Chapter 15(14)
Financial Statement Analysis

OPENING COMMENTS

This chapter presents techniques for analyzing financial statements and the contents of annual reports. The techniques for analyzing financial statements include horizontal analysis, vertical analysis, and ratio analysis. Since an analytical technique has been presented at the end of most chapters, some of the material presented in Chapter 15(14) will be a review. The appendix presents unusual items on the income statement.

When covering this chapter, you should guard against getting bogged down in the calculations surrounding ratio analysis. Try to spend at least as much class time interpreting ratios as calculating them. Emphasize that computing ratios is only the starting point for assessing the performance of a business. To be meaningful, current-year ratios must be compared with ratios from prior years and ratios of other companies in the same industry. The influence of the general economic and business environment should be considered. Finally, sound financial judgment should be applied.

After studying the chapter, your students should be able to:

1. Describe basic financial statement analytical methods.
2. Use financial statement analysis to assess the solvency of a business.
3. Use financial statement analysis to assess the profitability of a business.
4. Describe the contents of corporate annual reports.

KEY TERMS

accounts receivable analysis
accounts receivable turnover
common-sized statement
current position analysis
current ratio
dividend yield
dividends per share
earnings per share on common stock
extraordinary item
horizontal analysis
inventory analysis
inventory turnover
leverage
liquidity
Management's Discussion and Analysis (MD&A)
number of days' sales in inventory
number of days' sales in receivables
number of times interest charges are earned
price-earnings (P/E) ratio
profitability
quick assets
quick ratio
rate earned on common stockholders' equity
rate earned on stockholders' equity
rate earned on total assets
ratio of fixed assets to long-term liabilities
ratio of liabilities to stockholders' equity
ratio of sales to assets
solvency
vertical analysis
working capital

STUDENT FAQS

- Do we have to memorize all these formulas?
- Which formulas are the most important?
- What are the top five formulas?
- Should we use these formulas to tell how a company is doing before we invest in it?
- These are hard since I did not learn some of this information earlier. What do you suggest I do?
- What do these formulas really tell us about the company?
- How do I know if a ratio of fixed assets to long-term liabilities of 3.8 is good or bad?
- Is vertical or horizontal analysis better?

- How are some of these ratios related? If a company's accounts receivable turnover is poor, then won't the numbers of days' sales in receivables be poor too?
- How much emphasis should I put on unusual items in a company's income statement when evaluating its financial condition?

OBJECTIVE 1

Describe basic financial statement analytical methods.

SYNOPSIS

Three methods to analyze a company's financial statements are horizontal analysis, vertical analysis, and common-size statements. To complete a horizontal analysis, a minimum of two financial statements is used. Each item on the most recent statement is compared with the same item on an earlier statement in terms of the amount of increase or decrease and the percent of increase or decrease. Exhibits 1, 2, 3, and 4 show the horizontal comparison of various financial statements. The percentage analysis of the relationship of each component to a total within the statement is called vertical analysis. In a balance sheet analysis, each asset item is stated as a percentage of total assets and each liability and stockholders' equity item is stated as a percentage of the total liabilities and stockholders' equity. The vertical analysis of an income statement compares each item to the sales. In a common-sized statement, all items are expressed as percentages, with no dollar amounts shown. Exhibit 7 shows an income statement in common-size form.

Key Terms and Definitions

- **Common-Sized Statement** - A financial statement in which all items are expressed only in relative terms.
- **Horizontal Analysis** - Financial analysis that compares an item in a current statement with the same item in prior statements.
- **Vertical Analysis** - An analysis that compares each item in a current statement with a total amount within the same statement.

Relevant Example Exercises and Exhibits

- Example Exercise 15(14)-1 Horizontal Analysis
- Example Exercise 15(14)-2 Vertical Analysis
- Exhibit 1 – Comparative Balance Sheet—Horizontal Analysis
- Exhibit 2 – Comparative Schedule of Current Assets—Horizontal Analysis
- Exhibit 3 – Comparative Income Statement—Horizontal Analysis
- Exhibit 4 – Comparative Retained Earnings Statement—Horizontal Analysis
- Exhibit 5 – Comparative Balance Sheet—Vertical Analysis
- Exhibit 6 – Comparative Income Statement—Vertical Analysis
- Exhibit 7 – Common-Sized Income Statements

SUGGESTED APPROACH

The basic financial statement analytical procedures are horizontal analysis, vertical analysis, and ratio analysis. Ratio analysis is covered under Objectives 2 and 3.

