

Chapter 17: Financial Statement Analysis: Chapter Overview

Financial Statement Analysis: Chapter Objectives

Financial Statement Analysis: Accounting in the Real World: E*Trade

Financial Statement Analysis: Key Terms

Financial Statement Analysis: Chapter Objectives

Learning Objectives

After studying Chapter 17, in addition to defining key terms, you will be able to:

- LO1 Analyze an income statement using vertical analysis.
- LO2 Perform vertical analysis of a balance sheet.
- LO3 Analyze a balance sheet using vertical analysis.
- LO4 Perform horizontal analysis on an income statement.
- LO5 Perform horizontal analysis on a balance sheet.
- LO6 Calculate earnings per share.
- LO7 Calculate and interpret market ratios.
- LO8 Calculate and interpret liquidity ratios.

Financial Statement Analysis: Accounting in the Real World: E*Trade

The Internet revolutionized how individual investors buy and sell stock. Before the Internet, an investor could only trade stock using a stock broker. Through their investment firms, stock brokers had access to financial information not available elsewhere. As a result, most investors relied on their stock brokers for investment advice. When an investor made a decision on an investment, the stock broker would make the purchase on the stock exchange.

Today's investors can manage their own investments using an online investing site. For over 20 years, E*TRADE has been a leader in online investing. E*TRADE customers have 24/7 access to financial information and the tools to place stock trades. An E*TRADE customer can enter the stock symbol of a corporation and gain instant access to a wealth of information, including:

- recent news articles about the corporation,
- projected earnings,
- research reports, and
- charts of the stock prices for one day to over 30 years.

A link on E*TRADE's website opens to a wide range of financial ratios for the selected company. A section for AT&T Inc. (stock symbol, T) is shown.

The financial community has assigned names to the most commonly used vertical analysis ratios. For example, profit margin is the name given to the vertical analysis ratio for net income after federal income taxes. E*TRADE uses two methods to help investors compare AT&T's profit margin to other companies in the same industry. The illustration at the top of the next column indicates, from low to high, how the company's ratios compare to those of other companies. AT&T's profit margin, 17.28%, is in the upper range of other communications services companies.

Below the ratios, E*TRADE provides an explanation of the ratios. This statement helps E*TRADE's customers make more informed investment decisions.

Financial Statement Analysis: Accounting in the Real World: ETrade

Critical Thinking

Access etrade.com and enter a stock symbol to obtain a current stock quote for a company. Use the available links to view its financial ratios. Identify the four ratios shown in the illustration above.

With this information, compare the company's performance to other companies in its industry group.

Financial Statement Analysis: **Key Terms**

- profitability ratio
- benchmark
- comparative financial statements
- trend analysis
- profit margin
- gross margin
- operating margin
- operating expense ratio
- solvency ratio
- debt ratio
- horizontal analysis
- earnings per share
- market ratio
- dividend yield
- price-earnings ratio
- liquidity ratio
- working capital
- current ratio
- quick assets
- quick ratio

Chapter 17: Financial Statement Analysis:

Lesson 17-1: Vertical Analysis of an Income Statement

Vertical Analysis Ratios LO1

Analyzing Trends with Vertical Analysis

Using Vertical Analysis to Analyze Gross Profit

Using Vertical Analysis to Analyze Operating Expenses

End of Lesson Review

- LO1 Analyze an income statement using vertical analysis.

Vertical Analysis Ratios LO1

Vertical analysis ratios measure the relationship between one financial statement item and another item on the same financial statement. On the income statement, vertical analysis ratios focus on the ability of a business to earn a profit. A ratio that measures the ability of a business to generate income is called a profitability ratio . Vertical analysis ratios on an income statement are examples of profitability ratios.

Managers use vertical analysis ratios to help make business decisions. For vertical analysis to be an effective tool, a business must set a target, or standard, for each ratio. A standard used to compare financial performance is called a benchmark .

Benchmark ratios can be determined using many factors. These include:

1. Actual ratios from prior fiscal periods. Current fiscal period ratios tend to be similar to prior-period ratios.
2. Industry standards published by industry organizations. A business can be expected to have ratios similar to other businesses in the same industry.

3. Business plans. Managers often make decisions that change how they conduct business. For example, managers may decide to advertise more with the goal of increasing sales. As a result, advertising expense as a percent of sales is likely to change.
4. Unexpected events. Unexpected events may require a business to revise its benchmark ratios. For example, a hard freeze in Florida can result in higher food prices.

Based on these factors, ThreeGreen sets a benchmark for each vertical analysis ratio. A benchmark ratio can be stated as a single value or a range of values. ThreeGreen expects that its gross profit should be between 59.5% and 60.5% of net sales. If a ratio falls outside the target range, ThreeGreen should look for what caused the unfavorable results.

Analyzing Trends with Vertical Analysis

Lesson 17-1: Vertical Analysis of an Income Statement

Financial statements that provide information for multiple fiscal periods are called comparative financial statements. The format of ThreeGreen's comparative income statement differs from the income statement shown in Chapter 16. Each fiscal year's amounts are listed in a single column. Three amounts, Net Sales, Cost of Merchandise Sold, and Other Revenue, are listed without their underlying accounts. The vertical analysis ratios are presented next to each year's income statement amounts.

An analysis of changes over time is called trend analysis. Comparing financial statement ratios over two or more periods is useful for identifying and correcting unfavorable trends. Management should analyze the trends indicated by changes in vertical analysis ratios. The first vertical analysis ratio a manager would likely analyze would be for net income after federal income taxes. This ratio reveals how successfully the business has performed in generating income.

Net income after federal income tax as a percent of net sales is called profit margin. ThreeGreen's profit margin has decreased from 13.4% to 12.7% of net sales. ThreeGreen would like its net income after federal income tax to be a larger part of each sales dollar. Thus, these ratios show an unfavorable trend. However, to determine how to correct this unfavorable trend, management will need to analyze each item on the income statement. For example, utilities expense has increased from 0.6% to 0.8% of net sales. This unfavorable trend alerts management to evaluate its energy policies and investigate payments posted to this account.

A corporation having a net loss before federal income taxes can file for a tax refund from the federal government. To qualify for this benefit, the corporation must have paid at least an equal amount of federal income taxes in the previous three years. The tax refund is calculated using the same tax schedule that ThreeGreen used to calculate its federal income tax expense.

Using Vertical Analysis to Analyze Gross Profit

For most retail businesses, the cost of merchandise is the largest cost of doing business. Controlling the cost of merchandise is necessary to maximize gross profit. Gross profit must be large enough to cover total operating expenses and produce the desired amount of net income.

The vertical analysis ratios for the cost of merchandise sold and gross profit are similar. Both ratios focus on the relationship between sales and the cost of merchandise sold. Any increase in the cost of merchandise sold reduces gross profit. Therefore, a manager can focus on either ratio in an effort to maximize the gross profit.

Managers often focus on the cost of merchandise sold ratio. Jenn Quitman, the manager of Main Street Café, constantly monitors her "food cost." For a café, the food cost is the cost of merchandise sold. Jenn expects her food cost to be between 36.0% and 38.0%. If her food cost exceeds 38.0%, she immediately investigates what has caused it to go up.

Most managers and investors watch the vertical analysis ratio for gross profit. The ratio is so widely used that it has been given an alternative name. Gross profit as a percent of net sales is called gross margin . This ratio is also referred to as gross profit margin. Online investing sites and company annual reports report gross margins.

ThreeGreen's benchmark gross margin is between 59.5% and 60.5%. ThreeGreen's gross margin has decreased from 60.9% to 58.8% of net sales—an unfavorable trend. The ratio for the current year is lower than the benchmark—also an unfavorable result. Therefore, ThreeGreen's managers need to investigate why this ratio has decreased below the target range.

Correcting an Unfavorable Gross Margin

Two actions can enable a business to achieve its gross margin benchmark:

(1) Increase unit sales prices. The amount a business adds to the cost of merchandise to establish the selling price is called markup. The markup of an item purchased for \$4.00 and sold for \$10.00 is \$6.00. To increase sales revenue, a business may consider increasing its markups. A business must be cautious when increasing its markups. If a markup is too large, a decrease in sales revenue could occur. The higher sales price may exceed what customers are willing to pay. Or, customers may elect to purchase from competing businesses having lower prices.

