

## CHAPTER 2

### COVERAGE OF LEARNING OBJECTIVES

<u>LEARNING OBJECTIVES</u>	<u>QUESTIONS</u>	<u>EXERCISES</u>	<u>PROBLEMS</u>	<u>OTHER</u>
<b>LO1: Explain how accountants measure income.</b>	1,2,3,4,26,27	32, 36	45,49,51	67
<b>LO2: Determine when a company should record revenue from a sale.</b>	5,6	31	45,46,49,51,61	67
<b>LO3: Use the concept of matching to record the expenses for a period.</b>	7,8,9	34, 36	45,47,48,50, 52,53,54,56	
<b>LO4: Prepare an income statement and show how it is related to a balance sheet.</b>	10,11,12	30,35,36,37,38,39, 40,41	45,47,48,50,52, 53,54,55, 56,57,58	65,66,67
<b>LO5: Account for cash dividends and prepare a statement of stockholders' equity.</b>	13,14,15, 28	33,35, 38, 39,40	54,55,57,58	65,66
<b>LO6: Compute and explain earnings per share, price-earnings ratio, dividend-yield ratio, and dividend-payout ratio.</b>	17,18,19,20,29	42,43	59, 60	64,66
<b>LO7: Explain how the conceptual framework guides the standard setting process and how accounting regulators trade off relevance and faithful representation in setting accounting standards.</b>	21,22,23		62	
<b>LO8: Explain how the following concepts affect financial statements: entity, going concern, materiality, stable monetary unit, periodicity and reliability.</b>	16,24,25,26	44	63	

## CHAPTER 2

- 2-1 The length of the operating cycle depends on the nature of the company. It is the time it takes the company to use cash to acquire goods and services, to sell those goods and services to customers, and to collect cash from the sales.
- 2-2 A fiscal year is the year used for financial reporting. It may be the same as a calendar year, but often it is not. Many companies elect to begin and end a fiscal year at the low point in their annual business activity.
- 2-3 Expenses are reductions in stockholders' equity; thus they may be described as negative stockholders' equity accounts.
- 2-4 The cash basis fails to match accomplishments with efforts in a single accounting period. In particular, the cash basis fails to match revenues and expenses properly. Inventory may be bought and paid for in one period, and sold in the second with the collection from customers in a third period. Accrual accounting matches revenue and cost of goods sold in the second period, although the cash outlay occurred in the first and the collection was made in the third.
- 2-5 The two criteria for revenue recognition are earning and realization (realized or realizable).
- 2-6 Revenue recognition is delayed when a company sells a magazine subscription because the company does not recognize revenue until it is earned by delivery of the magazines. Revenue recognition is also delayed if collection of the account receivable is not reasonably certain, which means that it is not realized or realizable. This may happen with speculative land sales.
- 2-7 Product costs are naturally linked to revenues, while period costs support a company's operations for a given period. Product costs become expenses when the company recognizes the related revenue. Period costs become expenses in the period in which they are incurred.
- 2-8 In theory, all expenses are goods and services that were first purchased as assets and that have now been consumed or used in the conduct of operations.
- 2-9 Managers acquire assets (goods and services) that are then either used instantaneously or at a later time. When the assets are used, they become expenses.
- 2-10 The balance sheet is a financial picture of a company at one point in time, like a snapshot. In contrast, an income statement shows activity over a period of time. It shows the series of events that take a company from one "snapshot" (balance sheet) to another, just as a moving picture shows movement from one position to the next.

- 2-11 Synonyms for the income statement include statement of earnings, statement of operations, and operating statement. A major reason to learn accounting is to be able to read real financial statements. Such statements contain a variety of terms that may differ from the one first learned in an introductory accounting course. To be able to read and interpret the financial statements, users need to understand the terminology, including synonyms used for the major accounting terms.
- 2-12 Managers are often optimistic and feel that things are bound to get better, so they do not like to report bad news. In addition, they may have bonuses or possible promotions that depend on the financial results, so they want the reports to be as good as possible. Finally, financial reports are often the “scorecard” for business success, and competitive managers want to report a high score.
- 2-13 Cash dividends are not necessary in the conduct of revenue-producing operations. Therefore, they are not expenses but are voluntary distributions of assets to owners. These distributions are made possible because of profitable operations, but are not part of the profitable operations.
- 2-14 Retained earnings is a stockholders’ equity account (a residual claim against assets), and not an asset account. It is a claim against resources, not a resource itself.
- 2-15 The statement of stockholders’ equity provides information on what caused the stockholders’ equity accounts to change during a given period. The three main items that affect stockholders’ equity are net income, transactions with stockholders (sale of stock, distribution of dividends), and other comprehensive income—a catch-all category of all equity changes that are neither part of net income nor arise from transactions with owners.
- 2-16 No. An accounting entity can be a part of an organization, such as a division or department. It can also be an entire economy, such as national income accounting for the United States or another country.
- 2-17 No. One financial ratio, earnings per share (EPS), is presented on the income statement.
- 2-18 A high P-E ratio suggests that investors expect future earnings to significantly exceed current earnings. This is likely to be true for fast growing companies.
- 2-19 Two dividend ratios are as follows:
- Dividend-yield ratio—The amount of dividends paid per dollar invested in a stock at the current market price. The dividend-yield ratio is computed as  $\text{Dividends per share} \div \text{Market price per share}$ .
  - Dividend-payout ratio—The percentage of a company’s earnings that is paid out in dividends. The dividend-payout ratio is computed as  $\text{Dividends per share} \div \text{EPS}$ .