DEMONSTRATION PROBLEM—Horizontal Analysis

Ask your students to turn to the annual report for Nike in Appendix C at the end of the text. Specifically, direct them to the Consolidated Statements of Income. Ask your students to compute the dollar increase in sales (Gross Margin) between fiscal year 2010 and fiscal year 2011. (Answer: $708 million, or $708,000,000)

Next, ask your students to calculate the percentage increase in Gross Margin from 2010 to 2011. The correct answer is 8 percent, calculated as follows:

Increase in Gross Margin between 2010 and 2011 ÷ Sales in 2010 (base year) =
$708 million ÷ $8,800 million = 8%

Most likely, a few students will have 7.4 percent as an answer. These students have compared the $708 million increase in sales to sales in fiscal year 2011. Remind them that a percentage change in a financial statement item is computed by comparing the change in dollars to the base year amount. The base year is the starting point—fiscal year 2010 in this case.

Ask your students to calculate the percentage increase in Gross Margin from 2009 to 2010. The answer is as follows:

8800.4 million – 8604.4 million = 196 million ÷ 8604.4 million = 2.3%

Remind students that this analytical technique is called horizontal analysis (or trend analysis). It is used to compare changes in operating results from year to year.

GROUP LEARNING ACTIVITY—Horizontal Analysis

Divide your class into small groups. Ask them to perform the horizontal analysis requested on Transparency Master (TM) 15(14)-1 using the financial statements. The correct answers are displayed on TM 15(14)-2.

GROUP LEARNING ACTIVITY—Vertical Analysis

Under vertical analysis, all financial statement items are shown as a percentage of a significant total on the statement. On an income statement, all items are shown as a percentage of sales. On a balance sheet, all items are shown as a percentage of total assets.

Divide your class into small groups. Ask each group to perform vertical analysis on Nike's 2011 Income Statement (called the Consolidated Statements of Income), showing each item through Net Income as a percentage of Gross Margin. Suggest that percentages be rounded to one decimal place. The correct solution is shown on TM 15(14)-3.

Emphasize that TM 15(14)-3 shows a common-size income statement. Common-size statements use vertical analysis to show all items as percentages. Expressing financial statements as percentages is useful when comparing one company with another or with industry averages.

OBJECTIVE 2

Use financial statement analysis to assess the solvency of a business.

SYNOPSIS

Users of financial statements are interested in the ability of a company to maintain liquidity, solvency, and profitability. The ability of a company to convert assets into cash is called liquidity, and the ability to pay its debts is called solvency. Current position analysis concerns a company's ability to pay its current liabilities; it includes working capital, current ratio, and quick ratio. Working capital is computed as working capital = current assets – current liabilities and is used to evaluate a company's ability to pay current liabilities. The current ratio is computed as current ratio = current assets/current liabilities. It is more reliable than working capital and can be compared across companies. Quick assets are defined as cash and other current assets that can be easily concerted to cash. The quick ratio measures the "instant" debt-paying ability of a company and is calculated as quick ratio = quick assets/current liabilities.

Accounts receivable analysis assesses a company's ability to collect the money due from customers. It includes accounts receivable turnover and number of days' sales in receivables. Accounts receivable turnover is calculated as accounts receivable turnover = sales/average accounts receivable. Number of days' sales in receivables is computed as number of days' sales in receivables = average accounts receivable/average daily sales and is an estimate of the time (in days) that the accounts receivable have been outstanding.

Inventory analysis analyzes the company's ability to manage its inventory and includes inventory turnover and number of days' sales in inventory. Excess inventory ties up cash and increases insurance expense, property taxes, and storage costs. Inventory turnover = cost of goods sold/average inventory and estimates how many times the inventory turned over or was sold during the period. The number of days' sales in inventory = average inventory/average daily cost of goods sold; it is an estimate of the length of time it takes to purchase, sell, and replace the inventory.

The ratio of fixed assets to long-term liabilities provides a measure of whether note holders or bondholders will be paid. Calculated as ratio of fixed assets to long-term liabilities = fixed assets (net)/ long-term liabilities. A related ratio, the ratio of liabilities to stockholders' equity, measures how much of the company is financed by debt and equity. It is computed as ratio of liabilities to stockholders' equity = total liabilities/total stockholders' equity. The fixed charge coverage ratio is also known as the number of times interest charges are earned and measures the risk that interest payments will not be made if earnings decrease. It is computed as number of times interest charges are earned = (income before income tax + interest expense)/interest expense. The higher the ratio, the more likely payments will be made.