(2) Decrease the unit cost of merchandise. Decreasing the unit cost of merchandise will increase the gross margin. To decrease its cost of merchandise, a business should review purchasing practices. For example, the business could purchase items in larger quantities or from other vendors that offer a lower cost.

Management may need to take both actions to achieve its gross margin benchmark.

A business must work to maintain or reduce its cost of merchandise. However, gradual increases in the cost of merchandise are unavoidable. Any increase in merchandise costs reduces the gross margin, leaving less gross profit to cover operating expenses. To maintain its target gross margin when the cost of merchandise rises, a business must increase its unit sales prices. Before deciding to increase prices, a business must try to determine the impact that higher prices will have on its sales. Often, it's possible for a business to absorb a lower gross profit by reducing operating expenses.

Unfavorable ratios serve as a warning that management action is necessary. Vertical analysis ratios are an example of how accounting information can help management planning and decision making. Effective managers rely on the information provided from accounting records.

Using Vertical Analysis to Analyze Operating Expenses

The vertical analysis ratio for income from operations, like the gross margin, has an alternate name. Income from operations as a percent of net sales is called the operating margin . This ratio is also referred to as the rate of return on sales. Investors are interested in the operating margin. This ratio gives the best indication of how effectively a business is earning a profit from its normal business operations. ThreeGreen's normal business operations involve the sale of ecologically friendly merchandise. Its operating margin for the current year, 16.4%, means that ThreeGreen nets 16.4 cents of every dollar of sales before taxes.

Investors can compare the operating margin to other businesses in the same industry to assist them in making investment decisions. However, managers who want to control operating expenses will be more interested in another ratio. Total operating expenses as a percent of net sales is called the operating expense ratio . Unlike the operating margin, the operating expense ratio does not include the effect of merchandise costs.

ThreeGreen's benchmark total operating expense ratio is between 40.0% and 42.0%. Its actual operating expense ratio has declined from 43.9% to 42.4% of net sales—a favorable trend. The current year's ratio is still higher than the target range—an unfavorable result. Therefore, ThreeGreen's managers need to continue their efforts to decrease operating expenses.

An operating expense ratio that is higher than expected only alerts management that there may be a problem. The ratio does not reveal specific problems nor suggest any solutions. Management must investigate individual expense accounts until the reason for the unfavorable ratio is identified.

ThreeGreen should begin by analyzing its largest operating expense, wages and salaries. Salary expense is 29.4% of net sales. In the prior year, salary expense was 29.9% of sales. The decrease in the ratio suggests that ThreeGreen has been effective in managing its salary expense.

ThreeGreen should evaluate each expense. Several courses of action are possible.

(1) Reduce operating expenses. Having identified which operating expenses are higher than expected, management can take action to reduce them. The actions required are often unique to the business and different for each expense account. For example:

Supplies Expense. Employees can be trained to use supplies more efficiently. Management can also try to obtain lower prices from vendors.

Insurance Expense. Management can try to lower its insurance expense by comparing premiums from other insurance companies. The business can also elect to reduce the amount of coverage.

Credit Card Fee Expense. Management can offer customers incentives to pay with cash rather than using a credit card.

(2) Modify the benchmark. Management may be unable to reduce an expense. ThreeGreen's utilities expense has increased from 0.6% to 0.8% of net sales. The local utility company raised its rates during the current year. ThreeGreen changed its thermostat settings to conserve energy. Still, it was unable to offset the rate increases. ThreeGreen may have to accept that its utility expenses will be higher in future fiscal periods.

(3) Increase net sales. Management can offset an increase in operating expenses by increasing net sales. The business can increase its unit sales prices if customers are willing to pay higher prices. The business can also take actions to increase the number of items sold.

It is natural for management to focus on expenses that exceed the target range. However, it may be as important for managers to focus on expenses that fall short of the target range. Spending too little may have a negative impact on the business. Examples:

A store cuts back on the number of sales clerks to reduce the expense of their wages. The action forces customers to stand in long lines to check out. Eventually, customers avoid shopping at the store.

A café reduces its advertising, but loses sales to other restaurants that do more advertising.

To reduce its depreciation expense, a business does not replace its old computer systems. As a result, its employees are less productive. The business might also be unable to take advantage of business opportunities on the Internet.

End of Lesson Review

- LO1 Analyze an income statement using vertical analysis.

Terms Review

- | | |
|------------------------------------|---------------------|
| • profitability ratio | • profit margin |
| • benchmark | • gross margin |
| • comparative financial statements | • operating margin |
| • trend analysis | • operating expense |
| • ratio | |

Audit Your Understanding

1. Identify four factors that management can use to determine benchmark financial ratios.
2. Why should a business be cautious about increasing the markup on merchandise purchased for sale?
3. What are two practices that can be used to reduce the cost of merchandise?
4. Should managers interested in reducing operating expenses focus more on the operating expense ratio or the operating margin?
5. What are three possible actions to correct an unfavorable operating expense ratio?

Work Together 17-1

Analyzing an income statement

The comparative income statement for Tri-State Pipe and a form for completing this problem are given in the Working Papers. Your instructor will guide you through the following examples.

Complete the vertical analysis of the comparative income statement. Round percentage calculations to the nearest 0.1%.

Compare selected vertical analysis ratios to Tri-State Pipe's benchmark ratios. Identify whether each ratio indicates a favorable trend and is within management's target range.

On Your Own 17-1

Analyzing an income statement

The comparative income statement for PBH Corporation and a form for completing this problem are given in the Working Papers. Work this problem independently.

Complete the vertical analysis of the comparative income statement. Round percentage calculations to the nearest 0.1%.

Compare the vertical analysis ratios to PBH Corporation's benchmark ratios. Identify whether each ratio indicates a favorable trend and is within management's target range.

Chapter 17: Financial Statement Analysis: Ethics in Action: An Unethical Invitation?

Ethics in Action: An Unethical Invitation?

John Gatlin's e-commerce site has grown from a one-person operation to a company that employs over 100 people. When he needs more computer equipment, John heads to Nance Office Supply to talk with Blake Nash, its computer expert. Blake makes sure that John buys the right equipment, but he never tries to sell him more than he needs. For this reason, John will only buy his computer equipment from Blake.

John enjoys following his college football team by traveling to games in his motor home. At the last minute, John's parents said they couldn't make the trip to the upcoming game. John has invited Blake and his wife to join him and his family. John already purchased the game tickets and the food for the tailgate party. "I've already paid for everything," insisted John, when Blake offered to pay for his share of the trip. Blake asked John if he could call back and give him a decision in a few hours. Before he accepts John's invitation, Blake has asked for your advice.

Instructions

Determine whether it would be ethical for Blake to accept John's invitation. Use Staples' Code of Ethics at www.staples.com/sbd/cre/marketing/staples_soul/documents/staples-code-of-ethics_english.pdf as a guide.

Chapter 17: Financial Statement Analysis: Financial Literacy: Rollover and Protect Your Investment

Financial Literacy: Rollover and Protect Your Investment

Most companies today offer their employees a 401(k) retirement plan. Since you are likely to change jobs more than 10 times between the ages of 18 and 44, what happens to your employer-sponsored 401(k) when you leave an employer? What are your options? You can do one of the following:

Leave your 401(k) with your former employer. Although your account will remain active, be aware that many companies impose fees to maintain 401(k) accounts for former employees.

Move your 401(k) funds to a different qualified retirement plan. The movement of funds from one qualified retirement plan to another is called a rollover. For example, funds may be withdrawn from your 401(k) plan with a former employer and deposited to another 401(k) offered by your new employer. Or the funds can be rolled over to an individual retirement account (IRA) at a bank or other financial institution, which can give you more flexibility in managing the invested funds. Funds withdrawn from a qualified retirement plan must be rolled over to another qualified plan within 60 days or the IRS will impose taxes and penalties on the amount withdrawn. Rollovers are important to saving for your retirement because they allow your retirement savings to keep growing tax-free.

Take a lump-sum distribution. Some employers will require 401(k) accounts with small balances (\$5,000 or less) to be closed. If the funds are taken in cash (not rolled over), the IRS will require the payment of taxes and penalties for early withdrawal. You will also be subject to additional state and local income taxes. Funds in a qualified retirement plan must be left in the plan until at least age 59½ to avoid penalties.