- 2-20 No. A high dividend-payout ratio may be a bad sign. Companies with a high dividend-payout ratio tend to be slow-growing companies. They return a larger percentage of their income to shareholders because they do not have profitable opportunities in which to invest.
- 2-21 Yes, accountants make many trade-offs between relevance and faithful representation. Although both are desirable characteristics, sometimes it is necessary to sacrifice some of one to gain much of the other. A major trade-off is between market values, which are often more relevant but may raise questions about faithful representation, and historical costs, which faithfully represent an event but may be less relevant.
- 2-22 The two main characteristics that make accounting information relevant are predictive value—meaning that it helps users form their expectations about the future—and confirmatory value—meaning that it can confirm or contradict existing expectations.
- 2-23 These criteria support faithful representation. They help ensure that information truly captures the economic substance of the transactions, events, or circumstances it describes.
- 2-24 Reliable data require convincing evidence that can be verified by independent auditors. Accountants must make sure that data reported in the financial statements can be measured with enough accuracy to be useful to users of the statements.
- 2-25 Materiality means that items that are not large enough to influence users' decisions can be omitted from the financial statements. Thus, you do not find pencils or paper clips listed separately among a company's assets. Cost-benefit means, for example, that if the cost of measuring an item is greater than the value from knowing it, the item can be omitted. Thus, the financial statements of a division of a company may not include an expense for any portion of the company president's salary, even though the president spends time overseeing the division's activities. It would simply be too costly for the president to account for each minute spent on each different activity he or she undertakes, and there is little benefit to attempting to allocate the president's salary to individual divisions. However, in the corporate financial statements, the president's salary would be treated as an operating cost assigned to the corporation as a whole.
- 2-26 A year is a long time to wait for new information about a company's performance. Preparing full financial statements is time consuming and costly. Quarterly financial disclosures are less complete than annual ones, but they represent a balanced answer to how often and how complete information should be. Within companies, managers get financial reports daily, weekly, or monthly depending on their needs. In different countries the tradition and the identity of investors have led to different customs. The United States relies on public ownership of companies and needs a system to keep large numbers of investors adequately informed. In countries where more of the ownership is closely held and more of the liabilities are bank financed, there is less need for frequent public disclosure.

- 2-27 The real choice is not between the cash basis and the accrual basis. We can have either one, but they provide very different information. The accrual-basis income statement is a better measure of overall performance over an accounting period. The cash-basis income statement provides better information about the risks of running out of cash. In the end, our choice between the two would depend on the question we are trying to answer.
- 2-28 Theoretically, the stock price will drop by the amount of the dividend per share. Just before the dividend, the stock is worth whatever it will be worth after the dividend plus the amount of the dividend. The chapter does not address details of exactly when rights to a dividend are created, when they accompany the sale of a share, or when they are retained by the seller. These issues are covered in the owners' equity chapter (Chapter 10). The chapter also does not address the impact of other information that may affect the stock price at the time of the dividend.
- 2-29 Many investors would say that it does not matter because the security markets are efficient and the P-E ratios reflect the expected growth rates of future earnings for each firm. High-growth firms have high P-E ratios and low-growth firms have lower ones. Other investors would sort into two groups. Each group of investors believes the market tends to systematically misvalue firms, but they disagree on the nature of the market's "error." Value investors believe that the market undervalues good low-growth, low P-E firms and therefore buy these stocks. Growth investors believe that the market undervalues good high-growth, high P-E firms and therefore buy high P-E stocks. Empirically, we can find periods of time when value investors have had better results from their investments than growth investors and vice versa. The bottom line is that investing based on P-E ratios alone is never a good idea, although they are an important descriptor of what the market perceptions of a company are at a moment in time.
- 2-30 (10 min.)

<u>Balance Sheet</u>	<u>Income Statement</u>
3. Accumulated deficit	1. Sales
4. Unexpired costs—asset	2. Net earnings
5. Prepaid expenses—asset	7. Statement of earnings
6. Accounts receivable—asset	8. Used up costs—expense
12. Retained earnings	9. Net profits
14. Statement of financial condition	10. Net income
16. Statement of financial position	11. Revenues
	13. Expenses—expense
	15. Statement of income
	17. Operating statement
	18. Cost of goods sold—expense

2-31 (5-10 min.)

The dealer is confused. As used by accountants, revenue is a gross amount recorded for sales to customers. For example, sales and revenues are synonyms. Revenue is not “the bottom line” in accountants’ minds. “The bottom line” is net income, that is, revenue minus all expenses. The dealer has \$280,000 more revenue per month, not \$280,000 more in income.