Key Terms and Definitions

- **Accounts Receivable Analysis -** A company's ability to collect its accounts receivable.
- **Accounts Receivable Turnover -** The relationship between sales and accounts receivable, computed by dividing the sales by the average net accounts receivable; measures how frequently during the year the accounts receivable are being converted to cash.
- **Current Position Analysis** - A company's ability to pay its current liabilities.
- **Current Ratio** - A financial ratio that is computed by dividing current assets by current liabilities.
- **Inventory Analysis -** A company's ability to manage its inventory effectively.
- **Inventory Turnover** - The relationship between the volume of goods sold and inventory, computed by dividing the cost of goods sold by the average inventory.
- **Liquidity** - The ability to convert assets into cash.
- **Number of Days' Sales in Inventory -** The relationship between the volume of sales and inventory, computed by dividing the inventory at the end of the year by the average daily cost of goods sold.
- **Number of Days' Sales in Receivables -** The relationship between sales and accounts receivable, computed by dividing the net accounts receivable at the end of the year by the average daily sales.
- **Number of Times Interest Charges Are Earned -** A ratio that measures creditor margin of safety for interest payments, calculated as income before interest and taxes divided by interest expense.
- **Profitability -** The ability of a firm to earn income.
- **Quick Assets -** Cash and other current assets that can be quickly converted to cash, such as marketable securities and receivables.
- **Quick Ratio** - A financial ratio that measures the ability to pay current liabilities with quick assets (cash, marketable securities, accounts receivable).
- **Ratio of Fixed Assets to Long-Term Liabilities** - A leverage ratio that measures the margin of safety of long-term creditors, calculated as the net fixed assets divided by the long-term liabilities.
- **Ratio of Liabilities to Owner's (Stockholders') Equity -** A comprehensive leverage ratio that measures the relationship of the claims of creditors to stockholders' equity.
- **Solvency -** The ability of a firm to pay its debts as they come due.
- **Working Capital -** The excess of the current assets of a business over its current liabilities.

Relevant Example Exercises and Exhibits

- Example Exercise 15(14)-3 Current Position Analysis
- Example Exercise 15(14)-4 Accounts Receivable Analysis
- Example Exercise 15(14)-5 Inventory Analysis
- Example Exercise 15(14)-6 Long-Term Solvency Analysis
- Example Exercise 15(14)-7 Times Interest Charges Are Earned

SUGGESTED APPROACH

Solvency, which is a company's ability to pay debts as they become due, is assessed through ratio analysis. TM 15(14)-4 lists the ratios that measure a firm's solvency.

Use the following group learning activities to give your students the opportunity to practice ratio analysis as it relates to solvency.

GROUP LEARNING ACTIVITY—Computing Solvency Measures

The ratios that assess solvency are listed in the text in the first section of Exhibit 10. Calculating these ratios using real-life financial statements is a challenge for most students, due to the differences in terminology used by companies. For example, a company may use the term “plant assets” or “property, plant, and equipment” instead of fixed assets. Of course, students need to become proficient at recognizing different terms for the concepts they have learned in this course. You can help your students make these connections by calculating ratios using financial statements of real companies.

The textbook includes a Nike Inc. Financial Statement Analysis problem immediately following the series B problems. Ask your students to calculate each of the solvency ratios in this problem (items *a* through *h*). Remind your students to assume that all of Nike’s sales were on account. The solution to this problem is found in the Instructor’s Solutions. You may also want to ask your students to describe, in their own words, what each ratio measures.

GROUP LEARNING ACTIVITY—Analyzing Solvency Measures

TM 15(14)-5 shows solvency ratios for Ace Company over a two-year period. The TM also presents industry averages for the solvency ratios. Ask your students to analyze the data related to Ace Company and comment on its performance. Specifically, ask them to answer the following questions:

1. For each solvency ratio, state whether or not Ace has improved from the prior year.
2. For each solvency ratio, state whether Ace compares favorably or unfavorably with the industry average.
3. Comment on any significant items noticed when reviewing the solvency ratios and Ace’s overall solvency.

