

7: How Do Managers Use Financial and Nonfinancial Performance Measures?

Chapter 7 How Do Managers Use Financial and Nonfinancial Performance Measures?



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Sandy Masako is the CEO of a fast-food restaurant called Chicken Deluxe. The company operates hundreds of restaurants throughout North America and is choosing between two suppliers of soft drinks: Deep Fizz Company and Extreme Fizz, Inc. Consumer surveys indicate no significant preference between the two. Sandy is meeting with Dave Roberts, the CFO, and Karen Kraft, the purchasing manager, to discuss the company's options.

Sandy (CEO):

We have a big decision to make. Our soft drink contract is up at the end of this year, and we need to decide on a supplier for next year.

Karen (Purchasing Manager):

I've had preliminary discussions with both Deep Fizz and Extreme Fizz, and the costs of their products are about the same.

Dave (CFO):

Based on extensive surveys with our customers, they are not particularly concerned about which supplier we choose, as long as it's either Deep Fizz or Extreme Fizz.

Karen:

Both companies would like our business. This is a big contract for either of them!

Sandy:

OK, so we have two companies offering the same terms, and customers who would be satisfied with either company's products. Are there any other criteria we should consider?

Dave:

We must have a supplier that is on solid financial ground. If our supplier were to have financial difficulties that jeopardized product quality or timing of deliveries, we would be in a bind.

Karen:

I agree. We need to determine whether these companies are in good financial shape.

Dave:

I suggest we have our accounting staff evaluate their financial information by analyzing and comparing certain key financial measures.

Sandy:

What do you have in mind?

Dave:

My staff can look at financial trends and calculate several different ratios to evaluate the strength of each company's income statement and balance sheet. We can compare these ratios for both companies and also compare them to industry standards. This analysis should give us a better idea about the financial stability of each company.

Sandy:

Excellent! We have a few months to make our decision. How much time do you need?

Dave:

We can have it ready within a few weeks.

Sandy:

Great, let's plan on reviewing your analysis next month.

Chicken Deluxe is facing a supplier decision common to many companies. Financial stability is an important factor in deciding on a supplier, along with the quality of product and reliability of service. Chicken Deluxe must analyze financial information for Deep Fizz and Extreme Fizz to determine the financial condition of each company.

The analysis of a company's financial information typically follows a three-pronged approach. First, trends within a company's own financial information are analyzed, such as sales and earnings from one year to the next, using two methods—*trend analysis* and *common-size analysis*. Second, financial measures are compared between competitors. Finally, financial ratios are compared to industry averages. We discuss these three approaches next using **Coca-Cola** as an example. We will revisit the decision facing Chicken Deluxe later in the chapter.

7.1 Trend Analysis of Financial Statements

Learning Objectives

1. Perform trend analysis to evaluate financial statement information.

Question: How is trend analysis used to evaluate the financial health of an organization?

Answer: **Trend analysis** evaluates an organization's financial information over a period of time. Periods may be measured in months, quarters, or years, depending on the circumstances. The goal is to calculate and analyze the amount change and percent change from one period to the next.

For example, in fiscal years 2019 and 2018, **Coca-Cola** had the operating income shown as follows. (Amounts are in millions. To convert to the actual amount, simply multiply the amount given times one million. For example, $\$10,086 \times 1,000,000 = \$10,086,000,000$. Thus **Coca-Cola** had operating income of \$10,086,000 in 2019.)

	Amount 2019	Amount 2018	Amount Change	Percent Change
Operating income	\$10,086	\$9,152	?	

Although readers of the financial information can see that operating income increased from 2018 to 2019, the exact dollar amount of the change and the percent change is more helpful in evaluating the company's performance. The dollar amount of change is calculated as follows:

Key Equation

Amount of change = Current year amount – Base year amount

Amount of change = Current year amount – Base year amount $\$934 = \$10,086 - \$9,152$

*Question: As you can see, operating income increased by \$934 million from 2018 to 2019. Is this a significant increase for **Coca-Cola** ?*

Answer: Most of us consider \$934 million to be a huge amount, but the only way to gauge the true significance of this amount for **Coca-Cola** is to calculate the percent change from 2018 to 2019. The **percent change** is calculated as the current year amount minus the base year amount, divided by the base year amount.

Key Equation

Percent change = (Current year amount – Base year amount) ÷ Base year amount

The calculation that follows shows operating income increased 10.2 percent from 2018 to 2019. This is a significant increase and represents very positive results for **Coca-Cola**.

Percent change = (Current year amount – Base year amount) ÷ Base year amount $\% = (\$10,086 - \$9,152) \div \$9,152$

Trend Analysis for the Income Statement and Balance Sheet

Question: Trend analysis is often used to evaluate each line item on the income statement and balance sheet. How is this analysis prepared?

Answer: Figure 7.1 “Income Statement Trend Analysis for ” shows **Coca-Cola's** income statement trend analysis, and Figure 7.2 “Balance Sheet Trend Analysis for ” shows **Coca-Cola's** balance sheet trend analysis. Carefully examine each of these figures, including the comments.

Figure 7.1 Income Statement Trend Analysis for **Coca-Cola**

	2019	2018	\$ Change	Percent Change
Revenues	\$ 37,266	\$ 34,300	2,966	8.6%
Cost of Goods and Services Sold	14,619	13,067	1,552	11.9%
GROSS PROFIT	22,647	21,233	1,414	6.7%
Selling, General and Administrative Expense	12,103	11,002	1,101	10.0%
Other Cost and Expense, Operating	458	1,079	(621)	(57%)
OPERATING INCOME	10,086	9,152	934	10.2%

Note: Percent change for each line item is found by dividing the increase (decrease) amount by the 2018 amount. For example, net sales 13.3 percent increase equals $\$2,966 \div \$34,300$.

Figure 7.1 " shows that net sales increased by \$2,966 million, or 8.6 percent. Cost of goods sold had a corresponding increase of \$1,552 million, or 11.9 percent. The higher increase for cost of goods sold in relation to sales indicates that costs that go into the product are increasing in cost more than Coca Cola is able to increase the sales price of the product. The increase in net sales and related increase in cost of goods sold resulted in an increase in gross margin of \$1,414, or 6.7 percent. The increase in selling and administrative expenses of \$1,101 million, or 10 percent, outpaced the increase in net sales. This was offset by the 57% drop in other costs and expenses. Combined these changes resulted in a relatively health increase in operating income as noted above of \$934 million or 10.2 percent. The significant decrease in other expenses comes because of the drop in costs for the bottling operation as those operations were refranchised in 2018 so that costs were eliminated (this information is found in the footnotes to the financial statements).