Understand your 401(k) rollover options and make smart choices about your investment future!

Activities

Determine the best option for the following scenarios:

- Nathan will soon leave his employer to return to graduate school. What is the best option for his current 401(k) of \$15,000?
- Ashley was just terminated from her employer of five years and has not found another job. What is the best option for her 401(k)?
- Courtney just obtained a new job and will begin two weeks after her termination from her former job. Her new employer matches 401(k) employee contributions up to 5%. What is the best option for her 401(k)?
- Nikki has an IRA with a local financial institution. She is considering cashing in her IRA of \$18,000 because she needs the full amount for a down payment on a condo. What would you suggest? Why?

Source: Bureau of Labor Statistics.

Chapter 17: Financial Statement Analysis: Lesson 17-2: Vertical Analysis of a Balance Sheet

Lesson 17-2: Vertical Analysis of a Balance Sheet [[Click here to add Bookmark](#)]

Calculating Vertical Analysis Ratios on a Balance Sheet LO2

Evaluating Vertical Analysis Asset Ratios LO3

Evaluating Vertical Analysis Liability Ratios

End of Lesson Review

- LO2 Perform vertical analysis of a balance sheet.
- LO3 Analyze a balance sheet using vertical analysis.

Calculating Vertical Analysis Ratios on a Balance Sheet LO2

Lesson 17-2: Vertical Analysis of a Balance Sheet

Vertical analysis ratios measure the relationship between one financial statement item and another item on the same financial statement. On an income statement, each item is divided by net sales. On a balance sheet, each item is divided by the amount of Total Assets.

ThreeGreen's comparative balance sheet contains columns to report the vertical analysis ratios for each year.

Calculating Vertical Analysis Ratios

- 1 Divide each asset amount by the amount of Total Assets. Round each percent to the nearest 0.1%. For the current year, dividing Total Current Assets, \$185,322.90, by Total Assets, \$237,367.19, results in 78.1%.
- 2 Divide each liability and stockholders' equity amount by the amount of Total Assets. For the current year, dividing Total Current Liabilities, \$32,251.78, by Total Assets, \$237,367.19, results in 13.6%.

A business determines its benchmark vertical analysis ratios for its balance sheet in the same way it determined its income statement ratios. It uses (1) actual ratios from prior fiscal periods, (2) industry standards published by industry organizations, (3) business plans, and (4) unexpected events.

A business should never make a business decision for the sole purpose of meeting a benchmark ratio. However, if the benchmark ratios correctly reflect the company's financial goals, management should consider whether actions are necessary to bring a ratio within the target range.

A leading publication of industry standards presents vertical analysis ratios for only three asset items: net accounts receivable, merchandise inventory, and net plant assets. These items represent the majority of the total assets of a business. Therefore, ThreeGreen closely monitors its vertical analysis ratios for these items.

Correcting an Unfavorable Vertical Analysis Ratio for Accounts Receivable

ThreeGreen has determined that the vertical analysis ratio for accounts receivable should be between 8.0% and 10.0% of total assets. A favorable trend moves the ratio toward 9.0%, the middle of the target range. A ratio below the favorable target range may indicate that ThreeGreen is restricting customers' ability to purchase on account. Credit sales can be an effective tool to increase the revenue of a business. A ratio above the target range may indicate that ThreeGreen is too freely extending credit to its customers. The company might not be able to collect accounts from less creditworthy customers.

ThreeGreen's ratio for accounts receivable has increased from 6.6% to 7.5%—a favorable trend. The current-year ratio, 7.5%, is still below the target range. That ratio should cause management to reevaluate how the company approves credit customers. Allowing more credit sales will likely increase both sales and uncollectible accounts. But, if managed carefully, sales should increase at a higher rate than uncollectible accounts.

Correcting an Unfavorable Vertical Analysis Ratio for Merchandise Inventory

ThreeGreen determines that its vertical analysis ratio for merchandise inventory should be between 42.0% and 45.0% of total assets. A business should strive to have the lowest possible amount of inventory, while ensuring that merchandise is always available when a customer places an order. A ratio below the target range may indicate that the business is not stocking an adequate supply of goods. Or, the business might not stock the right variety of merchandise. The business will lose sales if the right quantity and selection of merchandise are not available for sale. A ratio above the target range may indicate that the business is stocking more merchandise than it needs. Carrying more merchandise than needed can increase some operating expenses, such as rent, utilities, and insurance.

ThreeGreen's ratio for merchandise inventory ratio has declined from 58.4% to 43.3%. The prior-year ratio was higher than the target range. Thus, the decline in the ratio is a favorable trend. The current year's ratio, 43.3%, is within the target range. ThreeGreen prepared a list of its inventory items having the largest cost. Then it assessed whether the

proper quantity of each item was available for sale. This information allowed ThreeGreen to reduce the quantities of many items.

Correcting an Unfavorable Vertical Analysis Ratio for Plant Asset

ThreeGreen determines that its vertical analysis ratio for plant assets should be between 20.0% and 25.0% of total assets. A business must have plant assets to operate. A ratio below the target range may indicate that ThreeGreen has not invested enough in plant assets. Too few plant assets could force the business to operate inefficiently. A ratio above the target range may indicate that ThreeGreen owns more plant assets than necessary. Or it may have spent more than it should on the assets it owns.

ThreeGreen's ratio for plant assets, 21.9%, is within the target range. This ratio is difficult for a business to change over a short period of time. Therefore, the target ratio should be considered when acquiring plant assets in the future. Buying used plant assets can help to reduce the ratio. A company below its target range might consider buying additional or higher-quality plant assets.

Evaluating Vertical Analysis Liability Ratios

Lesson 17-2: Vertical Analysis of a Balance Sheet

A ratio that measures the ability of a business to pay its long-term liabilities is called a solvency ratio. The vertical analysis ratio for total liabilities is one type of solvency ratio. Similar to other ratios used by investors, the ratio for total liabilities has another name. Total liabilities divided by total assets is called the debt ratio. Although solvency ratios are generally considered long-term measures, the debt ratio can be used to rate the ability of a business to pay its current and long-term liabilities.

Correcting an Unfavorable Debt Ratio

The ability to borrow money and delay the payment of expenses can benefit both individuals and businesses. Borrowing money enables individuals to purchase major items, such as houses and cars. Paying for daily expenses with a credit card can delay payment of these expenses.

Borrowing too much money, however, can be risky. It can be easy for individuals to buy houses or cars that they can't afford. Monthly loan and credit card payments can leave little money to pay for daily expenses. Individuals often abuse credit cards by making impulsive purchases of things they don't need or can't afford. Monthly debt payments, then, become overwhelming when someone becomes ill or loses a job.

Businesses face the same benefits and risks as individuals. A business can borrow money to purchase the equipment necessary to operate. Delaying payment for expenses and merchandise inventory purchases enables the business to use its cash for other transactions. However, a business can have too many liabilities. The business must be able to pay its liabilities on a timely basis. If sales decline during difficult financial times, the business may be unable to make its monthly payments.

ThreeGreen determines that total liabilities should be between 12.0% and 18.0% of total assets. ThreeGreen's debt ratio declined from 27.2% to 13.6%, a positive trend. The current-year debt ratio, 13.6%, is within the target range. Analyzing individual vertical analysis ratios provides more insight into the change in the debt ratio. ThreeGreen achieved its goal by reducing accounts payable from 19.5% to 6.9% of total assets.

A business having a debt ratio below its target range is able to increase its liabilities. For example, a business could borrow money to expand its store. The business could obtain a bank loan to pay for the expansion, purchase new store equipment, and increase its level of inventory.

A business having a debt ratio above the target range needs to restrict its purchases on account. The business may also be able to raise cash by selling more stock. Increasing assets will lower the debt ratio. Or the extra cash could be used to pay off some liabilities, which would also lower the debt ratio.

End of Lesson Review

- LO2 Perform vertical analysis of a balance sheet.
- LO3 Analyze a balance sheet using vertical analysis.