Possible response: The table below provides a summary of the questions listed above:

Ratio	**Ace Prior Year**	**Ace vs. Industry**
Current Ratio	Improved	Better
Quick Ratio	Unchanged	Better
Account receivable turnover	Worse	Worse
Number of days’ sales in receivables	Worse	Worse
Inventory turnover	Worse	Worse
Number of days’ sales in inventory	Improved	Better
Ratio of fixed assets to long-term liabilities	Unchanged	No significant difference
Ratio of liabilities to stockholders’ equity	Improved	Better
Number of times	Improved	Worse

interest charges earned		

Comments: 1) The accounts receivable turnover and number of days' sales in receivables show higher than the industry average. This could mean that Ace's terms are longer than industry average (45 days vs. 30 days) or that Ace does not perform adequate credit checking or does a poor job of collections. Also, this trend seems to be getting worse for Ace. 2) Number of days' sales in inventory shows a better-than-industry average for Ace. This could correlate to the poor collections if you assume that sales are being approved at the expense of credit checks. 3) Number of times interest charges earned is below industry average, but ratio of liabilities to stockholders' equity is better than industry average. This could be an indication of unfavorable credit terms or lower-than-industry income. All of these observations are based on limited knowledge of the individual companies and express only one of many possible explanations of these results.

OBJECTIVE 3

Use financial statement analysis to assess the profitability of a business.

SYNOPSIS

Profitability analysis focuses on a company's ability to earn profits. Eight different ratios are used to analyze profit and both the income statement and the balance sheet are utilized. The ratio of sales to assets measures how effectively a company uses its assets. It is calculated as ratio of sales to assets = sales/average total assets. Rate earned on total assets = (net income + interest expense)/average total assets is a ratio that measures the profitability of total assets. The rate earned on stockholders' equity measures the rate of income earned on the amount invested by the stockholders. It is calculated as rate earned on stockholders' equity = net income/average total stockholders' equity. The rate earned on common stockholders' equity = (net income – preferred dividends)/average common stockholders' equity, and it measures the rate of profits earned on the amount invested by the common stockholders. Earnings per share on common stock measures the share of profits that is earned by a share of common stock. It is calculated as earnings per share on common stock = (net income – preferred dividends)/shares of common stock outstanding. Price-earnings ratio = market price per share of common stock/earnings per share on common stock, and it is a ratio that measures a company's future earnings prospects. Dividends per share measures the extent to which earnings are being distributed to common shareholders. It is computed as dividends per share = dividends on common stock/shares of common stock outstanding. The dividend yield on common stock measures the rate of return to common stockholders from cash dividends. It is computed as dividend yield = dividends per share of common stock/market price per share of common stock. A summary of all the ratios discussed in this chapter is given in Exhibit 10.

Key Terms and Definitions

- **Dividend Yield -** A ratio, computed by dividing the annual dividends paid per share of common stock by the market price per share at a specific date that indicates the rate of return to stockholders in terms of cash dividend distributions.
- **Dividends per Share -** Measures the extent to which earnings are being distributed to common shareholders.

- **Earnings per Share (EPS) on Common Stock -** The profitability ratio of net income available to common shareholders to the number of common shares outstanding.
- **Leverage -** Using debt to increase the return on an investment.
- **Price-Earnings (P/E) Ratio -** The ratio of the market price per share of common stock, at a specific date, to the annual earnings per share.
- **Rate Earned on Common Stockholders' Equity -** A measure of profitability computed by dividing net income, reduced by preferred dividend requirements, by common stockholders' equity.
- **Rate Earned on Stockholders' Equity -** A measure of profitability computed by dividing net income by total stockholders' equity.
- **Rate Earned on Total Assets -** A measure of the profitability of assets, without regard to the equity of creditors and stockholders in the assets.
- **Ratio of Sales to Assets -** Ratio that measures how effectively a company uses its assets, computed as sales divided by average total assets.

Relevant Example Exercises and Exhibits

- Example Exercise 15(14)-8 Sales to Assets
- Example Exercise 15(14)-9 Rate Earned on Total Assets
- Example Exercise 15(14)-10 Common Stockholders' Profitability Analysis
- Example Exercise 15(14)-11 Earnings per Share and Price-Earnings Ratio
- Exhibit 8 – Effect of Leverage
- Exhibit 9 – Dividends and Earnings per Share of Common Stock
- Exhibit 10 – Summary of Analytical Measures

SUGGESTED APPROACH

Profitability, which is a company's ability to earn income, is also assessed through ratio analysis. TM 15(14)-6 lists the ratios that measure a firm's profitability.

