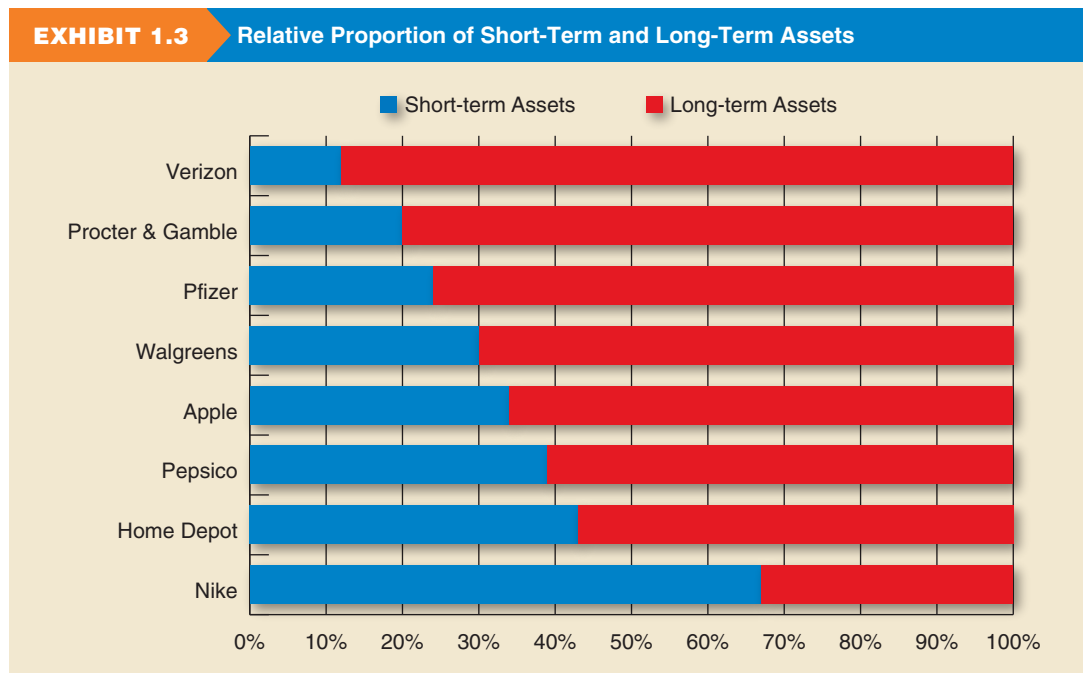


Some assets that a company invests in are used quickly. For instance, a retail clothing store hopes to sell its spring and summer merchandise before purchasing more inventory for the fall and winter. Other assets are acquired for long-term use. Buildings are typically used for several decades. The relative proportion of short-term and long-term investments depends on the type of business and the strategic plan that the company adopts. For example, Nike has relatively few long-term assets because it outsources most of the production of its products to other companies.

The graph in **Exhibit 1.3** compares the relative proportion of short-term and long-term assets held by Nike and seven other companies, several of which are featured in later chapters. Nike has adopted a business model that requires very little investment in long-term resources. A majority of its investments are short-term assets. In contrast, **Verizon**, **PepsiCo**, and **Procter & Gamble** all rely heavily on long-term investments. These companies hold relatively small proportions of short-term assets. This mix of long-term and short-term assets is described in more detail in Chapter 2.

Real Companies and Institutions are highlighted in bold, blue font.



Financing Activities

Investments in resources require funding, and **financing activities** refer to the methods companies use to fund those investments. *Financial management* is the planning of resource needs, including the proper mix of financing sources.

Companies obtain financing from two sources: equity (owner) financing and creditor (non-owner) financing. *Equity financing* refers to the funds contributed to the company by its owners along with any income retained by the company. One form of equity financing is the cash raised from the sale (or issuance) of stock by a corporation. *Creditor (or debt) financing* is funds contributed by non-owners, which create **liabilities**. **Liabilities** are obligations the company must repay in the future. One example of a liability is a bank loan. We draw a distinction between equity and creditor financing for an important reason: creditor financing imposes a legal obligation to repay, usually with interest, and failure to repay amounts borrowed can result in adverse legal consequences such as bankruptcy. In contrast, equity financing does not impose an obligation for repayment.

Exhibit 1.4 compares the relative proportion of creditor and equity financing for Nike and other companies. PepsiCo uses liabilities to finance **86%** of its resources. In contrast, **Walgreens Boots Alliance, Inc.**, relies more heavily on its equity financing, receiving **57%** of its financing from creditors. Procter & Gamble has the lowest proportion of creditor financing in this sample of companies with just **54%** of its assets financed by nonowners.

equals the amount of income retained in the company. The change in retained earnings links consecutive balance sheets through the income statement. Nike's retained earnings decreased from \$6,907 million at May 31, 2017, to \$3,517 million at May 31, 2018. This decrease is explained by net income of \$1,933 million, less dividends of \$1,265 million and other reductions of \$4,058 million. The category titled "other changes" refers to changes in equity that are not recorded in income and is discussed in Chapter 11.

Statement of Cash Flows

FYI Cash is critical to operations because it is necessary for purchasing resources and paying bills.

The **statement of cash flows** reports net cash flows from operating, investing, and financing activities over a period of time. Nike's statement of cash flows for fiscal year ended May 31, 2018, is shown in a reduced format in **Exhibit 1.10**. The statement reports that the cash balance increased by \$441 million during the fiscal year. Operating activities provided \$4,955 million (a cash inflow), investing activities provided \$276 million (a cash inflow), and financing activities used \$4,835 million (a cash outflow). These changes **increased** Nike's ending balance of cash to \$4,249 million.

EXHIBIT 1.10 Statement of Cash Flows (\$ millions)

NIKE Statement of Cash Flows For Year Ended May 31, 2018			Reports amounts over a period of time
Operating cash flows	\$4,955	Net cash flow from operating	
Investing cash flows	276	Net cash flow from investing	
Financing cash flows	(4,835)	Net cash flow from financing	
Effect of exchange rate changes	45		
Net increase (decrease) in cash	441		
Cash, May 31, 2017	3,808	Cash amounts per balance sheet	
Cash, May 31, 2018	\$4,249		

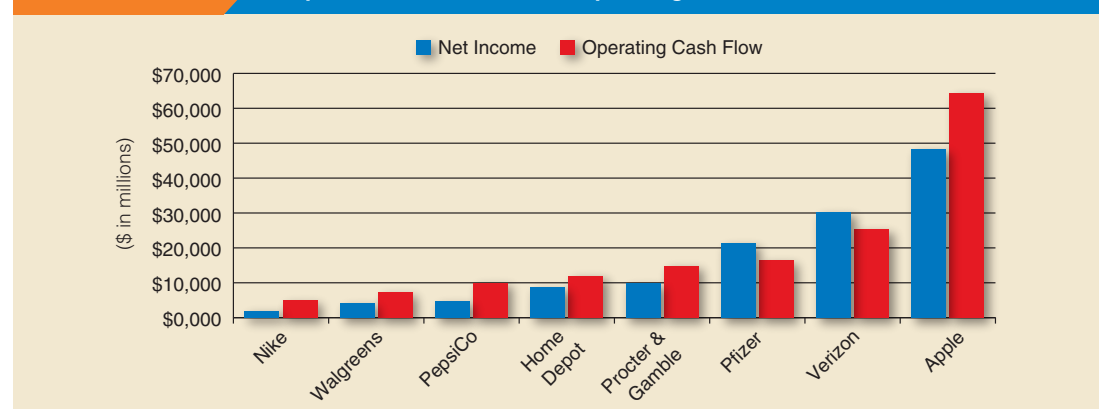
FYI Common formatting for U.S. financial statements includes:

- Dollar sign next to first and last amount listed in a column
- Single underline before a subtraction or addition; double underline after a major total
- Assets listed in order of liquidity, which is nearness to cash
- Liabilities listed in order of due dates

Operating cash flow is the amount of cash generated from operating activities. This amount usually differs from net income due to differences between the time that revenues and expenses are recorded, and the time that the related cash receipts and disbursements occur. For example, a company may report revenues for goods sold to customers this period, but not collect the payment until next period. Consistent with most companies, Nike's operating cash flows of \$4,955 million do not equal its net income of \$1,933 million. **Exhibit 1.11** compares net income and operating cash flows for Nike and several other companies. The exhibit shows that there is large variation across companies in the amount of net income and operating cash flows.

Both cash flow and net income are important for making business decisions. They each capture different aspects of firm performance and together help financial statement users better understand and assess a company's past, present, and future business activities.

EXHIBIT 1.11 Comparison of Net Income to Operating Cash Flows



LO3 E1-30. Financial Statement Relations to Compute Dividends

Colgate-Palmolive
NYSE :: CL

Colgate-Palmolive Company reports the following balances in its retained earnings.

(\$ millions)	2017	2016
Retained earnings	\$20,531	\$19,922

During 2017, Colgate-Palmolive reported net income of \$2,024 million.

- Assume that the only changes affecting retained earnings were net income and dividends. What amount of dividends did Colgate-Palmolive pay to its shareholders in 2017?
- This dividend amount constituted what percent of its net income?

LO3 E1-31. Calculating Gross Profit and Preparing an Income Statement

Colgate-Palmolive
NYSE :: CL

In 2017, **Colgate-Palmolive Company** reported sales revenue of \$15,454 million and cost of goods sold of \$6,099 million. Its net income was \$2,024 million. Calculate gross profit and prepare an income statement using the format illustrated in **Exhibit 1.8**.

LO2, 5 E1-32. Applying the Accounting Equation and Calculating Return on Equity and Debt-to-Equity Ratio

Alphabet, Inc.
NASDAQ :: GOOG

At the end of 2017, **Alphabet, Inc.**, reported stockholders' equity of \$152,502 million and total assets of \$197,295 million. Its balance in stockholders' equity at the end of 2016 was \$139,036 million. Net income in 2017 was \$12,662 million.