Figure 7.2 Balance Sheet Trend Analysis for **Coca-Cola**

	2019	2018	\$ Change	% Change
Cash and Short Term Investments	\$ 11,175	\$ 16,115	\$ (4,940)	(30.7%)
Accounts Receivable, net	3,971	3,685	286	7.8%
Inventory	3,379	3,071	308	10.0%
Prepaid and Other Current Assets	1,886	2,059	(173)	(8.4%)
Long Term Investments	28,366	27,101	1,265	4.7%
Property, Plant and Equipment, Net	10,838	9,598	1,240	12.9%
Intangible Assets, Net	26,766	21,587	5,179	24.0%
	\$86,381	\$83,216	3,165	3.8%
Accounts payable and accrued expenses	11,312	9,533	1,779	18.7%
Notes and Loans Payable, Current	15,247	18,838	(3,591)	-19.1%
Accrued income taxes	414	411	3	0.7%
Long Term Debt	27,516	25,376	2,140	8.4%
Other Liabilities	10,794	10,000	794	7.9%
Common Stock	18,914	18,280	634	3.5%

Retained Earnings	52,311	50,420	1,891	3.8%
Less: Treasury Stock	(50,127)	(49,642)	485	1.0%
Total Liabilities and Equity	\$86,381	\$83,216		

Note: Percent change for each line item is found by dividing the increase (decrease) amount by the 2018 amount. For example, cash and cash equivalents 30.7 percent decrease equals $\$4,940 \div \$16,155$.

Current Assets and Current Liabilities

Question: What does the balance sheet trend analysis tell us about current assets and current liabilities for Coca-Cola ?

Answer: The above analysis shows that cash and cash equivalents decreased by \$4,940 million, or 30.7 percent. **Coca-Cola's** statement of cash flows would provide detailed information regarding this increase. We covered the cash flow statement in the last chapter. Accounts receivable increased 7.8 percent, and merchandise inventory increased 10 percent. Other current assets decreased 8.4 percent. We would expect accounts receivable and inventory to increase when the company was able to increase sales as shown in our analysis of the income statement.

Moving to current liabilities, accounts payable and accrued liabilities increased by 18.7 percent, loans and notes payable decreased 19.1 percent, and accrued taxes increased .7 percent.

Noncurrent Assets and Noncurrent Liabilities

Question: What does the balance sheet trend analysis above tell us about noncurrent assets and noncurrent liabilities for Coca-Cola ?

Answer: The above shows that long-term investments increased 4.7 percent. Property, plant, and equipment increased 12.9 percent, and intangible assets increased by a significant 24 percent. Both items appearing under noncurrent liabilities increased, with a 8.4 percent increase in long-term debt and a 7.9 percent increase in other liabilities.

Shareholders' Equity

Question: What does the balance sheet trend analysis above tell us about shareholders' equity for Coca-Cola ?

Answer: Common stock increased 3.5 percent, and retained earnings increased 3.8 percent. Treasury stock increased just 1 percent.

Big Picture Balance Sheet Trend Analysis

Question: What are some of the key big picture items identified in the balance sheet trend analysis shown above?

Answer: Overall, total assets increased by 3.8 percent. Of course, total liabilities and shareholders' equity also increased by the same amount. The increases identified in almost every asset, liability, and shareholders' equity line item are significant. Growth in sales made it necessary to have more inventory and accounts receivable. Growth in acquisitions fueled an increase in both tangible and intangible assets that were financed by adding more long term debt.

This analysis points to the reason we perform trend analysis—to identify the increases and decreases in dollar amounts from one year to the next and to take a close look at unusual trends.

Trend Analysis over Several Years

Question: The trend analysis just described works well when comparing financial data for two years. However, many prefer to review trends over more than two years. How might a trend analysis for several years be prepared?

Answer: A common approach is to establish the oldest year as the base year and compute future years as a percentage of the base year. For example, **Coca-Cola** had the following net sales for each of the past five years (in millions):

	2019	2018	2017	2016	2015
Net sales	\$37,266	\$34,300	\$36,212	\$41,863	\$44,294

Comparing 2019 to the past 5 years, we see that 2019 reverses a troubling trend of dropping sales for the past four years. Just looking at 2 years may hide this turnaround whether you consider it a healthy restart or just a positive bump in a continued slide.

Business in Action 7.1

Trends Presented in Annual Reports

Most public companies present trend information in their annual reports. For example, **Intel** shows net revenues, gross margin, research and development costs, operating income, and net income for the past five years. **Nike** and **PepsiCo** both show the percent change in selected income

statement line items for the past two years. **Costco Wholesale Corporation** presents selected income statement information for the past five years. The fact that these financial data are provided in the annual report confirms the importance of presenting trend information to shareholders.

Sources: **Intel**, “Annual Report, 2019,” <http://www.intel.com>; **Nike**, “Annual Report, 2019,” <http://www.nike.com>; **PepsiCo**, “Annual Report, 2019,” <http://www.pepsico.com>; **Costco Wholesale Corporation**, “Annual Report, 2019,” <http://www.costco.com>.

7.2 Common-Size Analysis of Financial Statements

Learning Objectives

1. Perform common-size analysis to evaluate financial statement information.

Question: How is common-size analysis used to evaluate the financial health of an organization?

Answer: **Common-size analysis** converts each line of financial statement data to an easily comparable amount measured in percent form. Income statement items are stated as a percent of net sales, and balance sheet items are stated as a percent of total assets (or total liabilities and shareholders’ equity); also called *vertical analysis*. (also called *vertical analysis*) converts each line of financial statement data to an easily comparable, or common-size, amount measured as a percent. This is done by stating income statement items as a percent of net sales and balance sheet items as a percent of total assets (or total liabilities and shareholders’ equity). For example, **Coca-Cola** had net income of \$8,920 million and net sales of \$37,267 million for 2019. The common-size percent is simply net income divided by net sales, or 23.9 percent ($= \$8,920 \div \$37,267$).

There are two reasons to use common-size analysis: (1) to evaluate information from one period to the next within a company and (2) to evaluate a company relative to its competitors. Common-size analysis answers such questions as “how do our current assets as a percent of total assets compare with last year?” and “how does our net income as a percent of net sales compare with that of our competitors?”

