A Look Back

Chapter 12 focused on reporting and analyzing cash inflows and cash outflows. We explained how to prepare, analyze, and interpret the statement of cash flows.

A Look at This Chapter

This chapter emphasizes the analysis and interpretation of financial statement information. We learn to apply horizontal, vertical, and ratio analyses to better understand company performance and financial condition.

Chapter 13

Analyzing and Interpreting Financial Statements

Learning Objectives

CAP

Conceptual

- C1 Explain the purpose of analysis. *(p. 476)*
- C2 Identify the building blocks of analysis. *(p. 477)*
- C3 Describe standards for comparisons in analysis. *(p. 478)*
- C4 Identify the tools of analysis. *(p. 478)*

Analytical

- A1 Summarize and report results of analysis. *(p. 496)*
- A2 *Appendix 13A*—Explain the form and assess the content of a complete income statement. *(p. 499)*

LP13

Procedural

- P1 Explain and apply methods of horizontal analysis. *(p. 478)*
- P2 Describe and apply methods of vertical analysis. *(p. 483)*
- P3 Define and apply ratio analysis. *(p. 486)*

Decision Feature

Motley Fool

ALEXANDRIA, VA—In Shakespeare's Elizabethan comedy *As You Like It,* only the fool could speak truthfully to the King without getting his head lopped off. Inspired by Shakespeare's stage character, Tom and David Gardner vowed to become modern-day fools who tell it like it is. With under $10,000 in start-up money, the brothers launched **The Motley Fool (Fool.com).** And befitting of a Shakespearean play, the two say they are "dedicated to educating, amusing, and enriching individuals in search of the truth."

The Gardners do not fear the wrath of any King, real or fictional. They are intent on exposing the truth, as they see it, "that the financial world preys on ignorance and fear." As Tom explains, "There is such a great need in the general populace for financial information." Who can argue, given their brilliant success through practically every medium; including their Website, radio shows, newspaper columns, online store, investment newsletters, and global expansion.

"What goes on at The Motley Fool . . . is similar to what goes on in a library"
—Tom Gardner (David Gardner on left)

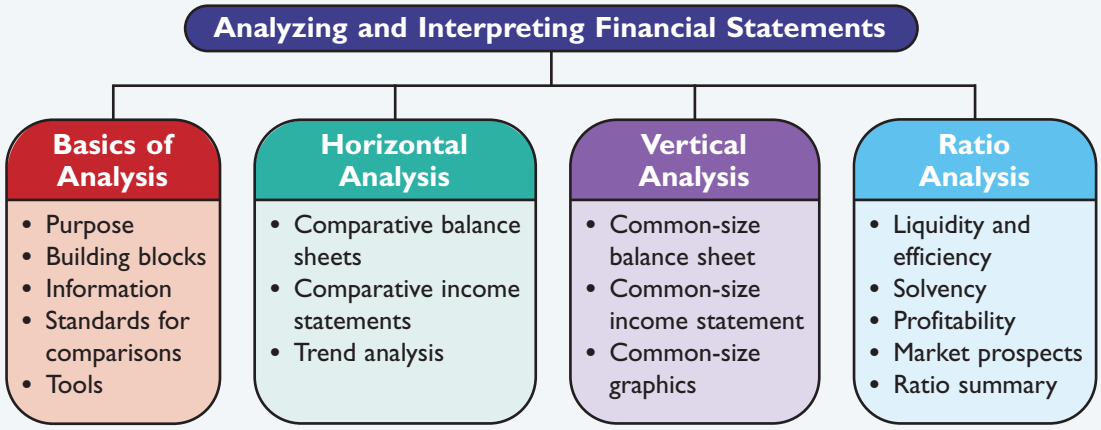
Despite the brothers' best efforts, however, ordinary people still do not fully use information contained in financial statements. For instance, discussions keep appearing on The Motley Fool's online bulletin board that can be easily resolved using reliable and available accounting data. So, it would seem that the Fools must continue their work of "educating and enriching" individuals.

Resembling The Motley Fools' objectives, this chapter introduces horizontal and vertical analyses—tools used to reveal crucial trends and insights from financial information. It also expands on ratio analysis, which gives insight into a company's financial condition and performance. By arming ourselves with the information contained in this chapter and the investment advice of The Motley Fool, *we* can be sure to not play the fool in today's financial world.

[Sources: *Motley Fool Website,* March 2009; *Entrepreneur,* July 1997; *What to Do with Your Money Now,* June 2002; *USA Weekend,* July 2004; *Washington Post,* November 2007; *Money after 40,* April 2007]

Chapter Preview

This chapter shows how we use financial statements to evaluate a company's financial performance and condition. We explain financial statement analysis, its basic building blocks, the information available, standards for comparisons, and tools of analysis. Three major analysis tools are presented: horizontal analysis, vertical analysis, and ratio analysis. We apply each of these tools using **Best Buy**'s financial statements, and we introduce comparative analysis using **Circuit City** and **RadioShack**. This chapter expands and organizes the ratio analyses introduced at the end of each chapter.



Basics of Analysis

Video13.1

Financial statement analysis applies analytical tools to general-purpose financial statements and related data for making business decisions. It involves transforming accounting data into more useful information. Financial statement analysis reduces our reliance on hunches, guesses, and intuition as well as our uncertainty in decision making. It does not lessen the need for expert judgment; instead, it provides us an effective and systematic basis for making business decisions. This section describes the purpose of financial statement analysis, its information sources, the use of comparisons, and some issues in computations.

Purpose of Analysis

C1 Explain the purpose of analysis.

Internal users of accounting information are those involved in strategically managing and operating the company. They include managers, officers, internal auditors, consultants, budget directors, and market researchers. The purpose of financial statement analysis for these users is to provide strategic information to improve company efficiency and effectiveness in providing products and services.

External users of accounting information are *not* directly involved in running the company. They include shareholders, lenders, directors, customers, suppliers, regulators, lawyers, brokers, and the press. External users rely on financial statement analysis to make better and more informed decisions in pursuing their own goals.

Point: Financial statement analysis tools are also used for personal financial investment decisions.

We can identify other uses of financial statement analysis. Shareholders and creditors assess company prospects to make investing and lending decisions. A board of directors analyzes financial statements in monitoring management's decisions. Employees and unions use financial statements in labor negotiations. Suppliers use financial statement information in establishing credit terms. Customers analyze financial statements in deciding whether to establish supply relationships. Public utilities set customer rates by analyzing financial statements. Auditors use financial statements in assessing the "fair presentation" of their clients' financial results. Analyst services such as **Dun & Bradstreet**, **Moody's**, and **Standard & Poor's** use financial statements in making buy-sell recommendations and in setting credit ratings. The common goal of these users is to evaluate company performance and financial condition. This includes evaluating (1) past and current performance, (2) current financial position, and (3) future performance and risk.

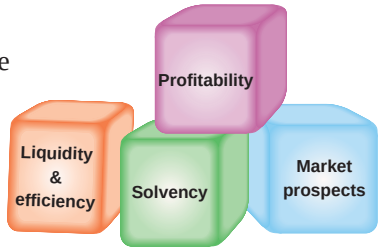
Point: Financial statement analysis is a topic on the CPA, CMA, CIA, and CFA exams.

Building Blocks of Analysis

C2 Identify the building blocks of analysis.

Financial statement analysis focuses on one or more elements of a company's financial condition or performance. Our analysis emphasizes four areas of inquiry—with varying degrees of importance. These four areas are described and illustrated in this chapter and are considered the *building blocks* of financial statement analysis:

- **Liquidity** and **efficiency**—ability to meet short-term obligations and to efficiently generate revenues.
- **Solvency**—ability to generate future revenues and meet long-term obligations.
- **Profitability**—ability to provide financial rewards sufficient to attract and retain financing.
- **Market prospects**—ability to generate positive market expectations.



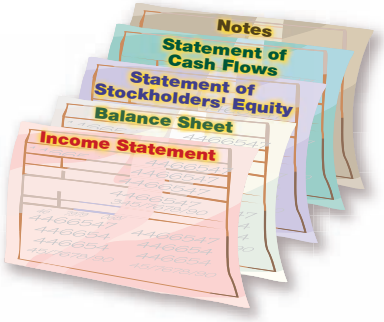
Applying the building blocks of financial statement analysis involves determining (1) the objectives of analysis and (2) the relative emphasis among the building blocks. We distinguish among these four building blocks to emphasize the different aspects of a company's financial condition or performance, yet we must remember that these areas of analysis are interrelated. For instance, a company's operating performance is affected by the availability of financing and short-term liquidity conditions. Similarly, a company's credit standing is not limited to satisfactory short-term liquidity but depends also on its profitability and efficiency in using assets. Early in our analysis, we need to determine the relative emphasis of each building block. Emphasis and analysis can later change as a result of evidence collected.

Decision Insight

Chips and Brokers The phrase *blue chips* refers to stock of big, profitable companies. The phrase comes from poker; where the most valuable chips are blue. The term *brokers* refers to those who execute orders to buy or sell stock. The term comes from wine retailers—individuals who broach (break) wine casks.

Information for Analysis

Some users, such as managers and regulatory authorities, are able to receive special financial reports prepared to meet their analysis needs. However, most users must rely on **general-purpose financial statements** that include the (1) income statement, (2) balance sheet, (3) statement of stockholders' equity (or statement of retained earnings), (4) statement of cash flows, and (5) notes to these statements.



Financial reporting refers to the communication of financial information useful for making investment, credit, and other business decisions. Financial reporting includes not only general-purpose financial statements but also information from SEC 10-K or other filings, press releases, shareholders' meetings, forecasts, management letters, auditors' reports, and Webcasts.

Management's Discussion and Analysis (MD&A) is one example of useful information outside traditional financial statements. **Best Buy**'s MD&A (available at **BestBuy.com**), for example, begins with an overview and strategic initiatives. It then discusses operating results followed by liquidity and capital resources—roughly equivalent to investing and financing. The final few parts discuss special financing arrangements, key accounting policies, interim results, and the next year's outlook. The MD&A is an excellent starting point in understanding a company's business activities.

Decision Insight

Analysis Online Many Websites offer free access and screening of companies by key numbers such as earnings, sales, and book value. For instance, **Standard & Poor's** has information for more than 10,000 stocks (**StandardPoor.com**).

Standards for Comparisons

C3 Describe standards for comparisons in analysis.

When interpreting measures from financial statement analysis, we need to decide whether the measures indicate good, bad, or average performance. To make such judgments, we need standards (benchmarks) for comparisons that include the following:

- *Intracompany*—The company under analysis can provide standards for comparisons based on its own prior performance and relations between its financial items. **Best Buy**'s current net income, for instance, can be compared with its prior years' net income and in relation to its revenues or total assets.
- *Competitor*—One or more direct competitors of the company being analyzed can provide standards for comparisons. **Coca-Cola**'s profit margin, for instance, can be compared with **PepsiCo**'s profit margin.
- *Industry*—Industry statistics can provide standards of comparisons. Such statistics are available from services such as **Dun & Bradstreet**, **Standard & Poor's**, and **Moody's**.
- *Guidelines (rules of thumb)* —General standards of comparisons can develop from experience. Examples are the 2:1 level for the current ratio or 1:1 level for the acid-test ratio. Guidelines, or rules of thumb, must be carefully applied because context is crucial.

Point: Each chapter's *Reporting in Action* problems engage students in *intracompany* analysis, whereas *Comparative Analysis* problems require competitor analysis (Best Buy vs. Circuit City).

All of these comparison standards are useful when properly applied, yet measures taken from a selected competitor or group of competitors are often best. Intracompany and industry measures are also important. Guidelines or rules of thumb should be applied with care, and then only if they seem reasonable given past experience and industry norms.

Tools of Analysis

C4 Identify the tools of analysis.

Three of the most common tools of financial statement analysis are

1. **Horizontal analysis**—Comparison of a company's financial condition and performance across time.
2. **Vertical analysis**—Comparison of a company's financial condition and performance to a base amount.
3. **Ratio analysis**—Measurement of key relations between financial statement items.

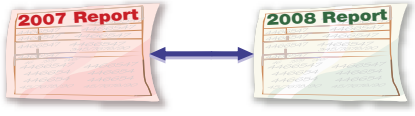
The remainder of this chapter describes these analysis tools and how to apply them.

Quick Check

Answers—p. 502

1. Who are the intended users of general-purpose financial statements?
2. General-purpose financial statements consist of what information?
3. Which of the following is *least* useful as a basis for comparison when analyzing ratios? (*a*) Company results from a different economic setting. (*b*) Standards from past experience. (*c*) Rule-of-thumb standards. (*d*) Industry averages.
4. What is the preferred basis of comparison for ratio analysis?

Horizontal Analysis



Analysis of any single financial number is of limited value. Instead, much of financial statement analysis involves identifying and describing relations between numbers, groups of numbers, and changes in those numbers. Horizontal analysis refers to examination of financial statement data *across time*. [The term *horizontal analysis* arises from the left-to-right (or right-to-left) movement of our eyes as we review comparative financial statements across time.]

Comparative Statements

P1 Explain and apply methods of horizontal analysis.

Comparing amounts for two or more successive periods often helps in analyzing financial statements. **Comparative financial statements** facilitate this comparison by showing financial

amounts in side-by-side columns on a single statement, called a *comparative format*. Using figures from **Best Buy**'s financial statements, this section explains how to compute dollar changes and percent changes for comparative statements.

Video13.1

Computation of Dollar Changes and Percent Changes Comparing financial statements over relatively short time periods—two to three years—is often done by analyzing changes in line items. A change analysis usually includes analyzing absolute dollar amount changes and percent changes. Both analyses are relevant because dollar changes can yield large percent changes inconsistent with their importance. For instance, a 50% change from a base figure of $100 is less important than the same percent change from a base amount of $100,000 in the same statement. Reference to dollar amounts is necessary to retain a proper perspective and to assess the importance of changes. We compute the *dollar change* for a financial statement item as follows:

Example: What is a more significant change, a 70% increase on a $1,000 expense or a 30% increase on a $400,000 expense? *Answer:* The 30% increase.

$$\text{Dollar change} = \text{Analysis period amount} - \text{Base period amount}$$

Analysis period is the point or period of time for the financial statements under analysis, and *base period* is the point or period of time for the financial statements used for comparison purposes. The prior year is commonly used as a base period. We compute the *percent change* by dividing the dollar change by the base period amount and then multiplying this quantity by 100 as follows:

$$\text{Percent change (\%)} = \frac{\text{Analysis period amount} - \text{Base period amount}}{\text{Base period amount}} \times 100$$

We can always compute a dollar change, but we must be aware of a few rules in working with percent changes. To illustrate, look at four separate cases in this chart:

Case	Analysis Period	Base Period	Change Analysis	
			Dollar	Percent
A	$ 1,500	$(4,500)	$ 6,000	—
B	(1,000)	2,000	(3,000)	—
C	8,000	—	8,000	—
D	0	10,000	(10,000)	(100%)

When a negative amount appears in the base period and a positive amount in the analysis period (or vice versa), we cannot compute a meaningful percent change; see cases A and B. Also, when no value is in the base period, no percent change is computable; see case C. Finally, when an item has a value in the base period and zero in the analysis period, the decrease is 100 percent; see case D.

Example: When there is a value in the base period and zero in the analysis period, the decrease is 100%. Why isn't the reverse situation an increase of 100%? *Answer:* A 100% increase of zero is still zero.

It is common when using horizontal analysis to compare amounts to either average or median values from prior periods (average and median values smooth out erratic or unusual fluctuations).[1] We also commonly round percents and ratios to one or two decimal places, but practice on this matter is not uniform. Computations are as detailed as necessary, which is judged by whether rounding potentially affects users' decisions. Computations should not be excessively detailed so that important relations are lost among a mountain of decimal points and digits.

Comparative Balance Sheets Comparative balance sheets consist of balance sheet amounts from two or more balance sheet dates arranged side by side. Its usefulness is often improved by showing each item's dollar change and percent change to highlight large changes.

[1] *Median* is the middle value in a group of numbers. For instance, if five prior years' incomes are (in 000s) $15, $19, $18, $20, and $22, the median value is $19. When there are two middle numbers, we can take their average. For instance, if four prior years' sales are (in 000s) $84, $91, $96, and $93, the median is $92 (computed as the average of $91 and $93).

Point: Spreadsheet programs can help with horizontal, vertical, and ratio analyses, including graphical depictions of financial relations.

Point: Business consultants use comparative statement analysis to provide management advice.

Analysis of comparative financial statements begins by focusing on items that show large dollar or percent changes. We then try to identify the reasons for these changes and, if possible, determine whether they are favorable or unfavorable. We also follow up on items with small changes when we expected the changes to be large.

