in inventory for Mooney Company

| | 20Y6 | 20Y5 |
|---|---|---|
| Average inventory | \$273,500 (\$547,000 ÷ 2) | \$297,000 (\$594,000 ÷ 2) |
| Average daily cost of goods sold | \$2,858 (\$1,043,000 ÷ 365) | \$2,247 (\$820,000 ÷ 365) |
| Days' sales in inventory | 95.7 (\$273,500 ÷ \$2,858) | 132.2 (\$297,000 ÷ \$2,247) |

# Learning Objective 4

Describe and illustrate metrics used to analyze solvency

# Metrics Used to Assess Solvency

- Net Assets
- Debt Ratio
- Ratio of Liabilities to Stockholders' Equity
- Ratio of Fixed Assets to Long-Term Liabilities
- Times Interest Earned

# Net Assets

- Equals a company's stockholders' equity
- Computed as:

$$\textbf{Net Assets} = \textbf{Total Assets} - \textbf{Total Liabilities}$$

- Net assets for Mooney Company for 20Y6 and 20Y5 are as follows:

| | 20Y6 | 20Y5 |
|---|---|---|
| Total assets | $1,139,500 | $1,230,500 |
| Total liabilities | (310,000) | (443,000) |
| Net assets | $ 829,500 | $ 787,500 |

# Debt Ratio

- Computed as follows:

$$\text{Debt Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

- Computation of debt ratio for Mooney Company

| | 20Y6 | 20Y5 |
|---|---|---|
| Total liabilities | $310,000 | $443,000 |
| Total assets | $1,139,500 | $1,230,500 |
| Debt ratio | 27.2% ($310,000 ÷ $1,139,500) | 36.0% ($443,000 ÷$1,230,500) |

# Ratio of Liabilities to Stockholders' Equity

- Measures how much of the company is financed by debt and equity
- Computed as follows:

$$\text{Ratio of Liabilities to Stockholders' Equity} = \frac{\text{Total Liabilities}}{\text{Total Stockholders' Equity}}$$

- Computation of ratio of liabilities to stockholders' equity for Mooney Company

| | 20Y6 | 20Y5 |
|---|---|---|
| Total liabilities | $310,000 | $443,000 |
| Total stockholders' equity | $829,500 | $787,500 |
| Ratio of liabilities to stockholders' equity | 37.4% ($310,000 ÷ $829,500) | 56.3% ($443,000 ÷ $787,500) |

# Ratio of Fixed Assets to Long-Term Liabilities

- Indicates the margin of safety for noteholders or bondholders
- Computed as follows:

$$\text{Ratio of Fixed Assets to Long-Term Liabilities} = \frac{\text{Fixed Assets (net)}}{\text{Long-Term Liabilities}}$$

- Computation of ratio of fixed assets to long-term liabilities for Mooney Company

| | 20Y6 | 20Y5 |
|---|---|---|
| Fixed assets (net) | $444,500 | $470,000 |
| Long-term liabilities | $100,000 | $200,000 |
| Ratio of fixed assets to long-term liabilities | 4.4 ($444,500 ÷ $100,000) | 2.4 ($470,000 ÷ $200,000) |

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# Times Interest Earned

- Measures the risk that interest payments will not be made if earnings decrease
- Computed as follows:

$$\text{Times Interest Earned} = \frac{\text{Income Before Income Tax + Interest Expense}}{\text{Interest Expense}}$$

- Computation of ratio of fixed assets to long-term liabilities for Mooney Company

| | 20Y6 | 20Y5 |
|---|---|---|
| Income before income tax | $162,500 | $134,600 |
| Add interest expense | 6,000 | 12,000 |
| Amount available to pay interest | $168,500 | $146,600 |
| Times interest earned | 28.1 ($168,500 ÷ $6,000) | 12.2 ($146,600 ÷ $12,000) |

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# Times Preferred Dividends Earned (1 of 2)

- Computed as follows:

$$\text{Times Preferred Dividends Earned} = \frac{\text{Net Income}}{\text{Preferred Dividends}}$$

- The higher the ratio, the more likely preferred dividend payments will be paid if earnings decrease

# Times Preferred Dividends Earned (2 of 2)

- To illustrate, times preferred dividends earned for Mooney Company is computed as follows:

