Chapter 5

Basics of Analysis

The analysis of financial data employs various techniques to emphasize the comparative and relative importance of the data presented and to evaluate the position of the firm. These techniques include ratio analysis, common-size analysis, study of differences in components of financial statements among industries, review of descriptive material, and comparisons of results with other types of data. The information derived from these types of analysis should be blended to determine the overall financial position. No one type of analysis supports overall findings or serves all types of users. This chapter provides an introduction to different analyses and uses of financial information.

Financial statement analysis is a judgmental process. One of the primary objectives is identification of major changes (turning points) in trends, amounts, and relationships and investigation of the reasons underlying those changes. Often, a turning point may signal an early warning of a significant shift in the future success or failure of the business. The judgment process can be improved by experience and by the use of analytical tools.

Ratio Analysis

Financial ratios are usually expressed as a percent or as times per period. The following ratios will be discussed fully in future chapters.

1. Liquidity ratios measure a firm's ability to meet its current obligations. They may include ratios that measure the efficiency of the use of current assets and current liabilities (Chapter 6).
2. Borrowing capacity (leverage) ratios measure the degree of protection of suppliers of long-term funds (Chapter 7).
3. Profitability ratios measure the earning ability of a firm. Discussion will include measures of the use of assets in general (Chapter 8).
4. Investors are interested in a special group of ratios, in addition to liquidity, debt, and profitability ratios (Chapter 9).
5. Cash flow ratios can indicate liquidity, borrowing capacity, or profitability (Chapter 10).

A ratio can be computed from any pair of numbers. Given the large quantity of variables included in financial statements, a very long list of meaningful ratios can be derived. A standard list of ratios or standard computation of them does not exist. Each author and source on financial analysis uses a different list and often a different computation of the same ratio. This book presents frequently utilized and discussed ratios.

Ratios are interpretable in comparison with (1) prior ratios, (2) ratios of competitors, (3) industry ratios, and (4) predetermined standards. The trend of a ratio and the variability of a ratio are important considerations.

Comparison of income statement and balance sheet numbers, in the form of ratios, can create difficulties due to the timing of the financial statements. Specifically, the income statement covers the entire fiscal period; whereas, the balance sheet applies to a single point in time, the end of the period. Ideally, then, to compare an income statement figure such as sales to a balance sheet figure such as receivables, we need to know the average receivables for the year that the sales figure covers. However, these data are not available to the external analyst. In some cases, the analyst uses an average of the beginning and ending balance sheet figures. This approach smooths out changes from beginning to end, but it does not eliminate problems due to seasonal and cyclical changes. It also does not reflect changes that occur unevenly throughout the year.

Be aware that computing averages from two similar balance sheet dates can be misleading. It is possible that a representative average cannot be computed from externally published statements.

A ratio will usually represent a fairly accurate trend, even when the ratio is distorted. If the ratio is distorted, then it does not represent a good absolute number.

Applying the U.S. techniques of ratio analysis to statements prepared in other countries can be misleading. The ratio analysis must be understood in terms of the accounting principles used and the business practices and culture of the country.

Common-Size Analysis (Vertical and Horizontal)

Common-size analysis expresses comparisons in percentages. For example, if cash is $40,000 and total assets is $1,000,000, then cash represents 4% of total assets. The use of percentages is usually preferable to the use of absolute amounts. An illustration will make this clear. If Firm A earns $10,000 and Firm B earns $1,000, which is more profitable? Firm A is probably your response. However, the total owners' equity of A is $1,000,000, and B's is $10,000. The return on owners' equity is as follows:

	Firm A	Firm B
Earnings / Owners' Equity	$\frac{\$10,000}{\$1,000,000} = 1\%$	$\frac{\$1,000}{\$10,000} = 10\%$

The use of common-size analysis makes comparisons of firms of different sizes much more meaningful. Care must be exercised in the use of common-size analysis with small absolute amounts because a small change in amount can result in a very substantial percentage change. For example, if profits last year amounted to $100 and increased this year to $500, this would be an increase of only $400 in profits, but it would represent a substantial percentage increase.

Vertical analysis compares each amount with a base amount selected from the same year. For example, if advertising expenses were $1,000 in 2007 and sales were $100,000, the advertising would have been 1% of sales.

Horizontal analysis compares each amount with a base amount for a selected base year. For example, if sales were $400,000 in 2006 and $600,000 in 2007, then sales increased to 150% of the 2006 level in 2007, an increase of 50%.

Exhibit 5-1 illustrates common-size analysis (vertical and horizontal).

Year-to-Year Change Analysis

Comparing financial statements over two time periods using absolute amounts and percentages can be meaningful. This approach aids in keeping absolute and percentage changes in perspective. For example, a substantial percentage change may not be relevant because of an immaterial absolute change. When performing year-to-year change analysis, follow these rules:

1. When an item has value in the base year and none in the next period, the decrease is 100%.
2. A meaningful percent change cannot be computed when one number is positive and the other number is negative.
3. No percent change is computable when there is no figure for the base year.

These rules are illustrated in Exhibit 5-2.

Exhibit 5-1 MELCHER COMPANY

Income Statement

Illustration of Common-Size Analysis (Vertical and Horizontal)

(Absolute dollars)	**For the Years Ended December 31,** 2007	2006	2005
Revenue from sales	$100,000	$95,000	$91,000
Cost of products sold	65,000	60,800	56,420
Gross profit	35,000	34,200	34,580
Operating expenses			
Selling expenses	14,000	11,400	10,000
General expenses	16,000	15,200	13,650
Total operating expenses	30,000	26,600	23,650
Operating income before income taxes	5,000	7,600	10,930
Taxes related to operations	1,500	2,280	3,279
Net income	$ 3,500	$ 5,320	$ 7,651
Vertical Common Size			
Revenue from sales	100.0%	100.0%	100.0%
Cost of goods sold	65.0	64.0	62.0
Gross profit	35.0	36.0	38.0
Operating expenses			
Selling expenses	14.0	12.0	11.0
General expenses	16.0	16.0	15.0
Total operating expenses	30.0	28.0	26.0
Operating income before income taxes	5.0	8.0	12.0
Taxes related to operations	1.5	2.4	3.6
Net income	3.5%	5.6%	8.4%
Horizontal Common Size			
Revenue from sales	109.9%	104.4%	100.0%
Cost of goods sold	115.2	107.8	100.0
Gross profit	101.2	98.9	100.0
Operating expenses			
Selling expenses	140.0	114.0	100.0
General expenses	117.2	111.4	100.0
Total operating expenses	126.8	112.5	100.0
Operating income before income taxes	45.7	69.5	100.0
Taxes related to operations	45.7	69.5	100.0
Net income	45.7	69.5	100.0

Exhibit 5-2 YEAR-TO-YEAR CHANGE ANALYSIS

(Illustrating Rules)

Item	**Year 1**	**Year 2**	**Change Analysis Amount**	**Percent**
Advertising expense	$20,000	$ —	$(20,000)	(100%)
Operating income	6,000	(3,000)	(9,000)	—
Net income	(7,000)	8,000	15,000	—
Other	—	4,000	4,000	—

Financial Statement Variation by Type of Industry

The components of financial statements, especially the balance sheet and the income statement, will vary by type of industry. Exhibits 5-3, 5-4, and 5-5 (pages 180–185) illustrate, respectively, a merchandising firm (Best Buy Co., Inc.), a service firm (Kelly Services, Inc. and Subsidiaries), and a manufacturing firm (Cooper Tire & Rubber Company).

