
Course Learning Outcomes for Unit II

Upon completion of this unit, students should be able to:

2. Analyze a forecast using relevant data.
 - 2.1 Describe four main financial statements and their importance.
 - 2.2 Explain three main sections of a cash flow statement and why cash flow is important.
 - 2.3 Perform a ratio analysis using the main categories of ratios.

Reading Assignment

Chapter 3: Understanding Financial Statements, Taxes, and Cash Flows, pp. 38-70

Chapter 4: Financial Analysis - Sizing Up Firm Performance, pp. 76-111

Unit Lesson

Often people do not consider why understanding financial statements and analyzing them is important. Although accounting is the language of business, understanding finance drives decision making. Consider the case of George Whitaker.

George Whitaker recently moved to a major city after taking a job and expecting to retire in a few years. Whitaker received a payout from his former employer and wants to invest the money, but he has no background investing or understanding what to look for in securities in which he might invest. Whitaker put his money in an investment account with SavvyTrade, a major online financial service firm. SavvyTrade offers access to most of the major markets with tools to evaluate potential companies and securities. Using this service, Whitaker wants to start researching companies to understand whether they are worthy of his investment. Whitaker noticed one feature of SavvyTrade's website offered financial statements for companies.

Even though Whitaker did not understand financial statements, he noticed four main statements, including the income statement, balance sheet, shareholder's equity statement, and a cash flow statement. Whitaker asked a friend, who was an accountant, what these statements would tell him. Whitaker's friend, Fred Russell, explained an income statement reports revenues and expenses usually for a month, quarter, or year. Russell explained a balance sheet by stating it showed all the assets bought by a company and how the company financed them through some combination of debt and equity. Russell explained a balance sheet offers a snapshot of a firm's financial standing that balances assets with debt and equity used to finance them. Russell further noted shareholders' equity ties the income statement to a balance sheet by tying beginning equity with ending equity. This statement shows any profits or losses added during a period plus any contributions minus distributions to shareholders. Russell explained that the most important statement in finance is a cash flow statement because it shows cash used and consumed in operating, investing, and financing activities.

Although Whitaker appreciates SavvyTrade's tools, he has no understanding of how to use them. Whitaker has no training reading financial statements or understanding them. Whitaker, on examining a few financial statements, noticed different-sized companies could distort big picture performance of companies he wanted to compare. Because some companies showed millions of dollars and others billions of dollars Whitaker struggled with these comparisons. Whitaker's investment adviser at SavvyTrade told him about common-sized financial statements, which converts dollars to percentages for both income statement and balance sheet items. Common-sized financial statements show accounts listed on a balance sheet as a percentage of

total assets, and show accounts on an income statement as a percentage of sales. Whitaker found common-sized analysis made comparisons of different size companies much easier and useful.

Besides struggling with different size financial statements, Whitaker also had a difficult time understanding different ratios given on the SavvyTrade website. Whitaker consulted his financial adviser who broke ratios down into five different groups including liquidity, efficiency, profitability, debt (capital structure), and market value ratios.

Whitaker's financial adviser explained liquidity ratios include measures like current ratio and acid-test (quick) ratio. These ratios measure availability of cash to meet continuing expenses. Other ways of measuring liquidity include calculating the average collection period of receivables and how often receivables turnover. Similarly, another measure is inventory turnover ratio, which measures how often a firm sells its inventory during a year. Another similar measure is number of days' sales in inventory, which tells how long it takes to sell inventory before converting it to cash. Whitaker decided to compare these ratios for different companies to evaluate their liquidity.

Besides liquidity ratios, Whitaker wanted to find out how these prospective investments finance their assets. Capital structure (debt) ratios helped Whitaker assess just how much debt or equity these firms use for financing economic resources (assets). Whitaker found the times interest earned ratio measures the firm's ability to pay interest based on pretax income. Times interest earned suggests the firm's ability to service debt.