- Calculate Alphabet, Inc., return on equity ratio for 2017.
- Calculate its debt-to-equity ratio as of December 31, 2017. (*Hint: Apply the accounting equation to determine total liabilities.*)

LO2, 5 E1-33. Applying the Accounting Equation and Computing Return on Equity and Debt-to-Equity Ratio

Daimler AG
OTC :: DDAIF

At the end of 2017, **Daimler AG**, reported stockholders' equity of €64,023 million and total assets of €255,605 million. Its stockholders' equity at the end of 2016 was €57,950 million. Net income in 2017 was €10,525 million.

- Calculate Daimler's return on equity ratio for 2017.
- Calculate Daimler's debt-to-equity ratio as of December 31, 2017.

LO1, 4 E1-34. Accounting in Society

Financial accounting plays an important role in modern society and business.

- What role does financial accounting play in the allocation of society's financial resources?
- What are three aspects of the accounting environment that can create ethical pressure on management?

LO6 E1-35.^A Basic Assumptions, Principles, and Terminology in the Conceptual Framework

Match each item in the left column with the correct description in the right column.

- | | |
|--|---|
| _____ 1. Relevance | a. Refers to whether or not a particular amount is large enough to affect a decision. |
| _____ 2. Verifiability | b. The activities of a business are considered to be independent and distinct from those of its owners or from other companies. |
| _____ 3. Going concern | c. Accounting information should enable users to identify similarities and differences between sets of economic phenomena. |
| _____ 4. Materiality | d. Financial reporting information must be available to decision makers before it loses its capacity to influence decisions. |
| _____ 5. Monetary unit | e. Information is useful if it has the ability to influence decisions. |
| _____ 6. Representational faithfulness | f. Consensus among measures assures that the information is free of error. |
| _____ 7. Accounting period | g. Accounting information should reflect the underlying economic events that it purports to measure. |
| _____ 8. Comparability | h. The financial reports are presented in one consistent monetary unit, such as U.S. dollars. |
| _____ 9. Timeliness | i. A business is expected to have continuity in that it is expected to continue to operate indefinitely. |
| _____ 10. Economic entity | j. The life of a business can be divided into discrete accounting periods such as a year or quarter. |

LO3 P1-39. **Preparing Comparative Financial Statements from Raw Data**
 Tilly's, Inc.
 NYSE :: TLYS

Following is selected financial information for Tilly's, Inc.

(\$ thousands)	Feb. 3, 2018	Jan. 28, 2017
Cash and cash equivalents	\$ 53,202	\$ 78,994
Cash flow from operations	32,708	48,509
Cost of goods sold	401,529	400,493
Total liabilities	129,686	101,286
Total assets	290,111	290,506
Cash flow from financing	(17,622)	1,123
Sales revenue	576,899	568,952
Cash flow from investing	(40,878)	(21,658)
Other expenses, including income taxes	160,670	157,049

REQUIRED

Prepare balance sheets, income statements and cash flow statements for the years ended February 3, 2018 and January 28, 2017.

LO3 P1-40. **Preparing Comparative Financial Statements from Raw Data**
 Tesla, Inc.
 NASDAQ :: TSLA

Following is selected financial information for Tesla, Inc.

(\$ millions)	Dec. 31, 2017	Dec. 31, 2016
Cash and cash equivalents	\$ 3,367.9	\$ 3,393.2
Cash flow from operations	(60.7)	(123.8)
Cost of goods sold	9,536.3	5,400.9
Total liabilities	23,420.8	17,126
Total assets	28,655.4	22,664.1
Cash flow from financing	4,414.9	3,744.0
Sales revenue	11,758.8	7,000.1
Cash flow from investing	(4,419.0)	(1,416.4)
Other expenses, including income taxes	4,183.9	2,274.2
Effect of exchange rate changes on cash	39.5	(7.4)

REQUIRED

Prepare balance sheets, income statements and cash flow statements for the years ended December 31, 2017 and 2016.

LO3 P1-41. **Formulating a Statement of Stockholders' Equity from Raw Data**



Crocker Corporation began calendar-year 2019 with stockholders' equity of \$100,000, consisting of contributed capital of \$70,000 and retained earnings of \$30,000. During 2019, it issued additional stock for total cash proceeds of \$30,000. It also reported \$50,000 of net income, of which \$25,000 was paid as a cash dividend to shareholders.

REQUIRED

Prepare the December 31, 2019, statement of stockholders' equity for Crocker Corporation.

LO3 P1-42. **Formulating a Statement of Stockholders' Equity from Raw Data**

DP Systems, Inc., reports the following selected information at December 31, 2019 (\$ millions):

Contributed capital, December 31, 2018 and 2019	\$ 550
Retained earnings, December 31, 2018	2,437
Cash dividends, 2019	281
Net income, 2019	859

REQUIRED

Use this information to prepare its statement of stockholders' equity for 2019.

LO2, 3, 5 P1-43. **Analyzing and Interpreting Return on Equity**



Nokia
 NYSE :: NOK

Nokia Corp. manufactures, markets, and sells phones and other electronics. Stockholders' equity for Nokia are €16,218 million in 2017 and €20,975 million in 2016. In 2017, Nokia reported a loss of €(1,458) million on sales of €23,147 million.

REQUIRED

- What is Nokia's return on equity for 2017?
- Nokia's total assets were €41,024 million at the end of 2017. Compute its debt-to-equity ratio.
- What are total expenses for Nokia in 2017?

ADIDAS Statement of Cash Flows (€ millions) For Year Ended December 31, 2017	
Cash flow from operations	€1,648
Cash flow from investing	(680)
Cash flow from financing	(769)
Effect of exchange rates on cash	(111)
Net increase (decrease) in cash	88
Cash, beginning of year	1,510
Cash, end of year	€1,598

- b. Adidas reported revenues of €21,218 million (which is approximately equivalent to \$28,644 million) compared to Nike's \$36,397 million. Adidas reported net income of €1,100 million (\$1,485 million) compared to Nike's \$1,933 million. Adidas' operations produced cash flow of €1,648 million (\$2,225 million) while Nike's cash flow from operations was \$4,955 million. Hence, based on revenues, Nike is a larger company indicated by its substantially larger sales revenue. Its total assets of \$22,536 million are also greater than Adidas' total assets of €14,522 million (or \$19,605 million). Nike's operating cash flows and income are also larger than those of Adidas.

Chapter-End Review

SOLUTION

- a. $ROE = \frac{1,100}{[(6,435 + 6,455)/2]} = 0.171$ or 17.1%
- b. $Debt\text{-}to\text{-}equity = \frac{8,087}{6,435} = 1.26$
- c. One additional benefit to using ratios to analyze financial information is that ratios can be computed for amounts denominated in any currency. Thus, we can compare Adidas and Nike without translating euros into dollars. Adidas' ROE of 17.1% is almost identical to Nike's of 17.4%. This means that both companies earned a very similar return for their stockholders in 2017.
- Adidas' debt-to-equity ratio is 1.26 compared to Nike's 1.30. This means that Nike relies slightly more on debt, but again the companies are quite similar. A similar debt-to-equity ratio indicates a similar level of risk associated with an investment in either company.

P2-58. Recording Transactions in Journal Entries and T-Accounts

Use the information in Problem 2-57 to complete the following requirements.

LO6**REQUIRED**

- Prepare journal entries for each of the transactions 1 through 11.
- Set up T-accounts for each of the accounts used in part *a* and post the journal entries to those T-accounts.

P2-59. Analyzing and Interpreting Balance Sheet Data and Interpreting Liquidity Measures

Selected balance sheet amounts for **Apple Inc.**, a retail company, for four recent fiscal years follow:

LO1, 7

Apple Inc.
NYSE :: AAPL

(\$ millions)	Current Assets	Non-current Assets	Total Assets	Current Liabilities	Non-current Liabilities	Total Liabilities	Stockholders' Equity
2014	\$ 68,531	\$?	\$231,839	\$?	\$ 56,844	\$120,292	\$111,547
2015	89,378	201,101	?	80,610	?	171,124	119,355
2016	106,869	214,817	?	?	114,431	193,437	?
2017	?	246,674	375,319	100,814	?	241,272	134,047

REQUIRED

- Compute the missing balance sheet amounts for each of the four years shown.
- What asset category would you expect to constitute the majority of Apple's current assets? Of its long-term assets?
- Is the company conservatively financed; that is, is it financed by a greater proportion of equity than of debt?
- Calculate the current ratio for 2014 and 2017.
- Assume the industry average is 2.0 for the current ratio. Comment on Apple's current ratio relative to the industry.

P2-60. Analyzing Balance Sheet Numbers from Incomplete Data and Interpreting Liquidity Measures

Selected balance sheet amounts for **Alibaba Group Holding Ltd.**, a China-based online and mobile commerce company, for three recent fiscal years ending March 31 follow:

LO1, 7

Alibaba Group Holding Ltd
NYSE :: BABA

(millions of RMB)	Current Assets	Non-current Assets	Total Assets	Current Liabilities	Non-current Liabilities	Total Liabilities	Equity
2016	20,792	?	?	8,071	?	17,767	38,700
2017	?	47,114	73,630	?	12,919	26,542	47,088
2018	?	73,377	114,326	21,651	22,619	?	?

REQUIRED

- Compute the missing balance sheet amounts for each of the three years shown.
- What asset category do you expect to constitute the majority of the company's current assets?
- Calculate Alibaba's current ratio for fiscal years 2016 and 2018.
- Calculate net working capital for 2016 and 2018.

P2-61. Analyzing and Interpreting Income Statement Data

Selected income statement information for **Nike, Inc.**, a manufacturer of athletic footwear, for four recent fiscal years ending May 31 follows.

LO3

Nike, Inc.
NYSE :: NKE

(\$ millions)	Revenues	Cost of Goods Sold	Gross Profit	Operating Expenses	Operating Income	Other Expenses	Net Income
2014	\$27,799	\$15,353	\$?	\$ 8,766	\$3,680	\$987	\$?
2015	30,601	?	14,067	9,892	4,175	?	3,273
2016	?	17,405	14,971	10,469	4,502	742	?
2017	34,350	19,038	15,312	?	4,749	?	4,240

REQUIRED

- Compute the missing amounts for each of the four years shown.

income (or net loss) amount comes from the income statement. Dividends during the period are reflected in the retained earnings balance from the adjusted trial balance.