Terms Review

- solvency ratio
- debt ratio

Audit Your Understanding

1. Why do many retailers perform vertical analysis on the Accounts Receivable and Merchandise Inventory accounts?
2. What may cause a vertical analysis ratio for accounts receivable to be below the target range?
3. What may cause a vertical analysis ratio for merchandise inventory to be below the target range?
4. What should a company do if the vertical analysis ratio for merchandise inventory is above the target range?
5. Why is it risky for a business to have too many liabilities?

Work Together 17-2

Analyzing a balance sheet

The comparative balance sheet for Tri-State Pipe and a form for completing this problem are given in the Working Papers. Your instructor will guide you through the following examples.

Complete the vertical analysis of the comparative balance sheet. Round percentage calculations to the nearest 0.1%.

Compare actual vertical analysis ratios to Tri-State Pipe's target ratios. Identify whether each ratio indicates a favorable trend and is within management's target range.

On Your Own 17-2

Analyzing a balance sheet

The comparative balance sheet for PBH Corporation and a form for completing this problem are given in the Working Papers. Work this problem independently.

Complete the vertical analysis of the comparative balance sheet. Round percentage calculations to the nearest 0.1%.

Compare actual vertical analysis ratios to PBH Corporation's target ratios. Identify whether each ratio indicates a favorable trend and is within management's target range.

Chapter 17: Financial Statement Analysis: Explore Accounting: Forms of Business Organization

Explore Accounting: Forms of Business Organization

When forming a new business, there are several types of organization to choose from. The factors that must be considered in deciding on a form of organization are state and federal requirements, capital needs, taxation, and owner liability. In Part 1 of this textbook, you learned about sole proprietorships. In Parts 2 and 3, the corporate form of business was illustrated. Part 4 will introduce partnerships.

The standard corporate form is the "C" Corporation, named for Subchapter C of the Internal Revenue Code. Below, three forms of business organization not used in this textbook are compared to the C Corporation.

Corporations that have more than 30 stockholders must organize as C Corporations. These must have a board of directors, conduct annual stockholders meetings, and publish financial reports with the SEC and other government agencies. Since all corporate income is taxed, and dividends (paid after federal income tax) are taxed again to the

stockholders, corporate income distributions are taxed twice. However, there are two big advantages to this form of organization. One is limited liability for the owners, which means they cannot be held individually responsible for the liabilities of the company. Their liability is limited to the amount of their investment. The second is the ability to issue stock to raise capital.

S Corporation. These companies are named for Subchapter S of the Internal Revenue Code. They are regular corporations, with fewer than 100 stockholders, that have elected to be taxed in the same way as proprietorships and partnerships. Like C Corporations, these companies must have boards of directors, conduct annual meetings, and file the same reports. Unlike C Corporations, all corporate earnings (and losses) pass through the corporation to the stockholders in proportion to their ownership to be reported on their individual tax returns. That eliminates “double taxation.”

Limited Liability Company (LLC). Owners of limited liability companies are called members. In most states, LLCs can consist of one, two, or more members. Members enjoy the same limited liability as stockholders in a corporation. These entities are not required to maintain boards of directors, conduct annual meetings, or file returns with the SEC. LLCs are not recognized by the IRS for tax purposes, so each must elect to be taxed as a proprietorship, partnership, or corporation.

Limited Liability Partnership (LLP). Many states that allow LLPs limit them to professional organizations—doctors, dentists, lawyers, CPAs, etc. At least two partners are necessary to form an LLP, and most states restrict the number of partners. As a rule, each partner must be registered as either a general or limited partner. Only limited partners enjoy limited liability. Some states require that at least one partner be registered as a general partner. The primary advantage of forming an LLP is that partners can manage their organization and allocate profits and losses among themselves according to their partnership agreement.

Instructions

You own a small, but growing, retail business organized as a proprietorship. You need to raise capital for expansion. Several family members and friends are eager to invest in your business. Which form of organization would be best for you? For your investors? Why?

Chapter 17: Financial Statement Analysis: Why Accounting?: Architecture for Humanity

Why Accounting?: Architecture for Humanity

Almost every person in the world has benefited from the work of an architect. The homes we live in and the schools we attend were designed by architects. Architects provide planning, design, and construction oversight services.

Architecture for Humanity (AH) is a nonprofit organization that provides services for those who cannot afford the services of an architect. AH provides a network of over 40,000 professionals who are ready to contribute their expertise to help others. AH also helps raise funds to cover the costs of construction. Once a structure is built, the city or a local organization must maintain it. So designing durability into structures is a major focus.

AH provides direct services to thousands of people each year. Perhaps its biggest contribution, though, is its Open Architecture Network. This is a website where hundreds of building plans and designs are shared and can be viewed or downloaded for free by anyone around the world.

Critical Thinking

Go to the website for Architecture for Humanity (<http://architectureforhumanity.org>). Research one project (in process or completed). In a written report, list the name, a one-paragraph summary, and the location of the project.

Architecture for Humanity gives the following uses for contributions received: 88% spent on construction and design services, 9% spent on administrative costs, and 3% spent on fundraising. Why might AH's accountants collect and distribute this information?

Chapter 17: Financial Statement Analysis: Lesson 17-3: Horizontal Analysis

Lesson 17-3: Horizontal Analysis

- LO4 Perform horizontal analysis on an income statement.
- LO5 Perform horizontal analysis on a balance sheet.

Analyzing Trends with Horizontal Analysis

People often search for trends by comparing current information to prior-period information. These comparisons are used in all facets of life, including academic achievement, sports records, and business performance. For example, a high school increasing the average ACT score of its students from 22.9 to 24.1 would proudly claim a 5.2% increase in test scores—a favorable trend. In contrast, a 2.4% decrease in sales is an unfavorable trend that should cause concern for a corporation's board of directors.

A comparison of one item on a financial statement with the same item on a previous period's financial statement is called horizontal analysis. A horizontal analysis ratio is calculated by dividing the difference between the current- and prior-period amounts by the prior-period amount. The horizontal analysis ratio for a corporation's salary expense is calculated below.

Horizontal analysis ratios must be evaluated along with other information. For example, did the sales of the corporation also increase? Did management expect, or even plan, for wages and salaries to increase? Consider the following two cases:

Alton Company

Believing it would win a large government contract, Alton Company hired several new employees to support the planned increase in sales. Unfortunately, the government delayed awarding the contract until a month before the end of the fiscal year. Thus, salary expense increased by 9.5% while sales increased by just 2.0%.

Burke Company

Burke Company had expected the current year to be “business as usual.” As expected, the company's sales increased a modest 2.0%. However, Burke did not foresee that several employees would leave the company and need to be replaced at significantly higher pay. As a result, the company's salary expense increased by 9.5%.

Each company's sales increased by 2.0% while salary expense increased by 9.5%. Yet the reason for the increase at each company tells a different story about management's performance. Horizontal analysis does not, by itself, provide any answers. An increase in sales is not necessarily favorable, while an increase in an operating expense is not always unfavorable. Horizontal analysis does motivate managers to investigate why changes have occurred. Management can then use what it learns to improve company performance.

This comparative income statement differs slightly from the income statement used to prepare a vertical analysis. Each fiscal year's amounts are listed in a single column. The dollar amount of the increase or decrease is entered in the third column. The horizontal analysis ratio is written in the fourth column.

Calculating a Horizontal Analysis Ratio

1 Calculate the difference by subtracting the prior-year amount from the current-year amount. The difference for net sales, \$77,866.74, is calculated by subtracting prior-year net sales, \$548,915.25, from current-year net sales, \$626,781.99.

2 Calculate the horizontal analysis ratio by dividing the difference by the prior-year amount. The horizontal analysis ratio for net sales, 14.2%, is calculated by dividing the difference, \$77,866.74, by prior-year net sales, \$548,915.25. The ratio is typically rounded to the nearest tenth of a percent.

Net income after federal income tax is typically referred to as net income.

ThreeGreen performs a horizontal analysis on its comparative balance sheet. Accounts receivable and plant assets are presented at book value. The horizontal analysis ratios for a balance sheet are calculated using the same steps illustrated for the income statement.

The ratios show that total assets increased by 27.8% during the current year. The increase resulted from a 51.7% increase in stockholders' equity and a 36.1% decrease in liabilities. While these ratios appear to be favorable, only those can properly evaluate them. For example, ThreeGreen's 5.2% decrease in merchandise inventory might be seen as unfavorable by observers outside the company. However, because ThreeGreen took actions to reduce its inventory, its managers view this trend as favorable.