Exhibit 13.1 shows comparative balance sheets for **Best Buy**. A few items stand out. Many asset categories substantially increase, which is probably not surprising because Best Buy is a growth company. Much of the increase in current assets is from the 20.7% increase in merchandise inventories. The long-term assets of property, equipment, and goodwill also increased. Of course, its sizeable total asset growth of 14.4% must be accompanied by future income to validate Best Buy's growth strategy.

We likewise see substantial increases on the financing side, the most notable ones being accounts payable and long-term debt totaling about $1,112 million. The increase in payables is related to the increase in cash levels, and the increase in debt is partly explained by the increase in long-term assets. Best Buy also reinvested much of its income as reflected in the $1,203 million increase in retained earnings. Again, we must monitor these increases in

EXHIBIT 13.1

Comparative Balance Sheets

BEST BUY
Comparative Balance Sheets
March 3, 2007, and February 25, 2006

($ millions)	2007	2006	Dollar Change	Percent Change
Assets				
Cash and cash equivalents	$ 1,205	$ 748	$ 457	61.1%
Short-term investments	2,588	3,041	(453)	(14.9)
Receivables, net	548	449	99	22.0
Merchandise inventories	4,028	3,338	690	20.7
Other current assets	712	409	303	74.1
Total current assets	9,081	7,985	1,096	13.7
Property and equipment	4,904	4,836	68	1.4
Less accumulated depreciation	1,966	2,124	(158)	(7.4)
Net property and equipment	2,938	2,712	226	8.3
Goodwill	919	557	362	65.0
Tradenames	81	44	37	84.1
Long-term investments	318	218	100	45.9
Other long-term assets	233	348	(115)	(33.0)
Total assets	$13,570	$11,864	$1,706	14.4
Liabilities				
Accounts payable	$ 3,934	$ 3,234	$ 700	21.6%
Unredeemed gift card liabilities	496	469	27	5.8
Accrued compensation and related expenses	332	354	(22)	(6.2)
Accrued liabilities	990	878	112	12.8
Accrued income taxes	489	703	(214)	(30.4)
Short-term debt	41	0	41	—
Current portion of long-term debt	19	418	(399)	(95.5)
Total current liabilities	6,301	6,056	245	4.0
Long-term liabilities	443	373	70	18.8
Long-term debt	590	178	412	231.5
Minority interests	35	0	35	—
Stockholders' Equity				
Common stock	48	49	(1)	(2.0)
Additional paid-in capital	430	643	(213)	(33.1)
Retained earnings	5,507	4,304	1,203	28.0
Accumulated other comprehensive income	216	261	(45)	(17.2)
Total stockholders' equity	6,201	5,257	944	18.0
Total liabilities and stockholders' equity	$13,570	$11,864	$1,706	14.4

investing and financing activities to be sure they are reflected in increased operating performance.

Comparative Income Statements Comparative income statements are prepared similarly to comparative balance sheets. Amounts for two or more periods are placed side by side, with additional columns for dollar and percent changes. Exhibit 13.2 shows Best Buy's comparative income statements.

EXHIBIT 13.2
Comparative Income Statements

BEST BUY
Comparative Income Statements
For Years Ended March 3, 2007, and February 25, 2006

($ millions, except per share data)	2007	2006	Dollar Change	Percent Change
Revenues	$35,934	$30,848	$5,086	16.5%
Cost of goods sold	27,165	23,122	4,043	17.5
Gross profit	8,769	7,726	1,043	13.5
Selling, general, and administrative expenses	6,770	6,082	688	11.3
Operating income	1,999	1,644	355	21.6
Net interest income (expense)	111	77	34	44.2
Gain on investments	20	0	20	—
Earnings from continuing operations before income taxes	2,130	1,721	409	23.8
Income tax expense	752	581	171	29.4
Minority interest in earnings	1	0	1	—
Net earnings	$ 1,377	$ 1,140	$ 237	20.8
Basic earnings per share	$ 2.86	$ 2.33	$ 0.53	22.7
Diluted earnings per share	$ 2.79	$ 2.27	$ 0.52	22.9

Best Buy has substantial revenue growth of 16.5% in 2007. This finding helps support management's growth strategy as reflected in the comparative balance sheets. Best Buy also reveals some ability to control cost of sales and general and administrative expenses, which increased 17.5% and 11.3%, respectively. Best Buy's net income growth of 20.8% on revenue growth of 16.5% is impressive.

Point: Percent change can also be computed by dividing the current period by the prior period and subtracting 1.0. For example, the 16.5% revenue increase of Exhibit 13.2 is computed as: ($35,934/$30,848) − 1.

Trend Analysis

Trend analysis, also called *trend percent analysis* or *index number trend analysis,* is a form of horizontal analysis that can reveal patterns in data across successive periods. It involves computing trend percents for a series of financial numbers and is a variation on the use of percent changes. The difference is that trend analysis does not subtract the base period amount in the numerator. To compute trend percents, we do the following:

1. Select a *base period* and assign each item in the base period a weight of 100%.
2. Express financial numbers as a percent of their base period number.

Specifically, a *trend percent,* also called an *index number,* is computed as follows:

$$\text{Trend percent (\%)} = \frac{\text{Analysis period amount}}{\text{Base period amount}} \times 100$$

Point: *Index* refers to the comparison of the analysis period to the base period. Percents determined for each period are called *index numbers.*

To illustrate trend analysis, we use the **Best Buy** data shown in Exhibit 13.3.

EXHIBIT 13.3
Revenues and Expenses

($ millions)	2007	2006	2005	2004	2003
Revenues	$35,934	$30,848	$27,433	$24,548	$20,943
Cost of goods sold	27,165	23,122	20,938	18,677	15,998
Selling, general & administrative expenses	6,770	6,082	5,053	4,567	3,935

These data are from Best Buy's *Selected Financial Data* section. The base period is 2003 and the trend percent is computed in each subsequent year by dividing that year's amount by its 2003 amount. For instance, the revenue trend percent for 2007 is 171.6%, computed as $35,934/$20,943. The trend percents—using the data from Exhibit 13.3—are shown in Exhibit 13.4.

EXHIBIT 13.4

Trend Percents for Revenues and Expenses

	2007	2006	2005	2004	2003
Revenues	171.6%	147.3%	131.0%	117.2%	100.0%
Cost of goods sold	169.8	144.5	130.9	116.7	100.0
Selling, general & administrative expenses	172.0	154.6	128.4	116.1	100.0

Point: Trend analysis expresses a percent of base, not a percent of change.

Graphical depictions often aid analysis of trend percents. Exhibit 13.5 shows the trend percents from Exhibit 13.4 in a *line graph,* which can help us identify trends and detect changes in direction or magnitude. It reveals that the trend line for revenues consistently exceeds that for cost of goods sold. Moreover, the magnitude of that difference has slightly grown. This result bodes well for Best Buy because its cost of goods sold are by far its largest cost, and the company shows an ability to control these expenses as it expands. The line graph also reveals a consistent increase in each of these accounts, which is typical of growth companies. The trend line for selling, general and administrative expenses is less encouraging because it exceeds the revenue trend line in 2006–2007. The good news is that nearly all of that upward shift in costs occured in one year (2006). In other years, management appears to have limited those costs to not exceed revenue growth.

EXHIBIT 13.5

Trend Percent Lines for Revenues and Expenses of Best Buy

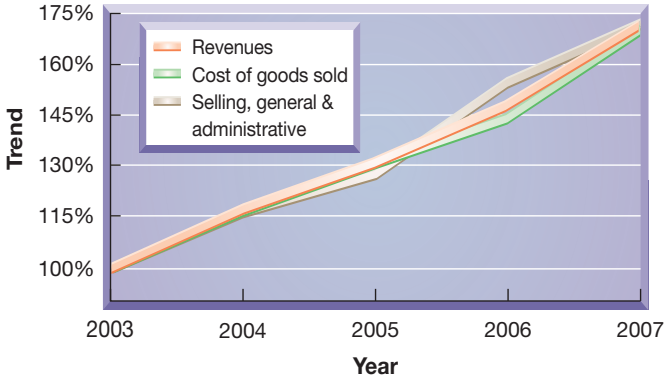
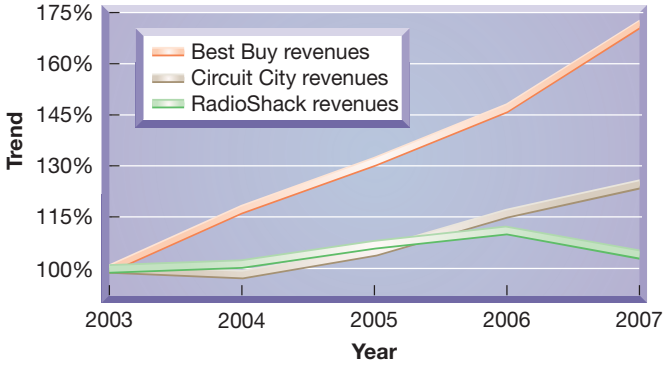


Exhibit 13.6 compares **Best Buy**'s revenue trend line to that of **Circuit City** and **RadioShack** for this same period. Best Buy's revenues sharply increased over this time period while those of Circuit City exhibited less growth, and those for RadioShack were flat. These data indicate that Best Buy's products and services have met with considerable consumer acceptance.

EXHIBIT 13.6

Trend Percent Lines—Best Buy, Circuit City, and RadioShack



Trend analysis of financial statement items can include comparisons of relations between items on different financial statements. For instance, Exhibit 13.7 compares Best Buy's revenues and total assets. The rate of increase in total assets (176.4%) is greater than the increase in revenues (171.6%) since 2003. Is this result favorable or not? It suggests that Best Buy was slightly less efficient in using its assets in 2007. Management apparently is expecting future years' revenues to compensate for this asset growth.

Overall we must remember that an important role of financial statement analysis is identifying questions and areas of interest, which often direct us to important factors bearing

($ millions)	2007	2003	Trend Percent (2007 vs. 2003)
Revenues	$35,934	$20,943	171.6%
Total assets	13,570	7,694	176.4

EXHIBIT 13.7
Revenue and Asset Data for Best Buy

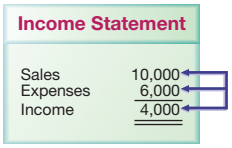
on a company's future. Accordingly, financial statement analysis should be seen as a continuous process of refining our understanding and expectations of company performance and financial condition.

Decision Maker

Auditor Your tests reveal a 3% increase in sales from $200,000 to $206,000 and a 4% decrease in expenses from $190,000 to $182,400. Both changes are within your "reasonableness" criterion of ±5%, and thus you don't pursue additional tests. The audit partner in charge questions your lack of follow-up and mentions the *joint relation* between sales and expenses. To what is the partner referring? [Answer—p. 502]

Vertical Analysis

Vertical analysis is a tool to evaluate individual financial statement items or a group of items in terms of a specific base amount. We usually define a key aggregate figure as the base, which for an income statement is usually revenue and for a balance sheet is usually total assets. This section explains vertical analysis and applies it to Best Buy. [The term *vertical analysis* arises from the up-down (or down-up) movement of our eyes as we review common-size financial statements. Vertical analysis is also called *common-size analysis*.]



Common-Size Statements

P2 Describe and apply methods of vertical analysis.

The comparative statements in Exhibits 13.1 and 13.2 show the change in each item over time, but they do not emphasize the relative importance of each item. We use **common-size financial statements** to reveal changes in the relative importance of each financial statement item. All individual amounts in common-size statements are redefined in terms of common-size percents. A *common-size per cent* is measured by dividing each individual financial statement amount under analysis by its base amount:

$$\text{Common-size percent (\%)} = \frac{\text{Analysis amount}}{\text{Base amount}} \times 100$$

Common-Size Balance Sheets Common-size statements express each item as a percent of a *base amount,* which for a common-size balance sheet is usually total assets. The base amount is assigned a value of 100%. (This implies that the total amount of liabilities plus equity equals 100% since this amount equals total assets.) We then compute a common-size percent for each asset, liability, and equity item using total assets as the base amount. When we present a company's successive balance sheets in this way, changes in the mixture of assets, liabilities, and equity are apparent.

Point: The *base* amount in common-size analysis is an *aggregate* amount from that period's financial statement.

Exhibit 13.8 shows common-size comparative balance sheets for Best Buy. Some relations that stand out on both a magnitude and percentage basis include (1) a 41% increase in cash and equivalents, (2) a 6.5% decline in short-term investments as a percentage of assets, (3) a 1.2% decrease in net property and equipment as a percentage of assets, (4) a 1.7% increase in the percentage of accounts payable, (5) a 3.4% decline in the current portion of long-term debt, and (6) a marked increase in retained earnings. Most of these changes are characteristic of a successful growth/stable company. The concern, if any, is whether Best Buy can continue to generate sufficient revenues and income to support its asset buildup within a very competitive industry.

Point: Common-size statements often are used to compare two or more companies in the same industry.

Point: Common-size statements are also useful in comparing firms that report in different currencies.

EXHIBIT 13.8

Common-Size Comparative Balance Sheets

BEST BUY
Common-Size Comparative Balance Sheets
March 3, 2007, and February 25, 2006

($ millions)	2007	2006	Common-Size Percents* 2007	Common-Size Percents* 2006
Assets				
Cash and cash equivalents	$ 1,205	$ 748	8.9%	6.3%
Short-term investments	2,588	3,041	19.1	25.6
Receivables, net	548	449	4.0	3.8
Merchandise inventories	4,028	3,338	29.7	28.1
Other current assets	712	409	5.2	3.4
Total current assets	9,081	7,985	66.9	67.3
Property and equipment	4,904	4,836	36.1	40.8
Less accumulated depreciation	1,966	2,124	14.5	17.9
Net property and equipment	2,938	2,712	21.7	22.9
Goodwill	919	557	6.8	4.7
Tradenames	81	44	0.6	0.4
Long-term investments	318	218	2.3	1.8
Other long-term assets	233	348	1.7	2.9
Total assets	$13,570	$11,864	100.0%	100.0%
Liabilities				
Accounts payable	$ 3,934	$ 3,234	29.0%	27.3%
Unredeemed gift card liabilities	496	469	3.7	4.0
Accrued compensation and related expenses	332	354	2.4	3.0
Accrued liabilities	990	878	7.3	7.4
Accrued income taxes	489	703	3.6	5.9
Short-term debt	41	0	0.3	0.0
Current portion of long-term debt	19	418	0.1	3.5
Total current liabilities	6,301	6,056	46.4	51.0
Long-term liabilities	443	373	3.3	3.1
Long-term debt	590	178	4.3	1.5
Minority interests	35	0	0.3	0.0
Stockholders' Equity				
Common stock	48	49	0.4	0.4
Additional paid-in capital	430	643	3.2	5.4
Retained earnings	5,507	4,304	40.6	36.3
Accumulated other comprehensive income	216	261	1.6	2.2
Total stockholders' equity	6,201	5,257	45.7	44.3
Total liabilities and stockholders' equity	$13,570	$11,864	100.0%	100.0%

* Percents are rounded to one decimal and thus may not exactly sum to totals and subtotals.

Global: International companies sometimes disclose "convenience" financial statements, which are statements translated in other languages and currencies. However, these statements rarely adjust for differences in accounting principles across countries.

Common-Size Income Statements Analysis also benefits from use of a common-size income statement. Revenues is usually the base amount, which is assigned a value of 100%. Each common-size income statement item appears as a percent of revenues. If we think of the 100% revenues amount as representing one sales dollar, the remaining items show how each revenue dollar is distributed among costs, expenses, and income.

Exhibit 13.9 shows common-size comparative income statements for each dollar of Best Buy's revenues. The past two years' common-size numbers are similar. The good news is that Best Buy has been able to squeeze an extra 0.1 cent in earnings per revenue dollar—evidenced by the 3.7% to 3.8% rise in earnings as a percentage of revenues. This implies that management is effectively controlling costs and/or the company is reaping growth benefits, so-called *economies of scale* . The bad news is that gross profit lost 0.6 cent per revenue dollar—evidenced by the 25.0% to 24.4% decline in gross profit as a percentage of revenues. This is a concern given the price-competitive

EXHIBIT 13.9

Common-Size Comparative Income Statements

BEST BUY
Common-Size Comparative Income Statements
For Years Ended March 3, 2007, and February 25, 2006

($ millions)	2007	2006	Common-Size Percents* 2007	Common-Size Percents* 2006
Revenues	$35,934	$30,848	100.0%	100.0%
Cost of goods sold	27,165	23,122	75.6	75.0
Gross profit	8,769	7,726	24.4	25.0
Selling, general, and administrative expenses	6,770	6,082	18.8	19.7
Operating income	1,999	1,644	5.6	5.3
Net interest income (expense)	111	77	0.3	0.2
Gain on investments	20	0	0.1	0.0
Earnings from continuing operations before income taxes	2,130	1,721	5.9	5.6
Income tax expense	752	581	2.1	1.9
Minority interest in earnings	1	0	0.0	0.0
Net earnings	$ 1,377	$ 1,140	3.8%	3.7%

* Percents are rounded to one decimal and thus may not exactly sum to totals and subtotals.

electronics market. Analysis here shows that common-size percents for successive income statements can uncover potentially important changes in a company's expenses. Evidence of no changes, especially when changes are expected, is also informative.