Merchandising (retail-wholesale) firms sell products purchased from other firms. A principal asset is inventory, which consists of merchandise inventories. For some merchandising firms, a large amount of sales may be for cash. In such cases, the receivables balance will be relatively low. Other merchandising firms have a large amount of sales charged but also accept credit

Exhibit 5-3 BEST BUY CO., INC.*

Merchandising Firm

Best Buy Co., Inc.
Consolidated Balance Sheets
($ in millions, except per share amounts)

Assets	**March 3, 2007**	**February 25, 2006**
Current Assets		
Cash and cash equivalents	$ 1,205	$ 748
Short-term investments	2,588	3,041
Receivables	548	449
Merchandise inventories	4,028	3,338
Other current assets	712	409
Total current assets	9,081	7,985
Property and Equipment		
Land and buildings	705	580
Leasehold improvements	1,540	1,325
Fixtures and equipment	2,627	2,898
Property under capital lease	32	33
	4,904	4,836
Less accumulated depreciation	1,966	2,124
Net property and equipment	2,938	2,712
Goodwill	919	557
Tradenames	81	44
Long-Term Investments	318	218
Other Assets	233	348
Total Assets	$ 13,570	$ 11,864
Liabilities and Shareholders' Equity		
Current Liabilities		
Accounts payable	$ 3,934	$ 3,234
Unredeemed gift card liabilities	496	469
Accrued compensation and related expenses	332	354
Accrued liabilities	990	878
Accrued income taxes	489	703
Short-term debt	41	—
Current portion of long-term debt	19	418
Total current liabilities	6,301	6,056
Long-Term Liabilities	443	373
Long-Term Debt	590	178
Minority Interests	35	—
Shareholders' Equity		
Preferred stock, $1.00 par value: Authorized—400,000 shares; Issued and outstanding—none	—	—
Common stock, $.10 par value; Authorized—1 billion shares; Issued and outstanding—480,655,000 and 485,098,000 shares, respectively	48	49
Additional paid-in capital	430	643
Retained earnings	5,507	4,304
Accumulated other comprehensive income	216	261
Total shareholders' equity	6,201	5,257
Total Liabilities and Shareholders' Equity	$13,570	$11,864

*"Best Buy Co., Inc. . . . is a specialty retailer of consumer electronics, home-office products, entertainment software, appliances and related services." 10-K

Exhibit 5-3 BEST BUY CO., INC. (Continued)

Best Buy Co., Inc.
Consolidated Statements of Earnings
($ in millions, except per share amounts)

Fiscal Years Ended	March 3, 2007	February 25, 2006	February 26, 2005
Revenue	$35,934	$30,848	$27,433
Cost of goods sold	27,165	23,122	20,938
Gross profit	8,769	7,726	6,495
Selling, general and administrative expenses	6,770	6,082	5,053
Operating income	1,999	1,644	1,442
Net interest income	111	77	1
Gain on investments	20	—	—
Earnings from continuing operations before income tax expense	2,130	1,721	1,443
Income tax expense	752	581	509
Minority interest in earnings	1	—	—
Earnings from continuing operations	1,377	1,140	934
Gain on disposal of discontinued operations (Note 2), net of tax	—	—	50
Net earnings	$ 1,377	$ 1,140	$ 984
Basic earnings per share:			
Continuing operations	$ 2.86	$ 2.33	$ 1.91
Gain on disposal of discontinued operations	—	—	0.10
Basic earnings per share	$ 2.86	$ 2.33	$ 2.01
Diluted earnings per share:			
Continuing operations	$ 2.79	$ 2.27	$ 1.86
Gain on disposal of discontinued operations	—	—	0.10
Diluted earnings per share	$ 2.79	$ 2.27	$ 1.96
Basic weighted-average common shares outstanding (in millions)	482.1	490.3	488.9
Diluted weighted-average common shares outstanding (in millions)	496.2	504.8	505.0

cards such as VISA, so they also have a relatively low balance in receivables. Other firms extend credit and carry the accounts receivable and thus have a relatively large receivables balance. Because of the competitive nature of the industry, profit ratios on the income statement are often quite low, with the cost of sales and operating expenses constituting a large portion of expenses. Refer to Exhibit 5-3, Best Buy Co., Inc.

A service firm generates its revenue from the service provided. Because service cannot typically be stored, inventory is low or nonexistent. In people-intensive services, such as advertising, investment in property and equipment is also low compared with that of manufacturing firms. Refer to Exhibit 5-4, Kelly Services, Inc. and Subsidiaries.

A manufacturing firm will usually have large inventories composed of raw materials, work in process, and finished goods, as well as a material investment in property, plant, and equipment. Notes and accounts receivable may also be material, depending on the terms of sale. The cost of sales often represents the major expense. Refer to Exhibit 5-5, Cooper Tire & Rubber Company.

Review of Descriptive Information

The descriptive information found in an annual report, in trade periodicals, and in industry reviews helps us understand the financial position of a firm. Descriptive material might discuss the role of research and development in producing future sales, present data on capital expansion and the goals related thereto, discuss aspects of employee relations such as minority hiring or union negotiations, or help explain the dividend policy of the firm. In its annual report, a company must present a section called Management Discussion and Analysis (MD&A). This section provides an overview of the previous year and an overview of future goals and new projects. Although the MD&A is unaudited, the information it contains can be very useful.

Exhibit 5-4 KELLY SERVICES, INC. AND SUBSIDIARIES*

Service Firm

BALANCE SHEETS
Kelly Services, Inc. and Subsidiaries

	2006	2005
	(In thousands of dollars)	
ASSETS		
Current Assets		
Cash and equivalents	$ 118,428	$ 63,699
Trade accounts receivable, less allowances of $16,818 and $16,648, respectively	838,246	803,812
Prepaid expenses and other current assets	45,316	47,588
Deferred taxes	29,543	33,805
Total current assets	1,031,533	948,904
Property and Equipment		
Land and buildings	61,410	58,461
Equipment, furniture and leasehold improvements	311,244	297,980
Accumulated depreciation	(202,366)	(190,684)
Net property and equipment	170,288	165,757
Noncurrent Deferred Taxes	35,437	22,088
Goodwill, net	96,504	88,217
Other Assets	135,662	87,891
Total Assets	$1,469,424	$1,312,857
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities		
Short-term borrowings	$ 68,928	$ 56,644
Accounts payable	132,819	110,411
Accrued payroll and related taxes	274,284	263,112
Accrued insurance	24,191	34,097
Income and other taxes	68,055	56,651
Total current liabilities	568,277	520,915
Noncurrent Liabilities		
Accrued insurance	57,277	54,517
Accrued retirement benefits	71,990	57,443
Other long-term liabilities	13,323	7,939
Total noncurrent liabilities	142,590	119,899
Stockholders' Equity		
Capital stock, $1.00 par value		
Class A common stock, shares issued 36,632,768 at 2006 and 36,620,146 at 2005	36,633	36,620
Class B common stock, shares issued 3,483,098 at 2006 and 3,495,720 at 2005	3,483	3,496
Treasury stock, at cost		
Class A common stock, 3,698,781 shares at 2006 and 4,269,753 at 2005	(78,241)	(90,319)
Class B common stock, 22,575 shares at 2006 and 2005	(600)	(600)
Paid-in capital	32,048	27,015
Earnings invested in the business	735,104	688,033
Accumulated other comprehensive income	30,130	7,798
Total stockholders' equity	758,557	672,043
Total Liabilities and Stockholders' Equity	$1,469,424	$1,312,857