Of course, many people use “bottom line” in a nontechnical sense to mean the important or significant result—the result that really matters. For example, “the bottom line is not how much you earn but how much you keep.”

2-32 (10 min.)

1. On the cash basis, Yankton’s net income would be as follows:

Revenue (cash received)	\$180,000*
Expenses	<u>170,000</u>
Net income	<u>\$ 10,000</u>

\* Beginning receivables + Credit sales – Cash collections = Ending receivables

\$50,000 + \$240,000 – Cash collections = \$110,000

\$50,000 + \$240,000 – \$110,000 = Cash collections = \$180,000

2. On an accrual basis, Yankton’s net income would be as follows:

Revenue (sales)	\$240,000
Expenses	<u>170,000</u>
Net income	<u>\$ 70,000</u>

3. The \$70,000 net income on the accrual basis is generally the most relevant for assessing Yankton’s performance. It gives credit for all \$240,000 of sales because, provided the accounts receivable are likely to be received (which is one criterion for the accrual recognition of revenue), Yankton has created value from all the sales, not just those for which cash has been received.

2-33 (15-20 min.) The theme of this solution is that retained earnings is not a pot of cash awaiting distribution to stockholders.

1.	Cash	<u>\$1,000</u>	Paid-in capital	<u>\$1,000</u>
2.	Cash	\$ 400	Paid-in capital	<u>\$1,000</u>
	Inventory	<u>600</u>		
	Total	<u>\$1,000</u>		

Note in both Requirements 1 and 2 that the ownership equity is fundamentally a claim against the total assets (in the aggregate). For example, none of the shareholders have a specific claim on cash, and none have a specific claim on inventory. Instead, they all have an undivided claim against (or interest in) all of the assets.

3.	Cash	<u>\$1,250</u>	Paid-in capital	\$1,000
			Retained earnings	<u>250</u>
			Total	<u>\$1,250</u>

Retained Earnings is part of stockholders' equity. Even though Cash and Retained Earnings have increased by identical amounts compared to the opening balance sheet given in number 1, the retained earnings is a general claim against total assets (just as paid-in capital is a general claim). Retained earnings is the net increase in ownership claim attributable to profitable operations. However, the assets themselves should not be confused with the claims against the assets.

4.	Cash (\$1,250 – \$300 – \$800)	\$ 150	Paid-in capital	\$1,000
	Inventory	300	Retained earnings	250
	Equipment	<u>800</u>		
	Total	<u>\$1,250</u>	Total	<u>\$1,250</u>

The same explanation applies here as in Requirement 3. However, Transaction 4 should clarify the lack of a specific link between retained earnings (and paid-in capital) and any particular assets. The ownership claims are general, not specific.

5.	Cash	\$ 150	Account payable	\$ 500
	Inventory (\$300 + \$500)	800	Paid-in capital	1,000
	Equipment	<u>800</u>	Retained earnings	<u>250</u>
	Total	<u>\$1,750</u>	Total	<u>\$1,750</u>

The meaning of retained earnings was explained above. Purchases on “open account” usually create a general liability; that is, the trade creditors hold only general claims against the total assets, not specific claims against particular assets (such as mortgages on buildings). In sum, both the creditors and the owners hold general claims against the assets. Of course, if the corporation is liquidated (all assets converted to cash to be distributed to claimants), the creditors' general claims must be satisfied before the owners get one dollar. Thus, the stockholders are said to have a residual claim or residual interest.

2-34 (15-25 min.)

See Exhibit 2-34 on the following page.

2-35 (15-20 min.)

1. First calculate stockholders' equity from the asset and liability amounts given.

	Assets	–	Liabilities	=	Stockholders' equity
Dec. 31:	£126,000	–	£55,000	=	£71,000
Jan. 1:	<u>110,000</u>	–	<u>50,000</u>	=	<u>60,000</u>
Change:	<u>£ 16,000</u>	–	<u>£ 5,000</u>	=	<u>£11,000</u>

Note that the £16,000 asset increase less the £5,000 liability increase yields the increase in stockholders' equity of £11,000.

2. We can use knowledge of what changes stockholders' equity to “deduce” the amount of net income. Net income increases stockholders' equity and dividends decrease stockholders' equity.

Beginning stockholders' equity + net income – dividends = ending stockholders' equity

$$\begin{aligned}\text{£60,000} + \text{net income} - \text{£5,000} &= \text{£71,000} \\ \text{net income} &= \text{£71,000} + \text{£5,000} - \text{£60,000} \\ &= \text{£16,000}\end{aligned}$$

3. Sales – Cost of goods sold – Operating expense = Net income  
£360,000 – Cost of goods sold – £210,000 = £16,000  
– Cost of goods sold = £16,000 + £210,000 – £360,000  
Cost of goods sold = £134,000

2-36 (15 min.)

The cash balance on June 30 was \$53,000, as shown in the balance sheet equation transactions in Exhibit 2-36. The cash balance is the only beginning or ending balance that is available from the data.