EXHIBIT 3.10 Statement of Stockholders' Equity

NATURAL BEAUTY SUPPLY, INC. Statement of Stockholders' Equity For Month Ended December 31, 2018			
	Contributed Capital	Earned Capital	Total Equity
Balance, November 30, 2018	\$20,000	\$ 30	\$20,030
Net income	—	650	650
Common stock issued	—	—	—
Cash dividends	—	(50)	(50)
Balances, December 31, 2018	<u>\$20,000</u>	<u>\$630</u>	<u>\$20,630</u>

FYI Financial statements are most commonly prepared for annual and quarterly accounting periods. A request for a bank loan is an example of a situation that can lead to financial statement preparation for a non-accounting period.

Balance Sheet The balance sheet reports a company's assets, liabilities, and equity. The assets and liabilities for Natural Beauty Supply's balance sheet at December 31, 2018, shown in **Exhibit 3.11**, come from the adjusted trial balance in **Exhibit 3.8**. The amounts reported for Common Stock and Retained Earnings in the balance sheet are taken from the statement of stockholders' equity for December (**Exhibit 3.10**).

EXHIBIT 3.11 Balance Sheet

NATURAL BEAUTY SUPPLY, INC. Balance Sheet December 31, 2018			
Assets		Liabilities	
Cash	\$ 6,825	Accounts payable	\$ 4,400
Accounts receivable	2,250	Interest payable	110
Other receivables	30	Wages payable	480
Inventory	7,300	Taxes payable	350
Prepaid insurance	1,540	Gift card liability	600
Security deposit	2,000	Current liabilities	5,940
Current assets	19,945	Notes payable	11,000
Fixtures and equipment	\$18,000	Total liabilities	16,940
Less: Accumulated depreciation	375	Equity	
Fixtures and equipment, net	17,625	Common stock	20,000
		Retained earnings	630
Total assets	<u>\$37,570</u>	Total liabilities and equity	<u>\$37,570</u>

FYI The income statement, statement of stockholders' equity, and statement of cash flows report on periods of time. These statements illustrate the accounting period concept—the concept that useful statements can be prepared for arbitrary time periods within a company's life span. The purpose of adjusting entries is to obtain useful statements for specific time periods.

Statement of Cash Flows The statement of cash flows is formatted to report cash inflows and outflows by the three primary business activities:

- **Cash flows from operating activities** Cash flows from the company's transactions and events that relate to its primary operations.
- **Cash flows from investing activities** Cash flows from acquisitions and divestitures of investments and long-term assets.
- **Cash flows from financing activities** Cash flows from issuances of and payments toward equity, borrowings, and long-term liabilities.

The net cash flows from these three sections yield the change in cash for the period.

In analyzing the statement of cash flows, we should not necessarily conclude that the company is better off if cash increases and worse off if cash decreases. It is not the cash change that is most important, but the reasons for the change. For example, what are the sources of the cash inflows?

NIKE Statement of Cash Flows For the Year Ended May 31, 2018 (\$ millions)	
Operating cash flows	\$4,955
Investing cash flows	276
Financing cash flows	(4,835)
Effect of exchange rate changes	45
Net increase in cash and cash equivalents	441
Cash and equivalents, beginning of year	3,808
Cash and equivalents, end of year	<u>\$4,249</u>

Supplemental Disclosures

When the indirect method is used in the statement of cash flows, three separate supplemental disclosures are required: (1) two specific operating cash outflows—cash paid for interest and cash paid for income taxes, (2) a schedule or description of all noncash investing and financing transactions, and (3) the firm's policy for determining which highly liquid, short-term investments are treated as cash equivalents. If the direct method is used, a reconciliation of net income to cash flows from operating activities is also required. A firm's policy regarding cash equivalents is placed in the financial statement notes. The other disclosures are reported either in the notes or at the bottom of the statement of cash flows.

One World Café Case Illustration One World Café incurred \$200 of interest expense, which was paid in cash. It also reported income tax expense of \$17,000 and reported a decrease in income taxes payable of \$1,500 (\$4,500 – \$3,000). Thus, One World Café paid \$18,500 (\$17,000 + \$1,500) in income taxes during 2018. It also had the noncash investment in plant assets costing \$5,000, which was financed with notes payable. One World Café would provide the following disclosure:

Supplemental cash flow information	
Cash payments for interest	\$ 200
Cash payments for income taxes	18,500
Noncash transaction—investment in plant assets financed with notes payable	5,000



LO5 Compute and interpret ratios that reflect a company's liquidity and solvency using information reported in the statement of cash flows.

ANALYZING FINANCIAL STATEMENTS

Cash is a special resource for companies because of its flexibility. At short notice, it can be used to fulfill obligations and to take advantage of investment opportunities. When companies run short of cash, their suppliers may be reluctant to deliver and lenders may be able to take over control of decision making. In Chapter 2, we introduced the current ratio, which compares the level of current assets to the level of current liabilities at a point in time. But the statement of cash flows gives us the opportunity to compare a company's ongoing cash generating activities to its obligations and to its investment opportunities.

Interpreting Indirect Method Cash from Operations

We want to interpret the cash flows from operations presented using the indirect method.

When companies use the indirect method to present their cash flows from operating activities, it is difficult to interpret the numbers presented to adjust net income to cash from operating activities. For instance, in **Exhibit 4.11**, One World Café reports \$6,000 for the change in accounts receivable. Does that mean that the company received cash payments of \$6,000 from its customers? It does not! Every item in the reconciliation has to be interpreted relative to the net income at the top. Net income includes revenue of \$390,000, and the adjustment addition of

Analysis Tools Operating Cash Flow to Capital Expenditures (OCFCX)

$$\text{Operating cash flow to capital expenditures} = \frac{\text{Operating cash flow}}{\text{Annual capital expenditures}}$$

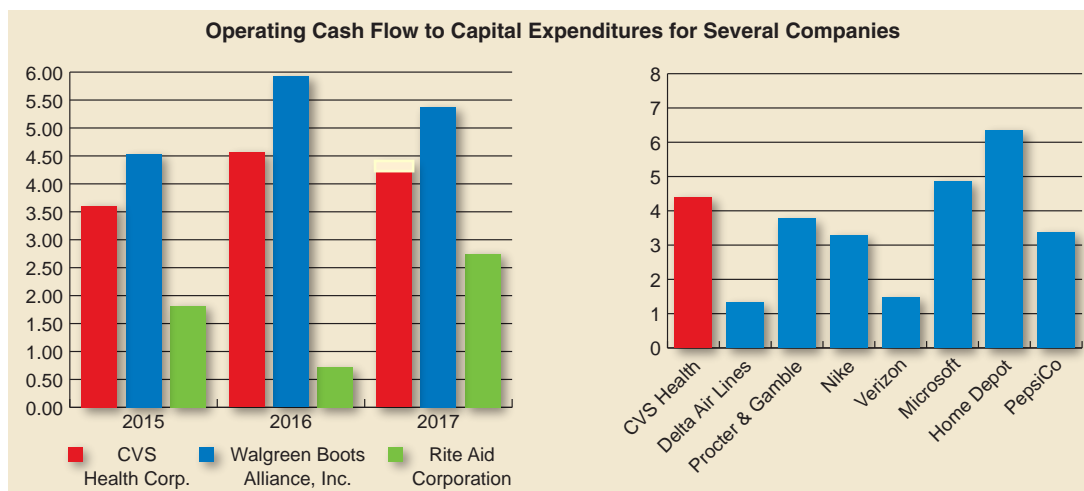
Free Cash Flow (FCF)

$$\text{Free cash flow} = \text{Operating cash flow} - \text{Net capital expenditures}$$

Applying the Operating Cash Flow to Capital Expenditures Ratio and Free Cash Flow to CVS Health Corporation

	OCFCX	FCF
2015:	$\frac{\$8,539}{\$2,367} = 3.61 \text{ or } 361\%$	$\$8,529 - \$2,332 = \$6,197$
2016:	$\frac{\$10,141}{\$2,224} = 4.56 \text{ or } 456\%$	$\$10,141 - \$2,187 = \$7,954$
2017:	$\frac{\$8,007}{\$1,918} = 4.17 \text{ or } 417\%$	$\$8,007 - \$1,885 = \$6,122$

Guidance Operating cash flows to capital expenditures ratios that exceed 1.0 (or free cash flows that are positive) mean that the company can make its capital investments without obtaining additional financing or reducing its cash balances. The excess cash could be used to reduce borrowing, make acquisitions, or it could be returned to shareholders. CVS Health Corporation's ratios are quite steady across these years, and the company has used this stability to return an average of \$6.5 billion per year to shareholders in the form of dividends and share repurchases. However, the planned merger with Aetna will require an amount of cash that far exceeds the free cash flow generated by its current operations, necessitating new borrowing and the use of common stock to fund part of the purchase price.

CVS Health Corporation in Context

Takeaways OCFCX remained relatively steady over the last three years for CVS Health, and its OCFCX is slightly lower than Walgreens Boots and higher than Rite Aid. Like CVS Health, Walgreens Boots and Rite Aid have used the additional cash flow to acquire other businesses, pay dividends and repay long-term debt. But CVS Health's proposed merger with Aetna would require it to issue "approximately \$45.0 billion of new debt." We can see that CVS Health's OCFCX is in the middle of the focus companies' levels. These companies can use the cash in excess of capital expenditures to make acquisitions or to return cash to shareholders in the form of dividends or common stock repurchases.

4. Sold equipment for \$14,000 cash that originally cost \$46,000 and had \$27,000 accumulated depreciation.
5. Issued bonds payable at face value for cash.
6. Acquired a patent with a fair value of \$25,000 by issuing 250 shares of preferred stock at par value.
7. Declared and paid a \$50,000 cash dividend.
8. Issued 3,000 shares of common stock for cash at \$8 per share.
9. Recorded depreciation of \$16,000 on buildings and \$23,000 on equipment.

REQUIRED

- a. Compute the change in cash and cash equivalents that occurred during 2018.
- b. Prepare a 2018 statement of cash flows using the indirect method.
- c. Prepare separate schedules showing (1) cash paid for interest and for income taxes and (2) noncash investing and financing transactions.
- d. Compute its (1) operating cash flow to current liabilities ratio, (2) operating cash flow to capital expenditures ratio, and (3) free cash flow.