Using Common-Size Analysis to Evaluate Trends within a Company

Question: How is a formal common-size analysis prepared, and what does it tell us for Coca-Cola ?

Answer: Figure 7.3 “Common-Size Income Statement Analysis ” presents the common-size analysis for **Coca-Cola’s** income statement, and Figure 7.4 “Common-Size Balance Sheet Analysis ” shows the common-size analysis for **Coca-Cola’s** balance sheet. As you look at these figures, notice that net sales are used as the base for the income statement, and total assets (or total liabilities and shareholders’ equity) are used as the base for the balance sheet. That is, for the income statement, each item is measured as a percent of net sales, and for the balance sheet, each item is measured as a percent of total assets (or total liabilities and shareholders’ equity).

Figure 7.3 Common-Size Income Statement Analysis for **Coca-Cola**

	2019	% of Sales	2018	% of Sales
Revenues	\$ 37,266	100%	\$ 34,300	100%
Cost of Goods and Services Sold	14,619	39%	13,067	38%
GROSS PROFIT	22,647	61%	21,233	62%
Selling, General and Administrative Expense	12,103	32%	11,002	32%
Other Cost and Expense, Operating	458	1%	1,079	3%
OPERATING INCOME	10,086	27%	9,152	27%
Interest income	563	2%	689	2%
Interest expense	946	3%	950	3%
Equity income (loss) – net	1,049	3%	1,008	3%
Other income (loss) – net	34	0%	(1,674)	-5%
INCOME BEFORE INCOME TAXES	10,786	29%	8,225	24%
Income taxes	1,801	5%	1,749	5%
CONSOLIDATED NET INCOME	8,985	24%	6,476	19%

Note: All percentages use net sales as the base. For example, 2019 cost of goods sold percent of 39 percent equals \$14,619 cost of goods sold ÷ \$37,266 net sales. Note that rounding issues sometimes cause subtotals in the percent column to be off by a small amount.

In general, managers prefer expenses as a percent of net sales to *decrease* over time, and profit figures as a percent of net sales to *increase* over time. As you can see in Figure 7.3 “Common-Size Income Statement Analysis”, **Coca-Cola’s** gross margin as a percent of net sales decreased from 2018 to 2019 (62 percent versus 61 percent). Operating income stayed the same (27 percent for both years). Income before taxes increased significantly from 24 percent in 2018 to 29 percent in 2019 due primarily to the loss in 2018. This caused net income to increase as well, from 19 percent in 2018 to 24 percent in 2019. In the expense category, cost of goods sold as a percent of net sales increased which is not a positive sign but this was offset by the drop in other costs and expenses. Selling and administrative expenses was unchanged as a percent of sales for both years as was interest expense, equity income and income tax expense.

Figure 7.4 Common-Size Balance Sheet Analysis for **Coca-Cola**

	2019	% of Assets	2018	% of Assets
Cash and Short Term Investments	\$ 11,175	13%	\$ 16,115	19%
Accounts Receivable, Inet	3,971	5%	3,685	4%
Inventory	3,379	4%	3,071	4%
Prepaid and Other Current Assets	1,886	2%	2,059	2%
Long Term Investments	28,366	33%	27,101	33%
Property, Plant and Equipment, Net	10,838	13%	9,598	12%
Intangible Assets, Net	26,766	31%	21,587	26%
Total Assets	\$ 86,381	100%	\$ 83,216	100%
Accounts payable and accrued expenses	11,312	13%	9,533	11%
Notes and Loans Payable, Current	15,247	18%	18,838	23%
Accrued income taxes	414	0%	411	0%
Long Term Debt	27,516	32%	25,376	30%
Other Liabilities	10,794	12%	10,000	12%
Common Stock	18,914	22%	18,280	22%
Retained Earnings	52,311	61%	50,420	61%
Less: Treasury Stock	(50,127)	-58%	(49,642)	-60%
Total Liabilities and Equity	\$ 86,381		\$ 83,216	

As you can see from the composition of assets, liabilities, and shareholders’ equity accounts changed slightly from 2018 to 2019. Notable changes occurred for cash (from 19 to 13%) intangible assets (from 26 to 31%), current loans payable (23% to 18%). Other assets and liabilities did not change much in relation to total assets.

Using Common-Size Analysis to Evaluate Competitors

*Question: To this point, we have used common-size analysis to evaluate just one company, **Coca-Cola**. Common-size analysis is, however, also an effective way of comparing two companies with different levels of revenues and assets. For example, suppose one company has operating income of \$100,000, and a competing company has operating income of \$2,000,000. If both companies have similar levels of net sales and total assets, it is reasonable to assume that the more profitable company is the better performer. However, most companies are not the same size. How do we compare companies of different sizes?*

Answer: This is where common-size analysis can help. Common-size analysis enables us to compare companies on equal ground. So that by converting dollar amounts into percentages, we can compare Coca Cola with 37 billion in sales with a start up beverage company with only \$3 million in sales. If both are converted to percentages they can be analyzed side by side to see which one is the most profitable and how the composition of their assets and liabilities compare.

Common-size analysis is obviously crucial to comparative analysis. In fact, some sources of industry data present the information exclusively in a common-size format, and most of the accounting software available today has been engineered to facilitate this type of analysis.

Key Takeaways

- Common-size analysis converts each line of financial statement data to an easily comparable amount measured as a percent. Income statement items are stated as a percent of net sales and balance sheet items are stated as a percent of total assets (or total liabilities and shareholders' equity). Common-size analysis allows for the evaluation of information from one period to the next within a company and between competing companies.

7.3 Ratio Analysis of Financial Information

Learning Objectives

1. Use ratio analysis to measure profitability, short-term liquidity, long-term solvency, and market valuation.

Question: Although reviewing trends and using common-size analysis provides an excellent starting point for analyzing financial information, managers, investors, and other stakeholders also use various ratios to assess the financial performance and financial condition of organizations. What are the four categories of ratios used to evaluate the financial health of an organization?

Answer: The four categories of ratios presented in this chapter are as follows (in order of presentation):

1. Ratios used to measure *profitability* (focus is on the income statement)
2. Ratios used to measure *short-term liquidity* (focus is on short-term liabilities)
3. Ratios used to measure *long-term solvency* (focus is on long-term liabilities)
4. Ratios used to measure *market valuation* (focus is on market value of the company)

For each ratio, we explain the meaning and provide the formula

Table 7.1 “Financial Ratio Formulas” summarizes the formulas for all the ratios presented in this section, and [Table 13.2 “Summary of Financial Ratios for “](#) shows the ratio results for **Coca-Cola**, **PepsiCo**, and the industry averages that will be covered throughout this section.