Use the Group Learning Activities below to give your students the opportunity to practice ratio analysis as it relates to profitability.

GROUP LEARNING ACTIVITY—Computing Profitability Measures

The ratios that assess profitability are listed in the text in the second part of Exhibit 10. Ask your students to calculate each of the profitability ratios (items *i* through *m*) for the Nike Inc. Financial Statement Analysis problem in the text. You will also want to emphasize that earnings per share (called "Basic Earnings per Share") are reported on Nike's income statement; therefore, students do not need to calculate these amounts. The solution to this problem can be found in the Instructor's Solutions. You may want to ask your students to describe, in their own words, what each ratio measures.

GROUP LEARNING ACTIVITY—Analyzing Profitability Measures

TM 15(14)-7 shows profitability ratios for Ace Company over a two-year period. The TM also presents industry averages for the profitability ratios.

Ask your students to analyze the data related to Ace Company and comment on its performance. Specifically, ask them to answer the following questions:

1. For each profitability ratio, state whether or not Ace has improved from the prior year.
2. For each profitability ratio, state whether Ace compares favorably or unfavorably with the industry average.
3. Comment on any significant items noticed when reviewing the profitability ratios and Ace's overall profitability.

Possible response: The table below provides a summary of the questions listed above:

Ratio	**Ace Prior Year**	**Ace vs. Industry**
Ratio of sales to assets	Improved	Better
Rate earned on total assets	No change	No significant difference
Rate earned on stockholders' equity	Improved	Better
Earnings per share on common stock	Improved	No comparison
Price earnings ratio	Worse	Worse
Dividend yield	No Change	Better

Comments: The ratio of sales to assets indicates that Ace is better than the industry at producing sales compared to the investment in assets. Rate earned on stockholders' equity and earnings per share also indicate a significant improvement over the industry average and are a trend up over the previous year, which would indicate that sales are up, as is net income, but the price earnings ratio has not resulted in an increase to market price of the stock.

OBJECTIVE 4

Describe the contents of corporate annual reports.

SYNOPSIS

The annual report of a corporation contains financial statements, accompanying notes, and several other requirements. The Securities and Exchange Commission (SEC) requires that annual reports include the management's analysis of current operations and their plans for the future. The Sarbanes-Oxley Act of 2002 requires that management file a report with the SEC on the internal control of the company. Sarbanes-Oxley also requires a public accounting firm to verify management conclusions on its control. All publicly traded corporations are required to have an independent audit of their financial statements.

Key Terms and Definitions

- **Management's Discussion and Analysis (MD&A) -** An annual report disclosure that provides management's analysis of the results of operations and financial condition.

SUGGESTED APPROACH

The text presents information on the Management Discussion and Analysis section of the annual report plus the Independent Auditor's Report. You may want to briefly mention other components of the annual report. TM 15(14)-8 lists several sections typically included in a corporate annual report. Briefly review these sections and their content with your students, using the notes below.

1. *Financial Highlights*—presents selected financial data that summarize operations for the past year or two.
2. *President's Letter*—highlights the company's goals and accomplishments in narrative form.
3. *Financial Statements*
4. *Notes to the Financial Statements*—presents supplemental information needed to interpret the financial statements (such as the accounting method selected for recording depreciation and valuing inventory).
5. *Management's Discussion and Analysis*—presents management's assessment of the company's operating results and financial condition as reported in the financial statements.
6. *Management Report*—affirms management's responsibility for internal controls and the accuracy of financial statements; usually signed by the company's CFO.
7. *Independent Auditors' Report*—prepared by the independent auditor; presents the auditors' opinion as to the fairness of the financial statements.
8. *Historical Summary*—presents key financial data for the past five to ten years.

Ask your students to look through the financial statements of Nike and locate as many of these sections as possible.

Use the following Group Learning Activity to cover the independent auditors' report and the management report in more detail.

GROUP LEARNING ACTIVITY—Independent Auditors' Report

Obtain copies of several different annual reports. Divide the class into small groups; give each group an annual report. Ask each group to locate the independent auditors' report. Next, instruct the groups to outline the auditors' report by briefly describing the main point(s) in each paragraph. Ask two or more groups to share their outlines with the class. Discuss how closely these student outlines follow the outline of a standard audit report [TM 15(14)-9].