*"We have evolved from a United States-based company concentrating primarily on traditional office services into a global staffing leader with a breadth of specialty businesses. We now assign professional and technical employees in the fields of finance and accounting, education, engineering, information technology, legal, science, health and home care." 10-K

Exhibit 5-4 KELLY SERVICES, INC. AND SUBSIDIARIES (Continued)

STATEMENTS OF EARNINGS
For the three fiscal years ended December 31, 2006
Kelly Services, Inc. and Subsidiaries

	2006	2005	2004(1)
	(In thousands of dollars except per share items)		
Revenue from services	$5,605,752	$5,251,712	$4,932,650
Cost of services	4,680,538	4,402,618	4,143,411
Gross profit	925,214	849,094	789,239
Selling, general and administrative expenses	846,198	797,813	758,128
Earnings from operations	79,016	51,281	31,111
Other income (expense), net	1,471	(187)	(861)
Earnings from continuing operations before taxes	80,487	51,094	30,250
Income taxes	23,112	14,813	10,780
Earnings from continuing operations	57,375	36,281	19,470
Earnings from discontinued operations, net of tax	6,116	2,982	1,741
Net earnings	$ 63,491	$ 39,263	$ 21,211
Basic earnings per share			
Earnings from continuing operations	$ 1.59	$ 1.02	$ .55
Earnings from discontinued operations	.17	.08	.05
Net earnings	$ 1.76	$ 1.10	$ .60
Diluted earnings per share			
Earnings from continuing operations	$ 1.58	$ 1.01	$ .55
Earnings from discontinued operations	.17	.08	.05
Net earnings	$ 1.75	$ 1.09	$ .60
Dividends per share	$ .45	$ .40	$ .40
Average shares outstanding (thousands):			
Basic	35,999	35,667	35,115
Diluted	36,314	35,949	35,461

(1) Fiscal year included 53 weeks

Comparisons

Absolute figures or ratios appear meaningless unless compared to other figures or ratios. If a person were asked if $10 is a lot of money, the frame of reference would determine the answer. To a small child, still in awe of a quarter, $10 is a lot. To a millionaire, a $10 bill is nothing. Similarly, having 60% of total assets composed of buildings and equipment would be normal for some firms but disastrous for others. One must have a guide to determine the meaning of the ratios and other measures. Several types of comparisons offer insight.

Trend Analysis

Trend analysis studies the financial history of a firm for comparison. By looking at the trend of a particular ratio, one sees whether that ratio is falling, rising, or remaining relatively constant. This helps detect problems or observe good management.

Standard Industrial Classification (SIC) Manual

The Standard Industrial Classification is a statistical classification of business by industry. The National Technical Information Service publishes the classification manual. The manual is the responsibility of the Office of Management and Budget, which is under the executive office of the president.

Exhibit 5-5 COOPER TIRE & RUBBER COMPANY*

Manufacturing Firm

CONSOLIDATED BALANCE SHEETS
December 31
(Dollar amounts in thousands, except par value amounts)

	2005	2006
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 280,712	$ 221,655
Accounts receivable, less allowances of $5,765 in 2005 and $8,880 in 2006	338,793	414,096
Inventories at lower of cost or market:		
Finished goods	221,968	240,100
Work in progress	21,820	28,458
Raw materials and supplies	62,258	83,129
	306,046	351,687
Other current assets	20,120	21,686
Deferred income taxes	23,130	—
Total current assets	968,801	1,009,124
Property, plant and equipment:		
Land and land improvements	39,152	41,553
Buildings	266,364	298,706
Machinery and equipment	1,396,248	1,636,091
Molds, cores and rings	225,555	268,158
	1,927,319	2,244,508
Less accumulated depreciation and amortization	1,141,094	1,252,692
Net property, plant and equipment	786,225	991,816
Goodwill	48,172	24,439
Intangibles, net of accumulated amortization of $18,028 in 2005 and $22,446 in 2006	31,108	37,399
Restricted cash	12,382	7,550
Other assets	305,498	164,951
	$2,152,186	$2,235,279
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Notes payable	$ 79	$ 112,803
Payable to non-controlling owner of subsidiary	—	51,527
Accounts payable	157,785	238,181
Accrued liabilities	99,659	117,005
Income taxes	15,390	4,698
Liabilities related to the sale of automotive operations	4,684	3,038
Total current liabilities	277,597	527,252
Long-term debt	491,618	513,213
Postretirement benefits other than pensions	181,997	258,579
Other long-term liabilities	220,896	217,743
Long-term liabilities related to the sale of automotive operations	14,407	8,913
Deferred income taxes	21,941	—
Minority interests in consolidated subsidiaries	4,954	69,688
Stockholders' equity:		
Preferred stock, $1 par value; 5,000,000 shares authorized; none issued	—	—
Common stock, $1 par value; 300,000,000 shares authorized; 86,322,514 shares issued in 2005 and 2006	86,323	86,323
Capital in excess of par value	37,667	38,144
Retained earnings	1,361,269	1,256,971
Cumulative other comprehensive loss	(86,323)	(282,552)
	1,398,936	1,098,886

*"Cooper Tire & Rubber Company . . . is a leading manufacturer of replacement tires. It is the fourth largest tire manufacturer in North America and, according to a recognized trade source, is the ninth largest tire company in the world based on jobs." 10-K

Exhibit 5-5 COOPER TIRE & RUBBER COMPANY (Continued)

	2005	2006
Less: common shares in treasury at cost (25,001,503 in 2005 and 24,943,265 in 2006)	$ (460,160)	$ (458,995)
Total stockholders' equity	938,776	639,891
	$2,152,186	$2,235,279

CONSOLIDATED STATEMENTS OF OPERATIONS
Years ended December 31
(Dollar amounts in thousands except per share amounts)

	2004	2005	2006
Net sales	$2,081,609	$2,155,185	$2,676,242
Cost of products sold	1,848,616	1,967,835	2,478,679
Gross profit	232,993	187,350	197,563
Selling, general and administrative	171,689	161,192	192,737
Adjustments to class action warranty	(11,273)	(277)	—
Restructuring	9,353	—	14,575
Operating profit	63,224	26,435	(9,749)
Interest expense	27,569	54,511	47,166
Debt extinguishment costs	—	4,228	(77)
Interest income	(2,068)	(18,541)	(10,067)
Dividend from unconsolidated subsidiary	-—	—	(4,286)
Impairment of goodwill and indefinite-lived intangible asset	—	—	51,546
Other—net	2,717	588	(2,077)
Income/(loss) from continuing operations before income taxes	35,006	(14,351)	(91,954)
Provision (benefit) for income taxes	7,560	704	(9,727)
Income/(loss) from continuing operations before minority interests	27,446	(15,055)	(82,227)
Minority interests	—	22	(3,663)
Income/(loss) from continuing operations	27,446	(15,033)	(85,890)
Income from discontinued operations, net of income taxes	61,478	—	7,379
Gain on sale of discontinued operations including income tax benefit	112,448	5,677	—
Net income/(loss)	$ 201,372	$ (9,356)	$ (78,511)
Basic earnings (loss) per share:			
Income/(loss) from continuing operations	$ 0.37	$ (0.24	$ (1.40)
Income from discontinued operations	0.83	—	0.12
Gain on sale of discontinued operations	1.52	0.09	—
Net income/(loss)	$ 2.71**	$ (0.15)	$ (1.28)
Diluted earnings (loss) per share:			
Income/(loss) from continuing operations	$ 0.37	$ (0.24)	$ (1.40)
Income from discontinued operations	0.82	—	0.12
Gain on sale of discontinued operations	1.50	0.09	—
Net income/(loss)	$ 2.68**	$ (0.15)	$ (1.28)

**Amounts do not add due to rounding.

Use of the SIC promotes comparability of various facets of the U.S. economy and defines industries in accordance with the composition and structure of the economy. An organization's SIC consists of a two-digit major group number, a three-digit industry group number, and a four-digit industry number. These numbers describe the business's identifiable level of industrial detail.