EXHIBIT 2–34 (Amounts are in thousands of dollars.)

GREENLEY COMPANY  
Analysis of Transactions for July

	<u>Assets</u>					=	<u>Liabilities</u>	+	<u>Stockholders' Equity</u>
	<u>Cash</u>	+ <u>Prepaid Rent</u>	+ <u>Supplies</u>	+ <u>Unexpired Advertising</u>	+ <u>Unexpired Training</u>	=		+	<u>Retained Earnings</u>
a1.	– 18	+ 18				=			
a2.		– 3				=		–	3 (Rent Expense)
b1.	– 2		+ 2			=			
b2.			– 2			=		–	2 (Supplies Expense)
c1.	– 4			+ 4		=			
c2.				– 4		=		–	4 (Advertising Expense)
d1.	– 8				+ 8	=			
d2.	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>– 8</u>	=		–	<u>8</u> (Training Expense)

The steps shown capture the essence of what is happening. The problem is not explicit that all of the supplies are used during the month, so some students may omit b2. The problem invites such discussion. You may wish to extend this example to reflect the more expedient procedure many accountants would use to record items that are immediately used up as expenses. For example, c and d might appear as follows:

c.	– 4	=	– 4 (Advertising Expense)
d.	<u>– 8</u>	=	– <u>8</u> (Training Expense)

EXHIBIT 2-36

Piedmont Company  
Analysis of Transactions for June 20X1  
(In Thousands of Dollars)

Transactions	Assets					=	Liabilities and Stockholders' Equity		
	Cash	Accounts + Receivable	Merchandise + Inventory	+ Equipment		=	Accounts Payable	Paid-in + Capital	Retained Earnings
Balance, 6/1/X1	+ 15	?	?	?		=	?	?	?
a.	+ 75	-75				=			
b.	- 45					=	- 45		
c.			+ 18			=	+ 18		
d1.	+ 23	+ 30				=			+ 53 (Sales Revenue)
d2.			- 28			=			-28 (Cost of Goods Sold expense)
e.				- 1		=			- 1 (Depreciation Expense)
f.	- 15					=			- 15 (Dividends)
Balance, 6/30/X1	<u>+ 53</u>					=			

2-37 (10-15 min.)

1. The name of the statement is antiquated. It should be titled income statement (or statement of earnings, statement of operations, or operating statement).
2. The line with the date should not be for a moment in time but for an indicated span of time: a year, a quarter, or a month ending on December 31, 20X0.
3. Increases in market values of land and buildings are not recognized under U. S. GAAP.
4. Dividends are not expenses and are not deducted before net profit is computed.
5. The appropriate deduction is the cost of goods sold, not the cost of the cars purchased.
6. The bottom line is more commonly titled net income or net earnings.
7. The cost of the products sold is usually listed right after revenue, not near the bottom of the statement.
8. Although it is not the major point of the problem, the income statement has apparently omitted some expenses; for example, neither rent nor depreciation is shown. As a minimum, one or the other would ordinarily be included.

2-38 (5-10 min.) Amounts are in millions.

1.	
Revenues	\$39,304
Expenses	<u>37,852</u>
Net income (loss)	<u>\$ 1,452</u>

Beginning retained earnings	\$13,966
+ Net income (loss)	1,452
– Dividends	<u>?</u>
Ending retained earnings	<u>\$15,266</u>

2. Dividends = \$15,266 – \$13,966 – \$1,452 = \$152

2-39 (20-30 min.) Amounts are in thousands of dollars.

The basic relations used in these problems are as follows:

$$\text{Revenues} - \text{Expenses} = \text{Net income}$$

$$\text{Assets} = \text{Liabilities} + \text{Stockholders' equity}$$

$$\text{Beginning retained earnings} + \text{Net income} - \text{Dividends} = \text{Ending retained earnings}$$

$$\text{Beginning paid-in-capital} + \text{additional investment} = \text{Ending paid-in-capital.}$$

1.  $E = 165 - 130 = 35$   
 $D = 35 + 35 = 70$   
 $C = 15$  because there were no additional investments by stockholders  
 $A = 80 - 15 - 35 = 30$ ; or  $80 - (15 + 35) = 30$   
 $B = 95 - 15 - 70 = 10$ ; or  $95 - (15 + 70) = 10$
2.  $K = 30 + 200 = 230$   
 $J = 60 + 30 - 7 = 83$   
 $H = 10 + 40 = 50$   
 $F = 60 + 10 + 90 = 160$   
 $G = 280 - 83 - 50 = 147$
3.  $P = 290 - 250 = 40$   
 $Q = 120 + 40 - 130 = 30$   
 $N = 85 - 35 = 50$   
 $L = 105 + 50 + 120 = 275$   
 $M = 95 + 85 + 130 = 310$

2-40 (10-15 min.)