Managers use horizontal analysis ratios to help identify and explain significant trends. Publicly held corporations must file documents with the Securities and Exchange Commission that contain a section titled Management's Discussion and Analysis of Financial Condition and Results of Operations. Management often cites these ratios to explain the current year's results of operations.

End of Lesson Review

- LO4 Perform horizontal analysis on an income statement.
- LO5 Perform horizontal analysis on a balance sheet.

Term Review

- horizontal analysis

Audit Your Understanding

1. How could a 2.0% decrease in supplies expense be an unfavorable trend?
2. How does a publicly held corporation use horizontal analysis when reporting to the Securities and Exchange Commission?

Work Together 17-3

1. Analyzing financial statements using horizontal analysis
2. The comparative financial statements for Tri-State Pipe are given in the Working Papers. Your instructor will guide you through the following example.
3. Complete the horizontal analysis of the income statement. Round percentage calculations to the nearest 0.1%.

On Your Own 17-3

1. Analyzing financial statements using horizontal analysis
2. The comparative financial statements for Tri-State Pipe are given in the Working Papers. Work this problem independently.
3. Complete the horizontal analysis of the balance sheet. Round percentage calculations to the nearest 0.1%.

Chapter 17: Financial Statement Analysis: Think Like an Accountant: Financial Analysis

Think Like an Accountant: Financial Analysis

For years, BJ's BBQ has expanded by opening new restaurants in major cities in Tennessee and Kentucky. The company performs a market study to identify a city lacking in the number of barbeque restaurants. The company tries to find a building previously occupied by another restaurant. The building is then renovated to reflect the casual, campfire style that has made BJ's BBQ a regional favorite.

Each month, the company performs a financial analysis of its financial statements. The analysis includes vertical analysis and other classic ratios. The company also calculates a set of ratios unique to restaurants. BJ's strives to increase each of these ratios over time.

Average ticket price: Dollar sales divided by the number of sales tickets. BJ's offers specials that encourage patrons to purchase additional items, such as beverages and desserts.

Sales per square foot: Dollar sales per day divided by square footage in the dining area. This ratio measures how effectively the company's dining area generates sales.

Table turns: The number of tickets per day divided by the number of tables. This ratio indicates how effectively the restaurant is servicing customers. BJ's offers early dinner specials in an effort to attract customers and increase its table turns ratio. BJ's BBQ has a table turns ratio of 4.39, meaning that just over four groups of customers are served daily at each table.

In a surprise move, the chief executive officer has announced his plan to purchase Barbeque Hut, a chain of 16 restaurants in North Carolina and Virginia. Before the deal closes, however, he has asked you to analyze the financial statements of the company.

Open the Spreadsheet TLA_CH17

Follow the steps on the Instructions tab. The worksheet on the Analysis tab contains five-year information for Barbeque Hut. Calculate the three ratios described above. On the Charts tab, create charts to contrast the ratios for BJ's BBQ and Barbeque Hut. Use the charts to answer the following questions.

Is Barbeque Hut effective in increasing its ratios over the five-year period? Explain.

Based on the information provided, would you recommend that the company continue to pursue the purchase of Barbeque Hut?

Chapter 17: Financial Statement Analysis: Lesson 17-4: Analyzing Financial Statements Using Financial Ratios

Lesson 17-4: Analyzing Financial Statements Using Financial Ratios

- LO6 Calculate earnings per share.
- LO7 Calculate and interpret market ratios.
- LO8 Calculate and interpret liquidity ratios.

Net income after federal income tax divided by the number of outstanding shares of stock is called earnings per share. Earnings per share is often abbreviated as EPS. EPS is the most widely recognized measure of a corporation's financial performance. Corporations must include earnings per share on income statements submitted to the Securities and Exchange Commission.

There are no industry standards for earnings per share. Nor can a corporation's EPS be compared to the EPS of other corporations. Each corporation's EPS is a unique number because corporations can issue any number of shares. The earnings of each corporation are divided by a different number of shares. ThreeGreen's earnings per share would be different if it had issued more shares. ThreeGreen issued 7,500 shares of \$10.00 par value stock, raising \$75,000 of capital. If ThreeGreen had elected to issue 75,000 shares of \$1.00 par value stock, it would still have raised \$75,000 of capital. But the decision would have had a dramatic impact on EPS.

A corporation's earnings per share can only be compared to (1) the prior period's earnings per share and (2) projected earnings per share. Many corporations share estimates of their projected earnings per share with investors. A corporation strives to have its actual EPS increase from the prior year and to meet or exceed projections. Horizontal analysis can be used to calculate the change in EPS from prior years.

Lesson 17-4: Analyzing Financial Statements Using Financial Ratios

Stock is traded on stock exchanges around the world. Investors use financial information and other information to place a value on a corporation's stock. A ratio that measures a corporation's financial performance in relation to the market value of its stock is called a market ratio. Investors rely on market ratios to make informed investment decisions.

Dividend Yield

The relationship between dividends per share and market price per share is called the dividend yield. Each corporation can decide the amount of dividends to pay to its stockholders. Corporations in some industries tend to have similar dividend yields. For example, most utility companies have high dividend yields—between 3% and 6%. Investors seeking a constant income will buy stock in companies with high dividend yields. For this reason, investors refer to stocks of these corporations as income stocks.

In contrast, some corporations pay little, if any, dividends. These corporations have very small, or zero, dividend yields. These corporations prefer to retain their earnings to support their future growth. Investors refer to stocks of these corporations as growth stocks. Investors who buy a growth stock expect to benefit through an increase in the market value of the stock.

Price-Earnings Ratio

The relationship between the market value per share and earnings per share of a stock is called the price-earnings ratio. It is often referred to as the P/E ratio.

The P/E ratio is calculated as the market price per share divided by the earnings per share. The P/E ratio measures the price of the company's stock relative to its earnings. Income stocks typically have low P/E ratios. In contrast, growth stocks typically have high P/E ratios. Investors are willing to pay more for growth stocks that are expected to have dynamic earnings growth.

Online sources of financial information highlight the EPS and P/E ratios over several years. Investors analyze the trends in the P/E ratio to project a company's future earnings. Then, using historical P/E ratios, investors can predict future market prices of the corporation's stock.

Based on its dividend yield of 0.87% and its price-earnings ratio of 21.5, investors perceive ThreeGreen to be a growth stock.

A ratio that measures the ability of a business to pay its current financial obligations is called a liquidity ratio. A business must have adequate financial resources to buy additional merchandise, pay employees, and pay for other operating expenses. The balance sheet is the primary source of data to calculate liquidity ratios.

Companies use liquidity ratios to analyze their financial strength. A company must understand its financial strength to plan for future periods and to ensure that adequate resources are available to operate the business. Creditors, vendors, and investors use liquidity ratios to help determine if a company is a good credit or investment risk. Before creditors will lend money to a business, or vendors will sell merchandise on account, they must believe that the company will later make good on its debt. A company that has been determined to be a poor credit risk is usually a bad investment as well.

Working Capital

The amount of current assets less current liabilities is called working capital. The amount is stated in dollars. Working capital is a measure of the financial resources available for the daily operations of a business. ThreeGreen's working capital for the current year is calculated as shown below.

Working capital should not be confused with cash. ThreeGreen does not have \$153,071.12 in cash. The company does have \$153,071.12 of assets that are available for use in daily operations of the business.

Current Ratio

A business cannot compare itself to industry standards based on the value of its working capital. Nor is a horizontal analysis of working capital meaningful. A more useful measure is needed.

A ratio that measures the relationship of current assets to current liabilities is called the current ratio . The current ratio measures a company's ability to pay its current liabilities when due.

On December 31 of the current year, ThreeGreen calculated its current ratio at 5.75, as shown below. The current ratio may be stated as 5.75 to 1. ThreeGreen's current assets are 5.75 times its current liabilities. Based on previous experience, industry guidelines, and the need to maintain sufficient merchandise inventory, ThreeGreen wants to maintain a current ratio between 4.0 and 6.0. ThreeGreen's current ratio of 5.75 is within the target range and a favorable indication of its financial strength.