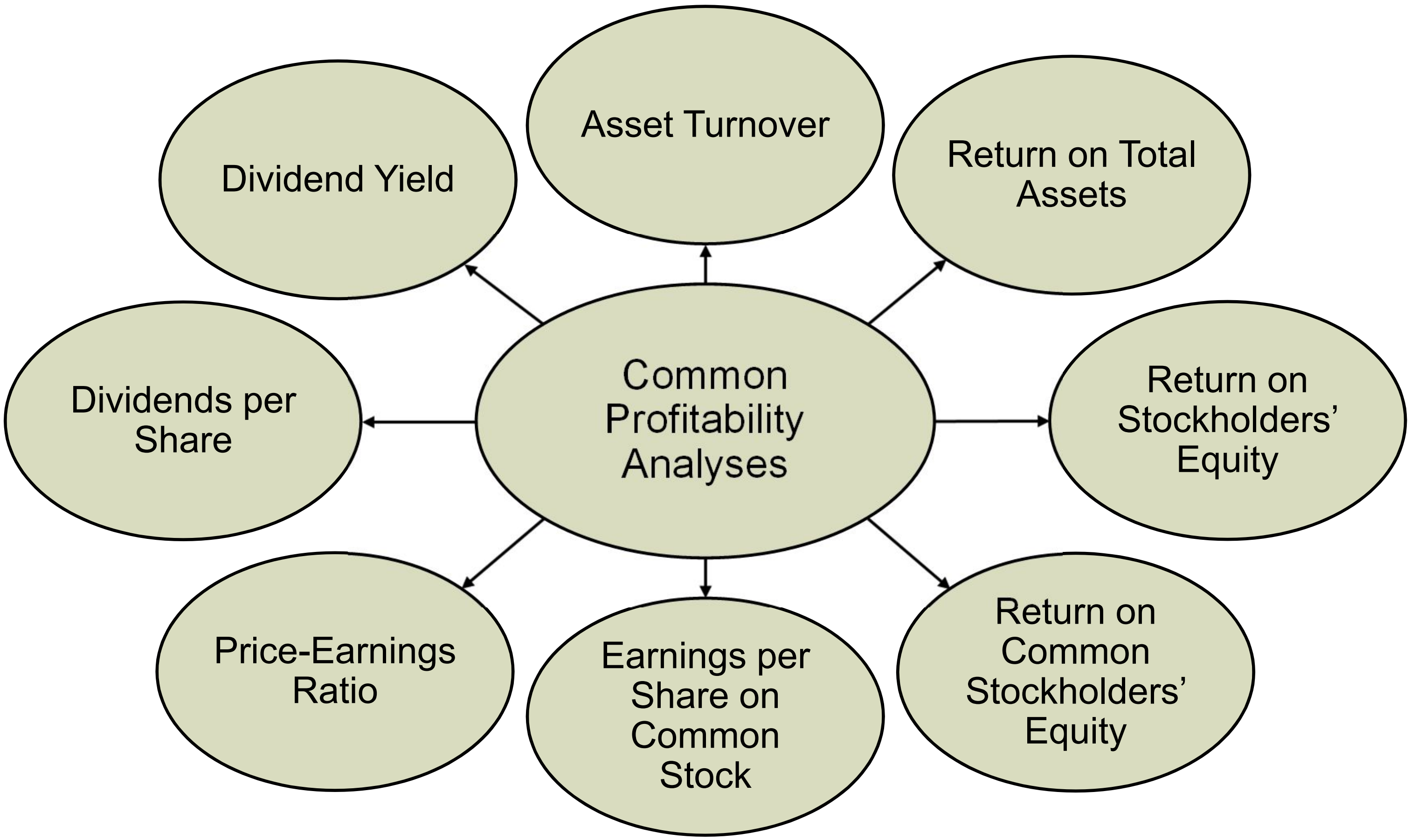
| | 20Y6 | 20Y5 |
|---|---|---|
| Net income | $91,000 | $76,500 |
| Preferred dividends | 9,000 | 9,000 |
| Times preferred dividends earned | 10.1 ($91,000 ÷ $9,000) | 8.5 ($76,500 ÷ $9,000) |

- During 20Y6, Mooney's times preferred dividends earned increased from 8.5 in 20Y5 to 10.1 in 20Y6.
  - This provides preferred stockholders greater likelihood that preferred dividends will be paid.