You may also want to use a similar exercise to review the management reports. The management reports will show much greater variation than the highly standardized audit report. However, the basic message of each management report should revolve around management's responsibility for establishing strong internal controls and preparing financial statements that adhere to generally accepted accounting principles.

INTERNET ACTIVITY—Annual Reports

It is possible to find the annual reports of many companies by searching the Internet. Ask your students to locate the annual report for a corporation and list the main sections that appear in that report. As an alternative, have them print out a section of the annual report, such as the Financial Statements and Supplemental Data. Ask them to compare and contrast their company's Financial Statements and Supplemental Data with the one for Nike in Appendix C.

WRITING EXERCISE—Historical Summary

Ask your students to write an answer to the following question [TM 15(14)-10]:

Many annual reports include a Historical Summary section, which shows key financial data for the past five to ten years. Why would information that is five to ten years old be presented in an annual report?

Possible response: Although not specifically discussed in the text, historical summary may provide significant insight to investors about past events that have had an impact on current financial statements. Historical data may also provide evidence of past trends that may reinforce positive results over extended periods.

APPENDIX—UNUSUAL ITEMS ON THE INCOME STATEMENT

SYNOPSIS

GAAP requires that unusual items be reported separately on the income statement. Without separate reporting on the income statement, users of financial statements might be misled. Unusual items either affect the current period or affect a prior period. Extraordinary item include those that are unusual in nature and infrequent in occurrence. Earnings per share are usually included with the income statement but are only required in the report for continuing operations and net income.

Key Terms and Definitions

- **Extraordinary Item** - An event or a transaction that is both (1) unusual in nature and (2) infrequent in occurrence.

Relevant Example Exercises and Exhibits

- Exhibit 11 – Unusual Items in the Income Statement
- Exhibit 12 – Income Statement with Earnings per Share

SUGGESTED APPROACH

The text presents unusual items in two sections, those affecting the current period income statement (discontinued operations and extraordinary items) and those affecting a prior period income statement (errors in applying generally accepted accounting principles and changes from one generally accepted accounting principle to another). It also notes that earnings per common share should be reported separately for discontinued operations and extraordinary items. Following are examples of unusual items.

LECTURE AID—Unusual Income Statement Items

1. *Fixed Asset Impairments*: A fixed asset impairment occurs when the carrying amount (book value) of a fixed asset exceeds its fair market value. The asset account is reduced to its fair value, and the charge is debited to Loss on Fixed Asset Impairment.

2. *Restructuring Charges*: These are costs associated with involuntarily terminating employees, terminating contracts, consolidating facilities, or relocating employees. For example, assume a restaurant chain decides to close several of its unprofitable locations. Closing the restaurants may create the following costs: severance packages for managers, fees associated with breaking a lease, or fees paid to an employment agency to help workers find other jobs. The company may be willing to incur these costs because the short-term restructuring costs are less than the long-term costs of running unprofitable restaurants.

   Ask your students if they have ever incurred a fee for early termination of a contract, such as on a cell phone or home alarm system. Ask if they would mind sharing the amount of the fee and why they chose to terminate the contract and pay the fee.

   Since employee termination benefits are normally the most significant restructuring charge, ask your students to share examples of benefits they or a friend may have received when losing a job due to the closing or relocation of their company.

3. *Discontinued Operations*: This section contains information concerning any component of a business (such as a division, department, or product line) that is sold or closed during the year. The amount displayed in this section is calculated as follows:

+/–	Profits or losses from operating the component before it is disposed of
+/–	Gains or losses from the act of selling or closing the business
	Net gain or loss on discontinued operations before taxes
–/+	Taxes paid on a net gain or taxes saved on a net loss
	Net gain or loss on discontinued operations

Note that a net gain on the discontinued component creates taxable income, which causes the corporation to incur an additional tax expense. A net loss on the discontinued component creates a tax deduction, which allows the corporation to reduce its tax expense.

4. *Extraordinary Items*: These are revenues or expenses that result from events that are "unusual and infrequent." Examples include natural disasters (flood, earthquake, fire) and condemnation of land or buildings. Extraordinary items must be shown net of tax. An extraordinary gain is reduced by taxes paid; an extraordinary loss is reduced by taxes saved.