Table 7.1 Financial Ratio Formulas

Profitability Measures
<ol style="list-style-type: none"> 1. Gross margin ratio = $\text{Gross margin} / \text{Net sales}$ Indicates the gross margin generated for each dollar in net sales. 2. Profit margin ratio = $\text{Net income} / \text{Net sales}$ Indicates the profit generated for each dollar in net sales. 3. Return on assets = $\text{Net income} / \text{Average total assets}$ Indicates how much net income was generated from each dollar in average assets invested. 4. Return on common shareholders' equity = $(\text{Net income} - \text{Preferred dividends}) / \text{Average common shareholders' equity}$ Indicates how much net income was generated from each dollar of common shareholders' equity. 5. Earnings per share = $(\text{Net income} - \text{Preferred dividends}) / \text{Weighted average common shares outstanding}$ Indicates how much net income was earned for each share of common stock outstanding.
Short-Term Liquidity Measures

6. Current ratio= $\text{Current assets} / \text{Current liabilities}$
Indicates whether a company has sufficient current assets to cover current liabilities.
7. Quick ratio= $(\text{Cash} + \text{Marketable securities} + \text{Short-term receivables}) / \text{Current liabilities}$

Alternate = $\text{Total Current Assets less inventory and other current assets} / \text{Current liabilities}$
Indicates whether a company has sufficient quick assets to cover current liabilities.

8. Receivables turnover ratio= $\text{Credit sales} / \text{Average accounts receivable}$
Indicates how many times receivables are collected in a given period.
9. Average collection period= $365 \text{ days} / \text{Receivables turnover ratio}$
Indicates how many days it takes on average to collect on credit sales.
10. Inventory turnover ratio= $\text{Cost of goods sold} / \text{Average inventory}$
Indicates how many times inventory is sold and restocked in a given period.
11. Average sale period= $365 \text{ days} / \text{Inventory turnover ratio}$
Indicates how many days it takes on average to sell the company's inventory.

Long-Term Solvency Measures

12. Debt to assets= $\text{Total liabilities} / \text{Total assets}$
Indicates the percentage of assets funded by creditors.
13. Debt to equity= $\text{Total liabilities} / \text{Total shareholders' equity}$
Indicates the amount of debt incurred for each dollar that owners provide.
14. Times interest earned= $\text{Net income} + \text{Income tax expense} + \text{Interest expense} / \text{Interest expense}$
Indicates the company's ability to cover its interest expense related to long-term debt with current period earnings.

Before we discuss the various ratios, it is important to note that different terms are often used in financial statements to describe the same item. For example, some companies use the term *net revenues* instead of *net sales*, and the income statement is often called the *statement of earnings*, or *consolidated statement of earnings*.

Profitability Ratios

Question: Analysts, shareholders, suppliers, and other stakeholders often want to evaluate profit trends within a company and compare a company's profits with competitors' profits. What are the five common ratios used to evaluate company profitability?

Answer: The five ratios used to evaluate *profitability* are as follows:

1. Gross margin ratio
2. Profit margin ratio
3. Return on assets
4. Return on common shareholders' equity
5. Earnings per share

The application of these ratios was covered in our earlier Principles of Financial Accounting textbooks.

Short-Term Liquidity Ratios

Question: Suppliers and other short-term lenders often want to evaluate whether companies can meet short-term obligations. What are the four common ratios used to evaluate short-term liquidity?

Answer: The four ratios used to evaluate *short-term liquidity* are as follows:

1. Current ratio
2. Quick ratio
3. Receivables turnover ratio (often converted to *average collection period*)
4. Inventory turnover ratio (often converted to *average sale period*)

The application of these ratios was covered in our earlier Principles of Financial Accounting textbooks.

Long-Term Solvency Ratios

Question: Banks, bondholders, and other long-term lenders often want to evaluate whether companies can meet long-term obligations. What are the three common ratios used to evaluate long-term solvency?

Answer: The three ratios used to evaluate long-term solvency are as follows:

1. Debt to assets
2. Debt to equity
3. Times interest earned

Debt to Assets

The debt to assets ratio can be expressed as a percentage or as just a ratio of liabilities to assets. The higher the percentage of assets are financed with debt the more leveraged the company is and the more risk of bankruptcy. With this additional risk comes a higher chance for large returns – this concept of leverage was covered in Principles of Managerial Accounting 1.

Debt to Equity

A variation of the debt to assets ratio is the [debt to equity ratio](#). Calculated as total liabilities divided by total shareholders' equity, this calculation measures the balance of liabilities and shareholders' equity used to fund assets. The debt to equity ratio is total liabilities divided by total shareholders' equity. Like Debt to Assets, the higher the debt to equity the more leveraged the company is and the higher risk of not being able to meet the long term obligations. It can be expressed as a ratio or a percentage.

Times Interest Earned

The [times interest earned](#) is calculated as income before income tax expense and interest expense divided by interest expense; also called interest coverage ratio. It measures the company's ability to cover its interest expense related to long-term debt with current period earnings. The times interest earned ratio is net income before income tax expense and interest expense divided by interest expense. Unlike the other solvency ratios, this generally is not expressed as a percentage but rather as a number of times. Income was able to cover the interest expense 6.4 times which means the company generated profits sufficient to pay its interest 6.4 times. With this ratio, the higher the number the less leverage and risk of bankruptcy exists.

Key Takeaways

- Shareholders, creditors, and analysts often evaluate a company's profitability. Five ratios used to evaluate *profitability* are the gross margin ratio, the profit margin ratio, return on assets, return on common shareholders' equity, and earnings per share. Suppliers and other short-term creditors often evaluate whether a company can meet short-term obligations. Four ratios used to evaluate *short-term liquidity* are the current ratio, the quick ratio, the receivables turnover ratio (often converted to average collection period), and the inventory turnover ratio (often converted to average sale period). Banks, bondholders, and other long-term lenders often evaluate whether companies can meet long-term obligations. Three ratios used to evaluate *long-term solvency* are debt to assets, debt to equity, and times interest earned.

Sandy:

Let's get started! Dave, what do you have for us?