# Learning Objective 5

Describe and illustrate metrics used to analyze profitability

# Profitability Metrics



# Asset Turnover

- Measures how effectively a company utilizes its long-term operating assets to generate sales

$$\text{Asset Turnover} = \frac{\text{Sales}}{\text{Average Long-Term Operating Assets}}$$

- Computation of asset turnover for Mooney Company

| | 20Y6 | 20Y5 |
|---|---|---|
| Sales | $1,498,000 | $1,200,000 |
| Long-term operating assets: | | |
| Beginning of year | $ 520,000[1] | $ 450,000 |
| End of year | 494,500[2] | 520,000 |
| Total | $1,014,500 | $ 970,000 |
| Average long-term operating assets | $507,250 ($1,014,500 ÷ 2) | $485,000 ($970,000 ÷ 2) |
| Asset turnover | 3.0 ($1,498,000 ÷ $507,250) | 2.5 ($1,200,000 ÷ $485,000) |

1. $470,000 + $50,000
2. $444,500 + $50,000

# Return on Total Assets

- Measures the profitability of total assets without considering how the assets are financed

$$\text{Return on Total Assets} = \frac{\text{Net Income} + \text{Interest Expense}}{\text{Average Total Assets}}$$

- Computation of return on total assets for Mooney Company

| | 20Y6 | 20Y5 |
|---|---|---|
| Net income | $ 91,000 | $ 76,500 |
| Plus interest expense | 6,000 | 12,000 |
| Total | $ 97,000 | $ 88,500 |
| Total assets: | | |
| Beginning of year | $1,230,500 | $1,187,500 |
| End of year | 1,139,500 | 1,230,500 |
| Total | $2,370,000 | $2,418,000 |
| Average total assets | $1,185,000 ($2,370,000 ÷ 2) | $1,209,000 ($2,418,000 ÷ 2) |
| Return on total assets | 8.2% ($97,000 ÷ $1,185,000) | 7.3% ($88,500 ÷ $1,209,000) |

# Return on Operating Assets

- Computed when there are large amounts of nonoperating income and expense

$$\text{Return on Operating Assets} = \frac{\text{Income from Operations}}{\text{Average Operating Assets}}$$

# Return on Stockholders’ Equity

- Measures the rate of income earned on the amount invested by the stockholders

$$\text{Return on Stockholders' Equity} = \frac{\text{Net Income}}{\text{Average Total Stockholders' Equity}}$$

- Computation of return on stockholders’ equity for Mooney Company

| | 20Y6 | 20Y5 |
|---|---|---|
| Net income | $ 91,000 | $ 76,500 |
| Stockholders’ equity: | | |
| Beginning of year | $ 787,500 | $ 750,000 |
| End of year | 829,500 | 787,500 |
| Total | $1,617,000 | $1,537,500 |
| Average stockholders’ equity | $808,500 ($1,617,000 ÷ 2) | $768,750 ($1,537,500 ÷ 2) |
| Return on stockholders’ equity | 11.3% ($91,000 ÷ $808,500) | 10.0% ($76,500 ÷ $768,750) |

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# Return on Stockholders' Equity (continued)

- Leverage
  - Using debt to increase the return on an investment
  - Results in higher return on stockholders' equity than the return on total assets
- Effect of leverage for Mooney Company for 20Y6

| | |
|---|---|
| Return on stockholders' equity | 11.3 % |
| Less return on total assets | (8.2) |
| Effect of leverage | 3.1 % |

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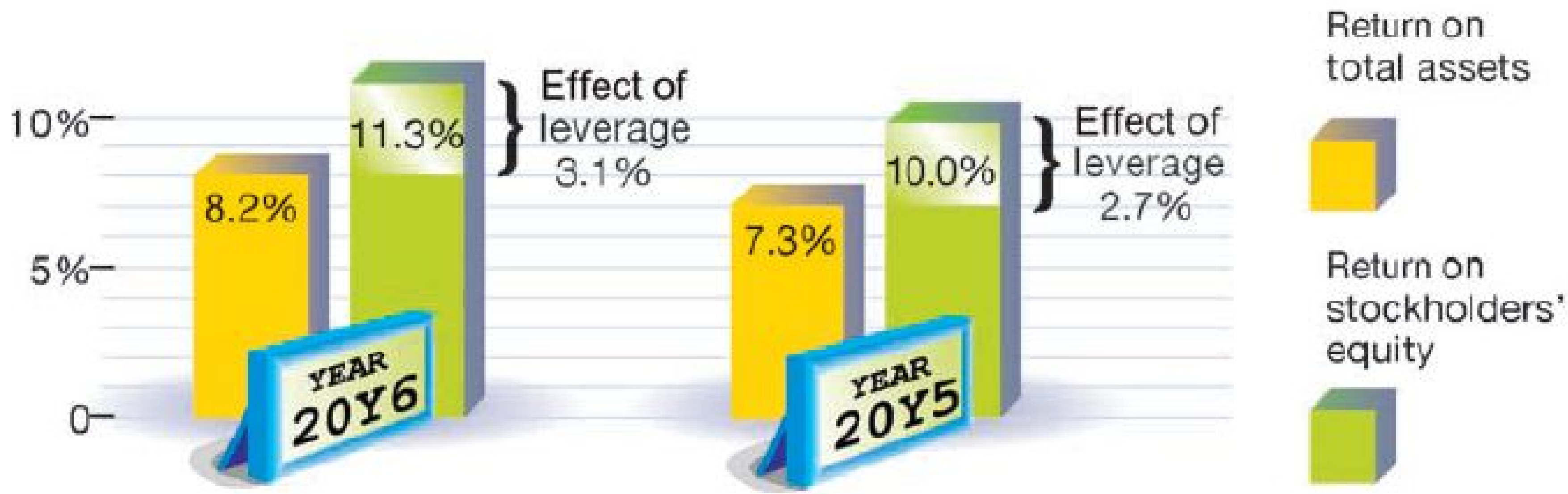
# Exhibit 8: Effects of Leverage