Common-Size Graphics

Two of the most common tools of common-size analysis are trend analysis of common-size statements and graphical analysis. The trend analysis of common-size statements is similar to that of comparative statements discussed under vertical analysis. It is not illustrated here because the only difference is the substitution of common-size percents for trend percents. Instead, this section discusses graphical analysis of common-size statements.

An income statement readily lends itself to common-size graphical analysis. This is so because revenues affect nearly every item in an income statement. Exhibit 13.10 shows **Best Buy**'s 2007 common-size income statement in graphical form. This pie chart highlights the contribution of each component of revenues for net earnings.

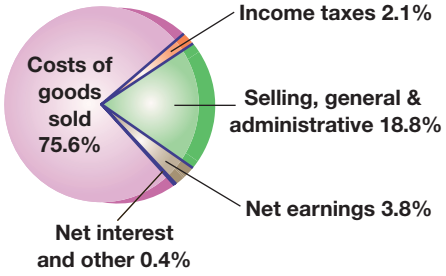


EXHIBIT 13.10

Common-Size Graphic of Income Statement

Exhibit 13.11 previews more complex graphical analyses available and the insights they provide. The data for this exhibit are taken from **Best Buy**'s *Segments* footnote. Best Buy has two reportable segments: domestic and international.

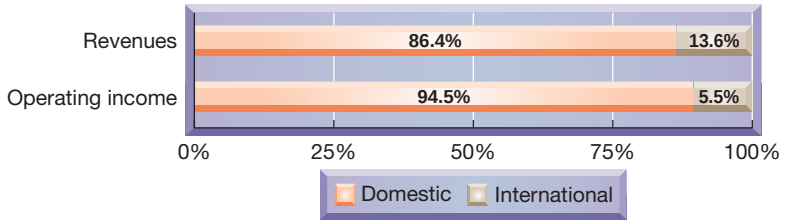
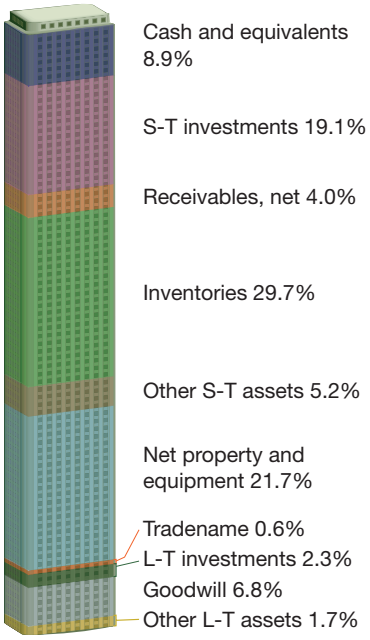


EXHIBIT 13.11

Revenue and Operating Income Breakdown by Segment

EXHIBIT 13.12

Common-Size Graphic of Asset Components



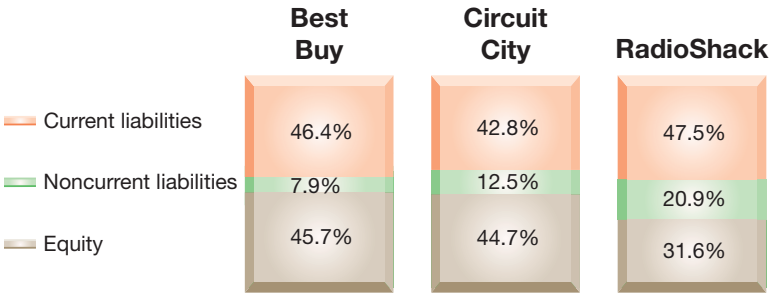
The upper bar in Exhibit 13.11 shows the percent of revenues from each segment. The major revenue source is Domestic (86.4%). The lower bar shows the percent of operating income from each segment. Although International provides 13.6% of revenues, it provides only 5.5% of operating income. This type of information can help users in determining strategic analyses and actions.

Graphical analysis is also useful in identifying (1) sources of financing including the distribution among current liabilities, noncurrent liabilities, and equity capital and (2) focuses of investing activities, including the distribution among current and noncurrent assets. As illustrative, Exhibit 13.12 shows a common-size graphical display of Best Buy's assets. Common-size balance sheet analysis can be extended to examine the composition of these subgroups. For instance, in assessing liquidity of current assets, knowing what proportion of current assets consists of inventories is usually important, and not simply what proportion inventories are of total assets.

Common-size financial statements are also useful in comparing different companies. Exhibit 13.13 shows common-size graphics of Best Buy, Circuit City, and RadioShack on financing sources. This graphic highlights the larger percent of equity financing for Best Buy and Circuit City than for RadioShack. It also highlights the much larger noncurrent (debt) financing of RadioShack. Comparison of a company's common-size statements with competitors' or industry common-size statistics alerts us to differences in the structure or distribution of its financial statements but not to their dollar magnitude.

EXHIBIT 13.13

Common-Size Graphic of Financing Sources—Competitor Analysis



Quick Check

Answers—p. 502

5. Which of the following is true for common-size comparative statements? (*a*) Each item is expressed as a percent of a base amount. (*b*) Total assets often are assigned a value of 100%. (*c*) Amounts from successive periods are placed side by side. (*d*) All are true. (*e*) None is true.
6. What is the difference between the percents shown on a comparative income statement and those shown on a common-size comparative income statement?
7. Trend percents are (*a*) shown on comparative income statements and balance sheets, (*b*) shown on common-size comparative statements, or (*c*) also called *index numbers*.

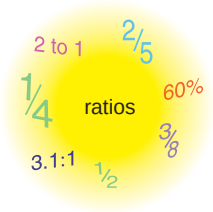
Ratio Analysis

P3 Define and apply ratio analysis.

Ratios are among the more widely used tools of financial analysis because they provide clues to and symptoms of underlying conditions. A ratio can help us uncover conditions and trends difficult to detect by inspecting individual components making up the ratio. Ratios, like other analysis tools, are usually future oriented; that is, they are often adjusted for their probable future trend and magnitude, and their usefulness depends on skillful interpretation.

A ratio expresses a mathematical relation between two quantities. It can be expressed as a percent, rate, or proportion. For instance, a change in an account balance from $100 to $250 can be expressed as (1) 150%, (2) 2.5 times, or (3) 2.5 to 1 (or 2.5:1). Computation of a ratio is a simple arithmetic operation, but its interpretation is not. To be meaningful, a ratio must refer to an economically important relation. For example, a direct and crucial relation exists between an item's sales price and its cost. Accordingly, the ratio of cost of goods sold to sales is meaningful. In contrast, no obvious relation exists between freight costs and the balance of long-term investments.

This section describes an important set of financial ratios and its application. The selected ratios are organized into the four building blocks of financial statement analysis: (1) liquidity and efficiency, (2) solvency, (3) profitability, and (4) market prospects. We use four common standards, in varying degrees, for comparisons: intracompany, competitor, industry, and guidelines.



Point: Some sources for industry norms are *Annual Statement Studies* by Robert Morris Associates, *Industry Norms & Key Business Ratios* by Dun & Bradstreet, *Standard & Poor's Industry Surveys*, and Reuters.com/finance.

Liquidity and Efficiency

Liquidity refers to the availability of resources to meet short-term cash requirements. It is affected by the timing of cash inflows and outflows along with prospects for future performance. Analysis of liquidity is aimed at a company's funding requirements. *Efficiency* refers to how productive a company is in using its assets. Efficiency is usually measured relative to how much revenue is generated from a certain level of assets.

Both liquidity and efficiency are important and complementary. If a company fails to meet its current obligations, its continued existence is doubtful. Viewed in this light, all other measures of analysis are of secondary importance. Although accounting measurements assume the company's continued existence, our analysis must always assess the validity of this assumption using liquidity measures. Moreover, inefficient use of assets can cause liquidity problems. A lack of liquidity often precedes lower profitability and fewer opportunities. It can foretell a loss of owner control. To a company's creditors, lack of liquidity can yield delays in collecting interest and principal payments or the loss of amounts due them. A company's customers and suppliers of goods and services also are affected by short-term liquidity problems. Implications include a company's inability to execute contracts and potential damage to important customer and supplier relationships. This section describes and illustrates key ratios relevant to assessing liquidity and efficiency.

Working Capital and Current Ratio The amount of current assets less current liabilities is called **working capital,** or *net working capital.* A company needs adequate working capital to meet current debts, to carry sufficient inventories, and to take advantage of cash discounts. A company that runs low on working capital is less likely to meet current obligations or to continue operating. When evaluating a company's working capital, we must not only look at the dollar amount of current assets less current liabilities, but also at their ratio. The *current ratio* is defined as follows.

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Drawing on information in Exhibit 13.1, **Best Buy**'s working capital and current ratio for both 2007 and 2006 are shown in Exhibit 13.14. **Circuit City** (1.68), **RadioShack** (1.63), and the Industry's current ratio of 1.6 is shown in the margin. Best Buy's 2007 ratio (1.44) is lower than any of the comparison ratios, but it does not appear in danger of defaulting on loan payments. A high current ratio suggests a strong liquidity position and an ability to meet current obligations. A company can, however, have a current ratio that is too high. An excessively high current ratio means that the company has invested too much in current assets compared to its current obligations. An

($ millions)	2007	2006
Current assets	$ 9,081	$ 7,985
Current liabilities	6,301	6,056
Working capital	**$2,780**	**$1,929**
Current ratio		
$9,081/$6,301	**1.44 to 1**	
$7,985/$6,056		**1.32 to 1**

EXHIBIT 13.14

Best Buy's Working Capital and Current Ratio

Current ratio
Circuit City = 1.68
RadioShack = 1.63
Industry = 1.6

excessive investment in current assets is not an efficient use of funds because current assets normally generate a low return on investment (compared with long-term assets).

Many users apply a guideline of 2:1 (or 1.5:1) for the current ratio in helping evaluate a company's debt-paying ability. A company with a 2:1 or higher current ratio is generally thought to be a good credit risk in the short run. Such a guideline or any analysis of the current ratio must recognize at least three additional factors: (1) type of business, (2) composition of current assets, and (3) turnover rate of current asset components.

Type of business. A service company that grants little or no credit and carries few inventories can probably operate on a current ratio of less than 1:1 if its revenues generate enough cash to pay its current liabilities. On the other hand, a company selling high-priced clothing or furniture requires a higher ratio because of difficulties in judging customer demand and cash receipts. For instance, if demand falls, inventory may not generate as much cash as expected. Accordingly, analysis of the current ratio should include a comparison with ratios from successful companies in the same industry and from prior periods. We must also recognize that a company's accounting methods, especially choice of inventory method, affect the current ratio. For instance, when costs are rising, a company using LIFO tends to report a smaller amount of current assets than when using FIFO.

Point: When a firm uses LIFO in a period of rising costs, the standard for an adequate current ratio usually is lower than if it used FIFO.

Composition of current assets. The composition of a company's current assets is important to an evaluation of short-term liquidity. For instance, cash, cash equivalents, and short-term investments are more liquid than accounts and notes receivable. Also, short-term receivables normally are more liquid than inventory. Cash, of course, can be used to immediately pay current debts. Items such as accounts receivable and inventory, however, normally must be converted into cash before payment is made. An excessive amount of receivables and inventory weakens a company's ability to pay current liabilities. The acid-test ratio (see below) can help with this assessment.

Turnover rate of assets. Asset turnover measures a company's efficiency in using its assets. One relevant measure of asset efficiency is the revenue generated. A measure of total asset turnover is revenues divided by total assets, but evaluation of turnover for individual assets is also first useful. We discuss both receivables turnover and inventory turnover on the next page.

Decision Maker

Banker A company requests a one-year, $200,000 loan for expansion. This company's current ratio is 4:1, with current assets of $160,000. Key competitors carry a current ratio of about 1.9:1. Using this information, do you approve the loan application? Does your decision change if the application is for a 10-year loan?

[Answer—p. 502]

Acid-Test Ratio Quick assets are cash, short-term investments, and current receivables. These are the most liquid types of current assets. The *acid-test ratio,* also called *quick ratio,* reflects on a company's short-term liquidity.

$$\text{Acid-test ratio} = \frac{\text{Cash + Short-term investments + Current receivables}}{\text{Current liabilities}}$$

Best Buy's acid-test ratio is computed in Exhibit 13.15. Best Buy's 2007 acid-test ratio (0.69) is between that for Circuit City (0.65) and RadioShack (0.73), and less than the 1:1 common

EXHIBIT 13.15

Acid-Test Ratio

($ millions)	2007	2006
Cash and equivalents	$1,205	$ 748
Short-term investments	2,588	3,041
Current receivables	548	449
Total quick assets	$4,341	$4,238
Current liabilities	$6,301	$6,056
Acid-test ratio		
$4,341/$6,301	0.69 to 1	
$4,238/$6,056		0.70 to 1

Acid-test ratio
Circuit City = 0.65
RadioShack = 0.73
Industry = 0.7

guideline for an acceptable acid-test ratio; each of these ratios is similar to the 0.7 industry ratio. As with analysis of the current ratio, we need to consider other factors. For instance, the frequency with which a company converts its current assets into cash affects its working capital requirements. This implies that analysis of short-term liquidity should also include an analysis of receivables and inventories, which we consider next.

Global: Ratio analysis helps overcome currency translation problems, but it does *not* overcome differences in accounting principles.

Accounts Receivable Turnover We can measure how frequently a company converts its receivables into cash by computing the *accounts receivable turnover*, which is defined as follows:

$$\text{Accounts receivable turnover} = \frac{\text{Net sales}}{\text{Average accounts receivable, net}}$$

Short-term receivables from customers are often included in the denominator along with accounts receivable. Also, accounts receivable turnover is more precise if credit sales are used for the numerator, but external users generally use net sales (or net revenues) because information about credit sales is typically not reported. Best Buy's 2007 accounts receivable turnover is computed as follows ($ millions).

Point: Some users prefer using gross accounts receivable (before subtracting the allowance for doubtful accounts) to avoid the influence of a manager's bad debts estimate.

$$\frac{\$35{,}934}{(\$548 + \$449)/2} = 72.1 \text{ times}$$

Accounts receivable turnover
Circuit City = 41.2
RadioShack = 17.1

Best Buy's value of 72.1 is larger than Circuit City's 41.2 and RadioShack's 17.1. Accounts receivable turnover is high when accounts receivable are quickly collected. A high turnover is favorable because it means the company need not commit large amounts of funds to accounts receivable. However, an accounts receivable turnover can be too high; this can occur when credit terms are so restrictive that they negatively affect sales volume.

Point: Ending accounts receivable can be substituted for the average balance in computing accounts receivable turnover if the difference between ending and average receivables is small.

Inventory Turnover How long a company holds inventory before selling it will affect working capital requirements. One measure of this effect is *inventory turnover,* also called *merchandise turnover* or *merchandise inventory turnover,* which is defined as follows.

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

Using Best Buy's cost of goods sold and inventories information, we compute its inventory turnover for 2007 as follows (if the beginning and ending inventories for the year do not represent the usual inventory amount, an average of quarterly or monthly inventories can be used).

$$\frac{\$27{,}165}{(\$4{,}028 + \$3{,}338)/2} = 7.38 \text{ times}$$

Inventory turnover
Circuit City = 5.70
RadioShack = 2.96
Industry = 4.5

Best Buy's inventory turnover of 7.38 is higher than Circuit City's 5.70, RadioShack's 2.96, and the industry's 4.5. A company with a high turnover requires a smaller investment in inventory than one producing the same sales with a lower turnover. Inventory turnover can be too high, however, if the inventory a company keeps is so small that it restricts sales volume.

Days' Sales Uncollected Accounts receivable turnover provides insight into how frequently a company collects its accounts. Days' sales uncollected is one measure of this activity, which is defined as follows:

$$\text{Days' sales uncollected} = \frac{\text{Accounts receivable, net}}{\text{Net sales}} \times 365$$

Any short-term notes receivable from customers are normally included in the numerator.

Best Buy's 2007 days' sales uncollected follows.

Day's sales uncollected
Circuit City = 11.23
RadioShack = 18.94

$$\frac{\$548}{\$35{,}934} \times 365 = 5.57 \text{ days}$$

Both Circuit City's days' sales uncollected of 11.23 days and RadioShack's 18.94 days are longer than the 5.57 days for Best Buy. Days' sales uncollected is more meaningful if we know company credit terms. A rough guideline states that days' sales uncollected should not exceed $1\frac{1}{3}$ times the days in its (1) credit period, *if* discounts are not offered or (2) discount period, *if* favorable discounts are offered.