Quick Ratio

The current ratio assumes a business could sell its merchandise inventory quickly to pay its current liabilities. For many businesses, that may not be possible. Thus, some creditors prefer to use a more conservative measure of liquidity. Cash and other current assets that can be quickly converted into cash are called quick assets . Quick assets are also referred to as liquid assets. ThreeGreen's quick assets include cash, petty cash, and the book value of accounts receivable. A ratio that measures the relationship of quick assets to current liabilities is called the quick ratio .

On December 31 of the current year, ThreeGreen's quick ratio was 2.24. The quick ratio may be stated as 2.24 to 1. ThreeGreen's quick assets are 2.24 times its current liabilities. Most businesses strive to have a quick ratio of at least 1.00. ThreeGreen wants to maintain a quick ratio between 2.00 and 3.00, so 2.24 is within the target range and a favorable indication of its liquidity.

Liquidity ratios are used by managers, vendors, and creditors to help determine the ability of a business to meet its current debt obligations.

End of Lesson Review

- LO6 Calculate earnings per share.
- LO7 Calculate and interpret market ratios.
- LO8 Calculate and interpret liquidity ratios.

Terms Review

- | | |
|------------------------|-------------------|
| • earnings per share | • working capital |
| • market ratio | • current ratio |
| • dividend yield | • quick assets |
| • price-earnings ratio | • quick ratio |
| • liquidity ratio | |
| • | |

Audit Your Understanding

1. Why can one corporation's earnings per share not be compared to the EPS of other corporations?
2. What group is the primary user of market ratios?
3. Do income stocks typically have low or high dividend yields?
4. Do growth stocks typically have low or high price-earnings ratios?
5. What is the primary source of data to calculate liquidity ratios?

6. What does working capital measure?
7. Why is the current ratio a useful measure of financial strength?

Work Together 17-4

Analyzing financial statements using financial ratios

Selected financial information for Eagle Corporation is presented below. A form for completing this problem is given in the Working Papers. Your instructor will guide you through the following example.

Net income after federal income taxes	\$148,186.18
Number of shares outstanding	40,000
Dividends per share	\$2.48
Market price	\$37.90
Quick assets	\$484,943.00
Current assets	\$604,984.00
Current liabilities	\$418,493.00

1. Calculate the (a) earnings per share, (b) dividend yield, and (c) price-earnings ratio. Round the dividend yield to the nearest 0.01%. Round the P/E ratio to the nearest 0.1.
2. Evaluate each ratio relative to prior-year ratios. Investors consider Eagle Corporation to be an income stock.
3. Calculate the (a) working capital and (b) current and quick ratios. Round ratios to the nearest 0.01.
4. Determine if the liquidity ratios are within management's target range.

On Your Own 17-4

Analyzing financial statements using financial ratios

Selected financial information for Mid-State Corporation is presented below. A form for completing this problem is given in the Working Papers. Work this problem independently.

Net income after federal income taxes	\$6,118,089.54
Number of shares outstanding	8,500,000
Dividends per share	\$0.06
Market price	\$42.15
Quick assets	\$2,814,974.00
Current assets	\$4,657,856.00
Current liabilities	\$3,253,053.00

1. Calculate the (a) earnings per share, (b) dividend yield, and (c) price-earnings ratio. Round the dividend yield to the nearest 0.01%. Round the P/E ratio to the nearest 0.1.
2. Evaluate each ratio relative to prior-year ratios. Investors consider Mid-State Corporation to be a growth stock.
3. Calculate the (a) working capital and (b) current and quick ratios. Round ratios to the nearest 0.01.
4. Determine if the liquidity ratios are within management's target range.

Careers in Accounting

Gerald Bozeman

INTERNAL AUDITOR

Gerald Bozeman is an internal auditor for a large financial services company. In Chapter 8 (page 232), an audit was described as an examination of financial records, accounts, and supporting documents to check their accuracy. An accountant who conducts an audit is known as an auditor. An internal auditor is an employee of a company who evaluates and monitors his or her company's internal control processes and procedures.

An internal auditor often reports to more than one person. On administrative and support issues, Mr. Bozeman reports to Ms. Gutzman, the chief executive officer (CEO). He also reports to the audit committee of the board of directors on issues of accountability.

In Chapter 11 (page 338), internal controls were defined as the processes and procedures employed within a business to ensure that its operations are conducted ethically, accurately, and reliably. Among Mr. Bozeman's major tasks is making sure that the internal control processes and procedures are being followed by company employees. He collects data and looks for deficient controls; duplicated effort; and noncompliance with laws, regulations, and company policies. Computers and calculators are the tools he relies on to perform these tasks.

Mr. Bozeman prepares both written and oral reports of his internal audits. These reports detail his findings and recommend corrective actions. His reports are presented to the audit committee. If the audit committee approves his recommendations, he will follow up to ensure that the recommendations are implemented.

Mr. Bozeman is a Certified Internal Auditor (CIA). This means that he has met the requirements of The Institute of Internal Auditors. These include education credits, work experience, and passing a certification exam.

Salary Range: Salaries vary depending on company size, job responsibilities, and experience. The average range is \$43,000 to \$95,000.

Qualifications: Minimum education for an internal auditor is a bachelor's degree in accounting. A master's degree is often preferred. Most employers also require past experience in the field of accounting. Many internal auditors have some education in law, forensics, finance, math, and economics.

Internal auditors interact with coworkers, other executives, and external professionals. They also prepare oral and written reports for senior management. So, it is necessary to have excellent communication skills as well as a cooperative attitude. To perform well in their positions, internal auditors must have good organizational, analytical, math, reasoning, and problem-solving skills. They must be able to plan and direct projects, deal with high-stress situations, prioritize tasks, and keep up to date with technology. An internal auditor must also be ethical, reliable, and responsible.

Occupational Outlook: The growth for auditor positions is projected to be faster than average (20% or higher for the period from 2008 to 2018).

Activities

Go to the website for The Institute of Internal Auditors (www.theiia.org). Find the specific education and work experience required to become a Certified Internal Auditor.

On the same website, find the Code of Ethics for internal auditors. List the four principles that make up the code.

Chapter 17: Financial Statement Analysis: End of Chapter Review

Analyzing the Printout of a Five-Year Comparative Income Statement

In this chapter, you learned about comparative financial statements and trend analysis. The comparative income statement in the chapter compares the current year to the prior year. While that is a common and useful analysis, managers often need a longer-term view.

Some high-end accounting software systems come with preformatted reports similar to the one illustrated here. However, this report could be created in most accounting systems using the custom report tools supplied in the software. Five-year comparative statements like this one are especially useful to investors and creditors. They are also useful to management for making more accurate projections of future revenue, expenses, and net income.

Some financial analysts argue that a comparison of two sequential periods only indicates the direction of a change. They contend that it requires three or more periods to reveal a trend. Several trends can be seen in this five-year comparative statement. Can you identify some of them?

1 Music Mania, Inc., is a retail merchandising business that sells musical instruments and supplies.

2 This report shows five years of income statements. For each year, it includes columns for a vertical analysis and the percent change from the prior year. Analysts commonly use the symbol Δ (delta) to represent an amount of change.

3 Computerized accounting systems generally put limits on the number of characters or numbers that can be entered in a particular type of field. For example, the account titles on this report are limited to 26 characters, including spaces and punctuation. The reason for limiting field lengths is clear when the fields are displayed in columns on a report such as this one.

4 When a report is being designed, numerical fields, shown here in dollars and cents, can be rounded to the nearest dollar or the nearest thousand dollars (000). The point is to show the amount of detail that will be meaningful to the reader and still be easy to read.

5 The designer of this report chose to use a shaded-bar style. For long reports, the bars aid the reader in following data across the page.

Financial Statement Analysis: Chapter Summary

Financial ratios allow managers to compare the financial performance of a business to established benchmarks. Management can determine benchmark ratios using many factors, including (1) actual ratios from prior fiscal periods, (2) industry standards published by industry organizations, (3) business plans, and (4) unexpected events. Organizations that publish industry standards analyze large numbers of financial statements to develop average financial ratios by industry.

Benchmark ratios are often stated in terms of a target range. When a ratio falls outside the target range, the business should investigate what factors or events resulted in the unfavorable results.