Dave:

I used several different financial ratios to evaluate profitability, short-term liquidity, long-term solvency, and market valuation for Deep Fizz Company and Extreme Fizz, Inc., Here is a summary of the results. Items 1 through 4 show that both companies are doing very well with regard to profitability, and exceed the industry average in all four categories. Earnings per share are not relevant for comparative purposes because different companies have different amounts of shares outstanding.

Sandy:

The profitability measures look good for both companies. What about the balance sheet?

Dave:

For the most part, Extreme Fizz has the edge on short-term liquidity, with top marks for all short-term liquidity measures. However, Deep Fizz is not far behind. Based on items 6 through 11, I consider both companies to have strong short-term liquidity. The only concern is with Deep Fizz's slow inventory turnover, which is well below Extreme Fizz and the industry average.

Sandy:

What about long-term solvency? Given both companies have strong profitability and excellent short-term liquidity, my biggest concern is whether these companies are able to meet long-term obligations.

Dave:

The short answer is both companies will be able to meet long-term obligations as indicated in the debt to assets, debt to equity, and times interest

earned ratios.

Sandy:

So what do we get from all this information?

Dave:

Both companies are solid. We shouldn't have to worry about either company having financial difficulties in the near future.

Karen:

Looks like we'll have to review other factors in deciding which company to use as our supplier.

Sandy:

I agree. Thanks, Dave, for your analysis. If nothing else, this puts my mind at ease about whichever company we ultimately select as our supplier.

As you can see from the Chicken Deluxe example, analysts use many different financial measures to evaluate financial performance. In the case of Deep Fizz and Extreme Fizz, both companies appear to be strong performers. Armed with this information, management can confidently choose either company knowing the winner will be on solid financial ground for years to come.

7.5 Nonfinancial Performance Measures: The Balanced Scorecard

Learning Objectives

1. Develop and analyze nonfinancial performance measures using a balanced scorecard.

Question: Although financial measures are important for evaluation purposes, many organizations use a mix of financial and nonfinancial measures to evaluate performance. For example, airlines track on-time arrival percentages carefully, and delivery companies like Federal Express (FedEx) and United Parcel Service (UPS) monitor percentages of on-time deliveries. The balanced scorecard uses several alternative measures to evaluate performance. What is a balanced scorecard and how does it help companies to evaluate performance?

Answer: The **balanced scorecard** is a balanced set of measures that organizations use to motivate employees and evaluate performance. These measures are typically separated into four perspectives outlined in the following. (Dr. Robert S. Kaplan and Dr. David P. Norton created the balanced scorecard, and it is actively promoted through their company, Balanced Scorecard Collaborative. More information can be found at the following link <https://balancedscorecard.org/>)

1. **Financial.** Measures that shareholders, creditors, and other stakeholders use to evaluate financial performance.
2. **Internal business process.** Measures that management uses to evaluate efficiency of existing business processes.
3. **Learning and growth.** Measures that management uses to evaluate effectiveness of employee training.
4. **Customer.** Measures that management uses to evaluate whether the organization is meeting customer expectations.

The goal is to link these four perspectives to the company's strategies and goals. For example, a high percentage of on-time arrivals is likely an important goal from the perspective of the *customer* of an airline. A high percentage of defect-free computer chips is likely an important goal from the *internal business process* perspective of a computer chip maker. A high number of continuing education hours is likely an important goal from the *learning and growth* perspective for tax personnel at an accounting firm. Measures from a *financial* perspective were covered earlier in this chapter.

Companies that use the balanced scorecard typically establish several measures for each perspective. Table 13.4 "Balanced Scorecard Measures" lists several examples of these measures.

Table 7.2 Balanced Scorecard Measures

Financial	Internal Business Process	Learning and Growth	Customer
Gross margin ratio	Defect-free rate	Hours of employee training	Customer satisfaction (survey)
Return on assets	Customer response time	Employee satisfaction (survey)	Number of customer complaints
Receivables turnover	Capacity utilization	Employee turnover	Market share
Inventory turnover	New product development time	Number of employee accidents	Number of returned products

Measures established across the four perspectives of the balanced scorecard are linked in a way that motivates employees to achieve company goals. For example, if the company wants to increase the defect-free rate and reduce product returns, effective employee training and low employee turnover will help in achieving this goal. The idea is to establish company goals first, then create measures that motivate employees to reach company goals.

Key Takeaways

- Most organizations use a mix of financial and nonfinancial measures to evaluate performance. The balanced scorecard approach uses a balanced set of measures separated into four perspectives—financial, internal business process, learning and growth, and customer. The last three perspectives

tend to include nonfinancial measures, such as hours of employee training or number of customer complaints, to evaluate performance. The goal is to link financial and nonfinancial measures to the company's strategies and goals.

Check Yourself

Assume Chicken Deluxe, the fast-food restaurant franchise featured in this chapter, uses a balanced scorecard. Provide at least two examples of measures that Chicken Deluxe might use for each of the following perspectives of the balanced scorecard:

1. Financial
2. Internal business process
3. Learning and growth
4. Customer

Solution

1. Answers will vary. Several examples of financial measures are as follows:
 - Gross margin ratio
 - Profit margin ratio
 - Return on assets
 - Receivables turnover
 - Inventory turnover
2. Answers will vary. Several examples of internal business process measures are as follows:
 - Capacity utilization
 - Amount of food spoilage
 - Order response time
3. Answers will vary. Several examples of learning and growth measures are as follows:
 - Hours of employee training
 - Employee satisfaction
 - Employee turnover
 - Number of employee accidents
4. Answers will vary. Several examples of customer perspective measures are as follows:
 - Customer satisfaction
 - Number of customer complaints
 - Market share
 - Amount of food returned

End-of-Chapter Exercises

Questions

1. What is trend analysis? Explain how the percent change from one period to the next is calculated.
2. What is common-size analysis? How is common-size analysis information used?
3. Explain the difference between trend analysis and common-size analysis.
4. Name the ratios used to evaluate profitability. Explain what the statement "evaluate profitability" means.
5. Name the ratios used to evaluate short-term liquidity. Explain what the statement "evaluate short-term liquidity" means.
6. Explain the difference between the current ratio and the quick ratio.
7. Name the ratios used to evaluate long-term solvency. Explain what the term "long-term solvency" means.
8. What is the balanced scorecard? Briefly describe the four perspectives of the balanced scorecard.