LO2, 3, 4 P4-53. Preparing a Statement of Cash Flows (Direct Method)

Refer to the data for Rainbow Company in Problem 4-52.

REQUIRED

- a. Compute the change in cash that occurred in 2018.
- b. Prepare a 2018 statement of cash flows using the direct method. Use one cash outflow for “cash paid for wages and other operating expenses.” Accounts payable relate to inventory purchases only.
- c. Prepare separate schedules showing (1) a reconciliation of net income to net cash flow from operating activities and (2) noncash investing and financing transactions.

LO3, 4 P4-54. Interpreting Cash Flow Information

Apple Inc.
NASDAQ :: AAPL

The 2017 cash flow statement for **Apple Inc.** is presented below (all \$ amounts in millions):

APPLE INC. Consolidated Statement of Cash Flows Year Ended September 30, 2017	
Cash and cash equivalents, beginning of the year.	\$ 20,484
Operating activities	
Net income	48,351
Adjustments to reconcile net income to cash generated by operating activities:	
Depreciation, and amortization	10,157
Share-based compensation expense	4,840
Other... → Deferred income tax expense	5,966
Changes in operating assets and liabilities:	(166)
Accounts receivable, net	(2,093)
Inventories.	(2,723)
Vendor nontrade receivables	(4,254)
Other current and noncurrent assets.	(5,318)
Accounts payable	9,618
Deferred revenue	(626)
Other current and noncurrent liabilities	(154)
Cash generated by operating activities	63,598
Investing activities	
Purchases of marketable securities	(159,486)
Proceeds from maturities of marketable securities	31,775
Proceeds from sales of marketable securities	94,564
Payments made in connection with business acquisitions, net	(329)
Payments for acquisition of property, plant and equipment	(12,451)
Payments for acquisitions of intangible assets	(344)
Payments for strategic investments, net.	(395)
Other	220
Cash used in investing activities	(46,446)

continued



Disaggregating ROA

LO3 Disaggregate ROA into profitability (profit margin) and efficiency (asset turnover) components.

We can gain further insights into return on investment by disaggregating ROA into performance drivers that capture profitability and efficiency. ROA can be restated as the product of two ratios—profit margin and asset turnover—by simultaneously multiplying and dividing ROA by sales revenue:

$$\text{ROA} = \frac{\text{Earnings without interest expense}}{\text{Average total assets}} = \underbrace{\frac{\text{Earnings without interest expense}}{\text{Sales revenue}}}_{\text{Profit Margin}} \times \underbrace{\frac{\text{Sales revenue}}{\text{Average total assets}}}_{\text{Asset Turnover}}$$

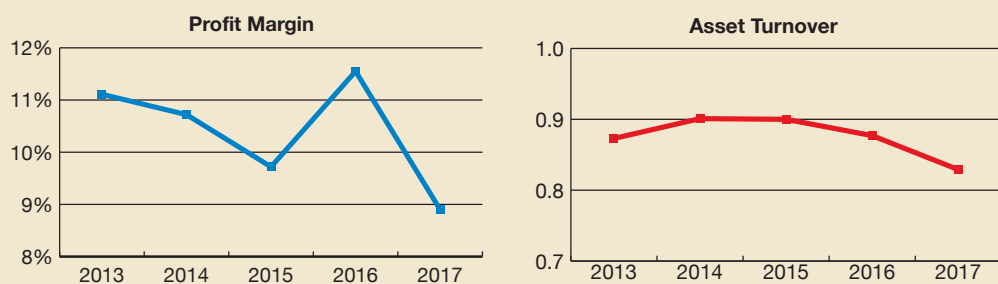
The first ratio on the right-hand side of the above relationship is the **profit margin (PM)**. This ratio measures the profit, without interest expense, that is generated from each dollar of sales revenue. All other things being equal, a higher profit margin is preferable. Profit margin is affected by the level of gross profit that the company earns on its sales (sales revenue minus cost of goods sold), which depends on product prices and the cost of manufacturing or purchasing its product. It is also affected by operating expenses that are required to support sales of products or services. These include wages and salaries, marketing, research and development, as well as depreciation and other **capacity costs**. Finally, profit margin is affected by the level of competition, which affects product pricing, and by the company's operating strategy, which affects operating costs, especially discretionary costs such as advertising and research and development.

PepsiCo's profit margin ratio was 8.9% in 2017, computed as follows (\$ millions):

$$\text{Profit margin (PM)} = \frac{\text{Earnings without interest expense (EWI)}}{\text{Sales revenue}} = \frac{\$4,908 + [\$1,151 \times (1 - 0.35)]}{\$63,525} = \boxed{8.9\%}$$

This ratio indicates that each dollar of sales revenue produces 8.9¢ of after-tax profit before financing costs. PepsiCo's profit margin for 2017 is down somewhat from recent years. It reported a profit margin ratio of 11.55% in the previous year, but the 2017 decline can be attributed to the TCJA effects described earlier. The profit margin ratio for the past 5 years is graphed in **Exhibit 5.6**.

EXHIBIT 5.6 PepsiCo's Profit Margin and Asset Turnover Ratios, 2013–2017



The **asset turnover (AT)** ratio reveals insights into a company's productivity and efficiency. This metric measures the level of sales generated by each dollar that a company invests in assets. A high asset turnover ratio suggests that assets are being used efficiently so, all other things being equal, a high asset turnover ratio is preferable. The ratio is affected by inventory management practices, credit policies, and most of all, the technology employed to produce a company's products or deliver its services.

The asset turnover ratio can be improved by increasing the level of sales for a given level of assets, or by efficiently managing assets. For many companies, efficiently managing working capital—primarily inventories and receivables—is the easiest way to limit investment in assets and increase turnover. On the other hand, it is usually more difficult to increase asset turnover by managing investment in long-term assets. Capital intensive companies, such as those in the telecommunications or energy production industries, tend to have lower asset turnover ratios (often less

LO2, 3 E5-27. Compute, Disaggregate, and Interpret Competitors' Rates of Return

CVS Health Corporation
NYSE :: CVS
Walgreens Boots Alliance, Inc.
NASDAQ :: WBA

Selected balance sheet and income statement information for the drug retailers **CVS Health Corporation** and **Walgreens Boots Alliance** follows. Assume an incremental tax rate of 35%.

(\$ millions)	CVS Health	Walgreens Boots
Sales revenue—2017.....	\$184,765	\$118,214
Interest expense—2017.....	1,062	728
Net income—2017.....	6,623	4,101
Total assets—2017.....	95,131	66,009
Total assets—2016.....	94,462	72,688
Stockholders' equity—2017.....	37,695	28,274
Stockholders' equity—2016.....	36,834	30,281

- Compute the 2017 return on assets (ROA) for each company.
- Disaggregate ROA into profit margin (PM) and asset turnover (AT) for each company.
- Compute the 2017 return on equity (ROE) and return on financial leverage (ROFL) for each company.
- Discuss any differences in these ratios for each company. Identify the factor(s) that drives the differences in ROA observed from your analyses in parts *a* through *c*.

LO2, 3 E5-28. Compute, Disaggregate, and Interpret ROE

Intel Corporation
NASDAQ :: INTC

Selected fiscal year balance sheet and income statement information for the computer chip maker, **Intel Corporation**, follows (\$ millions).

Balance sheet information (\$ millions)	2017	2016	2015
Total assets.....	\$123,249	\$113,327	\$101,459
Total shareholders' equity.....	69,019	66,226	61,085
Income statement information (\$ millions)	2017	2016	2015
Sales revenue.....	\$62,761	\$59,387	\$55,355
Interest expense.....	637	725	345
Net income.....	9,601	10,316	11,420

- Calculate Intel's return on equity (ROE) for fiscal years 2017 and 2016.
- Calculate Intel's return on assets (ROA) and return on financial leverage (ROFL) for each year. Is financial leverage working to the advantage of Intel's shareholders? Use an incremental tax rate of 35%.
- Use the DuPont formulation in the Business Insight on page 230 to analyze the variations in Intel's ROE over this period. How does this analysis differ from your answers to *a* and *b* above?

LO2, 3 E5-29. Return on Investment, Financial Leverage, and DuPont Analysis

The following tables provide information from the recent annual reports of HD Rinker, AG.

Balance sheets (€ millions)	2019	2018	2017	2016
Total assets.....	€6,108	€6,451	€7,173	€6,972
Total liabilities.....	5,970	4,974	4,989	5,097
Total shareholders' equity.....	138	1,477	2,184	1,875

Income statements (€ millions) 52 weeks ended	2019	2018	2017
Sales revenue.....	€10,364	€9,613	€8,632
Earnings before interest and income taxes.....	1,473	1,459	887
Interest expense.....	246	208	237
Earnings before income taxes.....	1,227	1,251	650
Income tax expense.....	377	446	202
Net earnings.....	€ 850	€ 805	€ 448

- Calculate HD Rinker's return on equity (ROE) for fiscal years 2019, 2018, and 2017.

(\$ thousands)	2017	2016	2015
Accounts receivable	\$1,153,988	\$1,136,593	\$1,169,469
Allowance for doubtful accounts	25,378	21,376	24,370
Accounts receivable, net	1,128,610	1,115,217	1,145,099

Activity in the allowance for doubtful accounts for the past three fiscal years is as follows:

(\$ thousands)	2017	2016	2015
Balance at beginning of year	\$21,376	\$24,370	\$26,283
Charged to income	17,568	9,165	5,813
Deductions ^a	13,566	12,159	7,726
Allowance at end of year	25,378	21,376	24,370

^a Includes write-offs, recoveries of previous write-offs, and currency translation adjustments.

Mattel's revenues were \$4,881,951 thousand and \$5,456,650 thousand for fiscal years 2017 and 2016, respectively.

REQUIRED

- What amount did Mattel report as accounts receivable, net in its December 31, 2017, balance sheet?
- Prepare journal entries to record bad debts expense and write-offs of uncollectible accounts in fiscal 2017. (Assume that Deductions did not include recoveries or foreign currency adjustments.) Post these entries to T-accounts. Now suppose Mattel experienced a \$350 thousand recovery of a previously written-off receivable. How should the company record this recovery?
- Compute the ratio of allowance for doubtful accounts to gross accounts receivable for fiscal 2016 and 2017.
- Compute Mattel's accounts receivable turnover and average collection period for 2017 and 2016.
- What might be the cause of the changes that you observe in parts c and d?