Days' Sales in Inventory *Days' sales in in ventory* is a useful measure in evaluating inventory liquidity. Days' sales in inventory is linked to inventory in a way that days' sales uncollected is linked to receivables. We compute days' sales in inventory as follows.

$$\textbf{Days' sales in inventory} = \frac{\textbf{Ending inventory}}{\textbf{Cost of goods sold}} \times \textbf{365}$$

Best Buy's days' sales in inventory for 2007 follows.

Days' sales in inventory
Circuit City = 62.9
RadioShack = 107.9

$$\frac{\$4{,}028}{\$27{,}165} \times 365 = 54.1 \text{ days}$$

Point: *Average collection period* is estimated by dividing 365 by the accounts receivable turnover ratio. For example, 365 divided by an accounts receivable turnover of 6.1 indicates a 60-day average collection period.

If the products in Best Buy's inventory are in demand by customers, this formula estimates that its inventory will be converted into receivables (or cash) in 54.1 days. If all of Best Buy's sales were credit sales, the conversion of inventory to receivables in 54.1 days *plus* the conversion of receivables to cash in 5.57 days implies that inventory will be converted to cash in about 59.67 days (54.1 + 5.57).

Total Asset Turnover *Total asset turnover* reflects a company's ability to use its assets to generate sales and is an important indication of operating efficiency. The definition of this ratio follows.

$$\textbf{Total asset turnover} = \frac{\textbf{Net sales}}{\textbf{Average total assets}}$$

Best Buy's total asset turnover for 2007 follows and is less than Circuit City's, but greater than that for RadioShack.

Total asset turnover
Circuit City = 3.08
RadioShack = 2.24

$$\frac{\$35{,}934}{(\$13{,}570 + \$11{,}864)/2} = 2.83 \text{ times}$$

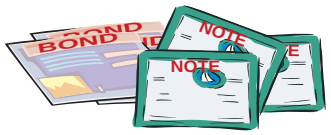
Quick Check

Answers—p. 502

8. Information from Paff Co. at Dec. 31, 2008, follows: cash, $820,000; accounts receivable, $240,000; inventories, $470,000; plant assets, $910,000; accounts payable, $350,000; and income taxes payable, $180,000. Compute its (*a*) current ratio and (*b*) acid-test ratio.

9. On Dec. 31, 2009, Paff Company (see question 8) had accounts receivable of $290,000 and inventories of $530,000. During 2009, net sales amounted to $2,500,000 and cost of goods sold was $750,000. Compute (*a*) accounts receivable turnover, (*b*) days' sales uncollected, (*c*) inventory turnover, and (*d*) days' sales in inventory.

Solvency



Solvency refers to a company's long-run financial viability and its ability to cover long-term obligations. All of a company's business activities—financing, investing, and operating—affect its solvency. Analysis of solvency is long term and uses less precise but more encompassing measures than liquidity. One of the most important components of solvency analysis is the composition of a company's capital structure. *Capital structure* refers to a company's financing sources. It ranges from relatively permanent equity financing to riskier or more temporary short-term financing. Assets represent security for financiers, ranging from loans secured by specific assets to the assets available as general security to unsecured creditors. This section describes the tools of solvency analysis. Our analysis focuses on a company's ability to both meet its obligations and provide security to its creditors *over the long run* . Indicators of this ability include *debt* and *equity* ratios, the relation between *pledged assets and secured liabilities,* and the company's capacity to earn sufficient income to *pay fixed interest charges*.

Debt and Equity Ratios One element of solvency analysis is to assess the portion of a company's assets contributed by its owners and the portion contributed by creditors. This relation is reflected in the debt ratio. The *debt ratio* expresses total liabilities as a percent of total assets. The **equity ratio** provides complementary information by expressing total equity as a percent of total assets. **Best Buy**'s debt and equity ratios follow.

($ millions)	2007	Ratios	
Total liabilities	$ 7,369	54.3%	[Debt ratio]
Total equity	6,201	45.7	[Equity ratio]
Total liabilities and equity	$13,570	100.0%	

Debt ratio :: Equity ratio
Circuit City = 55.3% :: 44.7%
RadioShack = 68.4% :: 31.6%

Best Buy's financial statements reveal more debt than equity. A company is considered less risky if its capital structure (equity and long-term debt) contains more equity. One risk factor is the required payment for interest and principal when debt is outstanding. Another factor is the greater the stockholder financing, the more losses a company can absorb through equity before the assets become inadequate to satisfy creditors' claims. From the stockholders' point of view, if a company earns a return on borrowed capital that is higher than the cost of borrowing, the difference represents increased income to stockholders. The inclusion of debt is described as *financial leverage* because debt can have the effect of increasing the return to stockholders. Companies are said to be highly leveraged if a large portion of their assets is financed by debt.

Point: Bank examiners from the FDIC and other regulatory agencies use debt and equity ratios to monitor compliance with regulatory capital requirements imposed on banks and S&Ls.

Debt-to-Equity Ratio The ratio of total liabilities to equity is another measure of solvency. We compute the ratio as follows.

$$\text{Debt-to-equity ratio} = \frac{\text{Total liabilities}}{\text{Total equity}}$$

Best Buy's debt-to-equity ratio for 2007 is

$$\$7{,}369/\$6{,}201 = 1.19$$

Debt-to-equity
Circuit City = 1.24
RadioShack = 2.17
Industry = 0.99

Best Buy's 1.19 debt-to-equity ratio is less than the 1.24 ratio for Circuit City and the 2.17 for RadioShack, but greater than the industry ratio of 0.99. Consistent with our inferences from the debt ratio, Best Buy's capital structure has more debt than equity, which increases risk. Recall that debt must be repaid with interest, while equity does not. These debt requirements can be burdensome when the industry and/or the economy experience a downturn. A larger debt-to-equity ratio also implies less opportunity to expand through use of debt financing.

Point: For analysis purposes, Minority Interest is usually included in equity.

Times Interest Earned The amount of income before deductions for interest expense and income taxes is the amount available to pay interest expense. The following *times interest*

Point: The times interest earned ratio and the debt and equity ratios are of special interest to bank lending officers.

earned ratio reflects the creditors' risk of loan repayments with interest.

$$\text{Times interest earned} = \frac{\text{Income before interest expense and income taxes}}{\text{Interest expense}}$$

The larger this ratio, the less risky is the company for creditors. One guideline says that creditors are reasonably safe if the company earns its fixed interest expense two or more times each year. Best Buy's times interest earned ratio follows; its value suggests that its creditors have little risk of nonrepayment.

Times interest earned
Circuit City = 12.5
RadioShack = 3.5

$$\frac{\$1{,}377 + \$31 \text{ (see Best Buy note \#7)} + \$752}{\$31} = 69.7$$

Decision Insight

Bears and Bulls A *bear market* is a declining market. The phrase comes from bear-skin jobbers who often sold the skins before the bears were caught. The term *bear* was then used to describe investors who sold shares they did not own in anticipation of a price decline. A *bull market* is a rising market. This phrase comes from the once popular sport of bear and bull baiting. The term *bull* came to mean the opposite of *bear.*

Profitability

We are especially interested in a company's ability to use its assets efficiently to produce profits (and positive cash flows). *Profitability* refers to a company's ability to generate an adequate return on invested capital. Return is judged by assessing earnings relative to the level and sources of financing. Profitability is also relevant to solvency. This section describes key profitability measures and their importance to financial statement analysis.

Profit Margin A company's operating efficiency and profitability can be expressed by two components. The first is *profit margin,* which reflects a company's ability to earn net income from sales. It is measured by expressing net income as a percent of sales (*sales* and *revenues* are similar terms). **Best Buy**'s profit margin follows.

Profit margin
Circuit City = −0.1%
RadioShack = 1.5%

$$\text{Profit margin} = \frac{\text{Net income}}{\text{Net sales}} = \frac{\$1{,}377}{\$35{,}934} = 3.8\%$$

To evaluate profit margin, we must consider the industry. For instance, an appliance company might require a profit margin between 10% and 15%; whereas a retail supermarket might require a profit margin of 1% or 2%. Both profit margin and *total asset turnover* make up the two basic components of operating efficiency. These ratios reflect on management because managers are ultimately responsible for operating efficiency. The next section explains how we use both measures to analyze return on total assets.

Return on Total Assets *Return on total assets* is defined as follows.

$$\text{Return on total assets} = \frac{\text{Net income}}{\text{Average total assets}}$$

Best Buy's 2007 return on total assets is

Return on total assets
Circuit City = −0.2%
RadioShack = 3.4%
Industry = 3.0

$$\frac{\$1{,}377}{(\$13{,}570 + \$11{,}864)/2} = 10.8\%$$

Best Buy's 10.8% return on total assets is lower than that for many businesses but is higher than RadioShack's return of 3.4% and the industry's 3.0% return. We also should evaluate any trend in the rate of return.

Point: Many analysts add back *Interest expense* × *(1 − Tax rate)* to net income in computing return on total assets.

The following equation shows the important relation between profit margin, total asset turnover, and return on total assets.

$$\textbf{Profit margin} \times \textbf{Total asset turnover} = \textbf{Return on total assets}$$

or

$$\frac{\textbf{Net income}}{\textbf{Net sales}} \times \frac{\textbf{Net sales}}{\textbf{Average total assets}} = \frac{\textbf{Net income}}{\textbf{Average total assets}}$$

Both profit margin and total asset turnover contribute to overall operating efficiency, as measured by return on total assets. If we apply this formula to Best Buy, we get

$$3.8\% \times 2.83 = 10.8\%$$

Circuit City: −0.1% × 3.08 = −0.2%
RadioShack: 1.5% × 2.24 = 3.4% (with rounding)

This analysis shows that Best Buy's superior return on assets versus that of Circuit City and RadioShack is driven mainly by its higher profit margin.

Return on Common Stockholders' Equity Perhaps the most important goal in operating a company is to earn net income for its owner(s). *Return on common stoc kholders' equity* measures a company's success in reaching this goal and is defined as follows.

$$\textbf{Return on common stockholders' equity} = \frac{\textbf{Net income} - \textbf{Preferred dividends}}{\textbf{Average common stockholders' equity}}$$

Best Buy's 2007 return on common stockholders' equity is computed as follows:

$$\frac{\$1{,}377 - \$0}{(\$6{,}236 + \$5{,}257)/2} = 24.0\%$$

Return on common equity
Circuit City = −0.4%
RadioShack = 11.8%

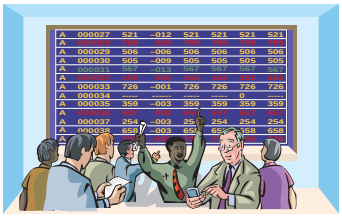
The denominator in this computation is the book value of common equity (including minority interest). In the numerator, the dividends on cumulative preferred stock are subtracted whether they are declared or are in arrears. If preferred stock is noncumulative, its dividends are subtracted only if declared.

Decision Insight

Wall Street *Wall Street* is synonymous with financial markets, but its name comes from the street location of the original New York Stock Exchange. The street's name derives from stockades built by early settlers to protect New York from pirate attacks.

Market Prospects

Market measures are useful for analyzing corporations with publicly traded stock. These market measures use stock price, which reflects the market's (public's) expectations for the company. This includes expectations of both company return and risk—as the market perceives it.



Price-Earnings Ratio Computation of the *price-earnings ratio* follows.

$$\textbf{Price-earnings ratio} = \frac{\textbf{Market price per common share}}{\textbf{Earnings per share}}$$

Point: PE ratio can be viewed as an indicator of the market's expected growth and risk for a stock. High expected risk suggests a low PE ratio. High expected growth suggests a high PE ratio.

Predicted earnings per share for the next period is often used in the denominator of this computation. Reported earnings per share for the most recent period is also commonly used. In both cases, the ratio is used as an indicator of the future growth and risk of a company's earnings as perceived by the stock's buyers and sellers.

The market price of Best Buy's common stock at the start of fiscal year 2008 was $46.35. Using Best Buy's $2.86 basic earnings per share, we compute its price-earnings ratio as follows (some analysts compute this ratio using the median of the low and high stock price).

PE (year-end)
Circuit City = −380.0
RadioShack = 31.1

$$\frac{\$46.35}{\$2.86} = 16.2$$

Point: Some investors avoid stocks with high PE ratios under the belief they are "overpriced." Alternatively, some investors *sell these stocks short*—hoping for price declines.

Best Buy's price-earnings ratio is less than that for RadioShack, but is slightly higher than the norm. (Circuit City's ratio is negative due to its abnormally low earnings.) Best Buy's middle-of-the-pack ratio likely reflects investors' expectations of continued growth but normal earnings.

Dividend Yield *Dividend yield* is used to compare the dividend-paying performance of different investment alternatives. We compute dividend yield as follows.

$$\textbf{Dividend yield} = \frac{\textbf{Annual cash dividends per share}}{\textbf{Market price per share}}$$

Best Buy's dividend yield, based on its fiscal year-end market price per share of $46.35 and its policy of $0.36 cash dividends per share, is computed as follows.

Dividend yield
Circuit City = 0.6%
RadioShack = 1.5%

$$\frac{\$0.36}{\$46.35} = 0.8\%$$

Some companies do not declare and pay dividends because they wish to reinvest the cash.

Point: Corporate PE ratios and dividend yields are found in daily stock market quotations listed in *The Wall Street Journal, Investor's Business Daily,* or other publications and Web services.

Summary of Ratios

Exhibit 13.16 summarizes the major financial statement analysis ratios illustrated in this chapter. This summary includes each ratio's title, its formula, and the purpose for which it is commonly used.

Decision Insight

Ticker Prices *Ticker prices* refer to a band of moving data on a monitor carrying up-to-the-minute stock prices. The phrase comes from *ticker tape,* a 1-inch-wide strip of paper spewing stock prices from a printer that ticked as it ran. Most of today's investors have never seen actual ticker tape, but the phrase survives.

Quick Check

Answers—p. 502

10. Which ratio best reflects a company's ability to meet immediate interest payments? (*a*) Debt ratio. (*b*) Equity ratio. (*c*) Times interest earned.

11. Which ratio best measures a company's success in earning net income for its owner(s)? (*a*) Profit margin. (*b*) Return on common stockholders' equity. (*c*) Price-earnings ratio. (*d*) Dividend yield.

12. If a company has net sales of $8,500,000, net income of $945,000, and total asset turnover of 1.8 times, what is its return on total assets?

EXHIBIT 13.16

Financial Statement Analysis Ratios

Ratio	Formula	Measure of
Liquidity and Efficiency		
Current ratio	$= \frac{\text{Current assets}}{\text{Current liabilities}}$	Short-term debt-paying ability
Acid-test ratio	$= \frac{\text{Cash} + \text{Short-term investments} + \text{Current receivables}}{\text{Current liabilities}}$	Immediate short-term debt-paying ability
Accounts receivable turnover	$= \frac{\text{Net sales}}{\text{Average accounts receivable, net}}$	Efficiency of collection
Inventory turnover	$= \frac{\text{Cost of goods sold}}{\text{Average inventory}}$	Efficiency of inventory management
Days' sales uncollected	$= \frac{\text{Accounts receivable, net}}{\text{Net sales}} \times 365$	Liquidity of receivables
Days' sales in inventory	$= \frac{\text{Ending inventory}}{\text{Cost of goods sold}} \times 365$	Liquidity of inventory
Total asset turnover	$= \frac{\text{Net sales}}{\text{Average total assets}}$	Efficiency of assets in producing sales
Solvency		
Debt ratio	$= \frac{\text{Total liabilities}}{\text{Total assets}}$	Creditor financing and leverage
Equity ratio	$= \frac{\text{Total equity}}{\text{Total assets}}$	Owner financing
Debt-to-equity ratio	$= \frac{\text{Total liabilities}}{\text{Total equity}}$	Debt versus equity financing
Times interest earned	$= \frac{\text{Income before interest expense and income taxes}}{\text{Interest expense}}$	Protection in meeting interest payments
Profitability		
Profit margin ratio	$= \frac{\text{Net income}}{\text{Net sales}}$	Net income in each sales dollar
Gross margin ratio	$= \frac{\text{Net sales} - \text{Cost of goods sold}}{\text{Net sales}}$	Gross margin in each sales dollar
Return on total assets	$= \frac{\text{Net income}}{\text{Average total assets}}$	Overall profitability of assets
Return on common stockholders' equity	$= \frac{\text{Net income} - \text{Preferred dividends}}{\text{Average common stockholders' equity}}$	Profitability of owner investment
Book value per common share	$= \frac{\text{Shareholders' equity applicable to common shares}}{\text{Number of common shares outstanding}}$	Liquidation at reported amounts
Basic earnings per share	$= \frac{\text{Net income} - \text{Preferred dividends}}{\text{Weighted-average common shares outstanding}}$	Net income per common share
Market Prospects		
Price-earnings ratio	$= \frac{\text{Market price per common share}}{\text{Earnings per share}}$	Market value relative to earnings
Dividend yield	$= \frac{\text{Annual cash dividends per share}}{\text{Market price per share}}$	Cash return per common share

Decision Analysis — Analysis Reporting

A1 Summarize and report results of analysis.