This is straightforward. Computations are in millions of dollars:

$$A = 27,388 - 8,189 = 19,199$$

$$B = 10,655 - 841 = 9,814$$

$$C = 1,702 + 841 - 510 = 2,033$$

$$D = 21,015 + 8,482 = 29,497$$

2-41 (10-15 min.)

1. *Income statement* or *operating statement* is used instead of *statement of income and expenses*.
2. The end of the fiscal year is typically identified.
3. The terms *income* or *earnings* are used rather than *surplus* (and *net income* or *net earnings* rather than *net surplus*).
4. The term *loss* is used instead of *deficit*.
5. A profit-seeking organization would not receive a subsidy.
6. General Income might be best called General Revenue.

2-42 (10-15 min.)

This problem demonstrates how financial statements provide information for investor decisions. These ratios are compared with other companies in the industry and with the company's ratios through the years.

1.  $\text{EPS} = \text{£}5,458,000,000 \div 5,099,000,000 = \text{£}1.07$
2.  $\text{P-E} = \text{£}14.72 \div \text{£}1.07 = 13.8$
3.  $\text{Dividend-Yield} = (\text{£}3,406,000,000 \div 5,099,000,000) \div \text{£}14.72 = 4.5\%$
4.  $\text{Dividend-Payout} = (\text{£}3,406,000,000 \div 5,099,000,000) \div \text{£}1.07 = 62.4\%$

2-43 (10-15 min.)

1.  $\$26,895,000,000 \div \$13.54 = 1,986,336,780$  average shares
2.  $\$13.54 \times .228 = \$3.09$
3. (a)  $\$3.09 \div \$106.40 = 2.9\%$  dividend yield  
(b)  $\$106.40 \div \$13.54 = 7.86$  P-E ratio

2-44 (10 min.)

1. Companies choose what details to report based partly on materiality. A \$250,000 investment is definitely material to Dayton Service Stations. It is 27% of its total assets before the investment. However, it is not necessarily material to ExxonMobil—it is a very small fraction of 1% of its total assets.
2. A key question a company must ask is whether a potential investor would find the information relevant for assessing the position and prospects of the company. The investment would certainly be an important factor in assessing Dayton Service Stations, but it would be so small as to be insignificant for assessing ExxonMobil.

2-45 (20-30 min.)

1 and 2. See Exhibit 2-45 on the following page.

3.

R. J. SEN CORPORATION  
Income Statement  
For the Month Ended June 30, 20X0

<u>Accrual Basis</u>		<u>Cash Basis</u>	
Sales	\$115,000	Revenue (cash collected from customers*)	\$ 45,000
Deduct: Cost of goods sold	<u>60,000</u>	Expenses (cash disbursed for merchandise)	<u>85,000</u>
Net income	<u>\$ 55,000</u>	Net cash used by operating activities = Net loss	<u>\$(40,000)</u>

\*Revenue consists of cash sales only. If any cash had been collected from credit customers during June, it would be added here.

The accrual basis provides a better measure of the economic accomplishments and efforts of the entity. The cash basis is inferior because it fails to recognize revenue as earned (the sales on credit), and it often recognizes expenses before they help generate revenues (for example, inventory acquired but not sold). Note that the June 28 acquisition of inventory on open account is irrelevant under both the accrual and cash basis.

EXHIBIT 2-45

R. J. SEN CORPORATION  
Analysis of Transactions for June, 20X0  
(In Thousands of Dollars)

Description of Transactions	Assets			=	Liabilities and Stockholders' Equity		
	Cash	+ Accounts Receivable	+ Inventories		Accounts Payable	+ Paid-in Capital	+ Retained Earnings
1. Original investment	+100			=		+100	
2. Acquisition of inventory	- 85		+85	=			
3a. Sales for cash and credit	+ 45	+70		=			+115 (Sales Revenue)
b. Cost of inventory sold			-60	=			- 60 (Cost of Goods Sold expense)
4. Acquisition of inventory	<u>+ 60</u>	<u>+70</u>	<u>+34</u> <u>+59</u>	=	<u>+34</u> <u>+34</u>	<u>+100</u>	<u>+ 55</u>
	189				189		

R. J. SEN CORPORATION  
Balance Sheet  
June 30, 20X0

Assets		Liabilities and Stockholders' Equity	
		Liabilities:	
Cash	\$ 60,000	Accounts payable	\$ 34,000
Accounts receivable	70,000	Stockholders' equity:	
Merchandise inventory	59,000	Paid-in capital	\$100,000
		Retained earnings	<u>55,000</u>
Total assets	<u>\$189,000</u>	Total liabilities & stockholders' equity	<u>\$189,000</u>

2-46 (10-15 min.)