LO4

The GAP, Inc.
NYSE :: GPS

P6-46. Accounting for Product Returns

In its income statement for the first quarter of fiscal year 2018, **The Gap, Inc.**, reported net sales of \$3,783 million and cost of goods sold and occupancy expenses of \$2,356 million, resulting in a gross profit of \$1,427 million. In its footnotes, The Gap reports that "We also record an allowance for estimated returns based on our historical return patterns and various other assumptions that management believes to be reasonable, which are presented on a gross basis on our Condensed Consolidated Balance Sheet."

When The Gap accounts for estimated sales returns, it makes two entries. First, it reduces sales revenue by the returns' expected sales price and recognizes a sales return allowance as a liability for the same amount. Then, The Gap reduces cost of goods sold by the returns' expected cost and recognizes a right of return merchandise asset for that same amount.

At the end of the first quarter of fiscal year 2018, The Gap reported a sales return allowance liability of \$93 million and a right of return merchandise asset of \$38 million.

REQUIRED

- What was the estimated gross profit margin on the items The Gap expected to be returned following the first quarter of fiscal year 2018? How does that compare with the gross profit margin reported in the income statement for the first quarter of fiscal year 2018? What might account for the difference?
- Suppose The Gap sells 100 units of an item for \$50 each, and its gross profit on each unit is \$20. Further, suppose The Gap expects that 10 of the units will be returned. What entries will be made to record the sale of 100 units (for cash) and the expected returns? What entry is made when ten customers subsequently return the items and receive a cash refund? Assume that the units are undamaged and can be sold to other customers.

LO2



Take-Two Interactive Software, Inc.
NASDAQ :: TTWO

P6-47. Analyzing Unearned Revenue Changes

Take-Two Interactive Software, Inc. (TTWO) is a developer, marketer, publisher, and distributor of video game software and content to be played on a variety of platforms. There is an increasing demand for the ability to play these games in an online environment, and TTWO has developed this capability in many of its products. In addition, TTWO maintains servers (or arranges for servers) for the online activities of its customers.

continued from previous page

In millions	2017	2016
5.75% senior notes due 2041.....	133	133
5.3% senior notes due 2043.....	750	750
5.125% senior notes due 2045.....	3,500	3,500
Capital lease obligations.....	670	648
Other.....	43	23
Total debt principal.....	27,170	27,726
Debt premiums.....	28	33
Debt discounts and deferred financing costs.....	(196)	(228)
	27,002	27,531
Less:		
Short-term debt (commercial paper).....	(1,276)	(1,874)
Current portion of long-term debt.....	(3,545)	(42)
Long-term debt.....	<u>\$22,181</u>	<u>\$25,615</u>

CVS also discloses that its interest expense was \$1.04 billion in 2017, after deducting capitalized interest of \$8 million. It paid interest of \$1.07 billion.

REQUIRED

- What was the average interest rate on CVS debt in 2017?
- Does your computation in part *a* seem reasonable given the disclosure relating to specific bond issues? Explain.
- Why can the amount of interest paid be different from the amount of interest expense recorded in the income statement?

LO3, 4 P9-54. Recording and Assessing the Effects of Bond Financing (with Accrued Interest)

Petroni, Inc., which closes its books on December 31, is authorized to issue \$800,000 of 9%, 20-year bonds dated March 1, 2019, with interest payments on September 1 and March 1.

REQUIRED

Assuming that the bonds were sold at 100 plus accrued interest on July 1, 2019, prepare the necessary journal entries, post the journal entries to their respective T-accounts, and record each transaction in the financial statement effects template.

- The bond issuance.
- Payment of the semiannual interest on September 1, 2019.
- Accrual of bond interest expense at December 31, 2019.
- Payment of the semiannual interest on March 1, 2020. (The firm does not make reversing entries.)
- Retirement of \$200,000 of the bonds at 101 on March 1, 2020 (immediately after the interest payment on that date).

LO3, 4 P9-55. Preparing an Amortization Schedule and Recording the Effects of Bonds

On December 31, 2018, Kasznik, Inc., issued \$720,000 of 11%, 10-year bonds for \$678,708, yielding an effective interest rate of 12%. Semiannual interest is payable on June 30 and December 31 each year. The firm uses the effective interest method to amortize the discount.

REQUIRED

- Prepare an amortization schedule showing the necessary information for the first two interest periods. Round amounts to the nearest dollar.
- Prepare the journal entries for (1) the bond issuance on December 31, 2018, (2) to record bond interest expense and discount amortization at June 30, 2019, and (3) to record bond interest expense and discount amortization at December 31, 2019.
- Post the journal entries from part *b* to their respective T-accounts.
- Record each of the transactions from part *b* in the financial statement effects template.

Transaction	Balance Sheet					Income Statement		
	Cash Asset	+ Noncash Assets	= Liabilities	+ Contrib. Capital	+ Earned Capital	Revenues	Expenses	Net Income
Lease store space under operating lease.		+41,002 Right-of-Use Asset—Operating Lease	= +41,002 Operating Lease Liability			-	=	

Right-of-use asset—Operating lease (+A)	41,002	
Operating lease liability (+L)		41,002

+	Right-of-Use Asset—Operating Lease (A)	-	Operating Lease Liability (L)	+
	41,002		41,002	

At the end of the first year, Gillette will record the straight-line expense amount related to the lease and will also record the lease payment in cash. The straight-line expense is computed by taking the total cost of the lease divided by the total number of lease payments. The total cost of the lease in our example is straightforward because this is a simple lease.⁶ The total cost of the lease is \$50,000 and if we divide by the 5-year term, we obtain \$10,000 as the annual straight-line expense amount. As stated above, Gillette still needs to prepare the amortization schedule for the liability. Though no interest expense line item is recorded for the operating lease liability, Gillette needs to compute the “interest” on the lease liability. Gillette also needs to compute the amortization of the right-of-use asset. The amortization is computed as the straight-line expense amount less the computed “interest” amount (though again no actual amortization expense line item is recorded). The entries to record the payment of the lease payment as well as the recording of the straight-line expense are as follows:

Recording of the lease payment:

Lease payment.	-10,000	= -10,000 Operating Lease Liability		
----------------	---------	--	--	--

Operating lease liability (-L)	10,000	
Cash (-A)		10,000

-	Operating Lease Liability (L)	+	Cash (A)	-
	10,000		10,000	

Recording of the straight-line expense:

Record lease expense.	-7,130 Right-of-Use Asset—Operating Lease	= +2,870 Operating Lease Liability	-10,000	
-----------------------	--	---------------------------------------	---------	--

Operating lease expense (+E, -SE)	10,000	
Operating lease liability (+L)		2,870
Right-of-use asset—Operating lease (-A)		7,130

+	Operating Lease Expense (E)	-	Operating Lease Liability (L)	+	Right-of-Use Asset—Operating Lease (A)	-
	10,000		2,870		7,130	

⁶ For example the lease could include prepayments, escalation provisions, other required or optional payments, lessee initial direct costs, lease incentives, or other items. In more complicated leases such as these, the amortization of the operating lease asset in subsequent entries can only be computed as a “plug” number equal to the straight-line expense amount less the “interest” expense for the reporting period. In other words, at commencement of the lease, the right-of-use asset value will not always equal the liability value when the lease terms are more complicated. In such cases, the “amortization” of the right-of-use asset will not equal the principal reduction of the liability.

This will continue on each year, following the amortization schedule above, to reduce the asset value on the lessee's books to zero and the liability on the lessee's books to zero. In every year of the lease, the same amount of expense will be recorded, in this case, \$10,000.

In year 5 of this lease for Gillette, the entries would be as follows:

Operating lease liability (–L)	10,000	
Cash (–A)		10,000

The entry for the straight-line-expense amount is:

Transaction	Balance Sheet					Income Statement		
	Cash Asset	+ Noncash Assets	=	Liabilities	+ Contrib. Capital	+ Earned Capital	Revenues	– Expenses = Net Income
Record lease expense.		–9,346 Right-of-Use Asset—Operating Lease	=	+654 Operating Lease Liability		–10,000		+10,000 Operating Lease Expense = –10,000

Operating lease expense (+E, –SE)	10,000	
Operating lease liability (+L)		654
Right-of-use asset—Operating lease (–A)		9,346

Operating Lease Expense (E)	Operating Lease Liability (L)	Right-of-Use Asset—Operating Lease (A)
10,000	654	9,346

Thus, at the end of the lease term, the liability will be zero (\$41,002 – \$10,000 + \$2,870 – \$10,000 + \$2,371 – \$10,000 + \$1,837 – \$10,000 + 1,266 – \$10,000 + \$654). The asset also will have a zero balance (\$41,002 – \$7,130 – \$7,629 – \$8,163 – \$8,734 – \$9,346).

Comparison of Operating and Finance Lease Treatment The accounting for operating leases might seem odd in some ways to readers. Gillette is required to compute an “interest” cost using the amortization of the liability table to adjust the lease liability account and to compute the “amortization” of the right-of-use asset to adjust the right-of-use asset account. But there is no interest expense or amortization expense ever recorded—only one straight-line Lease Expense. The goal (in the end, anyway) of the standard was to achieve (retain) straight-line expensing for these leases: the related expenses are not greater in the earlier part of the lease as they are with finance lease treatment. For example, even in our simple lease illustration above, the total expense in the first year for Gillette if the lease was a finance lease was \$11,070 (amortization of the right-of-use asset is \$8,200 and interest expense is \$2,870). However, with the operating lease classification, the first year expense amount is \$10,000. Note also that the balance of the asset on the balance sheet differs—the balance of the asset declines faster for the finance lease than the operating lease (i.e., amortization is faster for the finance lease). A full comparison is below:

EXHIBIT 10.3 Comparison of Expenses and Right-of-Use Asset Balance						
Year	Finance Lease Method			Right-of-Use Asset Balance End of Year	Operating Lease Method	
	Interest Expense	Amortization Expense	Total Expense		Lease Expense	Right-of-Use Asset Balance End of Year
1	\$2,870	\$ 8,200	\$11,070	\$32,802	\$10,000	\$33,872
2	2,371	8,200	10,571	24,602	10,000	26,243
3	1,837	8,200	10,037	16,401	10,000	18,080
4	1,266	8,201	9,467	8,200	10,000	9,346
5	654	8,201	8,855	0	10,000	0
Total ...	\$8,998	\$41,002	\$50,000		\$50,000	

3. If the lease were an operating lease, the entries would be as follows:

(3a) To record lease asset and liability at commencement of lease.