Determining a company's SIC is a good starting point in researching a company, an industry, or a product. Many library sources use the SIC number as a method of classification.

North American Industry Classification System (NAICS)

The North American Industry Classification System (NAICS) was created jointly by the United States, Canada, and Mexico. It is to replace the existing classification of each country: the Standard Industrial Classification of Canada (1980), the Mexican Classification of Activities and Products (1994), and the Standard Industrial Classification of the United States (1987).

For the NAICS, economic units with similar production processes are classified in the same industry, and the lines drawn between industries demarcate differences in production processes. This supply-based economic concept was adopted because an industry classification system is a framework for collecting information on both inputs and outputs. This will aid in the collection of statistics on such things as productivity, unit labor costs, and capital intensity.

NAICS provides enhanced industry comparability among the three NAFTA trading partners. It also increases compatibility with the two-digit level of the International Standard Industrial Classification (ISIC Rev. 3) of the United Nations.

NAICS divides the economy into 20 sectors. Industries within these sectors are grouped according to the production criterion. Four sectors are largely goods-producing and 16 are entirely services-producing industries.

In most sectors, NAICS provides for compatibility at the industry (five-digit) level. For some sectors, the compatibility level is less at four-digit, three-digit, or two-digit levels. Each country can add additional detailed industries, provided the additional detail aggregates to the NAICS level.

The United States adopted the NAICS in 1997 for statistical agencies. Most of the U.S. government agencies now use the NAICS in place of the Standard Industrial Classification. A major exception is the Securities and Exchange Commission (SEC). Companies reporting to the SEC include their SIC. For private companies that publish industry data, some now only use the NAICS, some use the SIC, and some include both the NAICS and the SIC.

Industry Averages and Comparison with Competitors

The analysis of an entity's financial statements is more meaningful if the results are compared with industry averages and with results of competitors. Several financial services provide composite data on various industries.

The analyst faces a problem when the industries reported do not clearly include the company being examined because the company is diversified into many industrial areas. Since many companies do not clearly fit into any one industry, it is often necessary to use an industry that best fits the firm. The financial services have a similar problem in selecting an industry in which to place a company. Thus, a financial service uses its best judgment as to which industry the firm best fits.

This section briefly describes some financial services. For a more extensive explanation, consult the service's literature. Each service explains how it computes its ratios and the data it provides.

The Department of Commerce Financial Report is a publication of the federal government for manufacturing, mining, and trade corporations. Published by the Economic Surveys Division of the Bureau of the Census, it includes income statement data and balance sheet data in total industry dollars. It also includes an industry-wide common-size vertical income statement (Income Statement in Ratio Format) and an industry-wide common-size vertical balance sheet (Selected Balance Sheet Ratios). This source also includes selected operating and balance sheet ratios. This government publication uses NAICS for classification.

This report, updated quarterly, probably offers the most current source. It typically becomes available within six or seven months after the end of the quarter. It is a unique source of industry data in total dollars and would enable a company to compare its dollars (such as sales) with the industry dollars (sales). This service is free and is now on the Internet at http://www.census.gov/csd/qfr.

Annual Statement Studies is published by the Risk Management Association, the association of lending and credit risk professionals. Submitted by institutional members of the Risk

Management Association, the data cover several hundred different industries in manufacturing, wholesaling, retailing, service, agriculture, and construction.

Annual Statement Studies groups the data by industry, using the SIC number, and the NAICS number. It provides common-size balance sheets, income statements, and 16 selected ratios.

The data are sorted by assets and sales and are particularly useful because the financial position and operations of small firms are often quite different from those of larger firms. The presentation also includes a five-year comparison of historical data that presents all firms under a particular NAICS or SIC code.

In each category, the ratios are computed for the median and the upper and lower quartiles. For example:

Number of firms (9)

Ratio—Return on total assets

Results for the nine firms (in order, from highest to lowest):

12%, 11%, 10.5%, 10%, 9.8%, 9.7%, 9.6%, 7.0%, 6.5%

The middle result is the median: 9.8%

The result halfway between the top result and the median is the upper quartile: 10.5%

The result halfway between the bottom result and the median is the lower quartile: 9.6%

For ratios in which a low value is desirable, the results are presented from low values to high: For example, 2% (upper quartile), 5% (median), and 8% (lower quartile). For ratios in which a high value is desirable, the results are presented from high values to low; for example, 10.5% (upper quartile), 9.8% (median), and 9.6% (lower quartile).

Because of the combination of common-size statements, selected ratios, and comparative historical data, *Annual Statement Studies* is one of the most extensively used sources of industry data. Commercial loan officers in banks frequently use this source.

Standard & Poor's Industry Surveys contains information of particular interest to investors. This includes a write-up by industry, statistics for companies in an industry, and specific company by industry.

Almanac of Business and Industrial Financial Ratios, published by CCH Incorporated, is a compilation of corporate tax return data. It includes nearly 200 industries and presents 50 statistics for 11 size categories of firms. Some of the industries include manufacturing, construction, transportation, retail trade, banking, and wholesale trade.

Beginning with the 2002 edition, each *Almanac* industry is cross-referenced to a NAICS number. The IRS's condensed NAICS represents the classification system used in the *Almanac*.

Industry Norms and Key Business Ratios, desktop edition published by Dun & Bradstreet, includes over 800 different lines of business as defined by the SIC code numbers. It includes one-year data consisting of a condensed balance sheet and income statement in dollars and common size. It also includes working capital and ratios.

There are 14 ratios presented for the upper quartile, median, and lower quartile. The 14 ratios are as follows:

Solvency
- Quick Ratio (Times)
- Current Ratio (Times)
- Current Liabilities to Net Worth (%)
- Current Liabilities to Inventory (%)
- Total Liabilities to Net Worth (%)
- Fixed Assets to Net Worth (%)

Efficiency
- Collection Period (days)
- Sales to Inventory (times)
- Assets to Sales (%)
- Sales to Net Working Capital (times)
- Accounts Payable to Sales (%)

Profitability
- Return on Sales (%)
- Return on Assets (%)
- Return on Net Working Capital (%)

Dun & Bradstreet advises that the industry norms and key business ratios are to be used as yardsticks and not as absolutes. *Industry Norms and Key Business Ratios* is also published in an expanded set in the following five segments:

1. Agriculture/Mining/Construction/Transportation/Communication/Utilities
2. Manufacturing
3. Wholesaling
4. Retailing
5. Finance/Real Estate/Services

All five segments are available in three different formats, for a total of 15 books. The three formats follow:

1. Industry Norms and Key Business Ratios, three-year edition
2. Industry Norms and Key Business Ratios, one-year edition
3. Key Business Ratios, one-year edition

Value Line Investment Survey is in two editions; the Standard Edition and the Small & Mid-Cap Edition. The Standard Edition places companies in 1 of 97 industries. The Small & Mid-Cap Edition places companies in 1 of 84 industries. There are approximately 1,700 stocks in the Standard Edition and approximately 1,800 stocks in the Small & Mid-Cap Edition. The *Value Line Investment Survey* is very popular with investors.