Vertical analysis ratios measure the relationship between one financial statement item and the total that includes that item. For an income statement, the total is net sales. For a balance sheet, total assets or the sum of total liabilities plus stockholder's equity are used. However, since those two totals are equal, total assets can be used to calculate all vertical analysis ratios on the balance sheet. Certain vertical analysis ratios have alternate names, including the gross margin, operating margin, profit margin, and debt ratio.

Horizontal analysis focuses on the percentage change in a financial statement amount between fiscal periods. A horizontal analysis ratio is calculated by dividing the difference of the current- and prior-period amounts by the prior-period amount.

Earnings per share (EPS) is likely the most widely recognized financial ratio. EPS is unique to each corporation. There are no industry benchmarks for EPS. However, managers and investors can use horizontal analysis to compare the current period's EPS to those of prior periods.

Financial ratios can be classified as profitability, solvency, market, and liquidity ratios. Each ratio measures a certain aspect of a corporation's operations. These ratios can be compared to benchmark ratios to measure the corporation's performance.

Financial Statement Analysis: Explore Accounting

Annual Reports—Financial Information and More

Corporations publish annual reports to communicate the results of operations to interested parties, such as stockholders, creditors, and government agencies. The typical annual report is a colorful, soft-cover brochure printed on glossy paper and 40 to 60 pages in length. Most companies encourage their stockholders to register for electronic delivery of the annual report. Other individuals can access the annual report on the corporation's website. The reports are grouped in two sections:

1. Management's Analysis and Discussion. This section provides management with an opportunity to promote the corporation. Through the use of pictures, graphs, and narrative, management can highlight the achievements of the past fiscal year and present its plans. Some corporations report on how the volunteer work of their employees is having a positive impact in their communities. They might include discussions of environmental and recycling programs to demonstrate efforts toward social responsibility.

The ultimate objective of any corporation is to increase the market price of its stock, thereby raising stockholders' investment. By “putting its best foot forward” in this section, management can increase the demand for the corporation's products and stock, thus increasing the stock's price.

2. Financial Statements. This section contains several items in addition to the basic financial statements. Most of the additional items are required by GAAP or the Securities and Exchange Commission. As a result, these items are similar among corporations.

a. Notes to the Financial Statements. The notes contain additional, detailed information about items presented on the financial statements. For example, the note related to long-term debt would include the projected loan repayments for the next five years.

b. Auditor's Report. The report of the independent auditor states that a public accounting firm has tested the financial statements and found them accurate and free of misrepresentation. The auditor's report is not meant as an endorsement of the corporation's investment quality. It does, however, give the reader confidence to use the financial statements to make business or investment decisions.

c. Financial Analysis. Summary financial information, such as total assets, net income, and common financial ratios, is presented for several years.

Instructions

Access an annual report using a library or the Internet. Prepare a detailed outline of its contents. Summarize the major topics in management's analysis and discussion. Did management do a good job of “putting its best foot forward”? Would you recommend that a friend purchase the corporation's stock? Support your answers.

Financial Statement Analysis: Apply Your Understanding:

Application Problem

INSTRUCTIONS: Download problem instructions for Excel, QuickBooks, and Peachtree from the textbook companion website at www.C21accounting.com.

17-1 Application Problem: Analyzing an Income Statement LO1

1. Review the comparative income statement.
2. Complete the vertical analysis.
3. Print the worksheet.

The comparative income statement for TR's Quik Mart and a form for completing this problem are given in the Working Papers.

Instructions:

1. Complete the vertical analysis of the comparative income statement. Round the calculation of percents to the nearest 0.1%.
2. Compare selected vertical analysis ratios to TR's Quik Mart's benchmark ratios. Identify whether each ratio indicates a favorable trend and is within management's target range.

17-2 Application Problem: Analyzing a Balance Sheet LO2, 3

1. Review the comparative balance sheet.
2. Complete the Current Ratios section.
3. Complete the vertical analysis.
4. Print the worksheet.

The comparative balance sheet for TR's Quik Mart and a form for completing this problem are given in the Working Papers.

Instructions:

1. Complete the vertical analysis of the comparative balance sheet. Round the calculation of percents to the nearest 0.1%.
2. Compare selected vertical analysis ratios to TR's Quik Mart's target ratios. Identify whether each ratio indicates a favorable trend and is within management's target range.

17-3 Application Problem: Analyzing Financial Statements Using Horizontal Analysis LO4, 5

1. Review the comparative financial statements.
2. Complete the horizontal analysis.
3. Print the worksheets.

The comparative financial statements for Vector Industries are given in the Working Papers. Round the calculation of percents to the nearest 0.1%.

Instructions:

1. Complete the horizontal analysis of the income statement.
2. Complete the horizontal analysis of the balance sheet.

17-4 Application Problem: Analyzing Financial Statements Using Financial Ratios LO6, 7, 8

Selected financial information for Lakeside Furniture is presented below. A form for completing this problem is given in the Working Papers.

Net income after federal income taxes \$7,948,184.15

Number of shares outstanding	2,500,000
Dividends per share	\$2.40
Market price	\$38.15
Quick assets	\$2,618,419.19
Current assets	\$3,418,461.04
Current liabilities	\$2,491,894.11

Instructions:

1. Calculate the (a) earnings per share, (b) dividend yield, and (c) price-earnings ratio. Round the dividend yield to the nearest 0.01%. Round the price-earnings ratio to the nearest 0.1.
2. Evaluate each ratio relative to prior-year ratios. Investors consider Lakeside Furniture to be an income stock.
3. Calculate the (a) working capital and (b) current and quick ratios. Round ratios to the nearest 0.01.
4. Determine if these items are within management's target range.

Financial Statement Analysis: Apply Your Understanding:

Mastery Problem

17-M Mastery Problem: Analyzing Financial Statements LO1, 2, 3, 4, 5, 6, 7, 8

1. Review the comparative financial statements.
2. Complete the vertical analysis.
3. Complete the horizontal analysis.
4. Print the worksheets.

The income statement and balance sheet for Aqua Products, Inc., and forms for completing this problem are given in the Working Papers.

Instructions:

1. Prepare a vertical analysis of the income statement and balance sheet. Round percentage calculations to the nearest 0.1%.
2. Prepare a horizontal analysis of the comparative income statement and balance sheet. Round percentage calculations to the nearest 0.1%.
3. Compare the actual vertical analysis ratios to management's benchmark ratios. Identify whether each ratio is within management's target range.
4. Using the following information, calculate the following ratios for the current year: (a) earnings per share, (b) dividend yield, and (c) price-earnings ratio. Round the dividend yield to the nearest 0.01%. Round the price-earnings ratio to the nearest 0.1. Evaluate each ratio relative to prior-year ratios.

Number of shares outstanding	10,000
Dividends per share	\$0.80
Market price	\$92.40

Calculate the (a) working capital and (b) current and quick ratios. Round ratios to the nearest 0.01. Determine if these ratios are within management's target range.

Financial Statement Analysis: Apply Your Understanding: Challenge Problem

17-C Challenge Problem: Analyzing Industry Standards LO1, 3, 8

Selected financial ratios for the five industries below are represented in the table by the letters A through E. Match each industry, 1 through 5, to a set of ratios, A through E. A form for completing this problem is given in the Working Papers.

Financial Statement Analysis: Apply Your Understanding: Challenge Problem

Accommodations (hotels and motels)

Commercial banking

Gasoline stations

Hardware stores

Offices of physicians

Source: Almanac of Business and Industrial Financial Ratios, 2011 Edition, Leo Troy, CCH, Chicago, Illinois.

Financial Statement Analysis: 21st Century Skills

Savings and Investing

Theme: Financial, Economic, Business, and Entrepreneurial Literacy

Skills: Critical Thinking and Problem Solving, Communication and Collaboration, ICT Literacy

A common method of planning finances is the 70-20-10 rule. The guideline for spending (including debt payments) is 70%, the guideline for saving is 20%, and the guideline for investing is 10%. Therefore, when budgeting, you will begin to set money aside for savings. That will allow you to plan for opportunities and emergencies and reach long-term financial goals. Although many consider saving and investing to be the same thing, they really are quite different.