5. *Changes in Accounting Principles*: This section shows the effect of changing from one accepted accounting principle to another. For example, a corporation might choose to change its depreciation method from the straight-line to the declining-balance method. That corporation would need to re-compute depreciation for all of its assets under the new method (declining-balance) for any prior years. The amount needed to bring the accumulated depreciation account up to the balance it would have if the declining-balance method had been used in past years is shown as the cumulative effect of a change in accounting principle. This amount is also shown net of tax.

WRITING EXERCISE—Below-the-Line Items Reported on the Income Statement

Ask your students to write a response to the following questions found on TM 15(14)-11:

1. Why are the results of discontinued operations and extraordinary items shown in separate sections at the bottom of the income statement?
2. Why are discontinued operations and extraordinary items shown net of tax?

Possible response: Discontinued operations and extraordinary items are reported at the bottom of the income statement, allowing investors to evaluate normal operations. By removing these items from the body of the income statement, the business can report income from operations and the investor can evaluate the business had these rare items not occurred. These items are reported net of tax, because these events can be a significant gain or loss to a business that will impact the bottom line by causing additional (unusual) tax consequences in the short term.

HOMEWORK CHART WITH LEARNING OUTCOMES																				
			TAGGING							RESOURCES				FOCUS						
Type	Ite	Descriptio	LO(s)	Difficult	Time	BUSPRO	AICPA	ACBSP - APC	Bloom's	EE	Excel	GL	SMH	FAI	Service	Real World	Writing	Ethics	Internet	Group
DQ	1		1	Easy	5 min.	Analytic	Measureme	Financial Statement	Knowledg											
DQ	2		1	Easy	5 min.	Analytic	Measureme	Financial Statement	Knowledg											
DQ	3		1	Easy	5 min.	Analytic	Measureme	Financial Statement	Knowledg											
DQ	4		2	Easy	5 min.	Analytic	Measureme	Financial Statement	Knowledg											
DQ	5		2	Easy	5 min.	Analytic	Measureme	Financial Statement	Knowledg											
DQ	6		2	Easy	5 min.	Analytic	Measureme	Financial Statement	Knowledg											
DQ	7		3	Easy	5 min.	Analytic	Measureme	Financial Statement	Knowledg											
DQ	8		3	Easy	5 min.	Analytic	Measureme	Financial Statement	Knowledg							x				
DQ	9		3	Easy	5 min.	Analytic	Measureme	Financial Statement	Knowledg							x				
DQ	10		4	Easy	5 min.	Analytic	Measureme	Financial Statement	Knowledg											
PE	1A	Horizontal analysis	1	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	1B	Horizontal analysis	1	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	2A	Vertical analysis	1	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	2B	Vertical analysis	1	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	3A	Current position analysis	2	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	3B	Current position analysis	2	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	4A	Accounts receivable analysis	2	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	4B	Accounts receivable analysis	2	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	5A	Inventory analysis	2	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	5B	Inventory analysis	2	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	6A	Long-term solvency analysis	2	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	6B	Long-term solvency analysis	2	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	7A	Times interest charges are earned	2	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	7B	Times interest charges are earned	2	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	8A	Sales to assets	3	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	8B	Sales to assets	3	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	9A	Rate earned on total assets	3	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	9B	Rate earned on total assets	3	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	10A	Common stockholders' profitability analysis	3	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	10B	Common stockholders' profitability analysis	3	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	11A	Earnings per share and price-earnings ratio	3	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
PE	11B	Earnings per share and price-earnings ratio	3	Easy	5 min.	Analytic	Measureme	Financial Statement	Applicatio	x										
EX	1	Vertical analysis of income statement	1	Easy	15 min.	Analytic	Measureme	Financial Statement	Applicatio				x				x			
EX	2	Vertical analysis of income statement	1	Easy	15 min.	Analytic	Measureme	Financial Statement	Applicatio		x					x	x			