# Return on Common Stockholders' Equity

- Measures the rate of profits earned on the amounts invested by the common stockholders

$$\text{Return on Common Stockholders' Equity} = \frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Average Common Stockholders' Equity}}$$

- Computation of Mooney Company's common stock equity
  - $500,000 of common stock was outstanding in 20Y4

| | December 31 | | |
|---|---|---|---|
| | 20Y6 | 20Y5 | 20Y4 |
| Common stock, $10 par | $500,000 | $500,000 | $500,000 |
| Retained earnings | 179,500 | 137,500 | 100,000 |
| Common stockholders' equity | $679,500 | $637,500 | $600,000 |

# Return on Common Stockholders' Equity (continued)

- Computation of return on common stockholders' equity for Mooney Company
  - The company had $150,000 of 6% preferred stock outstanding on December 31, 20Y6 and 20Y5

| | 20Y6 | 20Y5 |
|---|---|---|
| Net income | $ 91,000 | $ 76,500 |
| Less preferred dividends | (9,000) | (9,000) |
| Total | $ 82,000 | $ 67,500 |
| Common stockholders' equity: | | |
| Beginning of year | $ 637,500 | $ 600,000 |
| End of year | 679,500 | 637,500 |
| Total | $1,317,000 | $1,237,500 |
| Average common stockholders' equity | $658,500 ($1,317,000 ÷ 2) | $618,750 ($1,237,500 ÷ 2) |
| Return on common stockholders' equity | 12.5% ($82,000 ÷ $658,500) | 10.9% ($67,500 ÷ $618,750) |

# Earnings per Share (EPS) on Common Stock

- Measures the share of profits earned per share of common stock outstanding

$$\text{Earnings per Share (EPS) on Common Stock} = \frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Shares of Common Stock Outstanding}}$$

- Computation of EPS on common stock for Mooney Company

| | 20Y6 | 20Y5 |
|---|---|---|
| Net income | $91,000 | $76,500 |
| Less preferred dividends | (9,000) | (9,000) |
| Total | $82,000 | $67,500 |
| Shares of common stock outstanding | 50,000 | 50,000 |
| Earnings per share on common stock | $1.64 ($82,000 ÷ 50,000) | $1.35 ($67,500 ÷ 50,000) |

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# Diluted Earnings per Share

- Known as earnings per common share assuming dilution
- Possible effects of different types of securities on the shares of common stock outstanding are considered in reporting earnings per share

# Price-Earnings (P/E) Ratio

- Measures a firm's future earnings prospects

$$\text{Price-Earnings (P/E) Ratio} = \frac{\text{Market Price per Share of Common Stock}}{\text{Earnings per Share on Common Stock}}$$

- Computation of P/E ratio for Mooney Company

| | 20Y6 | 20Y5 |
|---|---|---|
| Market price per share of common stock | \$41.00 | \$27.00 |
| Earnings per share on common stock | \$ 1.64 | \$ 1.35 |
| Price-earnings ratio on common stock | 25 (\$41 ÷ \$1.64) | 20 (\$27 ÷ \$1.35) |