Understanding the purpose of financial statement analysis is crucial to the usefulness of any analysis. This understanding leads to efficiency of effort, effectiveness in application, and relevance in focus. The purpose of most financial statement analyses is to reduce uncertainty in business decisions through a rigorous and sound evaluation. A *financial statement analysis report* helps by directly addressing the building blocks of analysis and by identifying weaknesses in inference by requiring explanation: It forces us to organize our reasoning and to verify its flow and logic. A report also serves as a communication link with readers, and the writing process reinforces our judgments and vice versa. Finally, the report helps us (re)evaluate evidence and refine conclusions on key building blocks. A good analysis report usually consists of six sections:

1. **Executive summary**—brief focus on important analysis results and conclusions.
2. **Analysis overview**—background on the company, its industry, and its economic setting.
3. **Evidential matter**—financial statements and information used in the analysis, including ratios, trends, comparisons, statistics, and all analytical measures assembled; often organized under the building blocks of analysis.
4. **Assumptions**—identification of important assumptions regarding a company's industry and economic environment, and other important assumptions for estimates.
5. **Key factors**—list of important favorable and unfavorable factors, both quantitative and qualitative, for company performance; usually organized by areas of analysis.
6. **Inferences**—forecasts, estimates, interpretations, and conclusions drawing on all sections of the report.

We must remember that the user dictates relevance, meaning that the analysis report should include a brief table of contents to help readers focus on those areas most relevant to their decisions. All irrelevant matter must be eliminated. For example, decades-old details of obscure transactions and detailed miscues of the analysis are irrelevant. Ambiguities and qualifications to avoid responsibility or hedging inferences must be eliminated. Finally, writing is important. Mistakes in grammar and errors of fact compromise the report's credibility.

Decision Insight

Short Selling *Short selling* refers to selling stock before you buy it. Here's an example: You borrow 100 shares of Nike stock, sell them at $40 each, and receive money from their sale. You then wait. You hope that Nike's stock price falls to, say, $35 each and you can replace the borrowed stock for less than you sold it for, reaping a profit of $5 each less any transaction costs.

Demonstration Problem

Use the following financial statements of Precision Co. to complete these requirements.

1. Prepare comparative income statements showing the percent increase or decrease for year 2009 in comparison to year 2008.
2. Prepare common-size comparative balance sheets for years 2009 and 2008.
3. Compute the following ratios as of December 31, 2009, or for the year ended December 31, 2009, and identify its building block category for financial statement analysis.
   a. Current ratio
   b. Acid-test ratio
   c. Accounts receivable turnover
   d. Days' sales uncollected
   e. Inventory turnover
   f. Debt ratio
   g. Debt-to-equity ratio
   h. Times interest earned
   i. Profit margin ratio
   j. Total asset turnover
   k. Return on total assets
   l. Return on common stockholders' equity

PRECISION COMPANY
Comparative Balance Sheets
December 31, 2009 and 2008

	2009	2008
Assets		
Current assets		
Cash	$ 79,000	$ 42,000
Short-term investments	65,000	96,000
Accounts receivable, net	120,000	100,000
Merchandise inventory	250,000	265,000
Total current assets	514,000	503,000
Plant assets		
Store equipment, net	400,000	350,000
Office equipment, net	45,000	50,000
Buildings, net	625,000	675,000
Land	100,000	100,000
Total plant assets	1,170,000	1,175,000
Total assets	$1,684,000	$1,678,000
Liabilities		
Current liabilities		
Accounts payable	$ 164,000	$ 190,000
Short-term notes payable	75,000	90,000
Taxes payable	26,000	12,000
Total current liabilities	265,000	292,000
Long-term liabilities		
Notes payable (secured by mortgage on buildings)	400,000	420,000
Total liabilities	665,000	712,000
Stockholders' Equity		
Common stock, $5 par value	475,000	475,000
Retained earnings	544,000	491,000
Total stockholders' equity	1,019,000	966,000
Total liabilities and equity	$1,684,000	$1,678,000

PRECISION COMPANY
Comparative Income Statements
For Years Ended December 31, 2009 and 2008

	2009	2008
Sales	$2,486,000	$2,075,000
Cost of goods sold	1,523,000	1,222,000
Gross profit	963,000	853,000
Operating expenses		
Advertising expense	145,000	100,000
Sales salaries expense	240,000	280,000
Office salaries expense	165,000	200,000
Insurance expense	100,000	45,000
Supplies expense	26,000	35,000
Depreciation expense	85,000	75,000
Miscellaneous expenses	17,000	15,000
Total operating expenses	778,000	750,000
Operating income	185,000	103,000
Interest expense	44,000	46,000
Income before taxes	141,000	57,000
Income taxes	47,000	19,000
Net income	$ 94,000	$ 38,000
Earnings per share	$ 0.99	$ 0.40

Planning the Solution

- Set up a four-column income statement; enter the 2009 and 2008 amounts in the first two columns and then enter the dollar change in the third column and the percent change from 2008 in the fourth column.
- Set up a four-column balance sheet; enter the 2009 and 2008 year-end amounts in the first two columns and then compute and enter the amount of each item as a percent of total assets.
- Compute the required ratios using the data provided. Use the average of beginning and ending amounts when appropriate (see Exhibit 13.16 for definitions).

Solution to Demonstration Problem

1.

PRECISION COMPANY
Comparative Income Statements
For Years Ended December 31, 2009 and 2008

	2009	2008	Increase (Decrease) in 2009 Amount	Increase (Decrease) in 2009 Percent
Sales	$2,486,000	$2,075,000	$411,000	19.8%
Cost of goods sold	1,523,000	1,222,000	301,000	24.6
Gross profit	963,000	853,000	110,000	12.9
Operating expenses				
Advertising expense	145,000	100,000	45,000	45.0
Sales salaries expense	240,000	280,000	(40,000)	(14.3)
Office salaries expense	165,000	200,000	(35,000)	(17.5)

[continued on next page]

[continued from previous page]

Insurance expense	100,000	45,000	55,000	122.2
Supplies expense	26,000	35,000	(9,000)	(25.7)
Depreciation expense	85,000	75,000	10,000	13.3
Miscellaneous expenses	17,000	15,000	2,000	13.3
Total operating expenses	778,000	750,000	28,000	3.7
Operating income	185,000	103,000	82,000	79.6
Interest expense	44,000	46,000	(2,000)	(4.3)
Income before taxes	141,000	57,000	84,000	147.4
Income taxes	47,000	19,000	28,000	147.4
Net income	$ 94,000	$ 38,000	$ 56,000	147.4
Earnings per share	$ 0.99	$ 0.40	$ 0.59	147.5

2.

PRECISION COMPANY
Common-Size Comparative Balance Sheets
December 31, 2009 and 2008

	December 31		Common-Size Percents	
	2009	2008	2009*	2008*
Assets				
Current assets				
Cash	$ 79,000	$ 42,000	4.7%	2.5%
Short-term investments	65,000	96,000	3.9	5.7
Accounts receivable, net	120,000	100,000	7.1	6.0
Merchandise inventory	250,000	265,000	14.8	15.8
Total current assets	514,000	503,000	30.5	30.0
Plant Assets				
Store equipment, net	400,000	350,000	23.8	20.9
Office equipment, net	45,000	50,000	2.7	3.0
Buildings, net	625,000	675,000	37.1	40.2
Land	100,000	100,000	5.9	6.0
Total plant assets	1,170,000	1,175,000	69.5	70.0
Total assets	$1,684,000	$1,678,000	100.0	100.0
Liabilities				
Current liabilities				
Accounts payable	$ 164,000	$ 190,000	9.7%	11.3%
Short-term notes payable	75,000	90,000	4.5	5.4
Taxes payable	26,000	12,000	1.5	0.7
Total current liabilities	265,000	292,000	15.7	17.4
Long-term liabilities				
Notes payable (secured by mortgage on buildings)	400,000	420,000	23.8	25.0
Total liabilities	665,000	712,000	39.5	42.4
Stockholders' Equity				
Common stock, $5 par value	475,000	475,000	28.2	28.3
Retained earnings	544,000	491,000	32.3	29.3
Total stockholders' equity	1,019,000	966,000	60.5	57.6
Total liabilities and equity	$1,684,000	$1,678,000	100.0	100.0

* Columns do not always add to 100 due to rounding.

3. Ratios for 2009:

a. Current ratio: $514,000/$265,000 = 1.9:1 (liquidity and efficiency)

b. Acid-test ratio: ($79,000 + $65,000 + $120,000)/$265,000 = 1.0:1 (liquidity and efficiency)

c. Average receivables: ($120,000 + $100,000)/2 = $110,000
Accounts receivable turnover: $2,486,000/$110,000 = 22.6 times (liquidity and efficiency)

d. Days' sales uncollected: ($120,000/$2,486,000) × 365 = 17.6 days (liquidity and efficiency)

e. Average inventory: ($250,000 + $265,000)/2 = $257,500
Inventory turnover: $1,523,000/$257,500 = 5.9 times (liquidity and efficiency)

f. Debt ratio: $665,000/$1,684,000 = 39.5% (solvency)

g. Debt-to-equity ratio: $665,000/$1,019,000 = 0.65 (solvency)

h. Times interest earned: $185,000/$44,000 = 4.2 times (solvency)

i. Profit margin ratio: $94,000/$2,486,000 = 3.8% (profitability)

j. Average total assets: ($1,684,000 + $1,678,000)/2 = $1,681,000
Total asset turnover: $2,486,000/$1,681,000 = 1.48 times (liquidity and efficiency)

k. Return on total assets: $94,000/$1,681,000 = 5.6% or 3.8% × 1.48 = 5.6% (profitability)

l. Average total common equity: ($1,019,000 + $966,000)/2 = $992,500
Return on common stockholders' equity: $94,000/$992,500 = 9.5% (profitability)

APPENDIX

Sustainable Income

13A

A2 Explain the form and assess the content of a complete income statement.

When a company's revenue and expense transactions are from normal, continuing operations, a simple income statement is usually adequate. When a company's activities include income-related events not part of its normal, continuing operations, it must disclose information to help users understand these events and predict future performance. To meet these objectives, companies separate the income statement into continuing operations, discontinued segments, extraordinary items, comprehensive income, and earnings per share. For illustration, Exhibit 13A.1 shows such an income statement for ComUS. These separate distinctions help us measure *sustainable income,* which is the income level most likely to continue into the future. Sustainable income is commonly used in PE ratios and other market-based measures of performance.

Continuing Operations

The first major section (①) shows the revenues, expenses, and income from continuing operations. Users especially rely on this information to predict future operations. Many users view this section as the most important.

Discontinued Segments

A **business segment** is a part of a company's operations that serves a particular line of business or class of customers. A segment has assets, liabilities, and financial results of operations that can be distinguished from those of other parts of the company. A company's gain or loss from selling or closing down a segment is separately reported. Section ② of Exhibit 13A.1 reports both (1) income from operating the discontinued segment for the current period prior to its disposal and (2) the loss from disposing of the segment's net assets. The income tax effects of each are reported separately from the income taxes expense in section ①.

Extraordinary Items

Section ③ reports **extraordinary gains and losses,** which are those that are *both unusual* and *infrequent*. An **unusual gain or loss** is abnormal or otherwise unrelated to the company's regular activities and environment. An **infrequent gain or loss** is not expected to recur given the company's operating environment. Reporting extraordinary items in a separate category helps users predict future performance, absent the effects of extraordinary items. Items usually considered extraordinary include (1) expropriation (taking away) of property by a foreign government, (2) condemning of property by a domestic government body, (3) prohibition against using an asset by a newly enacted law, and (4) losses and gains from an unusual and infrequent calamity ("act of God"). Items *not* considered extraordinary include (1) write-downs

EXHIBIT 13A.1

Income Statement (all-inclusive) for a Corporation

ComUS
Income Statement
For Year Ended December 31, 2009

	Net sales		$8,478,000
	Operating expenses		
	Cost of goods sold	$5,950,000	
	Depreciation expense	35,000	
	Other selling, general, and administrative expenses	515,000	
	Interest expense	20,000	
①	Total operating expenses		(6,520,000)
	Other gains (losses)		
	Loss on plant relocation		(45,000)
	Gain on sale of surplus land		72,000
	Income from continuing operations before taxes		1,985,000
	Income taxes expense		(595,500)
	Income from continuing operations		1,389,500
	Discontinued segment		
②	Income from operating Division A (net of $180,000 taxes)	420,000	
	Loss on disposal of Division A (net of $66,000 tax benefit)	(154,000)	266,000
	Income before extraordinary items		1,655,500
	Extraordinary items		
③	Gain on land expropriated by state (net of $85,200 taxes)	198,800	
	Loss from earthquake damage (net of $270,000 tax benefit)	(630,000)	(431,200)
	Net income		$1,224,300
	Earnings per common share (200,000 outstanding shares)		
	Income from continuing operations		$ 6.95
	Discontinued operations		1.33
④	Income before extraordinary items		8.28
	Extraordinary items		(2.16)
	Net income (basic earnings per share)		$ 6.12

of inventories and write-offs of receivables, (2) gains and losses from disposing of segments, and (3) financial effects of labor strikes.

Gains and losses that are neither unusual nor infrequent are reported as part of continuing operations. Gains and losses that are *either* unusual *or* infrequent, but *not* both, are reported as part of continuing operations *but* after the normal revenues and expenses.

Decision Maker

Small Business Owner You own an orange grove near Jacksonville, Florida. A bad frost destroys about one-half of your oranges. You are currently preparing an income statement for a bank loan. Can you claim the loss of oranges as extraordinary? [Answer—p. 502]

Earnings per Share

The final section ④ of the income statement in Exhibit 13A.1 reports earnings per share for each of the three subcategories of income (continuing operations, discontinued segments, and extraordinary items) when they exist.

Changes in Accounting Principles

Point: Changes in principles are sometimes required when new accounting standards are issued.

The *consistency concept* directs a company to apply the same accounting principles across periods. Yet a company can change from one acceptable accounting principle (such as FIFO, LIFO, or weighted-average) to another as long as the change improves the usefulness of information in its financial statements. A footnote would describe the accounting change and why it is an improvement.

Changes in accounting principles require retrospective application to prior periods' financial statements. *Retrospective application* involves applying a different accounting principle to prior periods as if that principle had always been used. Retrospective application enhances the consistency of financial information between periods, which improves the usefulness of information, especially with comparative analyses. (Prior to 2005, the cumulative effect of changes in accounting principles was recognized in net income in the period of the change.) Accounting standards also require that *a change in depreciation, amortization, or depletion method for long-term operating assets is accounted for as a change in accounting estimate*—that is, prospectively over current and future periods. This reflects the notion that an entity should change its depreciation, amortization, or depletion method only with changes in estimated asset benefits, the pattern of benefit usage, or information about those benefits.

Comprehensive Income

Comprehensive income is net income plus certain gains and losses that bypass the income statement. These items are recorded directly to equity. Specifically, comprehensive income equals the change in equity for the period, excluding investments from and distributions (dividends) to its stockholders. For **Best Buy**, it is computed as follows ($ millions):

Net income	$1,377
Accumulated other comprehensive income (loss)	(45)
Comprehensive income	$1,332

The most common items included in *accumulated other comprehensive income*, or *AOCI*, are unrealized gains and losses on available-for-sale securities and foreign currency translation adjustments. (Detailed computations for these items are in advanced courses.) Analysts disagree on how to treat these items. Some analysts believe that AOCI items should not be considered when predicting future performance, and some others believe AOCI items should be considered as they reflect on company and managerial performance. Whatever our position, we must be familiar with what AOCI items are as they are commonly reported in financial statements. Best Buy reports its comprehensive income in its statement of shareholders' equity (see Appendix A).

Quick Check

Answers—p. 502

13. Which of the following is an extraordinary item? (*a*) a settlement paid to a customer injured while using the company's product, (*b*) a loss to a plant from damages caused by a meteorite, or (*c*) a loss from selling old equipment.

14. Identify the four major sections of an income statement that are potentially reportable.

15. A company using FIFO for the past 15 years decides to switch to LIFO. The effect of this event on prior years' net income is (*a*) reported as if the new method had always been used; (*b*) ignored because it is a change in an accounting estimate; or (*c*) reported on the current year income statement.