1. The first two items in the first sentence of the footnote (i.e., reference to persuasive evidence of an arrangement and delivery) relate to the earning of the revenue, and the last two (i.e., fee fixed and determinable and collectability probable) relate to its realization. Microsoft used to recognize revenue on products licensed to OEMs when the OEMs shipped product to customers, based on the assumption that Microsoft does not earn the revenue until the product actually is sent to a final customer. However, a change in licensing earlier this decade made it possible to regard revenue as earned when Microsoft ships product to the OEMs. The licensing agreement may have been changed to make the OEMs more responsible for the products after Microsoft ships them. Microsoft decided not to wait until the OEM delivers product to customers to regard the revenue as earned; instead, it is deemed earned at the time Microsoft ships it. This accelerates Microsoft's recognition of revenues.
2. Multi-year licensing agreements are treated as a magazine publisher would treat a subscription. When cash is received, Microsoft records a liability. The revenue is not earned until the customer uses the software for which it has a licensing agreement. Therefore, revenue recognition is spread over the life of the license.
3. Revenue related to games published by third parties is recognized when the games are manufactured, not when they are shipped to customers. Microsoft must believe that it sells the right to manufacture the games, and as soon as the manufacturing process is complete its revenue-earning process is complete.



2-47 (40-50 min.)

1. See Exhibit 2-47 on the following page.

Transactions 8 to 11 illustrate the culmination of the asset acquisition-asset expiration sequence: that is, most assets are “stored” as “unexpired” or “prepaid” costs that are expected to benefit future operations (inventory, prepaid rent, prepaid insurance and equipment). As these assets are “used up” or “expire,” they become expenses or “expired costs.”

2. 

MONTERO COMPANY  
Income Statement  
For the Month Ended July 31, 20X2

Sales	\$205,000
Deduct expenses:	
Cost of goods sold	\$155,000
Rent	4,000
Depreciation	2,000
Insurance	<u>1,000</u>
Total expenses	<u>162,000</u>
Net income	<u>\$ 43,000</u>

3. 

MONTERO COMPANY  
Balance Sheet  
July 31, 20X2

<u>Assets</u>		<u>Liabilities and Stockholders' Equity</u>	
		Liabilities:	
Cash	\$148,000	Accounts payable	\$110,000
Accounts receivable	130,000	Note payable	<u>60,000</u>
Merchandise inventory	70,000	Total liabilities	<u>170,000</u>
Prepaid rent	44,000	Stockholders' equity:	
Prepaid insurance	23,000	Paid-in capital	300,000
Equipment	98,000	Retained earnings	<u>43,000</u>
		Total stockholders' equity	<u>343,000</u>
Total assets	<u>\$513,000</u>	Total liab. and stk. equity	<u>\$513,000</u>

## EXHIBIT 2-47

MONTERO COMPANY  
Analysis of Transactions for July, 20X2  
(In Thousands of Dollars)

Trans- action	Assets						=	Liabilities and Stockholder's Equity			
	Cash	Accounts Receiv- + able	Mer- chandise + Inventory	Pre- Paid + Rent	Prepaid Insur- + ance	Equip- + ment	=	Note Payable	Accounts + Payable	Paid-in + Capital	+ Retained Earnings
a.	+300						=			+300	
b.	- 48			+48			=				
c.	- 40					+100	=	+60			
d.	- 24				+24		=				
e.	- 35		+35				=				
f.			+190				=		+190		
g.	+30	+175					=				+205 (Sales Revenue)
h.			-155				=				-155 (Cost of Goods Sold)
i.				- 4			=				- 4 (Rent Expense)
j.						- 2	=				- 2 (Depreciation Expense)
k.					- 1		=				- 1 (Insurance Expense)
l.	+45	- 45					=				
m.	-80	—	—	—	—	—	=	—	- 80	—	—
Balances 7/31/X2	<u>+148</u>	<u>+130</u>	<u>+70</u>	<u>+44</u>	<u>+23</u>	<u>+98</u>	=	<u>+60</u>	<u>+110</u>	<u>+300</u>	<u>+43</u>
	513							513			

2-48 (35-40 min.)

1. See Exhibit 2-48 on the following page.

2. **BEKELE COMPANY**  
Balance Sheet  
April 30, 20X0

Assets		Liabilities and Stockholders' Equity	
		Liabilities:	
Cash	\$106,000	Note payable	\$ 24,000
Accounts receivable	57,000	Accounts payable	<u>5,000</u>
Merchandise inventory	43,000	Total liabilities	<u>29,000</u>
Prepaid rent	4,000	Stockholders' equity:	
Equipment and fixtures	35,000	Paid-in capital	\$200,000
		Retained earnings	<u>16,000</u>
		Total stk. equity	<u>\$216,000</u>
Total assets	<u>\$245,000</u>	Total liabilities & stk. equity	<u>\$245,000</u>

**BEKELE COMPANY**  
Income Statement  
For the Month Ended April 30, 20X0

Sales revenue		\$100,000
Deduct expenses:		
Cost of goods sold	\$37,000	
Wages and sales commissions	34,000	
Rent (\$2,000 + \$10,000)	12,000	
Depreciation	<u>1,000</u>	
Total expenses		<u>84,000</u>
Net Income		<u>\$ 16,000</u>

3. Most businesses tend to have net losses during their infant months, so Bekele's ability to show a net income for April is impressive. Indeed, the rate of return on beginning investment is  $(\$16,000 \div \$200,000) = 8\%$  per month, or 96% per year. Bekele also has high stockholders' equity compared to its liabilities, quite a high cash balance, and flexibility because most assets are either in cash or will be turned into cash relatively quickly. Many other points can be raised, including the problem of maintaining an "optimum" cash balance so that creditors can be paid neither too quickly nor too slowly. See problem 2-49 and its solution also.