The full-page Ratings & Reports are similar for the Standard Edition and the Small & Mid-Cap Edition. Each stock is rated for timeliness, safety, and technical. The Standard Edition includes an analyst's comments, while the Small & Mid-Cap Edition does not include an analyst's comments.

The data included in *Value Line* for a company are largely for a relatively long period of time (11 to 17 years). The data provided vary somewhat by industry. Some of the data provided for many companies are as follows:

1. Revenues per share
2. Cash flow per share
3. Earnings per share
4. Dividends declared per share
5. Capital spending per share
6. Book value per share
7. Common shares outstanding
8. Average annual P/E ratio
9. Relative P/E ratio
10. Average annual dividend yield
11. Revenues
12. Operating margin
13. Depreciation
14. Net profit
15. Income tax rate
16. Net profit margin
17. Working capital
18. Long-term debt
19. Shareholders' equity

20. Return on total capitalization
21. Return on shareholders' equity
22. Retained to common equity
23. All dividends to net profit

As indicated previously, comparison has become more difficult in recent years as more firms become conglomerates and diversify into many product lines. To counteract this problem, the SEC has implemented line-of-business reporting requirements for companies that must submit their reports to the SEC. These reports are made available to the public. SFAS No. 14 also addresses line-of-business reporting requirements. Such reporting requirements ease the analysis problem created by conglomerates but cannot eliminate it because the entity must decide how to allocate administrative and joint costs.

If industry figures are unavailable or if comparison with a competitor is desired, another firm's statements may be analyzed. Remember, however, that the other firm is not necessarily good or bad, nor does it represent a norm or standard for its industry. It also can be said that industry figures do not necessarily represent good or bad, nor do they represent a standard for its industry.

Alternative accounting methods are acceptable in many situations. Since identical companies may use different valuation or expense methods, read statements and notes carefully to determine if the statements are reasonably comparable.

Ideally, the use of all types of comparison would be best. Using trend analysis, industry averages, and comparisons with a major competitor will give support to findings and will provide a concrete basis for analysis.

In analyzing ratios, the analyst will sometimes encounter negative profit figures. **Analysis of ratios that have negative numerators or denominators is meaningless, and the negative sign of the ratio should simply be noted.**

Caution in Using Industry Averages

Financial analysis requires judgment decisions on the part of the analyst. Users of financial statements must be careful not to place under confidence in ratios or comparisons.

Remember that ratios are simply fractions with a numerator (top) and a denominator (bottom). There are as many for financial analysis as there are pairs of figures. There is no set group, nor is a particular ratio always computed using the same figures. Even the industry ratio formulas vary from source to source. Adequate detailed disclosure of how the industry ratios are computed is often lacking. Major problems can result from analyzing a firm according to the recommendations of a book and then making comparisons to industry ratios that may have been computed differently.

The use of different accounting methods causes a problem. For example, identical firms may use different valuation or revenue recognition methods. Read statements and notes carefully to determine the degree of comparability between statements. Trend analysis for each firm, however, will usually be meaningful. Industry averages group firms together that use different accounting principles.

Different year-ends can also produce different results. Consider the difference in the inventory of two toy stores if one ends November 30 and the other ends December 31. The ratios of firms with differing year-ends are all grouped together in industry averages.

Firms with differing financial policies might be included in the same industry average. Possibly capital-intensive firms are grouped with labor-intensive companies. Firms with large amounts of debt may be included in the same average as firms that prefer to avoid the risk of debt.

Some industry averages come from small samples that may not be representative of the industry. An extreme statement, such as one containing a large loss, can also distort industry data.

Ratios may have alternative forms of computation. In comparing one year to the next, one firm to another, or a company to its industry, meaningful analysis requires that the ratios be computed using the same formula. For example, *Annual Statement Studies* computes income ratios before tax; Dun & Bradstreet profit figures are after tax. The analyst should compute the enterprise ratios on the same basis as is used for industry comparisons, but this is often not possible.

Finally, ratios are not absolute norms. They are general guidelines to be combined with other methods in formulating an evaluation of the financial condition of a firm. Despite the problems with using ratios, they can be very informative if reasonably used.

Relative Size of Firm

Comparisons of firms of different sizes may be more difficult than comparisons of firms of equal size. For example, larger firms often have access to wider and more sophisticated capital markets, can buy in large quantities, and service wider markets. Ratios and common-size analysis help to eliminate some of the problems related to the use of absolute numbers.

Be aware of the different sizes of firms under comparison. These differences can be seen by looking at relative sales, assets, or profit sizes. Investment services such as *Value Line* often make available another meaningful figure—percent of market.

Other Library Sources

The typical business library has many sources of information relating to a particular company, industry, and product. Some of these sources are described here to aid you in your search for information about a company, its industry, and its products.

Ward's Business Directory

Ward's Business Directory covers domestic private and public companies. Up to 20 items of information are provided for each company listed. The data may include names, addresses, telephone numbers, e-mails and URLs, sales, employee figures, and up to five names and titles of executive officers.

The directory is published in eight volumes. Volumes 1, 2, and 3 contain profiles of private and public companies arranged alphabetically. Volume 4 provides profiles of all the companies listed in Volumes 1, 2, and 3 organized by state and lists each company in ascending ZIP Code order. Volume 5 organizes the companies by the 4-digit SIC code that most closely resembles their principal industry and ranks them according to revenue. Volumes 6 and 7 organize the companies by state, then by the 4-digit SIC code. Volume 8 organizes the companies by the 5- or 6-digit NAICS code and ranks them according to revenue. A number of the volumes include special features that are too extensive to describe here.

Ward's Business Directory is good for obtaining the SIC and NAICS codes for a company. It also includes a conversion guide from SIC to NAICS codes, and from NAICS to SIC codes. The directory is a very good source for information on private companies.

Standard & Poor's Stock Reports

Standard & Poor's Reports covers companies on the New York Stock Exchange, American Stock Exchange, NASDAQ stock market, and regional exchanges. Arranged alphabetically by stock exchange, it contains a brief narrative analysis of companies regularly traded. It provides key financial data relating to the income statement, balance sheet, and per-share data. Other comments cover management, company's business, product lines, and other important factors.

Standard & Poor's Register of Corporations, Directors, and Executives

This annual source is arranged in two volumes. Volume 1 contains an alphabetical list of approximately 75,000 corporations, including such data as ZIP Codes, telephone numbers, and functions of officers, directors, and other principals. The NAICS code is included at the end of each listing.

Volume 2, Section 1 contains an alphabetical list of over 70,000 individuals serving as officers, directors, trustees, partners, and so on. It provides such data as principal business affiliations, business address, and residence address.