Transaction	Balance Sheet							Income Statement		
	Cash Asset	+ Noncash Assets	= Contra Assets	= Liabilities	+ Contrib. Capital	+ Earned Capital		Revenues	= Expenses	= Net Income
Lease store space using operating-type lease.		+224,755 Right-of-Use Asset—Operating Lease		= +224,755 Operating Lease Liability						

(3a) Right-of-use asset—Operating lease (+A)	224,755	
Operating lease liability (+L)		224,755

+	Right-of-Use Asset—Operating Lease (A)	-
(3a)	224,755	

-	Operating Lease Liability (L)	+
	224,755	(3a)

(3b) At the end of the year the lease payment is recorded, as well as the straight line lease expense and effects on the balance sheet.

Lease payment.	-32,000 Cash		= -32,000 Operating Lease Liability	
----------------	-----------------	--	--	--

(3b) Operating lease liability (-L)	32,000	
Cash (-A)		32,000

-	Operating Lease Liability (L)	+
(3b)	32,000	

+	Cash (A)	-
	32,000	(3b)

(3c) At the end of the year, the straight-line lease expense is recorded and the balance sheet items are adjusted.

Record lease expense.	-16,267 Right-of-Use Asset—Operating Lease		= +15,733 Operating Lease Liability		-32,000 Retained Earnings
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(3c) Operating lease expense (+E)	32,000	
Operating lease liability (+L)		15,733
Right-of-use asset—Operating lease (-A)		16,267

+	Operating Lease Expense (E)	-
(3c)	32,000	

-	Operating Lease Liability (L)	+
	15,733	(3c)

+	Right-of-Use Asset—Operating Lease (A)	-
	16,267	(3c)

SOLUTION TO PART B

- When The Gap adopts the new standard, the company will record a Right-of-use operating lease asset on the balance sheet for \$5.8 billion in long-term assets. The company will also record \$6.6 billion as a

BUSINESS INSIGHT

It is possible that reported earnings declines but Basic EPS increases. Indeed, of all the public firms that filed with the SEC in the years 2015–2017, this occurred almost 800 times. Notably, Signet Jewelers had a decline in earnings of almost 5% and an increase in Basic EPS of 8%. A similar relation held for IBM in the years 2012–2014. Often this is due to reductions in the number of shares due to share repurchases.

CHAPTER-END REVIEW

Petroni Corporation reported net income of \$1,750 million in 2018. The weighted average number of common shares outstanding during 2018 was 760 million shares. Petroni paid \$40 million in dividends on preferred stock, which was convertible into 10 million shares of common stock.

1. Calculate Petroni's basic earnings per share for 2018.
2. Calculate Petroni's diluted earnings per share for 2018.
3. What EPS numbers should Petroni report on its 2018 income statement?

The solution to this review problem can be found on page 578.



APPENDIX 11A: Dilutive Securities: Accounting for convertible securities, stock options, and restricted stock

Convertible Securities

Convertible securities are debt and equity securities that provide the holder with an option to convert those securities into other securities. Convertible debentures, for example, are debt securities that give the holder the option to convert the debt into common stock at a predetermined conversion price. Preferred stock can also contain a conversion privilege.

To illustrate, assume 5,000 shares of preferred stock were issued at a stated value of \$100 per share, with each share convertible into 12 shares of \$5 par value common stock. The appropriate journal entry would be:

Cash (+A)	500,000	
Preferred stock (stated value) (+SE)		500,000

Now assume that 2,000 shares are converted to $(2,000 \times 12) = 24,000$ shares of common stock. The appropriate journal entry is:

Preferred stock (stated value) (–SE)	200,000	
Common stock (par \$5) (+SE)		120,000
Additional paid-in capital (+SE)		80,000

Conversion privileges offer an additional benefit to the holder of a security. That is, debtholders and preferred stockholders carry senior positions as claimants in bankruptcy, and carry a fixed-interest or dividend yield. With a conversion privilege, they can enjoy the residual benefits of common shareholders should the company perform well.

A conversion option is valuable and yields a higher price for the securities than they would otherwise command. However, conversion privileges impose a cost on common shareholders. That is, the higher market price received for convertible securities is offset by the cost imposed on the subordinate (common) securities. Conversion of these securities into common shares dilutes the ownership percentage of existing holders of the firm's common stock.

Accounting for the issuance of a convertible security is straightforward: the conversion option is *not* valued on the balance sheet unless it is detachable from the security (and, thus, separately saleable). Instead, the convertible preferred stock or convertible debt is recorded just like preferred stock or debt that does not have a conversion feature.



LO7 Analyze the accounting for convertible securities, stock rights, stock options, and restricted stock.

would be considered passive investors, even though their trading style may be active. Debt securities have no ownership interest, so they are always passive, and we leave the accounting for passive equity investments for the next section. Passive debt investments can be broadly grouped into two categories: those reported at cost and those reported at fair value. Furthermore, there are two methods for reporting investments at fair value. These alternative treatments are discussed below.

Acquisition of the Investment

When a debt investment is acquired, regardless of the amount purchased, the investment is initially recorded on the balance sheet at its fair value, that is, its price on the date of purchase. This accounting is the same as that for the acquisition of other assets such as inventories or plant assets. Subsequent to acquisition, investments are carried on the balance sheet as current or long-term assets, depending on management’s expectations about their ultimate holding period (the assets are reported as current assets if management expects to dispose of them within one year).

When investments are sold, any recognized gain or loss on sale usually is equal to the difference between the proceeds received and the book (carrying) value of the investment on the balance sheet. However, there is one passive investment method where that is not true.

To illustrate entries for a passive debt investment, assume that—on January 1 of Year 1—Pownall Company wants to earn a return on a cash balance for which it has no immediate need. King Company has just issued high-quality bonds that mature in five years. Each bond has a face value of \$1,000 and an annual coupon rate of interest equal to 10% (paid semi-annually on June 30 and December 31). The bonds have a current market price of \$1,000, implying a 10% annual discount rate. At the start of the year, Pownall Company purchases 500 of King Company’s bonds for \$500,000. The financial statement effects of this transaction for Pownell are the following:

ANALYZE

Transaction	Balance Sheet					Income Statement		
	Cash Asset	+ Noncash Assets	= Liabilities	+ Contrib. Capital	+ Earned Capital	Revenues	Expenses	Net Income
(1) Purchase 500 bonds at \$1,000 each.	-500,000 Cash	+500,000 Investments	=			-		=

(1)	Investment in King Company bonds (+A)	500,000	
	Cash (-A)		500,000

	+	Investment in King Company (A)	-		+	Cash (A)	-
(1)		500,000				500,000	(1)

ANALYZE

While accounting for the initial investment is straightforward, the subsequent reporting can follow one of three paths.

Investments Reported at Cost

When a company purchases a debt security, and it has the positive intent and the ability to hold that security until it matures, the value fluctuations between purchase and maturity are not relevant for financial statement readers. In such cases, these debt securities are classified as **held-to-maturity (HTM)**. Exhibit 12.3 summarizes the reporting of these securities.

EXHIBIT 12.3		
Investment Classification	Reporting of Fair Value Changes	Reporting Interest Received and Gains and Losses on Sale
Held-to-Maturity (HTM)	Fair value changes are not reported in either the balance sheet or income statement	Reported as other income in income statement

In our illustrative example, we assume (for the moment) that Pownall Company has the ability and the intent to hold the bonds until they mature. For the King Company bonds, Pownall Company's use of the held-to-maturity method would have the following interest income and book value pattern over the five years (mirroring the accounting for a bond from Chapter 9). At the end of each six-month period, Pownall would receive an interest payment of \$25,000 and recognize investment income of the same amount. Fluctuations in the market value of King Company bonds are not reflected in the accounting for the investment. At the end of year 5, Pownall would also receive a principal repayment of \$500,000.

Year	Beginning Book Value (A)	Interest Income	Interest Received	Principal Payment	Ending Book Value
	(a)	(b) = (a) × 10%/2	(c)		(d) = (a) + (b) - (c)
½	500,000	25,000	25,000	-0-	500,000
1	500,000	25,000	25,000	-0-	500,000
1½	500,000	25,000	25,000	-0-	500,000
2	500,000	25,000	25,000	-0-	500,000
2½	500,000	25,000	25,000	-0-	500,000
3	500,000	25,000	25,000	-0-	500,000
3½	500,000	25,000	25,000	-0-	500,000
4	500,000	25,000	25,000	-0-	500,000
4½	500,000	25,000	25,000	-0-	500,000
5	500,000	25,000	25,000	500,000	-0-

Investments Marked to Fair Value

If Pownall Company does not have the ability or the intent to hold the King Company bonds to maturity, then it cannot use the held-to-maturity accounting method. Instead, it must reflect changes in the fair value of those bonds at the end of a reporting period. In this illustration, we assume that Pownall closes its accounts and issues financial statements at the end of every calendar year. At the end of the first six months after the investment, Pownall Company makes the following entry:

Transaction	Balance Sheet					Income Statement		
	Cash Asset	+ Noncash Assets	= Liabilities	+ Contrib. Capital	+ Earned Capital	Revenues	- Expenses	= Net Income
(2) Receive interest payment.	+25,000 Cash		=		+25,000 Retained Earnings	+25,000 Investment Income		= +25,000

(2) Cash (+A)	25,000	
Investment income (+R, +SE)		25,000
<i>Received interest payment from King Company Bonds</i>		

	+	Cash (A)	-		-	Investment Income (R)	+	
(2)		25,000				25,000		(2)

Sale of the Investment

On July 1, Year 1, an unexpected liquidity need causes Pownall to sell 100 of the 500 bonds for \$950 cash per bond. The financial statement effects of this transaction and its related entries for Pownall follow.