Summary

C1 **Explain the purpose of analysis.** The purpose of financial statement analysis is to help users make better business decisions. Internal users want information to improve company efficiency and effectiveness in providing products and services. External users want information to make better and more informed decisions in pursuing their goals. The common goals of all users are to evaluate a company's (1) past and current performance, (2) current financial position, and (3) future performance and risk.

C2 **Identify the building blocks of analysis.** Financial statement analysis focuses on four "building blocks" of analysis: (1) liquidity and efficiency—ability to meet short-term obligations and efficiently generate revenues; (2) solvency—ability to generate future revenues and meet long-term obligations; (3) profitability—ability to provide financial rewards sufficient to attract and retain financing; and (4) market prospects—ability to generate positive market expectations.

C3 **Describe standards for comparisons in analysis.** Standards for comparisons include (1) intracompany—prior performance and relations between financial items for the company under analysis; (2) competitor—one or more direct competitors of the company; (3) industry—industry statistics; and (4) guidelines (rules of thumb)—general standards developed from past experiences and personal judgments.

C4 **Identify the tools of analysis.** The three most common tools of financial statement analysis are (1) horizontal analysis—comparing a company's financial condition and performance across time; (2) vertical analysis—comparing a company's financial condition and performance to a base amount such as revenues or total

assets; and (3) ratio analysis—using and quantifying key relations among financial statement items.

A1 Summarize and report results of analysis. A financial statement analysis report is often organized around the building blocks of analysis. A good report separates interpretations and conclusions of analysis from the information underlying them. An analysis report often consists of six sections: (1) executive summary, (2) analysis overview, (3) evidential matter, (4) assumptions, (5) key factors, and (6) inferences.

A2[A] Explain the form and assess the content of a complete income statement. An income statement has four *potential* sections: (1) continuing operations, (2) discontinued segments, (3) extraordinary items, and (4) earnings per share.

P1 Explain and apply methods of horizontal analysis. Horizontal analysis is a tool to evaluate changes in data across time. Two important tools of horizontal analysis are comparative statements and trend analysis. Comparative statements show amounts for two or more successive periods, often with changes disclosed in both absolute and percent terms. Trend analysis is used to reveal important changes occurring from one period to the next.

P2 Describe and apply methods of vertical analysis. Vertical analysis is a tool to evaluate each financial statement item or group of items in terms of a base amount. Two tools of vertical analysis are common-size statements and graphical analyses. Each item in common-size statements is expressed as a percent of a base amount. For the balance sheet, the base amount is usually total assets, and for the income statement, it is usually sales.

P3 Define and apply ratio analysis. Ratio analysis provides clues to and symptoms of underlying conditions. Ratios, properly interpreted, identify areas requiring further investigation. A ratio expresses a mathematical relation between two quantities such as a percent, rate, or proportion. Ratios can be organized into the building blocks of analysis: (1) liquidity and efficiency, (2) solvency, (3) profitability, and (4) market prospects.

Guidance Answers to **Decision Maker**

Auditor The *joint relation* referred to is the combined increase in sales and the decrease in expenses yielding more than a 5% increase in income. Both *individual* accounts (sales and expenses) yield percent changes within the ±5% acceptable range. However, a joint analysis suggests a different picture. For example, consider a joint analysis using the profit margin ratio. The client's profit margin is 11.46% ($206,000 − $182,400/$206,000) for the current year compared with 5.0% ($200,000 − $190,000/$200,000) for the prior year—yielding a 129% increase in profit margin! This is what concerns the partner, and it suggests expanding audit tests to verify or refute the client's figures.

Banker Your decision on the loan application is positive for at least two reasons. First, the current ratio suggests a strong ability to meet short-term obligations. Second, current assets of $160,000 and a current ratio of 4:1 imply current liabilities of $40,000 (one-fourth of current assets) and a working capital excess of $120,000. This working capital excess is 60% of the loan amount. However, if the application is for a 10-year loan, our decision is less optimistic. The current ratio and working capital suggest a good safety margin, but indications of inefficiency in operations exist. In particular, a 4:1 current ratio is more than double its key competitors' ratio. This is characteristic of inefficient asset use.

Small Business Owner The frost loss is probably not extraordinary. Jacksonville experiences enough recurring frost damage to make it difficult to argue this event is both unusual and infrequent. Still, you want to highlight the frost loss and hope the bank views this uncommon event separately from continuing operations.

Guidance Answers to **Quick Checks**

1. General-purpose financial statements are intended for a variety of users interested in a company's financial condition and performance—users without the power to require specialized financial reports to meet their specific needs.
2. General-purpose financial statements include the income statement, balance sheet, statement of stockholders' (owner's) equity, and statement of cash flows plus the notes related to these statements.
3. *a*
4. Data from one or more direct competitors are usually preferred for comparative purposes.
5. *d*
6. Percents on comparative income statements show the increase or decrease in each item from one period to the next. On common-size comparative income statements, each item is shown as a percent of net sales for that period.
7. *c*
8. (*a*) ($820,000 + $240,000 + $470,000)/($350,000 + $180,000) = 2.9 to 1.
   (*b*) ($820,000 + $240,000)/($350,000 + $180,000) = 2:1.
9. (*a*) $2,500,000/[($290,000 + $240,000)/2] = 9.43 times.
   (*b*) ($290,000/$2,500,000) × 365 = 42 days.
   (*c*) $750,000/[($530,000 + $470,000)/2] = 1.5 times.
   (*d*) ($530,000/$750,000) × 365 = 258 days.
10. *c*
11. *b*
12. $$\text{Profit margin} \times \text{Total asset turnover} = \text{Return on total assets}$$
    $$\frac{\$945,000}{\$8,500,000} \times 1.8 = 20\%$$
13. (*b*)
14. The four (potentially reportable) major sections are income from continuing operations, discontinued segments, extraordinary items, and earnings per share.
15. (*a*); known as retrospective application.

Key Terms

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Key Terms are available at the book's Website for learning and testing in an online Flashcard Format.

Business segment (p. 499)
Common-size financial statement (p. 483)
Comparative financial statements (p. 478)
Efficiency (p. 477)
Equity ratio (p. 491)
Extraordinary gains and losses (p. 499)
Financial reporting (p. 477)
Financial statement analysis (p. 476)
General-purpose financial statements (p. 477)
Horizontal analysis (p. 478)
Infrequent gain or loss (p. 499)
Liquidity (p. 477)
Market prospects (p. 477)
Profitability (p. 477)
Ratio analysis (p. 478)
Solvency (p. 477)
Unusual gain or loss (p. 499)
Vertical analysis (p. 478)
Working capital (p. 487)

Multiple Choice Quiz

Answers on p. 518

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Additional Quiz Questions are available at the book's Website.

Quiz13

1. A company's sales in 2008 were $300,000 and in 2009 were $351,000. Using 2008 as the base year, the sales trend percent for 2009 is:
   a. 17%
   b. 85%
   c. 100%
   d. 117%
   e. 48%

Use the following information for questions 2 through 5.

GALLOWAY COMPANY
Balance Sheet
December 31, 2009

Assets	
Cash	$ 86,000
Accounts receivable	76,000
Merchandise inventory	122,000
Prepaid insurance	12,000
Long-term investments	98,000
Plant assets, net	436,000
Total assets	$830,000
Liabilities and Equity	
Current liabilities	$124,000
Long-term liabilities	90,000
Common stock	300,000
Retained earnings	316,000
Total liabilities and equity	$830,000

2. What is Galloway Company's current ratio?
   a. 0.69
   b. 1.31
   c. 3.88
   d. 6.69
   e. 2.39
3. What is Galloway Company's acid-test ratio?
   a. 2.39
   b. 0.69
   c. 1.31
   d. 6.69
   e. 3.88
4. What is Galloway Company's debt ratio?
   a. 25.78%
   b. 100.00%
   c. 74.22%
   d. 137.78%
   e. 34.74%
5. What is Galloway Company's equity ratio?
   a. 25.78%
   b. 100.00%
   c. 34.74%
   d. 74.22%
   e. 137.78%

Superscript letter [A] denotes assignments based on Appendix 13A.

Discussion Questions

1. What is the difference between comparative financial statements and common-size comparative statements?
2. Which items are usually assigned a 100% value on (*a*) a common-size balance sheet and (*b*) a common-size income statement?
3. Explain the difference between financial reporting and financial statements.
4. What three factors would influence your evaluation as to whether a company's current ratio is good or bad?

5. Suggest several reasons why a 2:1 current ratio might not be adequate for a particular company.
6. Why is working capital given special attention in the process of analyzing balance sheets?
7. What does the number of days' sales uncollected indicate?
8. What does a relatively high accounts receivable turnover indicate about a company's short-term liquidity?
9. Why is a company's capital structure, as measured by debt and equity ratios, important to financial statement analysts?
10. How does inventory turnover provide information about a company's short-term liquidity?
11. What ratios would you compute to evaluate management performance?
12. Why would a company's return on total assets be different from its return on common stockholders' equity?
13. Where on the income statement does a company report an unusual gain not expected to occur more often than once every two years or so?
14. Use **Best Buy**'s financial statements in Appendix A to compute its return on total assets for the years ended March 3, 2007, and February 25, 2006. Total assets at February 26, 2005, were $10,294 (in millions).
15. Refer to **Circuit City**'s financial statements in Appendix A to compute its equity ratio as of February 28, 2007, and February 28, 2006.
16. Refer to **RadioShack**'s financial statements in Appendix A. Compute its debt ratio as of December 31, 2006, and December 31, 2005.
17. Refer to **Apple**'s financial statements in Appendix A. Compute its profit margin for the fiscal year ended September 30, 2006.

Denotes Discussion Questions that involve decision making.

Most materials in this section are available in McGraw-Hill's Connect connect

QUICK STUDY

QS 13-1
Financial reporting C1

Which of the following items (1) through (9) are part of financial reporting but are *not* included as part of general-purpose financial statements? (1) stock price information and analysis, (2) statement of cash flows, (3) management discussion and analysis of financial performance, (4) income statement, (5) company news releases, (6) balance sheet, (7) financial statement notes, (8) statement of shareholders' equity, (9) prospectus.

QS 13-2
Standard of comparison C3

What are four possible standards of comparison used to analyze financial statement ratios? Which of these is generally considered to be the most useful? Which one is least likely to provide a good basis for comparison?

QS 13-3
Common-size and trend percents P1 P2

Use the following information for Owens Corporation to determine (1) the 2008 and 2009 common-size percents for cost of goods sold using net sales as the base and (2) the 2008 and 2009 trend percents for net sales using 2008 as the base year.

($ thousands)	2009	2008
Net sales	$101,400	$58,100
Cost of goods sold	55,300	30,700

QS 13-4
Horizontal analysis P1

Compute the annual dollar changes and percent changes for each of the following accounts.

	2009	2008
Short-term investments	$110,000	$80,000
Accounts receivable	22,000	25,000
Notes payable	30,000	0

QS 13-5
Building blocks of analysis C2 C4 P3

Match the ratio to the building block of financial statement analysis to which it best relates.

A. Liquidity and efficiency
B. Solvency
C. Profitability
D. Market prospects

1. _____ Gross margin ratio
2. _____ Acid-test ratio
3. _____ Equity ratio
4. _____ Return on total assets
5. _____ Dividend yield
6. _____ Book value per common share
7. _____ Days' sales in inventory
8. _____ Accounts receivable turnover
9. _____ Debt-to-equity
10. _____ Times interest earned

QS 13-6
Identifying financial ratios
C4 P3

1. Which two short-term liquidity ratios measure how frequently a company collects its accounts?
2. What measure reflects the difference between current assets and current liabilities?
3. Which two ratios are key components in measuring a company's operating efficiency? Which ratio summarizes these two components?

QS 13-7
Ratio interpretation
P3

For each ratio listed, identify whether the change in ratio value from 2008 to 2009 is usually regarded as favorable or unfavorable.

Ratio	2009	2008	Ratio	2009	2008
1. Profit margin	10%	9%	5. Accounts receivable turnover	6.7	5.5
2. Debt ratio	43%	39%	6. Basic earnings per share	$1.25	$1.10
3. Gross margin	32%	44%	7. Inventory turnover	3.4	3.6
4. Acid-test ratio	1.20	1.05	8. Dividend yield	4%	3.2%

QS 13-8[A]
Error adjustments
A2

A review of the notes payable files discovers that three years ago the company reported the entire amount of a payment (principal and interest) on an installment note payable as interest expense. This mistake had a material effect on the amount of income in that year. How should the correction be reported in the current year financial statements?

connect *Most materials in this section are available in McGraw-Hill's Connect*

EXERCISES

Exercise 13-1
Computation and analysis of trend percents
P1

Compute trend percents for the following accounts, using 2007 as the base year. State whether the situation as revealed by the trends appears to be favorable or unfavorable for each account.

	2011	2010	2009	2008	2007
Sales	$282,700	$270,700	$252,500	$234,460	$150,000
Cost of goods sold	128,100	121,980	115,180	106,340	67,000
Accounts receivable	18,000	17,200	16,300	15,100	9,000

Exercise 13-2
Determination of income effects from common-size and trend percents
P1 P2

Common-size and trend percents for Danian Company's sales, cost of goods sold, and expenses follow. Determine whether net income increased, decreased, or remained unchanged in this three-year period.

	Common-Size Percents			Trend Percents		
	2010	2009	2008	2010	2009	2008
Sales	100.0%	100.0%	100.0%	104.9%	103.7%	100.0%
Cost of goods sold	67.7	61.2	58.4	102.5	108.6	100.0
Total expenses	14.4	13.9	14.2	106.5	101.5	100.0

Exercise 13-3
Common-size percent computation and interpretation
P2

Express the following comparative income statements in common-size percents and assess whether or not this company's situation has improved in the most recent year.

MULAN CORPORATION
Comparative Income Statements
For Years Ended December 31, 2009 and 2008

	2009	2008
Sales	$657,386	$488,400
Cost of goods sold	427,301	286,202
Gross profit	230,085	202,198
Operating expenses	138,051	94,750
Net income	$ 92,034	$107,448

Exercise 13-4
Analysis of short-term financial condition
A1 P3

The following information is available for Orkay Company and Lowes Company, similar firms operating in the same industry. Write a half-page report comparing Orkay and Lowes using the available information. Your discussion should include their ability to meet current obligations and to use current assets efficiently.

Team Project: Assume that the two companies apply for a one-year loan from the team. Identify additional information the companies must provide before the team can make a loan decision.

Microsoft Excel - Book1

		Orkay			Lowes		
		2010	2009	2008	2010	2009	2008
3	Current ratio	1.6	1.7	2.0	3.1	2.6	1.8
4	Acid-test ratio	0.9	1.0	1.1	2.7	2.4	1.5
5	Accounts receivable turnover	29.5	24.2	28.2	15.4	14.2	15.0
6	Merchandise inventory turnover	23.2	20.9	16.1	13.5	12.0	11.6
7	Working capital	$60,000	$48,000	$42,000	$121,000	$93,000	$68,000

Exercise 13-5
Analysis of efficiency and financial leverage
A1 P3

Caren Company and Revlon Company are similar firms that operate in the same industry. Revlon began operations in 2009 and Caren in 2006. In 2011, both companies pay 7% interest on their debt to creditors. The following additional information is available.

	Caren Company			Revlon Company		
	2011	2010	2009	2011	2010	2009
Total asset turnover	3.0	2.7	2.9	1.6	1.4	1.1
Return on total assets	6.9%	6.5%	6.4%	4.3%	4.1%	3.1%
Profit margin ratio	2.3%	2.4%	2.2%	2.7%	2.9%	2.8%
Sales	$400,000	$370,000	$386,000	$200,000	$160,000	$100,000

Write a half-page report comparing Caren and Revlon using the available information. Your analysis should include their ability to use assets efficiently to produce profits. Also comment on their success in employing financial leverage in 2011.

Exercise 13-6
Common-size percents
P2

Nabisco Company's year-end balance sheets follow. Express the balance sheets in common-size percents. Round amounts to the nearest one-tenth of a percent. Analyze and comment on the results.

At December 31	2010	2009	2008
Assets			
Cash	$ 36,229	$ 42,780	$ 44,562
Accounts receivable, net	106,073	76,377	57,087
Merchandise inventory	137,408	98,929	62,038
Prepaid expenses	11,548	11,003	4,903
Plant assets, net	335,317	311,062	272,710
Total assets	$626,575	$540,151	$441,300
Liabilities and Equity			
Accounts payable	$157,577	$ 94,024	$ 57,087
Long-term notes payable secured by mortgages on plant assets	116,618	127,962	99,478
Common stock, $10 par value	163,500	163,500	163,500
Retained earnings	188,880	154,665	121,235
Total liabilities and equity	$626,575	$540,151	$441,300

Exercise 13-7
Liquidity analysis
P3

Refer to Nabisco Company's balance sheets in Exercise 13-6. Analyze its year-end short-term liquidity position at the end of 2010, 2009, and 2008 by computing (1) the current ratio and (2) the acid-test ratio. Comment on the ratio results. (Round ratio amounts to two decimals.)