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# Dividends per Share

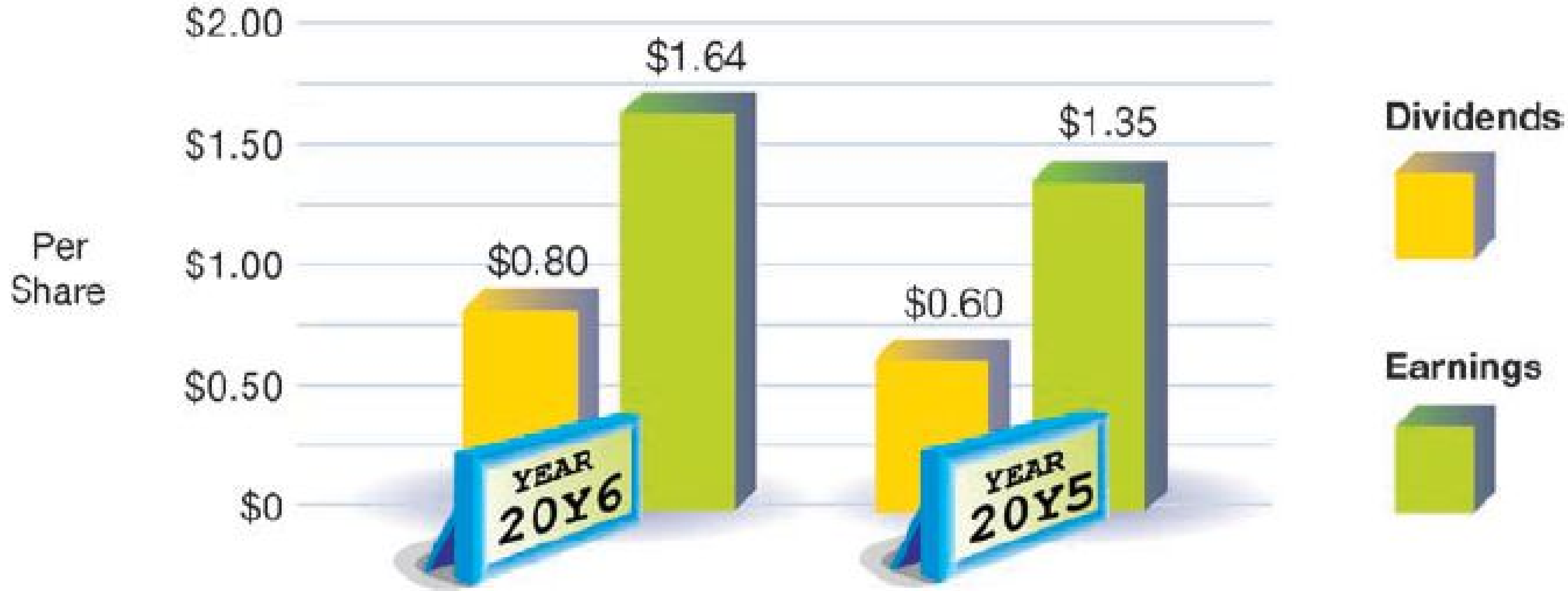
- Measures the extent to which earnings are being distributed to common shareholders

$$\text{Dividends per Share} = \frac{\text{Common Stock Dividends}}{\text{Shares of Common Stock Outstanding}}$$

- Computation of dividends per share for Mooney Company

| | 20Y6 | 20Y5 |
|---|---|---|
| Common stock dividends | $40,000 | $30,000 |
| Shares of common stock outstanding | 50,000 | 50,000 |
| Dividends per share of common stock | $0.80 ($40,000 ÷ 50,000) | $0.60 ($30,000 ÷ 50,000) |

# Exhibit 9: Dividends and Earnings per Share of Common Stock



# Dividend Yield

- Measures the rate of return to common stockholders from cash dividends

$$\text{Dividend Yield} = \frac{\text{Dividends per Share of Common Stock}}{\text{Market Price per Share of Common Stock}}$$

- Computation of dividend yield for Mooney Company

| | 20Y6 | 20Y5 |
|---|---|---|
| Dividends per share of common stock | $ 0.80 | $ 0.60 |
| Market price per share of common stock | $41.00 | $27.00 |
| Dividend yield on common stock | 2.0% ($0.80 ÷ $41) | 2.2% ($0.60 ÷ $27) |

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# Learning Objective 6

Describe corporate annual reports

# Corporate Annual Reports

- Summarize operating activities for the past year and plans for the future
- Include the following sections:
  - Management's Discussion and Analysis
  - Report on Internal Control
  - Report on Fairness of the Financial Statements

# Management's Discussion and Analysis (MD&A)

- Required in annual reports filed with the Securities and Exchange Commission
- Includes management's analysis of current operations and its plans for the future

# Report on Internal Control

- Prepared by the management to comply with the requirement of the Sarbanes-Oxley Act
- Report states:
  - Management's responsibility for establishing and maintaining internal control
  - Management's assessment of the effectiveness of internal controls over financial reporting

# Audit Report

- All publicly held corporations are required to have an independent audit of their financial statements
  - Conducted by a Certified Public Accounting (CPA) firm
    - Report of Independent Registered Public Accounting Firm: Opinion rendered by the firm on the fairness of the statements
- Any report other than an unqualified opinion raises a red flag for financial statement users
  - Requires further investigation

# End of Chapter 9