Management’s assignment of securities between these two classifications depends on the degree of turnover (transaction volume) it expects in the investment portfolio, which reflects its intent to actively trade the securities or not. Available-for-sale portfolios exhibit less turnover than do trading portfolios. Once that classification is established, reporting for a portfolio follows procedures detailed in **Exhibit 12.4**.

FYI GAAP permits companies to have multiple portfolios, each with a different classification. Management can change portfolio classification provided it adheres to strict disclosure and reporting requirements if its expectations of turnover change.

EXHIBIT 12.4 Accounting Treatment for Trading and Available-for-Sale Debt Investments			
Investment Classification	Reporting of Fair Value Changes	Reporting Gains and Losses on Sale	Reporting Interest Income
Trading (T)	Balance sheet values are updated to reflect fair value changes; unrealized gains and losses are reported as investment income; affects equity via retained earnings	Gain or loss on sale equals proceeds minus the most recent book (fair) value	Reported as investment income in income statement
Available-for-Sale (AFS)	Balance sheet values are updated to reflect fair value changes; unrealized gains and losses bypass the income statement and are reported directly in the statement of comprehensive income and then in accumulated other comprehensive income (AOCI), a component of equity	Gain or loss on sale equals proceeds minus the original acquisition cost of the investment; any unrealized gains or losses in accumulated other comprehensive income must be eliminated	Reported as investment income in income statement

Both trading (T) and available-for-sale (AFS) investments are reported at fair values on the statement date. Whether the change in fair value affects current income depends on the investment classification: available-for-sale securities have no immediate income effect; trading securities have an income effect. The impact on shareholders’ equity is similar for both classifications, with the only difference being whether the change is reflected in retained earnings or in accumulated other comprehensive income (AOCI) in equity. Interest income and any gains or losses on security sales are reported in the investment income section of the income statement for both classifications.

FYI When trading securities are marked-to-fair value, the unrealized gain/loss is recorded as income and reported in the income statement. For available-for-sale investments, unrealized gains/losses are reported as other comprehensive income.

Fair Value Adjustments To illustrate the accounting for changes in fair value subsequent to purchase (and before sale), assume that Pownall’s investment in King Co. (400 remaining bonds purchased for \$1,000 per bond) could be sold for \$1,010 per bond at year-end. The investment must be marked to fair value in an adjusting entry to reflect the \$4,000 unrealized gain (\$10 per bond increase for 400 bonds).

If the investment is classified as trading securities (T) the entry would be:

Balance Sheet						Income Statement		
Transaction	Cash Asset	+ Noncash Assets	= Liabilities	+ Contrib. Capital	+ Earned Capital	Revenues	- Expenses	= Net Income
If trading portfolio:								
(5T) \$10 increase in market value of King Co. investment.		+4,000 Investments	=		+4,000 Retained Earnings	+4,000 Unrealized Gain		= +4,000

(5T) Investment in King Company bonds (+A)4,000

Unrealized gain (+R, +SE)4,000

+ Investment in King Company (A) -

- Unrealized Gain (R) +

(5T) 4,000 | 4,000 (5T)

The investment account is increased by \$4,000, making the end-of-year book value of Pownall's investment equal to \$404,000, its fair value. Total investment income reported on Pownall's income statement would be \$44,000, consisting of a realized holding loss of \$5,000, interest income of \$45,000 ($= 500 \times 10\% \times \$1,000/2 + 400 \times 10\% \times \$1,000/2$) and \$4,000 in unrealized holding gains. If Pownall is actively trading to achieve capital gains, then this approach seems like the correct way to "keep score."

This entry to adjust the balance sheet to reflect the fair value of the securities is an adjusting entry. It would need to be made at the end of every fiscal period as financial reports are being prepared.

What happens when the securities are subsequently sold? Assume that Pownall Company sells its 400 bonds of King Company for \$990 per bond on July 1 of Year 2. Pownall Company would receive the interest payment of \$20,000 on June 30 of Year 2, as in transaction (4) above. On July 1, Year 2, Pownall receives \$396,000 ($= 400 \times \990) in cash, and it no longer owns bonds of King Company. When the trading method is used, the accounting for the sale of shares is relatively simple:

Balance Sheet						Income Statement		
Transaction	Cash Asset	+ Noncash Assets	= Liabilities	+ Contrib. Capital	+ Earned Capital	Revenues	- Expenses	= Net Income
(6T) Sell 400 bonds for \$990 per bond.	+396,000 Cash	-404,000 Investments	=		-8,000 Retained Earnings		+8,000 Realized Loss	= -8,000

(6T) Cash (+A)	396,000	
Realized loss (+E, -SE)	8,000	
Investment in King Company bonds (-A)		404,000

+	-	+	-	+	-
Cash (A)		Investment in King Company (A)		Realized Loss (E)	
(6T) 396,000		404,000	(6T)	(6T) 8,000	

Under the trading securities method, holding gains and losses (both realized and unrealized) are recognized in income in the period in which they occur. Holding these 400 bonds caused a holding gain of \$4,000 in Year 1 and a holding loss of \$8,000 in Year 2. Again, if Pownall Company were actively seeking capital gains, we would say that they were less successful in Year 2 than they had been in Year 1.

Now let's assume that Pownall Company had classified its investment in King Company as available-for-sale (AFS) securities; the end-of-year adjusting entry would be the following:

If available-for-sale portfolio:								
(5AFS) \$10 increase in market value of King Co. investment.	+4,000 Investments	=		+4,000 Unrealized Gain (AOCI)				

(5AFS) Investment in King Company bonds (+A)	4,000	
Unrealized gain (+AOCI, +SE)		4,000

+	-	-	+
Investment in King Company (A)		Unrealized Gain (AOCI)	
(5AFS) 4,000		4,000	(5AFS)

As under the trading method, the investment account is increased by \$4,000 (from \$400,000 to \$404,000) to reflect the increase in fair value of the shares owned at the end of Year 1. However, when accounted for as an AFS security, the unrealized gain (or loss) bypasses the income statement, is reported in the statement of other comprehensive income, and ends up in accumulated other comprehensive income (AOCI), a separate component of shareholders' equity. In contrast to

the trading method, the increase in the investment does not result in an immediate income statement effect. Under AFS, Pownall Company's investment income for Year 1 would reflect only the \$5,000 realized loss from the sale of 100 bonds, plus the interest income of \$45,000. The \$4,000 unrealized gain is reflected in stockholders' equity, but not reported on the income statement. In a sense, the balance sheet has been updated to reflect the current values, but the income statement has been left out of the picture for the time being.

When Pownall Company sells the 400 bonds for \$396,000 in the subsequent period, the entry under AFS would be the following:

Transaction	Balance Sheet					Income Statement		
	Cash Asset	+ Noncash Assets	= Liabilities	+ Contrib. Capital	+ Earned Capital	Revenues	Expenses	= Net Income
(6AFS) Sell 400 King bonds for \$990 per bond.	+396,000 Cash	-404,000 Investment	=		-4,000 Unrealized Gain (AOCI) -4,000 Retained Earnings		+4,000 Realized Loss	-4,000

(6AFS) Cash (+A)	396,000
Unrealized gain (-AOCI, -SE)	4,000
Realized loss on King bonds (+E, -SE)	4,000
Investment in King Company bonds (-A)	404,000
<i>Received proceeds from sale of 400 King Company Bonds</i>	

Cash (A)		Investment in King Company (A)
(6AFS) 396,000		404,000 (6AFS)

Unrealized Gain (AOCI)		Realized Loss (E)
(6AFS) 4,000		(6AFS) 4,000

Under AFS, the realized gain (loss) goes into income when the security is sold, and the amount is determined by comparing the amount received when the shares are sold (\$990 per bond) to the amount paid for the shares when originally purchased (\$1,000 per bond). When the investment is sold, the entry must delete the investment (which was valued at \$1,010 per bond at the end of last period) and the unrealized holding gain (\$10 per bond) that was put into accumulated other comprehensive income when those shares were revalued. Both the Investment in King Company account and the AOCI for King Company have zero balances after this transaction.

The principal difference between trading and available-for-sale accounting is in the income statement, as summarized in the following table. Under the trading security method, Pownall Company records income of \$44,000 in Year 1 and \$12,000 in Year 2. Under available-for-sale, Pownall Company records income that is \$4,000 lower in Year 1 and \$4,000 higher in Year 2. The total income from the investment in King Company is the same, but the timing is different.

	Income Reported in Income Statement From Investment in King Company Bonds	
	Trading	Available-for-Sale
Year 1:		
Interest income	\$45,000	\$45,000
Realized holding loss	(5,000)	(5,000)
Unrealized holding gain	4,000	—
Total Year 1 investment income	\$44,000	\$40,000
Year 2:		
Interest income	\$20,000	\$20,000
Realized holding loss	(8,000)	(4,000)
Total year 2 investment income	12,000	16,000
Total investment income—Year 1 plus Year 2	\$56,000	\$56,000

Because of the difference in the way unrealized gains and losses are reported, the classification of investments as either trading or available-for-sale will have an effect on key ratios that might be used to evaluate the performance of a company. Ratios that use net income in the calculation are affected. Return on equity (ROE), return on assets (ROA), and profit margin (PM) are among those ratios affected. Return on net operating assets (RNOA), which is discussed in Appendix A at the end of Chapter 5, would not be affected by this classification because passive investments would be considered nonoperating assets and excluded from the calculation of net operating assets and the gains and losses would be excluded from net operating profit after taxes (NOPAT).

PASSIVE INVESTMENTS IN EQUITY SECURITIES

While passive investments in debt securities may be accounted for in three different ways, passive investments in equity securities should be reported based on the trading method. That is, passive equity investments should be marked to fair value and changes in fair value should be reported in the income statement in the period they occur. The available-for-sale method—which lets unrealized holding gains and losses go into AOCI until the security is sold—is not allowed for passive investments in equity securities.