Exercise 13-8
Liquidity analysis and interpretation
P3

Refer to the Nabisco Company information in Exercise 13-6. The company's income statements for the years ended December 31, 2010 and 2009, follow. Assume that all sales are on credit and then compute: (1) days' sales uncollected, (2) accounts receivable turnover, (3) inventory turnover, and (4) days' sales in inventory. Comment on the changes in the ratios from 2009 to 2010. (Round amounts to one decimal.)

For Year Ended December 31	2010		2009	
Sales		$685,000		$557,000
Cost of goods sold	$417,850		$356,265	
Other operating expenses	207,282		141,971	
Interest expense	8,175		8,960	
Income taxes	12,900		12,450	
Total costs and expenses		646,207		519,646
Net income		$ 38,793		$ 37,354
Earnings per share		$ 2.37		$ 2.28

Exercise 13-9
Risk and capital structure analysis
P3

Refer to the Nabisco Company information in Exercises 13-6 and 13-8. Compare the company's long-term risk and capital structure positions at the end of 2010 and 2009 by computing these ratios: (1) debt and equity ratios, (2) debt-to-equity ratio, and (3) times interest earned. Comment on these ratio results.

Exercise 13-10
Efficiency and profitability analysis
P3

Refer to Nabisco Company's financial information in Exercises 13-6 and 13-8. Evaluate the company's efficiency and profitability by computing the following for 2010 and 2009: (1) profit margin ratio, (2) total asset turnover, and (3) return on total assets. Comment on these ratio results.

Exercise 13-11
Profitability analysis
P3

Refer to Nabisco Company's financial information in Exercises 13-6 and 13-8. Additional information about the company follows. To help evaluate the company's profitability, compute and interpret the following ratios for 2010 and 2009: (1) return on common stockholders' equity, (2) price-earnings ratio on December 31, and (3) dividend yield.

Common stock market price, December 31, 2010	$30.00
Common stock market price, December 31, 2009	28.00
Annual cash dividends per share in 2010	0.28
Annual cash dividends per share in 2009	0.24

Exercise 13-12[A]
Income statement categories
A2

In 2009, Simplon Merchandising, Inc., sold its interest in a chain of wholesale outlets, taking the company completely out of the wholesaling business. The company still operates its retail outlets. A listing of the major sections of an income statement follows:

A. Income (loss) from continuing operations

B. Income (loss) from operating, or gain (loss) from disposing, a discontinued segment

C. Extraordinary gain (loss)

Indicate where each of the following income-related items for this company appears on its 2009 income statement by writing the letter of the appropriate section in the blank beside each item.

Section	Item	Debit	Credit
_____	1. Net sales		$3,000,000
_____	2. Gain on state's condemnation of company property (net of tax)		330,000
_____	3. Cost of goods sold	$1,580,000	
_____	4. Income taxes expense	117,000	
_____	5. Depreciation expense	332,500	
_____	6. Gain on sale of wholesale business segment (net of tax)		875,000
_____	7. Loss from operating wholesale business segment (net of tax)	544,000	
_____	8. Salaries expense	740,000	

Exercise 13-13A
Income statement presentation
A2

Use the financial data for Simplon Merchandising, Inc., in Exercise 13-12 to prepare its income statement for calendar year 2009. (Ignore the earnings per share section.)

Most materials in this section are available in McGraw-Hill's Connect connect

PROBLEM SET A

Problem 13-1A
Ratios, common-size statements, and trend percents
P1 P2 P3

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Selected comparative financial statements of Astalon Company follow.

ASTALON COMPANY
Comparative Income Statements
For Years Ended December 31, 2010, 2009, and 2008

	2010	2009	2008
Sales	$526,304	$403,192	$279,800
Cost of goods sold	316,835	255,624	179,072
Gross profit	209,469	147,568	100,728
Selling expenses	74,735	55,640	36,934
Administrative expenses	47,367	35,481	23,223
Total expenses	122,102	91,121	60,157
Income before taxes	87,367	56,447	40,571
Income taxes	16,250	11,572	8,236
Net income	$ 71,117	$ 44,875	$ 32,335

ASTALON COMPANY
Comparative Balance Sheets
December 31, 2010, 2009, and 2008

	2010	2009	2008
Assets			
Current assets	$ 48,242	$ 38,514	$ 51,484
Long-term investments	0	800	3,620
Plant assets, net	92,405	97,259	58,047
Total assets	$140,647	$136,573	$113,151
Liabilities and Equity			
Current liabilities	$ 20,534	$ 20,349	$ 19,801
Common stock	69,000	69,000	51,000
Other paid-in capital	8,625	8,625	5,667
Retained earnings	42,488	38,599	36,683
Total liabilities and equity	$140,647	$136,573	$113,151

Required

1. Compute each year's current ratio. (Round ratio amounts to one decimal.)
2. Express the income statement data in common-size percents. (Round percents to two decimals.)
3. Express the balance sheet data in trend percents with 2008 as the base year. (Round percents to two decimals.)

Check (3) 2010, Total assets trend, 124.30%

Analysis Component

4. Comment on any significant relations revealed by the ratios and percents computed.

Problem 13-2A

Calculation and analysis of trend percents

A1 P1

Selected comparative financial statements of Adobe Company follow.

ADOBE COMPANY
Comparative Income Statements
For Years Ended December 31, 2010–2004

($ thousands)	2010	2009	2008	2007	2006	2005	2004
Sales	$2,431	$2,129	$1,937	$1,776	$1,657	$1,541	$1,263
Cost of goods sold	1,747	1,421	1,223	1,070	994	930	741
Gross profit	684	708	714	706	663	611	522
Operating expenses	521	407	374	276	239	236	196
Net income	$ 163	$ 301	$ 340	$ 430	$ 424	$ 375	$ 326

ADOBE COMPANY
Comparative Balance Sheets
December 31, 2010–2004

($ thousands)	2010	2009	2008	2007	2006	2005	2004
Assets							
Cash	$ 163	$ 216	$ 224	$ 229	$ 238	$ 235	$ 242
Accounts receivable, net	1,173	1,232	1,115	855	753	714	503
Merchandise inventory	4,244	3,090	2,699	2,275	2,043	1,735	1,258
Other current assets	109	98	60	108	91	93	48
Long-term investments	0	0	0	334	334	334	334
Plant assets, net	5,192	5,172	4,526	2,553	2,639	2,345	2,015
Total assets	$10,881	$9,808	$8,624	$6,354	$6,098	$5,456	$4,400
Liabilities and Equity							
Current liabilities	$ 2,734	$2,299	$1,509	$1,255	$1,089	$1,030	$ 664
Long-term liabilities	2,924	2,547	2,478	1,151	1,176	1,273	955
Common stock	1,980	1,980	1,980	1,760	1,760	1,540	1,540
Other paid-in capital	495	495	495	440	440	385	385
Retained earnings	2,748	2,487	2,162	1,748	1,633	1,228	856
Total liabilities and equity	$10,881	$9,808	$8,624	$6,354	$6,098	$5,456	$4,400

Required

1. Compute trend percents for all components of both statements using 2004 as the base year. (Round percents to one decimal.)

Check (1) 2010, Total assets trend, 247.3%

Analysis Component

2. Analyze and comment on the financial statements and trend percents from part 1.

Problem 13-3A

Transactions, working capital, and liquidity ratios

P3

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Page Corporation began the month of May with $884,000 of current assets, a current ratio of 2.6:1, and an acid-test ratio of 1.5:1. During the month, it completed the following transactions (the company uses a perpetual inventory system).

May 2 Purchased $70,000 of merchandise inventory on credit.
8 Sold merchandise inventory that cost $60,000 for $130,000 cash.
10 Collected $30,000 cash on an account receivable.
15 Paid $31,000 cash to settle an account payable.

17 Wrote off a $5,000 bad debt against the Allowance for Doubtful Accounts account.
22 Declared a $1 per share cash dividend on its 67,000 shares of outstanding common stock.
26 Paid the dividend declared on May 22.
27 Borrowed $85,000 cash by giving the bank a 30-day, 10% note.
28 Borrowed $100,000 cash by signing a long-term secured note.
29 Used the $185,000 cash proceeds from the notes to buy new machinery.

Check May 22: Current ratio, 2.23; Acid-test ratio, 1.37

May 29: Current ratio, 2.00; Working capital, $462,000

Required

Prepare a table showing Page's (1) current ratio, (2) acid-test ratio, and (3) working capital, after each transaction. Round ratios to two decimals.

Problem 13-4A

Calculation of financial statement ratios

P3

eXcel

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Selected year-end financial statements of Cadet Corporation follow. (All sales were on credit; selected balance sheet amounts at December 31, 2008, were inventory, $56,900; total assets, $219,400; common stock, $85,000; and retained earnings, $52,348.)

CADET CORPORATION
Income Statement
For Year Ended December 31, 2009

Sales	$456,600
Cost of goods sold	297,450
Gross profit	159,150
Operating expenses	99,400
Interest expense	3,900
Income before taxes	55,850
Income taxes	22,499
Net income	$ 33,351

CADET CORPORATION
Balance Sheet
December 31, 2009

Assets		Liabilities and Equity	
Cash	$ 20,000	Accounts payable	$ 21,500
Short-term investments	8,200	Accrued wages payable	4,400
Accounts receivable, net	29,400	Income taxes payable	3,700
Notes receivable (trade)*	7,000	Long-term note payable, secured by mortgage on plant assets	67,400
Merchandise inventory	34,150	Common stock	85,000
Prepaid expenses	2,700	Retained earnings	66,750
Plant assets, net	147,300	Total liabilities and equity	$248,750
Total assets	$248,750		

* These are short-term notes receivable arising from customer (trade) sales.

Required

Check Acid-test ratio, 2.2 to 1: Inventory turnover, 6.5

Compute the following: (1) current ratio, (2) acid-test ratio, (3) days' sales uncollected, (4) inventory turnover, (5) days' sales in inventory, (6) debt-to-equity ratio, (7) times interest earned, (8) profit margin ratio, (9) total asset turnover, (10) return on total assets, and (11) return on common stockholders' equity.

Problem 13-5A

Comparative ratio analysis A1 P3

Summary information from the financial statements of two companies competing in the same industry follows.

	Karto Company	Bryan Company
Data from the current year-end balance sheets		
Assets		
Cash	$ 19,500	$ 36,000
Accounts receivable, net	36,400	53,400
Current notes receivable (trade)	9,400	7,600
Merchandise inventory	84,740	134,500
Prepaid expenses	6,200	7,250
Plant assets, net	350,000	307,400
Total assets	$506,240	$546,150
Liabilities and Equity		
Current liabilities	$ 63,340	$ 73,819
Long-term notes payable	82,485	99,000
Common stock, $5 par value	190,000	196,000
Retained earnings	170,415	177,331
Total liabilities and equity	$506,240	$546,150

	Karto Company	Bryan Company
Data from the current year's income statement		
Sales	$790,000	$897,200
Cost of goods sold	588,100	634,500
Interest expense	7,600	19,000
Income tax expense	15,185	24,769
Net income	$179,115	$218,931
Basic earnings per share	$ 4.71	$ 5.58
Beginning-of-year balance sheet data		
Accounts receivable, net	$ 26,800	$ 51,200
Current notes receivable (trade)	0	0
Merchandise inventory	55,600	107,400
Total assets	408,000	422,500
Common stock, $5 par value	190,000	196,000
Retained earnings	124,300	95,600

Required

1. For both companies compute the (*a*) current ratio, (*b*) acid-test ratio, (*c*) accounts (including notes) receivable turnover, (*d*) inventory turnover, (*e*) days' sales in inventory, and (*f*) days' sales uncollected. Identify the company you consider to be the better short-term credit risk and explain why.
2. For both companies compute the (*a*) profit margin ratio, (*b*) total asset turnover, (*c*) return on total assets, and (*d*) return on common stockholders' equity. Assuming that each company paid cash dividends of $3.50 per share and each company's stock can be purchased at $85 per share, compute their (*e*) price-earnings ratios and (*f*) dividend yields. Identify which company's stock you would recommend as the better investment and explain why.

Check (1) Bryan: Accounts receivable turnover, 16.0; Inventory turnover, 5.2

(2) Karto: Profit margin, 22.7%; PE, 18.0

Problem 13-6A[A]

Income statement computations and format

A2

Selected account balances from the adjusted trial balance for Lindo Corporation as of its calendar year-end December 31, 2009, follow.

	Debit	Credit
a. Interest revenue		$ 15,000
b. Depreciation expense—Equipment	$ 35,000	
c. Loss on sale of equipment	26,850	
d. Accounts payable		45,000
e. Other operating expenses	107,400	
f. Accumulated depreciation—Equipment		72,600
g. Gain from settlement of lawsuit		45,000
h. Accumulated depreciation—Buildings		175,500
i. Loss from operating a discontinued segment (pretax)	19,250	
j. Gain on insurance recovery of tornado damage (pretax and extraordinary)		30,120
k. Net sales		999,500
l. Depreciation expense—Buildings	53,000	
m. Correction of overstatement of prior year's sales (pretax)	17,000	
n. Gain on sale of discontinued segment's assets (pretax)		35,000
o. Loss from settlement of lawsuit	24,750	
p. Income taxes expense	?	
q. Cost of goods sold	483,500	

Required

Answer each of the following questions by providing supporting computations.

1. Assume that the company's income tax rate is 30% for all items. Identify the tax effects and after-tax amounts of the four items labeled pretax.
2. What is the amount of income from continuing operations before income taxes? What is the amount of the income taxes expense? What is the amount of income from continuing operations?

Check (3) $11,025
(4) $241,325
(5) $262,409

3. What is the total amount of after-tax income (loss) associated with the discontinued segment?
4. What is the amount of income (loss) before the extraordinary items?
5. What is the amount of net income for the year?

PROBLEM SET B

Problem 13-1B

Ratios, common-size statements, and trend percents

P1 P2 P3

Selected comparative financial statement information of Danno Corporation follows.

DANNO CORPORATION
Comparative Income Statements
For Years Ended December 31, 2010, 2009, and 2008

	2010	2009	2008
Sales	$392,000	$300,304	$208,400
Cost of goods sold	235,984	190,092	133,376
Gross profit	156,016	110,212	75,024
Selling expenses	55,664	41,442	27,509
Administrative expenses	35,280	26,427	17,297
Total expenses	90,944	67,869	44,806
Income before taxes	65,072	42,343	30,218
Income taxes	12,103	8,680	6,134
Net income	$ 52,969	$ 33,663	$ 24,084

DANNO CORPORATION
Comparative Balance Sheets
December 31, 2010, 2009, and 2008

	2010	2009	2008
Assets			
Current assets	$ 53,776	$ 42,494	$ 55,118
Long-term investments	0	400	4,110
Plant assets, net	99,871	106,303	64,382
Total assets	$153,647	$149,197	$123,610
Liabilities and Equity			
Current liabilities	$ 22,432	$ 22,230	$ 21,632
Common stock	70,000	70,000	52,000
Other paid-in capital	8,750	8,750	5,778
Retained earnings	52,465	48,217	44,200
Total liabilities and equity	$153,647	$149,197	$123,610

Required

1. Compute each year's current ratio. (Round ratio amounts to one decimal.)
2. Express the income statement data in common-size percents. (Round percents to two decimals.)

Check (3) 2010, Total assets trend, 124.30%

3. Express the balance sheet data in trend percents with 2008 as the base year. (Round percents to two decimals.)

Analysis Component

4. Comment on any significant relations revealed by the ratios and percents computed.

Problem 13-2B
Calculation and analysis of trend percents

A1 P1

Selected comparative financial statements of Park Company follow.

PARK COMPANY
Comparative Income Statements
For Years Ended December 31, 2010–2004

($ thousands)	2010	2009	2008	2007	2006	2005	2004
Sales	$570	$620	$640	$690	$750	$780	$870
Cost of goods sold	286	300	304	324	350	360	390
Gross profit	284	320	336	366	400	420	480
Operating expenses	94	114	122	136	150	154	160
Net income	$190	$206	$214	$230	$250	$266	$320

PARK COMPANY
Comparative Balance Sheets
December 31, 2010–2004

($ thousands)	2010	2009	2008	2007	2006	2005	2004
Assets							
Cash	$ 54	$ 56	$ 62	$ 64	$ 70	$ 72	$ 78
Accounts receivable, net	140	146	150	154	160	164	170
Merchandise inventory	176	182	188	190	196	200	218
Other current assets	44	44	46	48	48	50	50
Long-term investments	46	40	36	120	120	120	120
Plant assets, net	520	524	530	422	430	438	464
Total assets	$980	$992	$1,012	$998	$1,024	$1,044	$1,100
Liabilities and Equity							
Current liabilities	$158	$166	$ 196	$200	$ 220	$ 270	$ 290
Long-term liabilities	102	130	152	158	204	224	270
Common stock	180	180	180	180	180	180	180
Other paid-in capital	80	80	80	80	80	80	80
Retained earnings	460	436	404	380	340	290	280
Total liabilities and equity	$980	$992	$1,012	$998	$1,024	$1,044	$1,100

Required

1. Compute trend percents for all components of both statements using 2004 as the base year. (Round percents to one decimal.)