Brief Exercises

13. **Evaluating Suppliers at Chicken Deluxe.** Refer to the dialogue at Chicken Deluxe presented at the beginning of the chapter and the follow-up dialogue immediately following.

Required:

1. What is the big decision that Chicken Deluxe is facing?
2. Briefly describe the results of Dave's analysis of the two suppliers.

14. **Trend Analysis.** The following income statement is for **Apple, Inc.**

	September 28,	September 29,
	2019	2018
Net sales:		
Products	\$ 213,883	\$ 225,847
Services	46,291	39,748
Total net sales	260,174	265,595
Cost of sales:		
Products	144,996	148,164
Services	16,786	15,592
Total cost of sales	161,782	163,756
Gross margin	98,392	101,839
Operating expenses:		
Research and development	16,217	14,236
Selling, general and administrative	18,245	16,705
Total operating expenses	34,462	30,941
Operating income	63,930	70,898
Other income/(expense), net	1,807	2,005
Income before provision for income taxes	65,737	72,903
Provision for income taxes	10,481	13,372
Net income	\$ 55,256	\$ 59,531

Required:

Prepare a trend analysis of the income statements from 2018 to 2019. Use the format shown in the chapter as a guide. (Round percent computations to one decimal place.)

15. **Common-Size Analysis.** Refer to the income statement for **Apple, Inc.**, in Brief Exercise 14.

Required:

Prepare a common-size analysis of the income statements for 2018 and 2019. Use the format shown in the chapter as a guide. (Round percent computations to one decimal place.)

16. **Gross Margin and Profit Margin Ratios.** Refer to the income statement for **Apple, Inc.**, in Brief Exercise 14.

Required:

Compute the following profitability ratios for 2019, and provide a brief explanation after each ratio (round computations to one decimal place):

1. Gross margin ratio
2. Profit margin ratio

17. **Current and Quick Ratios.** A condensed balance sheet for **Apple, Inc.**, appears in the following.

	September 28,

	2019
ASSETS:	
Current assets:	
Cash and cash equivalents	\$ 48,844
Marketable securities	51,713
Accounts receivable, net	22,926
Inventories	4,106
Vendor non-trade receivables	22,878
Other current assets	12,352
Total current assets	162,819
Non-current assets:	
Marketable securities	105,341
Property, plant and equipment, net	37,378
Other non-current assets	32,978
Total non-current assets	175,697
Total assets	\$ 338,516
LIABILITIES AND SHAREHOLDERS' EQUITY:	
Current liabilities:	
Accounts payable	\$ 46,236
Other current liabilities	37,720
Deferred revenue	5,522
Commercial paper	5,980
Term debt	10,260
Total current liabilities	105,718
Non-current liabilities:	
Term debt	91,807
Other non-current liabilities	50,503
Total non-current liabilities	142,310
Total liabilities	248,028
Commitments and contingencies	

Shareholders' equity:	
Common stock and additional paid-in capital, \$0.00001	
par value: 12,600,000 shares authorized; 4,443,236 and	
4,754,986 shares issued and outstanding, respectively	45,174
Retained earnings	45,898
Accumulated other comprehensive income/(loss)	(584)
Total shareholders' equity	90,488
Total liabilities and shareholders' equity	\$ 338,516

Required:

Compute the following short-term liquidity ratios for 2019, and provide a brief explanation after each ratio (round computations to two decimal places):

1. Current ratio
2. Quick ratio

18. **Long-Term Solvency Ratios.** Refer to the condensed balance sheet for **Apple, Inc.**, in Brief Exercise 17.

Required:

Compute the following long-term solvency ratios for 2019, and provide a brief explanation after each ratio (round computations to two decimal places):

1. Debt to assets
2. Debt to equity

19. **Balanced Scorecard.** Provide two nonfinancial measures likely used by delivery companies like **FedEx** and **UPS**.

Exercises:

20. **Trend Analysis.** The following condensed income statement is for **CarMax, Inc.**, a large retailer of used vehicles.

SALES AND OPERATING REVENUES:	2019	2018
REVENUES	20,319,987	18,173,100
TOTAL COST OF SALES	17,597,647	15,692,509
GROSS PROFIT	2,722,340	2,480,591
CARMAX AUTO FINANCE INCOME	456,030	438,690
Selling, general and		
administrative expenses	1,940,067	1,730,275
Interest expense	83,007	75,792
Other (income) expense	(5,690)	408
Earnings before income taxes	1,160,986	1,112,806
Income tax provision	272,553	270,393
NET EARNINGS	\$ 888,433	\$ 842,413

Required:

1. Prepare a trend analysis of the income statements from 2018 to 2019. Use the format shown in the chapter as a guide. (Round computations to one decimal place.)

What does the trend analysis prepared in requirement **a** tell you about the company?

21. **Common-Size Analysis.** Refer to the condensed income statement for **CarMax, Inc.**, in Exercise 20.

Required:

1. Prepare a common-size analysis of the income statements for 2019 and 2018. Use the format shown in the chapter as a guide. (Round computations to one decimal place.)
 2. What does the common-size analysis in requirement **a** tell you about the company?
22. **Profitability Ratios.** Refer to the condensed income statement for **CarMax, Inc.**, in Exercise 20 and to the company's balance sheet shown as follows.

ASSETS		
CURRENT ASSETS:	2019	2018
Cash and cash equivalents	\$ 58,211	\$ 46,938
Restricted cash from collections on auto loans receivable	481,043	440,669
Accounts receivable, net	191,090	139,850
Inventory	2,846,416	2,519,455
Other current assets	86,927	67,101
TOTAL CURRENT ASSETS	3,663,687	3,214,013
Auto loans receivable, net	13,551,711	12,428,487
Property and equipment, net	3,069,102	2,828,058
Deferred income taxes	89,842	61,346
Operating lease assets	449,094	–
Other assets	258,746	185,963
TOTAL ASSETS	\$ 21,082,182	\$ 18,717,867
CURRENT LIABILITIES:		
Accounts payable	\$ 737,144	\$ 593,171
Accrued expenses and other current liabilities	331,738	318,204
Accrued income taxes	1,389	3,784
Current portion of operating lease liabilities	30,980	–
Short-term debt	40	1,129
Current portion of long-term debt	9,251	10,177
Current portion of non-recourse notes payable	424,165	385,044
TOTAL CURRENT LIABILITIES	1,534,707	1,311,509
Long-term debt, excluding current portion	1,778,672	1,649,244
Non-recourse notes payable, excluding current portion	13,165,384	12,127,290
Operating lease liabilities, excluding current portion	440,671	–
Other liabilities	393,873	272,796
TOTAL LIABILITIES	17,313,307	15,360,839
Common Stock	81,541	83,739
Capital in excess of par value	1,348,988	1,237,153