EX	3	Common-sized income statement	1	Easy	15 min.	Analytic	Measureme	Financial Statement	Applicatio				x				x			
EX	4	Vertical analysis of balance sheet	1	Easy	20 min.	Analytic	Measureme	Financial Statement	Applicatio		x		x							
EX	5	Horizontal analysis of the income statement	1	Easy	20 min.	Analytic	Measureme	Financial Statement	Applicatio		x		x				x			
EX	6	Current position analysis	2	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio				x				x			
EX	7	Current position analysis	2	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio							x	x			
EX	8	Current position analysis	2	Moderat	15 min.	Analytic	Measureme	Financial Statement	Applicatio								x			
EX	9	Accounts receivable analysis	2	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio				x				x			
EX	10	Accounts receivable analysis	2	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio								x			
EX	11	Inventory analysis	2	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio				x				x			
EX	12	Inventory analysis	2	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio							x	x			
EX	13	Ratio of liabilities to stockholders' equity and number of times interest charges are	2	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio								x			
EX	14	Ratio of liabilities to stockholders' equity and number of times interest charges are	2	Easy	15 min.	Analytic	Measureme	Financial Statement	Applicatio							x	x			
EX	15	Ratio of liabilities to stockholders' equity and ratio of fixed assets to long-term	2	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio							x	x			
EX	16	Ratio of sales to assets	3	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio							x	x			
EX	17	Profitability ratios	3	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio				x				x			
EX	18	Profitability ratios	3	Easy	15 min.	Analytic	Measureme	Financial Statement	Applicatio							x	x			
EX	19	Six measures of solvency or profitability	2,3	Moderat	20 min.	Analytic	Measureme	Financial Statement	Applicatio											
EX	20	Six measures of solvency or profitability	2,3	Moderat	20 min.	Analytic	Measureme	Financial Statement	Applicatio											
EX	21	Earnings per share, price-earnings ratio, dividend yield	3	Easy	15 min.	Analytic	Measureme	Financial Statement	Applicatio				x							
EX	22	Price-earnings ratio; dividend yield	3	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio							x	x			
EX	23	Earnings per share, extraordinary item	Appendi	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio											
EX	24	Extraordinary item	Appendi	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio											
EX	25	Income statement and earnings per share for extaordinary items and discontinued	Appendi	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio											
EX	26	Unusual items	Appendi	Easy	10 min.	Analytic	Measureme	Financial Statement	Applicatio											
PR	1A	Horizontal analysis of income statement	1	Moderat	1 hour	Analytic	Measureme	Financial Statement	Applicatio		x	x	x				x			
PR	2A	Vertical analysis of income statement	1	Moderat	1 hour	Analytic	Measureme	Financial Statement	Applicatio		x	x					x			
PR	3A	Effect of transactions on current position analysis	2	Moderat	1 hour	Analytic	Measureme	Financial Statement	Applicatio		x									
PR	4A	Nineteen measures of solvency and profitability	2,3	Moderat	2 hours	Analytic	Measureme	Financial Statement	Applicatio		x									
PR	5A	Solvency and profitability trend analysis	2,3	Moderat	1.5	Analytic	Measureme	Financial Statement	Applicatio								x			
PR	1B	Horizontal analysis of income statement	1	Moderat	1 hour	Analytic	Measureme	Financial Statement	Applicatio		x	x	x				x			
PR	2B	Vertical analysis of income statement	1	Moderat	1 hour	Analytic	Measureme	Financial Statement	Applicatio		x	x					x			
PR	3B	Effect of transactions on current position analysis	2	Moderat	1 hour	Analytic	Measureme	Financial Statement	Applicatio		x									
PR	4B	Nineteen measures of solvency and profitability	2,3	Moderat	2 hours	Analytic	Measureme	Financial Statement	Applicatio		x									
PR	5B	Solvency and profitability trend analysis	2,3	Moderat	1.5	Analytic	Measureme	Financial Statement	Applicatio								x			
Nike Inc.			1,2,3	Moderat	1.5	Analytic	Measureme	Financial Statement	Applicatio								x			
CP	1	Analysis of financial corporate growth	2	Easy	5 min.	Analytic	Measureme	Financial Statement	Analysis								x			
CP	2	Receivables and inventory turnover	2	Moderat	10 min.	Analytic	Measureme	Financial Statement	Analysis								x			
CP	3	Vertical analysis	1	Easy	15 min.	Analytic	Measureme	Financial Statement	Analysis							x	x			
CP	4	Profitability and stockholder ratios	3	Moderat	20 min.	Analytic	Measureme	Financial Statement	Applicatio							x				
CP	5	Comprehensive profitability and solvency analysis	2,3	Easy	15 min.	Analytic	Measureme	Financial Statement	Analysis							x	x			