Check (1) 2010, Total assets trend, 89.1%

Analysis Component

2. Analyze and comment on the financial statements and trend percents from part 1.

Problem 13-3B
Transactions, working capital, and liquidity ratios

P3

Menardo Corporation began the month of June with $600,000 of current assets, a current ratio of 2.5:1, and an acid-test ratio of 1.4:1. During the month, it completed the following transactions (the company uses a perpetual inventory system).

June 1 Sold merchandise inventory that cost $150,000 for $240,000 cash.
3 Collected $176,000 cash on an account receivable.
5 Purchased $300,000 of merchandise inventory on credit.
7 Borrowed $200,000 cash by giving the bank a 60-day, 8% note.
10 Borrowed $240,000 cash by signing a long-term secured note.
12 Purchased machinery for $550,000 cash.
15 Declared a $1 per share cash dividend on its 160,000 shares of outstanding common stock.
19 Wrote off a $10,000 bad debt against the Allowance for Doubtful Accounts account.
22 Paid $24,000 cash to settle an account payable.
30 Paid the dividend declared on June 15.

Check June 3: Current ratio, 2.88; Acid-test ratio, 2.40

June 30: Working capital, $(20,000); Current ratio, 0.97

Required

Prepare a table showing the company's (1) current ratio, (2) acid-test ratio, and (3) working capital after each transaction. Round ratios to two decimals.

Problem 13-4B

Calculation of financial statement ratios

P3

Selected year-end financial statements of Steele Corporation follow. (All sales were on credit; selected balance sheet amounts at December 31, 2008, were inventory, $55,900; total assets, $249,400; common stock, $105,000; and retained earnings, $17,748.)

STEELE CORPORATION
Income Statement
For Year Ended December 31, 2009

Sales	$447,600
Cost of goods sold	298,150
Gross profit	149,450
Operating expenses	98,500
Interest expense	4,600
Income before taxes	46,350
Income taxes	18,672
Net income	$ 27,678

STEELE CORPORATION
Balance Sheet
December 31, 2009

Assets		Liabilities and Equity	
Cash	$ 8,000	Accounts payable	$ 25,500
Short-term investments	8,000	Accrued wages payable	3,000
Accounts receivable, net	28,800	Income taxes payable	4,000
Notes receivable (trade)*	8,000	Long-term note payable, secured by mortgage on plant assets	63,400
Merchandise inventory	34,150	Common stock, $5 par value	105,000
Prepaid expenses	2,750	Retained earnings	39,100
Plant assets, net	150,300		
Total assets	$240,000	Total liabilities and equity	$240,000

* These are short-term notes receivable arising from customer (trade) sales.

Required

Check Acid-test ratio, 1.6 to 1; Inventory turnover, 6.6

Compute the following: (1) current ratio, (2) acid-test ratio, (3) days' sales uncollected, (4) inventory turnover, (5) days' sales in inventory, (6) debt-to-equity ratio, (7) times interest earned, (8) profit margin ratio, (9) total asset turnover, (10) return on total assets, and (11) return on common stockholders' equity.

Problem 13-5B

Comparative ratio analysis A1 P3

Summary information from the financial statements of two companies competing in the same industry follows.

	Crisco Company	Silas Company
Data from the current year-end balance sheets		
Assets		
Cash	$ 21,000	$ 37,500
Accounts receivable, net	78,100	71,500
Current notes receivable (trade)	12,600	10,000
Merchandise inventory	87,800	83,000
Prepaid expenses	10,700	11,100
Plant assets, net	177,900	253,300
Total assets	$388,100	$466,400
Liabilities and Equity		
Current liabilities	$100,500	$ 98,000
Long-term notes payable	85,650	62,400
Common stock, $5 par value	150,000	170,000
Retained earnings	51,950	136,000
Total liabilities and equity	$388,100	$466,400

	Crisco Company	Silas Company
Data from the current year's income statement		
Sales	$394,600	$668,500
Cost of goods sold	291,600	481,000
Interest expense	6,900	13,300
Income tax expense	6,700	14,300
Net income	34,850	62,700
Basic earnings per share	1.16	1.84
Beginning-of-year balance sheet data		
Accounts receivable, net	$ 73,200	$ 74,300
Current notes receivable (trade)	0	0
Merchandise inventory	106,100	81,500
Total assets	384,400	444,000
Common stock, $5 par value	150,000	170,000
Retained earnings	50,100	110,700

Required

1. For both companies compute the (*a*) current ratio, (*b*) acid-test ratio, (*c*) accounts (including notes) receivable turnover, (*d*) inventory turnover, (*e*) days' sales in inventory, and (*f*) days' sales uncollected. Identify the company you consider to be the better short-term credit risk and explain why.
2. For both companies compute the (*a*) profit margin ratio, (*b*) total asset turnover, (*c*) return on total assets, and (*d*) return on common stockholders' equity. Assuming that each company paid cash dividends of $1.10 per share and each company's stock can be purchased at $25 per share, compute their (*e*) price-earnings ratios and (*f*) dividend yields. Identify which company's stock you would recommend as the better investment and explain why.

Check (1) Crisco: Accounts receivable turnover, 4.8; Inventory turnover, 3.0

(2) Silas: Profit margin, 9.4%; PE, 13.6

Problem 13-6B[A]

Income statement computations and format

A2

Selected account balances from the adjusted trial balance for Harton Corp. as of its calendar year-end December 31, 2009, follow.

	Debit	Credit
a. Accumulated depreciation—Buildings		$ 410,000
b. Interest revenue		30,000
c. Net sales		2,650,000
d. Income taxes expense	$?	
e. Loss on hurricane damage (pretax and extraordinary)	74,000	
f. Accumulated depreciation—Equipment		230,000
g. Other operating expenses	338,000	
h. Depreciation expense—Equipment	110,000	
i. Loss from settlement of lawsuit	46,000	
j. Gain from settlement of lawsuit		78,000
k. Loss on sale of equipment	34,000	
l. Loss from operating a discontinued segment (pretax)	130,000	
m. Depreciation expense—Buildings	166,000	
n. Correction of overstatement of prior year's expense (pretax)		58,000
o. Cost of goods sold	1,050,000	
p. Loss on sale of discontinued segment's assets (pretax)	190,000	
q. Accounts payable		142,000

Required

Answer each of the following questions by providing supporting computations.

1. Assume that the company's income tax rate is 25% for all items. Identify the tax effects and after-tax amounts of the four items labeled pretax.
2. What is the amount of income from continuing operations before income taxes? What is the amount of income taxes expense? What is the amount of income from continuing operations?
3. What is the total amount of after-tax income (loss) associated with the discontinued segment?
4. What is the amount of income (loss) before the extraordinary items?
5. What is the amount of net income for the year?

Check (3) $(240,000)

(4) $520,500

(5) $465,000

SERIAL PROBLEM

Success Systems

(This serial problem began in Chapter 1 and continues through most of the book. If previous chapter segments were not completed, the serial problem can begin at this point. It is helpful, but not necessary, to use the Working Papers that accompany the book.)

SP 13 Use the following selected data from Success Systems' income statement for the three months ended March 31, 2010, and from its March 31, 2010, balance sheet to complete the requirements below: computer services revenue, $25,160; net sales (of goods), $18,693; total sales and revenue, $43,853; cost of goods sold, $14,052; net income, $18,686; quick assets, $100,205; current assets, $105,209; total assets, $129,909; current liabilities, $875; total liabilities, $875; and total equity, $129,034.

Required

1. Compute the gross margin ratio (both with and without services revenue) and net profit margin ratio.
2. Compute the current ratio and acid-test ratio.
3. Compute the debt ratio and equity ratio.
4. What percent of its assets are current? What percent are long term?

BEYOND THE NUMBERS

REPORTING IN ACTION

A1 P1 P2

BTN 13-1 Refer to **Best Buy**'s financial statements in Appendix A to answer the following.

1. Using fiscal 2005 as the base year, compute trend percents for fiscal years 2005, 2006, and 2007 for revenues, cost of sales, selling general and administrative expenses, income taxes, and net income. (Round to the nearest whole percent.)
2. Compute common-size percents for fiscal years 2007 and 2006 for the following categories of assets: (*a*) total current assets, (*b*) property and equipment, net, and (*c*) intangible assets. (Round to the nearest tenth of a percent.)
3. Comment on any significant changes across the years for the income statement trends computed in part 1 and the balance sheet percents computed in part 2.

Fast Forward

4. Access Best Buy's financial statements for fiscal years ending after March 3, 2007, from Best Buy's Website (**BestBuy.com**) or the SEC database (**www.SEC.gov**). Update your work for parts 1, 2, and 3 using the new information accessed.

COMPARATIVE ANALYSIS

C3 P2

BTN 13-2 Key figures for **Best Buy**, **Circuit City**, and **RadioShack** follow.

($ millions)	Best Buy	Circuit City	RadioShack
Cash and equivalents	$ 1,205	$ 141	$ 472
Accounts receivable, net	548	383	248
Inventories	4,028	1,637	752
Retained earnings	5,507	1,336	1,781
Cost of sales	27,165	9,501	2,544
Revenues	35,934	12,430	4,778
Total assets	13,570	4,007	2,070

Required

1. Compute common-size percents for each of the companies using the data provided. (Round percents to one decimal.)
2. Which company retains a higher portion of cumulative net income in the company?
3. Which company has a higher gross margin ratio on sales?
4. Which company holds a higher percent of its total assets as inventory?

ETHICS CHALLENGE

A1

BTN 13-3 As Beacon Company controller, you are responsible for informing the board of directors about its financial activities. At the board meeting, you present the following information.

	2009	2008	2007
Sales trend percent	147.0%	135.0%	100.0%
Selling expenses to sales	10.1%	14.0%	15.6%
Sales to plant assets ratio	3.8 to 1	3.6 to 1	3.3 to 1
Current ratio	2.9 to 1	2.7 to 1	2.4 to 1
Acid-test ratio	1.1 to 1	1.4 to 1	1.5 to 1
Inventory turnover	7.8 times	9.0 times	10.2 times
Accounts receivable turnover	7.0 times	7.7 times	8.5 times
Total asset turnover	2.9 times	2.9 times	3.3 times
Return on total assets	10.4%	11.0%	13.2%
Return on stockholders' equity	10.7%	11.5%	14.1%
Profit margin ratio	3.6%	3.8%	4.0%

After the meeting, the company's CEO holds a press conference with analysts in which she mentions the following ratios.

	2009	2008	2007
Sales trend percent	147.0%	135.0%	100.0%
Selling expenses to sales	10.1%	14.0%	15.6%
Sales to plant assets ratio	3.8 to 1	3.6 to 1	3.3 to 1
Current ratio	2.9 to 1	2.7 to 1	2.4 to 1

Required

1. Why do you think the CEO decided to report 4 ratios instead of the 11 prepared?
2. Comment on the possible consequences of the CEO's reporting of the ratios selected.

COMMUNICATING IN PRACTICE

C2 A1 P3

BTN 13-4 Each team is to select a different industry, and each team member is to select a different company in that industry and acquire its financial statements. Use those statements to analyze the company, including at least one ratio from each of the four building blocks of analysis. When necessary, use the financial press to determine the market price of its stock. Communicate with teammates via a meeting, e-mail, or telephone to discuss how different companies compare to each other and to industry norms. The team is to prepare a single one-page memorandum reporting on its analysis and the conclusions reached.

TAKING IT TO THE NET

C4 P3

BTN 13-5 Access the February 23, 2007, filing of the 2006 10-K report of the **Hershey Foods Corporation** (ticker HSY) at **www.SEC.gov** and complete the following requirements.

Required

Compute or identify the following profitability ratios of Hershey for its years ending December 31, 2006, *and* December 31, 2005. Interpret its profitability using the results obtained for these two years.

1. Profit margin ratio.
2. Gross profit ratio.
3. Return on total assets. (Total assets in 2004 were $3,794,750,000.)
4. Return on common stockholders' equity. (Total shareholders' equity in 2004 was $1,137,103,000.)
5. Basic earnings per common share.

TEAMWORK IN ACTION

C2 P1 P2 P3

BTN 13-6 A team approach to learning financial statement analysis is often useful.

Required

1. Each team should write a description of horizontal and vertical analysis that all team members agree with and understand. Illustrate each description with an example.
2. *Each* member of the team is to select *one* of the following categories of ratio analysis. Explain what the ratios in that category measure. Choose one ratio from the category selected, present its formula, and explain what it measures.
   - **a.** Liquidity and efficiency
   - **b.** Solvency
   - **c.** Profitability
   - **d.** Market prospects
3. Each team member is to present his or her notes from part 2 to teammates. Team members are to confirm or correct other teammates' presentation.

Hint: Pairing within teams may be necessary for part 2. Use as an in-class activity or as an assignment. Consider presentations to the entire class using team rotation with transparencies.

ENTREPRENEURIAL DECISION

A1 P1 P2 P3

BTN 13-7 Assume that David and Tom Gardner of **The Motley Fool** (**Fool.com**) have impressed you since you first heard of their rather improbable rise to prominence in financial circles. You learn of a staff opening at The Motley Fool and decide to apply for it. Your resume is successfully screened from the thousands received and you advance to the interview process. You learn that the interview consists of analyzing the following financial facts and answering analysis questions. (*Note:* The data are taken from a small merchandiser in outdoor recreational equipment.)

	2008	2007	2006
Sales trend percents	137.0%	125.0%	100.0%
Selling expenses to sales	9.8%	13.7%	15.3%
Sales to plant assets ratio	3.5 to 1	3.3 to 1	3.0 to 1
Current ratio	2.6 to 1	2.4 to 1	2.1 to 1
Acid-test ratio	0.8 to 1	1.1 to 1	1.2 to 1
Merchandise inventory turnover	7.5 times	8.7 times	9.9 times
Accounts receivable turnover	6.7 times	7.4 times	8.2 times
Total asset turnover	2.6 times	2.6 times	3.0 times
Return on total assets	8.8%	9.4%	11.1%
Return on equity	9.75%	11.50%	12.25%
Profit margin ratio	3.3%	3.5%	3.7%

Required

Use these data to answer each of the following questions with explanations.

1. Is it becoming easier for the company to meet its current liabilities on time and to take advantage of any available cash discounts? Explain.
2. Is the company collecting its accounts receivable more rapidly? Explain.
3. Is the company's investment in accounts receivable decreasing? Explain.
4. Is the company's investment in plant assets increasing? Explain.
5. Is the owner's investment becoming more profitable? Explain.
6. Did the dollar amount of selling expenses decrease during the three-year period? Explain.

HITTING THE ROAD

C1 P3

BTN 13-8 You are to devise an investment strategy to enable you to accumulate $1,000,000 by age 65. Start by making some assumptions about your salary. Next compute the percent of your salary that you will be able to save each year. If you will receive any lump-sum monies, include those amounts in your calculations. Historically, stocks have delivered average annual returns of 10–11%. Given this history, you should probably not assume that you will earn above 10% on the money you invest. It is not necessary to specify exactly what types of assets you will buy for your investments; just assume a rate you expect to earn. Use the future value tables in Appendix B to calculate how your savings will grow. Experiment a bit with your figures to see how much less you have to save if you start at, for example, age 25 versus age 35 or 40. (For this assignment, do not include inflation in your calculations.)

GLOBAL DECISION

A1

BTN 13-9 **DSG international plc** (www.DSGiplc.com), **Best Buy**, **Circuit City**, and **RadioShack** are competitors in the global marketplace. Key figures for DSG follow (in millions).

Cash and equivalents	£ 441
Accounts receivable, net	393
Inventories	1,031
Retained earnings	1,490
Cost of sales	7,285
Revenues	7,930
Total assets	3,977

Required

1. Compute common-sized percents for DSG using the data provided. (Round percents to one decimal.)
2. Compare the results with Best Buy, Circuit City, and RadioShack from BTN 13-2.

ANSWERS TO MULTIPLE CHOICE QUIZ

1. d; ($351,000/$300,000) × 100 = 117%
2. e; ($86,000 + $76,000 + $122,000 + $12,000)/$124,000 = 2.39
3. c; ($86,000 + $76,000)/$124,000 = 1.31
4. a; ($124,000 + $90,000)/$830,000 = 25.78%
5. d; ($300,000 + $316,000)/$830,000 = 74.22%