Accumulated other comprehensive loss	(150,071)	(68,010)
Retained earnings	2,488,417	2,104,146
TOTAL SHAREHOLDERS' EQUITY	3,768,875	3,357,028
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$ 21,082,182	\$ 18,717,867

Required:

Compute the following profitability ratios for 2019, and provide a brief explanation after each ratio (round percentage computations to one decimal place and earnings per share to two decimal places):

1. Gross margin ratio
2. Profit margin ratio
3. Return on assets
4. Return on common shareholders' equity
5. Earnings per share (assume weighted average shares outstanding totaled 223,449,000 shares)

23. **Short-Term Liquidity Ratios.** Refer to the condensed income statement for **CarMax, Inc.**, in Exercise 20 and to the company's balance sheet in Exercise 22.

Required:

Compute the following short-term liquidity ratios for 2019, and provide a brief explanation after each ratio (round computations to two decimal places):

1. Current ratio
2. Quick ratio
3. Receivables turnover ratio and average collection period (assume all sales are on account)
4. Inventory turnover ratio and average sale period

24. **Long-Term Solvency Ratios.** Refer to the condensed income statement for **CarMax, Inc.**, in Exercise 20 and to the company's balance sheet in Exercise 22.

Required:

Compute the following long-term solvency ratios for 2019, and provide a brief explanation after each ratio (round computations to two decimal places):

1. Debt to assets
2. Debt to equity
3. Times interest earned

25. **Balanced Scorecard Customer Measures.** Tech University has more than 10,000 students enrolling in courses each term. The management would like to develop a balanced scorecard to assess performance.

Required:

Provide at least three customer measures Tech University can use on its balanced scorecard. Assume students are the customers.

Problems

26. **Trend Analysis and Common-Size Analysis.** The following condensed income statement and balance sheet are for **Nordstrom, Inc.**, a large retailer of apparel.

	2019	2018	
Net sales	\$15,132	\$15,480	
Credit card revenues, net	392	380	
Total revenues	15,524	15,860	
Cost of sales and related buying and occupancy costs	9,932	10,155	
Selling, general and administrative expenses	4,808	4,868	
Earnings before interest and income taxes	784	837	

Interest expense, net	102	104	
Earnings before income taxes	682	733	
Income tax expense	186	169	
Net earnings	\$496	\$564	

	2019	2018	
Assets			
Current assets:			
Cash and cash equivalents	\$ 853	\$ 957	
Accounts receivable, net	179	148	
Merchandise inventories	1,920	1,978	
Prepaid expenses and other	278	291	
Total current assets	3,230	3,374	
Land, property and equipment, net	4,179	3,921	
Operating lease right-of-use assets	1,774	—	
Goodwill	249	249	
Other assets	305	342	
Total assets	\$ 9,737	\$ 7,886	
Liabilities and Shareholders' Equity			
Current liabilities:			
Accounts payable	\$ 1,576	\$1,469	
Accrued salaries, wages and related benefits	510	580	
Current portion of operating lease liabilities	244	—	
Other current liabilities	1,190	1,324	
Current portion of long-term debt	—	8	
Total current liabilities	3,520	3,381	
Long-term debt, net	2,676	2,677	
Deferred property incentives, net	4	457	
Non-current operating lease liabilities	1,875	—	
Other liabilities	683	498	
Shareholders' equity:			
Common stock, no par value: 1,000 shares authorized; 155.6 and 157.6 shares issued and outstanding	3,129	3,048	
Accumulated deficit	(2,082)	(2,138)	
Accumulated other comprehensive loss	(68)	(37)	
Total shareholders' equity	979	873	

Total liabilities and shareholders' equity

\$9,737

\$ 7,886

Required:

1. Prepare a trend analysis of the income statements from 2018 to 2019. Use the format shown in the chapter as a guide. (Round computations to one decimal place.)
2. Prepare a trend analysis of the balance sheets from 2018 to 2019. Use the format shown in the chapter as a guide. (Round computations to one decimal place.)
3. Prepare a common-size analysis of the income statements for 2018 and 2019. Use the format shown in the chapter as a guide. (Round computations to one decimal place.)
4. Prepare a common-size analysis of the balance sheets for 2018 and 2019. Use the format shown in the chapter as a guide. (Round computations to one decimal place.)
5. What does the common-size analysis prepared in requirements **d** and **e** tell you about the company?

27. Profitability and Short-Term Liquidity Ratios. Refer to the information presented in Problem 26 for **Nordstrom**.

Required:

1. Compute the following profitability ratios for 2019, and provide a brief explanation after each ratio (round percentage computations to one decimal place and earnings per share to two decimal places):
 1. Gross margin ratio
 2. Profit margin ratio
 3. Return on assets
 4. Return on common shareholders' equity
 5. Earnings per share (weighted average shares outstanding totaled 218,800,000 shares)
2. Compute the following short-term liquidity ratios for 2019, and provide a brief explanation after each ratio (round computations to two decimal places):
 1. Current ratio
 2. Quick ratio
 3. Receivables turnover ratio and average collection period (assume all sales are on account)
 4. Inventory turnover ratio and average sale period

28. Long-Term Solvency Ratios Refer to the information presented in Problem 26 for **Nordstrom**.

Required:

1. Compute the following long-term solvency ratios for 2019, and provide a brief explanation after each ratio (round computations to two decimal places):
 1. Debt to assets
 2. Debt to equity
 3. Times interest earned

29. Income Statement Trend, Common-Size, and Profitability Analysis. The following condensed income statement and balance sheet are for **Starbucks Corporation**, a large retailer of specialty coffee with stores throughout the world.