Volume 2, Section 2—Indices: Divided into seven subsections:

- *Section 1*—Explains the construction and use of the NAICS code numbers and lists these numbers by major groups and by alphabetical and numerical division of major groups.
- *Section 2*—Lists corporations under the six-digit NAICS codes, which are arranged in numerical order.
- *Section 3*—Lists companies geographically by states and by major cities.
- *Section 4*—Lists and cross-references subsidiaries, divisions, and affiliates in alphabetical sequence and links them to their ultimate parent company listed in Volume 1.
- *Section 5*—Lists the deaths of which publishers have been notified in the past year.
- *Section 6*—Lists individuals whose names appear in the Register for the first time.
- *Section 7*—Lists the companies appearing in the Register for the first time.

Standard & Poor's Analyst's Handbook

This source contains selected income account and balance sheet items and related ratios as applied to the Standard & Poor's industry group stock price indexes. The progress of a given company may possibly be compared with a composite of its industry groups. Brief monthly updates for selected industries supplement the annual editions of the handbook.

Standard & Poor's Standard Corporation Descriptions (Corporation Records)

This source provides background information and detailed financial statistics on U.S. corporations, with extensive coverage for some corporations. The contents and the index are updated throughout the year.

America's Corporate Families:® The Billion Dollar Directory®

The directory listings include approximately 11,000 U.S. ultimates and 80,000 of their domestic subsidiaries, divisions, and major branches. Corporate family listings are alphabetical, geographical, and by SIC classification. This annual directory provides a cross-reference index of divisions, subsidiaries, and ultimate parent companies, as well as such data as lines of business and telephone numbers of parent and subsidiary companies.

The directory is in two volumes. Volume I covers the ultimate parent companies. Volume II covers (1) alphabetic cross-references of ultimate parent companies, subsidiaries, divisions, and branches; (2) businesses geographically; and (3) businesses by industrial classification.

D&B® Million Dollar Directory®

This directory provides information on more than 160,000 U.S. companies. Company listings are shown alphabetically, geographically, and by SIC classification. Data include lines of business, accounting firm, stock ticker symbol, and names of officers. This directory includes companies with sales of $1 million, or 20+ employees.

Directory of Corporate Affiliations™

This directory gives an in-depth view of companies and their divisions, subsidiaries, and affiliates. It contains an alphabetical index, geographical index, and SIC classifications. The parent company listing consists of address, telephone number, stock ticker symbol, stock exchange(s), approximate sales, number of employees, type of business, and top corporate officers.

Thomas Register of American Manufacturers

This is a comprehensive reference for products and services (Volumes 1–14), company profiles (Volumes 15 & 16), and a catalog file.

Mergent Industrial Manual and News Reports

Published in two volumes, these manuals cover 2,000 industrial corporations listed on the New York and American stock exchanges. Extensive information is provided such as history, business, properties, subsidiaries, financial statements, and SIC codes.

Security Owner's Stock Guide

This monthly guide, published by Standard & Poor's, covers over 5,300 common and preferred stocks. It contains trading activity, price range, dividends, and so on, for companies traded on the New York Stock Exchange, American Stock Exchange, over the counter, and regional exchanges. The information is displayed with numerous abbreviations and notes, in order to fit concisely into one single line, for each publicly traded security.

Standard & Poor's Statistical Service

Standard & Poor's Statistical Service includes comprehensive statistics on many industries such as agriculture, metals, building, and transportation. Many additional statistics are included such as price indexes and daily highs, lows, and closes for stock.

Mergent Dividend Record
Standard & Poor's Annual Dividend Record

These dividend publications provide a dividend record of payments on virtually all publicly owned American and some foreign companies.

D&B Reference Book of Corporate Managements

The four volumes contain profile information on over 200,000 principal corporate officers in over 12,000 companies. The information includes the year of birth, education, military service, present business position, and previous positions. Names and titles of other officers, as well as names of directors who are not officers, are also provided.

Compact Disclosure

This database of textual and financial information on approximately 12,000 public companies can be accessed by a menu-driven screen. The information is taken from annual and periodic reports filed by each company with the Securities and Exchange Commission. A full printout for a company is approximately 14 pages. It includes the major financial statements (annual and quarterly), many financial ratios for the prior three years, institutional holdings, ownership by insiders, president's letter, and financial notes.

A company can be accessed by keying its name or ticker symbol. In addition, the system can be searched by type of business (SIC), geographic area (state, city, ZIP Code, or telephone area code), stock price financial ratios, and much more.

Lexis-Nexis

This service provides accounting, legal, newspaper, and periodical information. Lexis-Nexis includes complete statement portions of annual reports for thousands of publicly traded companies. Many colleges of business, law schools, accounting firms, and law firms subscribe to this service.

The Users of Financial Statements

The financial statements are prepared for a group of diversified users. Users of financial data have their own objectives in analysis.

Management, an obvious user of financial data, must analyze the data from the viewpoints of both investors and creditors. Management must be concerned about the current position of the entity to meet its obligations, as well as the future earning prospects of the firm.

Management is interested in the financial structure of the entity in order to determine a proper mix of short-term debt, long-term debt, and equity from owners. Also of interest is the asset structure of the entity: the combination of cash, inventory, receivables, investments, and fixed assets.

Management must guide the entity toward sound short- and long-term financial policies and also earn a profit. For example, liquidity and profitability are competitive since the most highly liquid assets (cash and marketable securities) are usually the least profitable. It does the entity little good to be guided toward a maximum profitability goal if resources are not available to meet current obligations. The entity would soon find itself in bankruptcy as creditors cut off lines of credit and demand payment. Similarly, management must utilize resources properly to obtain a reasonable return.

The investing public, another category of users, is interested in specific types of analysis. Investors are concerned with the financial position of the entity and its ability to earn future profits. The investor uses an analysis of past trends and the current position of the entity to project the future prospects of the entity.

Credit grantors are interested in the financial statements of the entity. Pure credit grantors obtain a limited return from extending credit: a fixed rate of interest (as in the case of banks) or the profit on the merchandise or services provided (as in the case of suppliers). Since these rewards are limited and the possibility exists that the principal will not be repaid, credit grantors tend to be conservative in extending credit.

The same principle applies to suppliers that extend credit. If merchandise with a 20% markup is sold on credit, it takes five successful sales of the same amount to make up for one sale not collected. In addition, the creditor considers the cost of the funds when extending credit. Extending credit really amounts to financing the entity.

A difference exists between the objectives of short-term grantors of credit and those of long-term grantors. The short-term creditor can look primarily to current resources that appear on the financial statements in order to determine if credit should be extended. Long-term creditors must usually look to the future prospects of earnings in order to be repaid. For example, if bonds are issued that are to be repaid in 30 years, the current resources of the entity will not be an indication of its ability to meet this obligation. The repayment for this obligation will come from future earnings. Thus, the objectives of financial analysis by credit grantors will vary, based on such factors as the term of the credit and the purpose. Profitability of the entity may not be a major consideration, as long as the resources for repayment can be projected.

The financial structure of the entity is of interest to creditors because the amount of equity capital in relation to debt indicates the risk that the owners bear in relation to the creditors. The equity capital provides creditors with a cushion against loss. When this equity cushion is small, creditors are bearing the risk of the entity.

Many other parties are interested in analyzing financial statements. Unions that represent employees are interested in the ability of the entity to grant wage increases and fringe benefits, such as pension plans. The government also has an interest in analyzing financial statements for tax purposes and to ensure compliance with antitrust laws.