## EXHIBIT 2-48

1.

BEKELE COMPANY  
Analysis of Transactions for April 20X0  
(In Thousands of Dollars)

		Assets					=	Liabilities + Stockholders' Equity			
		Cash	Accounts Receivable	Merchandise Inventory	Prepaid Rent	Equipment & Fixtures	=	Note Payable	Accounts Payable	Paid-in Capital	Retained Earnings
Description											
a. Incorporation		+200					=			+200	
b. Purchased merchandise		- 45		+45			=				
c. Purchased merchandise				+35			=		+35		
d1. Sales		+ 25	+75				=				+ 100 (Sales Revenue)
d2. Cost of inventory sold				-37			=				- 37 (Cost of Goods Sold Expense)
e. Collections		+ 18	-18				=				
f. Disbursements to trade creditors		- 30					=		-30		
g. Purchased equipt.		- 12				+36	=	+24			
h. Prepaid rent		- 6			+6		=				
i. Rent expense		- 10*					=				- 10* (Rent Expense)
j. Wages, etc.		- 34					=				- 34 (Wages Expense)
k. Depreciation						- 1	=				- 1 (Deprec. Expense)
l. Rent expense		—	—	—	-2	—	=	—	—	—	- 2 (Rent Expense)
Balances,											
April 30 20X0		<u>+106</u>	<u>+57</u>	<u>+43</u>	<u>+4</u>	<u>+35</u>	=	<u>+24</u>	<u>+ 5</u>	<u>+200</u>	<u>+16</u>
		245						245			

\* (10% × \$100,000) = \$10,000.

2-49 (5-10 min.)

Cash Inflows:

Cash sales	\$ 25,000
Cash collected from credit customers	<u>18,000</u>
	43,000

Cash disbursements:\*

Disbursements for merchandise	\$(75,000)**	
Disbursements for rent, wages, and sales commissions	<u>(50,000)***</u>	
Total cash disbursements		<u>125,000</u>
Net cash outflow for operations		<u>\$(82,000)</u>

\*Some students will also include the \$12,000 cash paid to purchase equipment as a cash outflow. This is consistent with a strict cash-basis of accounting.

\*\*\$45,000 + \$30,000

\*\*\* \$6,000 + \$10,000 + \$34,000

The accrual basis provides a more accurate measure of economic performance. If the two revenue recognition criteria are met (earning and realization), the \$100,000 measure of revenue on the accrual basis is preferred to the \$43,000 measure of cash receipts for measuring economic performance, and the \$84,000 measure of costs is preferred to the \$125,000 measure of cash disbursements. The \$16,000 net income is a more accurate measure of total accomplishments *for April* than is the \$82,000 net cash outflow for operations.

2-50 (20-35 min.)

1. See Exhibit 2-50 on the following page.

2.

H. J. HEINZ COMPANY  
Statement of Earnings  
For the Month Ended May 31, 2011  
(In Millions)

Sales		\$11
Deduct expenses:		
Cost of goods sold	\$4	
Selling and administrative expenses	1	
Rent and insurance	1	
Depreciation	<u>2</u>	<u>8</u>
Net earnings		<u>\$ 3</u>

H. J. HEINZ COMPANY  
Balance Sheet  
May 31, 2011  
(In Millions)

Assets		Liabilities and Stockholders' Equity	
Cash	\$ 715	Liabilities:	
Receivables	1,268	Accounts payable	\$ 1,502
Inventories	1,454	Other liabilities	<u>7,549</u> \$ 9,051
Other assets	6,296	Stockholders' equity	<u>3,185</u>
Property, plant and equip.	<u>2,503</u>	Total liab. & stockholders' equity	<u>\$12,236</u>
Total assets	<u>\$12,236</u>		

## EXHIBIT 2-50

H. J. HEINZ COMPANY  
Analysis of Transactions for May, 2011  
(In Millions of Dollars)

	Assets					=	Liabilities + Shareholders' Equity								
Tans- actions	Cash	+	Receiv- ables	+	Inven- tories	+	Other Assets	+	Property, Plant, Equipment	=	Accounts Payable	+	Other Liabil- ities	+	Shareholder's Equity
Bal. 4/27	+724		+1,265		+1,452		+6,285		+2,505	=	+1,500		+7,549		+3,182
a1.	+ 3		+ 8							=					+ 11 (Sales Revenue)
a2.					- 4					=					- 4 (Cost of Goods Sold expense)
b.					+ 6					=	+ 6				
c.	+ 5		- 5							=					
d.	- 12						+ 12			=					
e.	- 4									=	-4				
f.	- 1									=					- 1 (S&A Expense)
g.							- 1			=					- 1 (Rent & Ins. Expense)
h.									- 2	=					- 2 (Deprec. Expense)
Bal. 5/31	<u>+715</u>		<u>+1,268</u>		<u>+1,454</u>		<u>+6,296</u>		<u>+2,503</u>	=	<u>+1,502</u>		<u>+7,549</u>		<u>+3,185</u>
	12,236										12,236				

2-51 (5-10 min.) Amounts are in millions.