When an equity security is purchased, the cost of purchase increases (debits) the investment asset. Dividends received are reported as income by the investing company. At the end of every reporting period, the investing company must adjust the investment asset's value to its current fair value. If the value has increased, the change produces an unrealized holding gain in the investing company's income statement. If the investment asset's value has decreased, then marking the assets value down to fair value produces an unrealized holding loss in the investing company's income statement. Fluctuations in the fair value of an equity security are presented as they occur in the investing company's balance sheet and income statement. When the equity security is sold, the realized holding gain or loss is determined by subtracting the fair value from the investing company's most recent balance sheet from the proceeds from the sale.

In the investing company's statement of cash flows, the original investment would be an investing cash outflow, and the sale proceeds would appear as an investing cash inflow (assuming that the purchase and sale were cash transactions). Cash dividends received would be operating cash inflows (under US GAAP). If the investing company uses the indirect method to report its operating cash flows, it would have to subtract any unrealized holding gain (or add back any unrealized holding loss) that was reporting in its income statement.

As an example, assume that Pownall Company used \$50,000 cash to purchase 1,000 common shares of King Company on January 1, Year 1. One thousand shares represent 5% of King's outstanding common stock, so Pownall's investment is considered passive. During Year 1, King pays dividends to its common shareholders equal to \$1.50 per share. Assume that King Company shares are traded actively on a national stock exchange. At the end of Year 1, the bid price for a common share of King Company is \$55. Shortly after the end of Year 1, Pownall sells its investment and receives \$52,000 in cash. These events would be accounting for in the following way:

Balance Sheet						Income Statement		
Transaction	Cash Asset	+ Noncash Assets	= Liabilities	+ Contrib. Capital	+ Earned Capital	Revenues	Expenses	Net Income
(1) Invest in King Co. shares.	-50,000 Cash	+50,000 King Co. shares	=			-	=	

(1) Investment in King Co. shares (+A)	50,000	
Cash (-A)		50,000
Investment in 1,000 King Company shares		

+	King Co. Shares (A)	-	+	Cash (A)	-
(1)	50,000			50,000	(1)

Transaction	Balance Sheet					Income Statement		
	Cash Asset	+ Noncash Assets	= Liabilities	+ Contrib. Capital	+ Earned Capital	Revenues	− Expenses	= Net Income
(2) Receive dividend payment.	+1,500 Cash		=		+1,500 Retained Earnings	+1,500 Investment Income		= +1,500
<div> <div> <div>(2) Cash (+A)</div> <div>Investment income (+R, +SE)</div> <div>Received dividend payment from 1,000 King Company shares</div> </div> <div> <div>1,500</div> <div>1,500</div> </div> </div>								
<div> <div> <div>+</div> <div>Cash (A)</div> <div>−</div> </div> <div> <div>−</div> <div>Investment Income (R)</div> <div>+</div> </div> </div> <div> <div>(2) 1,500</div> <div>1,500 (2)</div> </div>								
(3) Mark to Fair Value.		+5,000 King Co. Shares	=		+5,000 Retained Earnings	+5,000 Unrealized Gain		= +5,000
<div> <div> <div>(3) Investment in King Co. shares (+A)</div> <div>Unrealized gain (+R, +SE)</div> <div>Unrealized holding gain on King Co. shares</div> </div> <div> <div>5,000</div> <div>5,000</div> </div> </div>								
<div> <div> <div>+</div> <div>King Co. Shares (A)</div> <div>−</div> </div> <div> <div>−</div> <div>Unrealized Gain (R)</div> <div>+</div> </div> </div> <div> <div>(3) 5,000</div> <div>5,000 (3)</div> </div>								
(4) Sell King Co. shares.	+52,000 Cash	−55,000 King Co. shares	=		−3,000 Retained Earnings		+3,000 Realized Loss	= −3,000
<div> <div> <div>(4) Cash (+A)</div> <div>Realized loss (+E, −SE)</div> <div>Investment in King Co. shares (−A)</div> <div>Sell King Co. shares and recognize \$3,000 realized holding loss</div> </div> <div> <div>52,000</div> <div>3,000</div> <div>55,000</div> </div> </div>								
<div> <div> <div>+</div> <div>Cash (A)</div> <div>−</div> </div> <div> <div>+</div> <div>Realized Loss (E)</div> <div>−</div> </div> <div> <div>+</div> <div>King Co. Shares (A)</div> <div>−</div> </div> </div> <div> <div>(4) 52,000</div> <div>3,000 (4)</div> <div>55,000 (4)</div> </div>								

The available-for-sale method is not allowed for equity investments, so the holding gain/loss component of Pownall Company's investment income always reflects the events of that period. There is no opportunity for the investing company to "store up" holding gains or losses and to recognize them at a desired time.

As described earlier, the fair value of financial investments can be determined using a variety of mark-to-market or mark-to-model techniques, including hiring experts in valuation. When those approaches are prohibitively expensive, accounting standard setters also allow a version of a **cost method** for equity investments with no readily determinable fair value. The investing company uses the investment's cost, but then adjusts that cost for any impairments and for any observed price changes in orderly transactions for the identical (or similar) investment from the same issuer. This approach—known as the "measurement alternative"—requires the investing company to establish systems to identify such transactions on a continuing basis.

Financial Statement Disclosures

Companies are required to disclose cost and fair value information on their investment portfolios in footnotes to financial statements. **Alphabet, Inc.**, reports its accounting policies for its investments in note 1 to its 2018 10-K report:

- c. Explain the meaning of the asset Excess of Cost over Equity Acquired in Net Assets of Asare Company.
- d. What is meant by *noncontrolling interest* and to what company is this account related?

LO1, 2, 3, 4 C12-52. Understanding Intercompany Investments, Accounting Practices, and Managerial Ethics

Doug Stevens, controller of Nexgen, Inc., has asked his assistant, Gayle Sayres, for suggestions as to how the company can improve its reported financial performance for the year. The company is in the last quarter of the year and projections to the end of the year show the company will have a net loss of about \$400,000 before tax.

"My suggestion," said Sayres, "is that we sell 1,000 of the 200,000 common shares of Heflin Company that we own. The 200,000 shares gives us a 20% ownership of Heflin, and we have been using the equity method to account for this investment. We have owned this stock a long time and the current market value of the 200,000 shares is about \$750,000 above our book value for the stock."

"That sale will only generate a gain of about \$3,750," replied Stevens.

"The rest of the story," continued Sayres, "is that once we sell the 1,000 shares, we will own less than 20% of Heflin. We can then reclassify the remaining 199,000 shares from the influential category to the passive equity/fair value category. Then we value the stocks at their current fair value, include the rest of the \$750,000 gain in this year's income statement, and finish the year with a healthy net income."

"But," responded Stevens, "we aren't going to sell all the Heflin stock; 1,000 shares maybe, but certainly not any more. We own that stock because they are a long-term supplier of ours. Indeed, we even have representation on their board of directors. The 199,000 shares do not belong in the passive category."

Sayres rolled her eyes and continued, "The classification of an investment as passive or not depends on management's intent. This year-end we claim it was our intent not to exert influence over Heflin. Next year we change our minds and take the stock out of the trading category. Generally accepted accounting principles can't legislate management intent, nor can our outside auditors read our minds. Besides, why shouldn't we take advantage of the flexibility in GAAP to avoid reporting a net loss for this year?"

REQUIRED

- a. Should generally accepted accounting principles permit management's intent to influence accounting classifications and measurements?
- b. Is it ethical for Doug Stevens to implement the recommendation of Gayle Sayres?

SOLUTIONS TO REVIEW PROBLEMS

Mid-Chapter Review 1

SOLUTION TO PART 1

Transaction	Balance Sheet						Income Statement		
	Cash Asset	+	Noncash Assets	=	Liabilities	+	Contrib. Capital	+	Earned Capital
(1) Purchased 500 Pincus bonds.	-470,000 Cash		+470,000 Investments (AFS)	=					
							Revenues	-	Expenses = Net Income

(1) Investment in Pincus bonds (+A)	470,000
Cash (-A)	470,000

+	Investment in Pincus (A)	-	+	Cash (A)	-
(1)	470,000			470,000	(1)

continued

Mid-Chapter Review 2

SOLUTION

Transaction	Balance Sheet						Income Statement		
	Cash Asset	+ Noncash Assets	= Liabilities	+ Contrib. Capital	+ Earned Capital		Revenues	− Expenses	= Net Income
(1) Purchased 5,000 Hribar shares at \$10 cash per share. These shares reflect 30% ownership of Hribar.	−50,000 Cash	+50,000 Investment in Hribar	=				−		=
<div> <div> <div>(1) Investment in Hribar shares (+A)</div> <div>Cash (−A)</div> </div> <div> <div>50,000</div> <div>50,000</div> </div> </div>									
<div> <div> <div>+</div> <div>Investment in Hribar (A)</div> <div>−</div> </div> <div> <div>+</div> <div>Cash (A)</div> <div>−</div> </div> </div> <div> <div>(1) 50,000</div> <div></div> <div>(1) 50,000</div> </div>									
(2) Received a \$2 per share on cash dividend on Hribar stock.	+10,000 Cash	−10,000 Investment in Hribar	=				−		=
<div> <div> <div>(2) Cash (+A)</div> <div>Investment in Hribar shares (−A)</div> </div> <div> <div>10,000</div> <div>10,000</div> </div> </div>									
<div> <div> <div>+</div> <div>Cash (A)</div> <div>−</div> </div> <div> <div>+</div> <div>Investment in Hribar (A)</div> <div>−</div> </div> </div> <div> <div>(2) 10,000</div> <div>50,000</div> <div>(1)</div> <div>(1) 50,000</div> <div>10,000</div> <div>(2)</div> </div>									
(3) Made an adjustment to reflect \$100,000 income reported by Hribar.		+30,000 Investment in Hribar	=		+30,000 Retained Earnings		+30,000 Investment Income	−	= +30,000
<div> <div> <div>(3) Investment in Hribar shares (+A)</div> <div>Investment income (+R, +SE)</div> </div> <div> <div>30,000</div> <div>30,000</div> </div> </div>									
<div> <div> <div>+</div> <div>Investment in Hribar (A)</div> <div>−</div> </div> <div> <div>−</div> <div>Investment Income (R)</div> <div>+</div> </div> </div> <div> <div>(1) 50,000</div> <div>10,000</div> <div>(2)</div> <div>(3) 30,000</div> <div></div> <div>(3) 30,000</div> </div>									

continued