Summary

Financial analysis consists of the quantitative and qualitative aspects of measuring the relative financial position among firms and industries. Analysis can be done in different ways, depending on the type of firm or industry and the specific needs of the user. Financial statements will vary by size of firm and among industries.

The SIC and NAICS classification systems have been developed to promote comparability of firms. Determining a company's SIC and/or NAICS is a good starting point in researching a company, an industry, or a product.

The analysis of an entity's financial statements is more meaningful if the results are compared with industry averages and with results of competitors. At the same time, caution must be exercised in using industry averages and results of competitors.

Many library services are available that relate to individual companies, industries, and products. These sources can be a valuable aid in researching a firm.

Financial statements are prepared for a group of diversified users. These users have various needs and uses for the financial statements.

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1. Go to the SEC Web site (http://www.sec.gov). Under "Filings & Forms (EDGAR)," click on "Search for Company Filings." Click on "Companies & Other Filers." Under Company Name, enter "Alexander & Baldwin" (or under Ticker Symbol, enter "ALEX"). Select the 10-K filed February 26, 2007. For the following partial consolidated statements of income, compute horizontal and vertical common-size analysis. Use December 31, 2004, for the base on the horizontal common-size analysis. Use total revenue for the vertical common-size analysis. Comment on the results.

	Years Ended December 31,		
	2006	2005	2004
Operating revenue:			
Ocean transportation			
Logistics services			
Property leasing			
Property sales			
Agribusiness			
Total revenue			

2. Go to the SEC Web site (http://www.sec.gov). Under "Filings & Forms (EDGAR)," click on "Search for Company Filings." Click on "Companies & Other Filers." Under Company Name, enter "Best Buy Co" (or under Ticker Symbol, enter "BBY"). Select the 10-K filed May 2, 2007. For the following partial consolidated statements of earnings, compute horizontal and vertical common-size analyses. Use February 26, 2005, for the base in the horizontal common-size analysis. Use revenue for the vertical common-size analysis. Comment on the results.

	Consolidated Statements of Earnings		
	March 3, 2007	Feb. 25, 2006	Feb. 26, 2005
Revenue			
Cost of goods sold			
Gross profit			
Selling, general, and administrative expense			
Operating income			

3. Go to the SEC Web site (http://www.sec.gov). Under "Filings & Forms (EDGAR)," click on "Search for Company Filings." Click on "Companies & Other Filers." Under Company Name, enter "Amazoncom Inc" (or under Ticker Symbol, enter "AMZN"). Select the 10-K filed February 16, 2007. For the following partial consolidated balance sheets, compute horizontal and vertical common-size analyses. Use December 31, 2005, for the base in the horizontal common-size analysis. Use total liabilities and stockholders' equity for the vertical common-size analysis. Comment on the results.

	December 31,	
	2006	2005
Liabilities and stockholders' equity		
Total current liabilities		
Long-term debt		
Other long-term liabilities		
Stockholders' equity		
Common stock		
Treasury stock, at cost		
Additional paid-in capital		
Accumulated other comprehensive income (loss)		
Accumulated deficit		
Total stockholders' equity		
Total liabilities and stockholders' equity		

4. Go to the SEC Web site (http://www.sec.gov). Under "Filings & Forms (EDGAR)," click on "Search for Company Filings." Click on "Companies & Other Filers." Under Company Name, enter "Kroger Co" (or under Ticker Symbol, enter "KR"). Select the 10-K filed April 4, 2007. For the following partial consolidated statement of income, prepare a horizontal common-size analysis with change in dollars. Use the year ended January 28, 2005, as the base. Comment on the results.

Consolidated Statement of Income
Years Ended February 3, 2007, and January 28, 2006
(In millions)

	Feb. 3, 2007 53 Weeks	Jan. 28, 2006 52 Weeks	Increase (Decrease) Dollars	Percent
Sales				
Merchandise costs, including advertising, warehousing, and transportation, excluding items shown separately below				
Operating, general and administrative				
Rent				
Depreciation and amortization				
Operating profit				

5. Go to the SEC Web site (http://www.sec.gov). Under "Filings & Forms (EDGAR)," click on "Search for Company Filings." Click on "Companies & Other Filers." Under Company Name, enter "Yahoo Inc." (or under Ticker Symbol, enter "YHOO"). Select the 10-K filed February 23, 2007. For the following partial consolidated statements of operations, prepare a horizontal common-size analysis with change in dollars. Use the year ended December 31, 2005, as the base. Comment on the results.

Consolidated Statements of Operations
Years Ended December 31, 2005, and December 31, 2006 (In thousands)

	Dec. 31, 2005	Dec. 31, 2006	Increase (Decrease) Dollars	Percent
Revenues				
Cost of revenues				
Gross profit				
Operating expenses:				
Sales and marketing				
Product development				
General and administrative				
Amortization of intangibles				
Total operating expense				
Income from operations				

Questions

Q 5-1. What is a ratio? How do ratios help to alleviate the problem of size differences among firms?

Q 5-2. What does each of the following categories of ratios attempt to measure? (a) liquidity; (b) long-term borrowing capacity; (c) profitability. Name a group of users who might be interested in each category.

Q 5-3. Brown Company earned 5.5% on sales in 2007. What further information would be needed to evaluate this result?

Q 5-4. Differentiate between absolute and percentage changes. Which is generally a better measure of change? Why?

Q 5-5. Differentiate between horizontal and vertical analysis. Using sales as a component for each type, give an example that explains the difference.

Q 5-6. What is trend analysis? Can it be used for ratios? For absolute figures?

Q 5-7. Suppose you are comparing two firms within an industry. One is large and the other is small. Will relative or absolute numbers be of more value in each case? What kinds of statistics can help evaluate relative size?

Q 5-8. Are managers the only users of financial reports? Discuss.

Q 5-9. Briefly describe how each of these groups might use financial reports: managers, investors, and creditors.

Q 5-10. Refer to Exhibits 5-3, 5-4, and 5-5 to answer the following questions:

a. For each of the firms illustrated, what is the single largest asset category? Does this seem typical of this type of firm?

b. Which of the three firms has the largest amount in current assets in relation to the amount in current liabilities? Does this seem logical? Explain.

Q 5-11. Differentiate between the types of inventory typically held by a retailing firm and a manufacturing firm.

Q 5-12. Sometimes manufacturing firms have only raw materials and finished goods listed on their balance sheets. This is true of Avon Products, a manufacturer of cosmetics, and it might be true of food canners also. Explain the absence of work in process.

Q 5-13. Using these results for a given ratio, compute the median, upper quartile, and lower quartile. 14%, 13.5%, 13%, 11.8%, 10.5%, 9.5%, 9.3%, 9%, 7%.

Q 5-14. You want profile information on the president of a company. Which reference book should be consulted?

Q 5-15. Answer the following concerning the *Almanac of Business and Industrial Financial Ratios*:

a. This service presents statistics for how many size categories of firms?
b. Indicate some of the industries covered by this service.

Q 5-16. Using *The Department of Commerce Financial Report* discussion in the text, answer the following:

a. Could we determine the percentage of total sales income after income taxes that a particular firm had in relation to the total industry sales? Explain.
b. Could we determine the percentage of total assets that a particular firm had in relation to the total industry? Explain.