The purpose of saving is to store money in a safe place, such as a bank, where it earns interest. That gives you easy access to the cash for short-term needs. Examples include saving for a car or a computer and maintaining an emergency fund. Emergency funds are critical as they provide a safety net for unexpected repairs, medical expenses, or job loss. A guideline for an emergency fund is savings equal to six months of expenses.

There are a number of ways you can save money for short-term needs: savings accounts, money market accounts, and certificates of deposit (CDs). These methods of savings offer low risk, but the tradeoff is that they earn low interest. Interest is the percentage rate paid on money saved or invested. Most banks and savings and loans provide similar, competitive savings plans.

The purpose of investing is to build wealth for future needs—a commitment greater than five years. Common investments include stocks, bonds, mutual funds, real estate, IRAs, and 401(k)s. Depending on the type of investment, the risk is likely to be greater. The tradeoff is that the rate of return will be higher, and you will begin to build wealth while you are young. Unlike savings accounts, investments carry some risk of losing the entire amount invested. Due to the risk factor, most investors diversify by putting their money in multiple investments. Selecting the best investments to build wealth requires assessing the tradeoffs between risk and rate of return. A good investment plan provides more opportunity to grow your money over time.

Application

Research the methods of saving and investing. Create a model or diagram summarizing the types of savings and investment plans and their levels of risk. Which plan would be the best for an emergency fund? Explain your answer.

Based on your findings in part (1), do you think buying stock in a strong company would be a good short-term savings strategy?

Interview five adults about the methods they use to save and invest. Record your finding in a table or spreadsheet. Share your findings with the class and explain why you think they selected these methods based on their ages and family situations.

Financial Statement Analysis: Auditing for Errors

The Sarbanes-Oxley Act requires publicly traded corporations to document and test their accounting systems. The documentation for River Corporation contains the following section related to the analysis of comparative financial statements.

Identify the errors in this section of the documentation.

Financial Statement Analysis

The accounting department will provide the board of directors with an analysis of monthly comparative financial statements. This report must be submitted by the tenth business day after the end of the month. The calculation method for each ratio to be included in the report follows.

Vertical analysis: Divide every item on the financial statements by sales.

Horizontal analysis: Divide the month-to-month change of each item on the financial statements by the current month's amount of the item.

Earnings per share: Divide income from operations by the number of shares.

Dividend yield: Divide the most recent dividend per share by the market price of the stock on the last day of the month.

Price-earnings ratio: Divide the market price of the stock on the last day of the month by the earnings per share.

Working capital: Divide current assets by current liabilities.

Financial Statement Analysis: Analyzing Nike's Financial Statements

Nike's Selected Financial Data page provides investors with a summary of the most important amounts in the financial statements. The Year Ended May 31 section provides amounts from the Consolidated Statements of Income. The At May 31 section reports amounts from the Consolidated Balance Sheets.

The Financial Ratios section reports five financial ratios for each of the five years. Nike's management must believe that these financial ratios provide investors with the best and quickest way of assessing the performance and financial stability of the corporation.

Instructions

Use the Selected Financial Data on page B-3 of Appendix B to answer the following questions.

Identify the five financial ratios presented on the Selected Financial Data page.

What other financial ratios are presented in the Year Ended May 31 section?

Financial Statement Analysis: Reinforcement Activity 2—Part B

Financial Statement Analysis: Reinforcement Activity 2Part B

The ledgers used in Reinforcement Activity 2—Part A are needed to complete Reinforcement Activity 2—Part B.

Reinforcement Activity 2—Part B includes those accounting activities needed to complete the accounting cycle of Gulf Uniform Supply, Inc. (GUS), and to evaluate a proposed corporate acquisition.

End-of-Fiscal-Period Work

Instructions

11. After preparing the schedule of accounts receivable, the company accepted an offer from Western Theaters to settle its account for \$1,500.00. Enter the following transactions on a new general journal page. Post each transaction to the general ledger and the accounts receivable ledger.

Dec. 31. Accepted a \$1,500.00, 120-day, 8% note from Western Theaters. NR7.

31. Wrote off the remaining balance of Western Theaters' account. M62.

12. Prepare a new schedule of accounts receivable.

13. Prepare an unadjusted trial balance.

14. Complete the aging of accounts receivable. Journalize the December 31 adjusting entry for estimated uncollectible accounts expense for the year.

15. Use the information below, collected on December 31, to journalize the adjusting entries.

a. Merchandise inventory \$53,148.00

b. Office supplies inventory 845.00

c. Store supplies inventory 995.00

e. Value of prepaid insurance 2,400.00

f. Note receivable—6%, 90-day, dated November 10, face amount 4,000.00

g. Estimate of office equipment depreciation 5,460.00

h. Estimate of store equipment depreciation 6,980.00

16. Post the adjusting entries in the general ledger.

17. Prepare an adjusted trial balance, including all account balances except Federal Income Tax Expense, and total the columns.

18. Using the tax table shown in Chapter 15, calculate the federal income tax owed for the fiscal year.

19. Journalize and post the adjusting entry for federal income tax payable.

20. Complete the adjusted trial balance.

21. Prepare an income statement for the current year. Prepare a vertical analysis of each amount in the fourth amount column. Round calculations to the nearest 0.1%.

22. Prepare a statement of stockholders' equity. The company had 5,500 shares of \$10.00 par value stock outstanding on January 1. The company issued an additional 500 shares during the year.

23. Prepare a balance sheet for the current year.

24. Journalize and post the closing entries.

Proposed corporate acquisition: The board of directors of Health Fashions, Inc. (HFI), is seeking a buyer for the company. HFI sells uniforms to doctors' offices and hospitals. Thus, HFI and GUS operate similar businesses. Acquiring HFI would enable GUS to expand into a bordering state.

GUS obtained the comparative income statement and balance sheet from HFI. For the acquisition to work, GUS's management would want HFI's financial ratios to be in line with its own benchmarks. GUS considers HFI to be an income stock.

25. Prepare a vertical analysis of HFI's comparative income statement and balance sheet. Round calculations to the nearest 0.1%.

26. Prepare a horizontal analysis of HFI's comparative income statement and balance sheet. Round calculations to the nearest 0.1%.

27. Compare HFI's vertical analysis ratios to GUS's benchmark ratios. Determine whether each ratio shows a favorable trend and is within GUS's target range.

28. Using the following information, calculate the following ratios: (a) earnings per share, (b) dividend yield, and (c) price-earnings ratio. Round the dividend yield to the nearest 0.01%. Round the price-earnings ratio to the nearest 0.1. Evaluate each ratio relative to prior-year ratios.

	Current Year	Prior Year
Number of shares outstanding	50,000	50,000
Dividends per share	\$0.16	\$0.14
Market price	\$12.50	\$11.50

29. Calculate (a) the working capital and (b) the current and quick ratios for the current year. Round ratios to the nearest 0.01. Determine if these ratios are within GUS's target range. Is HFI a good fit for GUS?

Financial Statement Analysis: Century 21 Accounting

Authentic Threads is a merchandising business organized as a corporation. The company specializes in selling a unique variety of trendy clothing, shoes, jewelry, and accessories for the teen and young adult market. This simulation includes the realistic transactions made both in store and on the company's website. In this simulation, you will do accounting work for Authentic Threads.

Source documents are provided for transactions that are recorded in special journals and a general journal, similar to the ones used by ThreeGreen Products, Inc., in Part 2.

This real-life business simulation is available in manual and automated versions. The automated version is used with Automated Accounting Online software.

The following activities are included in this simulation:

- 1 Recording transactions in special journals from source documents.
- 2 Posting items to be posted individually to a general ledger and subsidiary ledgers.
- 3 Recording a payroll in a payroll register. Updating the employee earnings records. Recording payroll journal entries.
- 4 Posting column totals to a general ledger.
- 5 Preparing schedules of accounts receivable and accounts payable from subsidiary ledgers.
- 6 Preparing a trial balance on a work sheet.

- 7 Planning adjustments and completing a work sheet.
- 8 Preparing financial statements.
- 9 Journalizing and posting adjusting entries.
- 10 Journalizing and posting closing entries.
- 11 Preparing a post-closing trial balance.
- 12 Completing the Think Like an Accountant Financial Analysis activities.