Another ratio Whitaker discovered when talking to his investment adviser is efficiency ratios. These ratios management uses to measure efficiency of its operations. For example, total asset turnover ratio measures the firm's ability to use its assets efficiently or what sales level a company produces for each dollar invested in assets. Similarly, firms use fixed asset turnover to measure how effectively they use each dollar invested in equipment and other fixed assets to produce sales. Other turnover ratios firms use are receivables and inventory turnover to measure efficient use of assets.

Aside from efficiency, Whitaker also learned profitability ratios address companies' ability to produce profits. Some of the most basic profitability ratios include gross profit margin, operating profit margin, and net profit margin. These ratios link gross profit, operating income, and net income with sales. Companies also use return on capital ratios to measure profitability. For example, return on assets and return on equity signal companies' ability to create returns to their shareholders.

Although profitability is important, Whitaker learned certain ratios affect one another. Whitaker learned he could connect certain ratios using the DuPont Method to analyze what accounts influence profitability. DuPont analysis connects return on equity to profit margin, total asset turnover, and financial leverage using the following formula (Titman, Keown, & Martin, 2014, p. 97):

$$\frac{\text{Net Income}}{\text{Common Equity}} = \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}} \times \frac{1}{1 - \text{Debt Ratio}}$$

This formula says return on equity equals net profit margin times total asset turnover times financial leverage or an equity multiplier. DuPont analysis connects return on equity to profitability, efficiency, and capital structure with a simple formula. Whitaker started to become fascinated with financial analysis because it revealed so much new insight, which he could use in evaluating his investment prospects.

One last ratio Whitaker learned about is market value ratios. Whitaker came to realize market value ratios affect how investors value companies' equity shares. Whitaker learned firm performance affects its value in the stock market. For example, two measures of market value are price-earnings ratio and market-to-book ratio. Price earnings ratio relates the market value of a company's shares to its earnings per share. Similarly, market-to-book ratio relates market value of company's shares to their book value.

Despite learning about ratio analysis, Whitaker sought better understanding of the companies' plans before investing in them, Whitaker's financial adviser at SavvyTrade explained trend analysis to him. Trend analysis lends a historical analysis to both financial statement and ratio analysis by watching performance over time. Whitaker realized he could use this information to project future performance with educated decisions.

Besides trend analysis, Whitaker wanted to compare information gleaned from his analysis with company competitors. Industry analysis compares a firm in an industry to the rest of the industry or certain competitors.

This analysis offers a benchmark for performance markers. Whitaker found this information useful in evaluating prospective investments against competitor performance benchmarks.

Despite all the valuable insight Whitaker uncovered, he found ratio analysis had some problems. Some weaknesses involved consolidating accounts from different industries, trade information discrepancies, differences setting targets, use of different accounting principles, seasonal goods, understanding what is behind numbers, and data quality.

In summary, Whitaker studied company financial statements analyzing performance and projecting future performance. Common-sized statements allowed Whitaker to compare different-sized organizations. Whitaker had to understand differences between the income statement, balance sheet, shareholders' equity statement, and cash flow statements to gather data needed to do a ratio analysis. Whitaker learned five main categories of ratios including liquidity, efficiency, capital structure, profitability, and market value ratios. Trend analysis looked at prospective companies from a historical perspective to project future direction. Industry analysis offered a benchmark to assess performance.

Reference

Titman, S., Keown, A. J., & Martin J. D. (2014). *Financial management: Principles and applications* (12th ed.). Upper Saddle River, NJ: Pearson.

Suggested Reading

In order to access the resource below, you must first log into the myCSU Student Portal and access the Business Source Complete database within the CSU Online Library.

This article further explores the concept of cash flow.

Hughes, M., Hoy, S., & Andrew, B. (2011). Cash flows: The gap between reported and estimated operating cash flow elements. *Australasian Accounting Business & Finance Journal*, 4(1), 96-114.

These videos will further the concepts of financial ratio analysis.

Harris, P. (2011, July 18). *Financial ratio analysis part I* [Video file]. Retrieved from <https://youtu.be/0kcdFHWcXjw>

Harris, P. (2011, July 18). *Financial ratio analysis part II* [Video file]. Retrieved from <https://youtu.be/0hIAX7W51Q8>