Q 5-17.

a. What is the SIC number? How can it aid in the search of a company, industry, or product?
b. What is the NAICS number? How can it aid in the search of a company, industry, or product?

Q 5-18. You want to know if there have been any reported deaths of officers of a company you are researching. What library source will aid you in your search?

Q 5-19. You want to compare the progress of a given company with a composite of that company's industry group for selected income statement and balance sheet items. Which library source will aid you?

Q 5-20. You are considering buying the stock of a large publicly traded company. You need an opinion of timeliness of the industry and the company. Which publication could you use?

Q 5-21. You want to know the trading activity (volume of its stock sold) for a company. Which service provides this information?

Q 5-22. Indicate some sources that contain a dividend record of payments.

Q 5-23. What source includes comprehensive statistics on many industries?

Q 5-24. You would like to determine the principal business affiliations of the president of a company you are analyzing. Which reference service may have this information?

Q 5-25. Indicate some sources that contain an appraisal of the outlook for particular industries.

Q 5-26. What source contains a comprehensive reference for products and services, company profiles, and a catalog file?

Problems

P 5-1. Best Buy Co., Inc.'s consolidated balance sheets from its 2007 annual report are presented in Exhibit 5-3.

Required

a. Using the balance sheets, prepare a vertical common-size analysis for 2007 and 2006. Use total assets as a base.
b. Using the balance sheets, prepare a horizontal common-size analysis for 2007 and 2006. Use 2006 as the base.
c. Comment on significant trends that appear in (a) and (b).

P 5-2. Best Buy Co., Inc.'s consolidated statements of earnings from its 2007 annual report are presented in Exhibit 5-3.

Required
a. Using the statement of earnings, prepare a vertical common-size analysis for 2007, 2006, and 2005. Use revenue as a base.
b. Using the statement of earnings, prepare a horizontal common-size analysis for 2007, 2006, and 2005. Use 2005 as the base.
c. Comment on significant trends that appear in (a) and (b).

P 5-3. The Kelly Services, Inc. and Subsidiaries balance sheets from its 2006 annual report are presented in Exhibit 5-4.

Required
a. Using the balance sheets, prepare a vertical common-size analysis for 2006 and 2005. Use total assets as a base.
b. Using the balance sheets, prepare a horizontal common-size analysis for 2006 and 2005. Use 2005 as the base.
c. Comment on significant trends that appear in (a) and (b).

P 5-4. The Kelly Services, Inc. and Subsidiaries statements of earnings from its 2006 annual report are presented in Exhibit 5-4.

Required
a. Using the statements of earnings, prepare a vertical common-size analysis for 2006, 2005, and 2004. Use revenues as the base.
b. Using the statements of earnings, prepare a horizontal common-size analysis for 2006, 2005, and 2004. Use 2004 as the base.
c. Comment on significant trends that appear in (a) and (b).

P 5-5.

			Change Analysis	
Item	Year 1	Year 2	Amount	Percent
1	—	3,000		
2	6,000	(4,000)		
3	(7,000)	4,000		
4	4,000	—		
5	8,000	10,000		

Required Determine the absolute change and the percentage for these items.

P 5-6.

			Change Analysis	
Item	Year 1	Year 2	Amount	Percent
1	4,000	—		
2	5,000	(3,000)		
3	(9,000)	2,000		
4	7,000	—		
5	—	15,000		

Required Determine the absolute change and the percentage for these items.

P 5-7.

Rapid Retail
Comparative Statements of Income

	December 31		Increase (Decrease)	
(In thousands of dollars)	2008	2007	Dollars	Percent
Net sales	$30,000	$28,000		
Cost of goods sold	20,000	19,500		
Gross profit	10,000	8,500		

(continued)

(In thousands of dollars)	December 31 2008	December 31 2007	Increase (Decrease) Dollars	Increase (Decrease) Percent
Selling, general and administrative expense	3,000	2,900		
Operating income	7,000	5,600		
Interest expense	100	80		
Income before taxes	6,900	5,520		
Income tax expense	2,000	1,600		
Net income	$ 4,900	$ 3,920		

Required

a. Complete the increase (decrease) in dollars and percent.
b. Comment on trends.

P 5-8.

Required

Answer the following multiple-choice questions:

a. Which of the following statements is incorrect?
   1. Ratios are fractions expressed in percent or times per year.
   2. A ratio can be computed from any pair of numbers.
   3. A very long list of meaningful ratios can be derived.
   4. There is one standard list of ratios.
   5. Comparison of income statement and balance sheet numbers, in the form of ratios, should not be done.
b. A figure from this year's statement is compared with a base selected from the current year.
   1. Vertical common-size statement
   2. Horizontal common-size statement
   3. Funds statement
   4. Absolute figures
   5. Balance sheet
c. Fremont Electronics has income of $1,000,000. Columbus Electronics has income of $2,000,000. Which of the following statements is a correct statement?
   1. Columbus Electronics is getting a higher return on assets employed.
   2. Columbus Electronics has higher profit margins than does Fremont Electronics.
   3. Fremont Electronics could be more profitable than Columbus Electronics in relation to resources employed.
   4. No comparison can be made between Fremont Electronics and Columbus Electronics.
   5. Fremont Electronics is not making good use of its resources.
d. Industry ratios should *not* be considered as absolute norms for a given industry because of all but which of the following?
   1. The firms have different accounting methods.
   2. Many companies have varied product lines.
   3. Companies within the same industry may differ in their method of operations.
   4. The fiscal year-ends of the companies may differ.
   5. The financial services may be private independent firms.
e. Which of the following is a publication of the federal government for manufacturing, mining, and trade corporations?
   1. *Annual Statement Studies*
   2. *Standard & Poor's Industry Surveys*
   3. *Almanac of Business and Industrial Financial Ratios*
   4. *Industry Norms and Key Business Ratios*
   5. *The Department of Commerce Financial Report*
f. Which service represents a compilation of corporate tax return data?
   1. *Annual Statement Studies*
   2. *Standard & Poor's Industry Surveys*
   3. *Almanac of Business and Industrial Financial Ratios*
   4. *Industry Norms and Key Business Ratios*
   5. *The Department of Commerce Financial Report*

g. Which service includes over 800 different lines of business?
   1. *Annual Statement Studies*
   2. *Standard & Poor's Industry Surveys*
   3. *Almanac of Business and Industrial Financial Ratios*
   4. *Industry Norms and Key Business Ratios*
   5. *The Department of Commerce Financial Report*

h. Which analysis compares each amount with a base amount for a selected base year?
   1. Vertical common-size
   2. Horizontal common-size
   3. Funds statement
   4. Common-size statement
   5. None of these

i. Suppose you are comparing two firms in the coal industry. Which type of numbers would be most meaningful for statement analysis?
   1. Relative numbers would be most meaningful for both firms, especially for interfirm comparisons.
   2. Relative numbers are not meaningful.
   3. Absolute numbers would be most meaningful.
   4. Absolute numbers are not relevant.
   5. It is not meaningful to compare two firms.

j. Management is a user of financial analysis. Which of the following comments does *not* represent a fair statement as to the management perspective?
   1. Management is not interested in the view of investors.
   2. Management is interested in liquidity.
   3. Management is interested in profitability.
   4. Management is interested in the debt position.
   5. Management is interested in the financial structure of the entity.

Web Case

Thomson One *Business School Edition*

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