STARBUCKS CORPORATION			
CONSOLIDATED STATEMENTS OF EARNINGS			
(in millions, except per share data)			
	Sep 29,	Sep 30,	Oct 1,
Fiscal Year Ended	2019	2018	2017
Net revenues:			
Company-operated stores	\$ 21,544.40	\$ 19,690.30	\$ 17,650.70
Licensed stores	2,875.00	2,652.20	2,355.00
Other	2,089.20	2,377.00	2,381.10

Total net revenues	26,508.60	24,719.50	22,386.80
Cost of sales	8,526.90	7,930.70	7,065.80
Store operating expenses	10,493.60	9,472.20	8,486.40
Other operating expenses	371.00	554.90	518.00
Depreciation and amortization expenses	1,377.30	1,247.00	1,011.40
General and administrative expenses	1,824.10	1,708.20	1,408.40
Restructuring and impairments	135.80	224.40	153.50
Total operating expenses	22,728.70	21,137.40	18,643.50
Income from equity investees	298.00	301.20	391.40
Operating income	4,077.90	3,883.30	4,134.70
Gain resulting from acquisition of joint venture	–	1,376.40	–
Net gain resulting from divestiture of certain operations	622.80	499.20	93.50
Interest income and other, net	96.50	191.40	181.80
Interest expense	(331.00)	(170.30)	(92.50)
Earnings before income taxes	4,466.20	5,780.00	4,317.50
Income tax expense	871.60	1,262.00	1,432.60
Net earnings including noncontrolling interests	3,594.60	4,518.00	2,884.90
Net earnings/(loss) attributable to noncontrolling interests	(4.60)	(0.30)	0.20
Net earnings attributable to Starbucks	\$ 3,599.20	\$ 4,518.30	\$ 2,884.70
Earnings per share – basic	\$ 2.95	\$ 3.27	\$ 1.99
Earnings per share – diluted	\$ 2.92	\$ 3.24	\$ 1.97
Weighted average shares outstanding:			
Basic	1,221.20	1,382.70	1,449.50
Diluted	1,233.20	1,394.60	1,461.50

STARBUCKS CORPORATION		
CONSOLIDATED BALANCE SHEETS		
(in millions, except per share data)		
	Sep 29,	Sep 30,
	2019	2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 2,686.60	\$ 8,756.30

Short-term investments	70.50	181.50
Accounts receivable, net	879.20	693.10
Inventories	1,529.40	1,400.50
Prepaid expenses and other current assets	488.20	1,462.80
Total current assets	5,653.90	12,494.20
Long-term investments	220.00	267.70
Equity investments	396.00	334.70
Property, plant and equipment, net	6,431.70	5,929.10
Deferred income taxes, net	1,765.80	134.70
Other long-term assets	479.60	412.20
Other intangible assets	781.80	1,042.20
Goodwill	3,490.80	3,541.60
TOTAL ASSETS	\$ 19,219.60	\$ 24,156.40
LIABILITIES AND SHAREHOLDERS' EQUITY/(DEFICIT)		
Current liabilities:		
Accounts payable	\$ 1,189.70	\$ 1,179.30
Accrued liabilities	1,753.70	1,752.50
Accrued payroll and benefits	664.60	656.80
Income taxes payable	1,291.70	102.80
Stored value card liability and current portion of deferred revenue	1,269.00	1,642.90
Current portion of long-term debt	–	349.90
Total current liabilities	6,168.70	5,684.20
Long-term debt	11,167.00	9,090.20
Deferred revenue	6,744.40	6,775.70
Other long-term liabilities	1,370.50	1,430.50
Total liabilities	25,450.60	22,980.60
Shareholders' equity/(deficit):		
Common stock (\$0.001 par value) – authorized, 2,400.0 shares; issued and outstanding, 1,184.6 and 1,309.1 shares, respectively	1.20	1.30
Additional paid-in capital	41.10	41.10
Retained earnings/(deficit)	(5,771.20)	1,457.40
Accumulated other comprehensive loss	(503.30)	(330.30)
Total shareholders' equity/(deficit)	(6,232.20)	1,169.50
Noncontrolling interests	1.20	6.30
Total equity/(deficit)	(6,231.00)	1,175.80

TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY/(DEFICIT)	\$	19,219.60	\$	24,156.40
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Required:

1. Prepare a trend analysis of the income statements from 2018 to 2019. Use the format shown in the chapter as a guide. (Round computations to one decimal place.)
2. Identify all items that changed by more than 20 percent in the trend analysis prepared in requirement **a**, and briefly comment on the results.
3. Prepare a common-size analysis of the income statements for 2019 and 2018. Use the format shown in the chapter as a guide. (Round computations to one decimal place.)
4. What does the common-size analysis prepared in requirement **c** tell you about the company?
5. Compute the following profitability ratios for 2019, and provide a brief explanation after each ratio (round percentage computations to one decimal place and earnings per share to two decimal places):
 1. Gross margin ratio
 2. Profit margin ratio
 3. Return on assets
 4. Return on common shareholders' equity
 5. Earnings per share (assume weighted average shares outstanding totaled 748,300,000 shares)

30. Short-Term Liquidity, Long-Term Solvency, and Market Valuation. Refer to the information presented in Problem 29 for **Starbucks**.

Required:

1. Compute the following short-term liquidity ratios for 2019, and provide a brief explanation after each ratio (round computations to two decimal places):
 1. Current ratio
 2. Quick ratio
 3. Receivables turnover ratio and average collection period (assume all sales are on account)
 4. Inventory turnover ratio and average sale period

Compute the following long-term solvency ratios for 2019, and provide a brief explanation after each ratio (round computations to two decimal places):

 1. Debt to assets
 2. Debt to equity
 3. Times interest earned

31. Internet Project: Financial Statement Analysis. Using the Internet, find the most recent annual report (or form 10K) for a manufacturing or retail company of your choice. Most companies have links to the information at their Web sites under titles, such as *investor relations* or *financial reports*. Print the income statement and balance sheet for the company selected and include these documents with your response to the following requirements.

Required:

1. Compute the following profitability ratios for the most current year, and provide a brief explanation after each ratio (round percentage computations to one decimal place):
 1. Gross margin ratio
 2. Profit margin ratio
 3. Return on assets
 4. Return on common shareholders' equity
2. Compute the following short-term liquidity ratios for the most current year, and provide a brief explanation after each ratio (round computations to two decimal places):
 1. Current ratio
 2. Quick ratio
 3. Receivables turnover ratio and average collection period (assume all sales are on account)
 4. Inventory turnover ratio and average sale period
3. Compute the following long-term solvency ratios for the most current year, and provide a brief explanation after each ratio (round computations to two decimal places):
 1. Debt to assets
 2. Debt to equity
4. Provide a one-page written report summarizing your results in requirements **a**, **b**, and **c**. Identify any areas of concern as well as areas of strength for the company.

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