Cash Inflows:

Cash sales	\$ 3
Collections from credit customers	<u>5</u>
	8

Cash disbursements:

Disbursements for inventory	\$ (4)	
Disbursements to prepay rent and insurance	(12)	
Disbursements for selling and administrative expenses	<u>(1)</u>	
Total cash disbursements		<u>(17)</u>
Net cash outflow		<u><u>\$ (9)</u></u>

The accrual basis provides a more accurate measure of economic performance. If the two revenue recognition criteria are met (earning and realization), the \$11 million measure of revenue on the accrual basis is preferred to the \$8 million measure of cash receipts for measuring economic performance, and the \$8 million measure of costs is preferred to the \$17 million measure of cash disbursements. The \$3 million net income is a more accurate measure of total accomplishments *for May* than is the \$9 million net cash outflow.



2-52 (25-40 min.)

1. See Exhibit 2-52 on the following page.

2. NESTLÉ S.A.  
Statement of Earnings  
For the Month Ended July 31, 2011  
(In Millions)

Sales	CHF750
Deduct expenses:	
Cost of goods sold	CHF500
Selling and administrative expenses	290
Depreciation expense	<u>30</u>
Total expenses	<u>820</u>
Net Loss	<u>CHF (70)</u>

NESTLÉ S.A.  
Balance Sheet  
July 31, 2011  
(In Millions)

Assets		Liabilities and Stockholders' Equity	
Cash	CHF 3,563	Accounts payable	CHF 11,137
Receivables	11,726	Other liabilities	<u>37,081</u>
Inventories	8,385	Total liabilities	48,218
Property, plant, and equipment	20,084	Stockholders' equity	52,402
Other assets	<u>56,862</u>		
Total assets	<u>CHF100,620</u>	Total liab. and stockholders' equity	<u>CHF100,620</u>

## EXHIBIT 2-52

NESTLÉ S.A.  
Analysis of Transactions for July 2011  
(In Millions of CHF)

Description	Assets					=	Liabilities and Owners' Equity		
	Cash	Receiv- + ables	Inven- + tories	Property, Plant, & + Equip.	Other + Assets	=	Accts. Pay.	Other Liabi- + lities	+ Owners' Equity
Balances, July 1	+2,833	+11,946	+8,885	+20,114	+56,912	=	+11,137	+37,081	+ 52,472
a1. Sales	+ 350	+ 400				=			+ 750 (Sales Revenue)
a2. Cost of inventory sold			- 500			=			- 500 (Cost of Goods Sold Expense)
b. Collection of receivables	+ 620	- 620				=			
c. Depreciation expense				- 30		=			- 30 (Depreciation Expense)
d. Selling and administrative expense	- 240					=			(Selling & - 240 Adm. Exp.)
e. Selling and administrative expense				-50		=			(Selling & -50 Adm. Exp.)
Balances, January 31	<u>+3,563</u>	<u>+11,726</u>	<u>+8,385</u>	<u>+20,084</u>	<u>+56,862</u>	=	<u>+11,137</u>	<u>+37,081</u>	<u>+52,402</u>
	100,620						100,620		

2-53 (35-45 min.)

1.

LUDMILLA CORPORATION  
Income Statement  
For the Year Ended December 31, 20X2

Sales		\$285,000
Deduct expenses:		
Cost of goods sold	\$157,000	
Salaries	86,000	
Rent	17,500 <sup>a</sup>	
Advertising	9,300	
Utilities	5,000	
Depreciation	5,000	
Insurance	1,000 <sup>b</sup>	
Office supplies	<u>1,200</u>	<u>282,000</u>
Net Income		<u>\$ 3,000</u>

<sup>a</sup> (\$19,500 – \$2,000) = \$17,500; \$2,000 is prepaid rent.

<sup>b</sup> (\$ 1,800 – \$800) = \$ 1,000; \$800 is unexpired insurance.

2.

LUDMILLA CORPORATION  
Changes in Retained earnings  
For the Year Ended December 31, 20X2

Retained earnings, January 1, 20X2	\$18,000
Net income for 20X2	+ 3,000
Cash dividends declared	<u>– 4,000</u>
Retained earnings, December 31, 20X2	<u>\$17,000</u>

2-53 (cont.)

3. LUDMILLA CORPORATION  
Balance Sheet  
December 31, 20X2

Assets		Liabilities and Stockholders' Equity	
Cash	\$ 14,800	Liabilities:	
Accounts receivable	32,400	Accounts payable	\$ 14,000
Notes receivable	2,500	Notes payable	8,000
Merchandise inventory	61,000	Dividends payable	<u>4,000<sup>e</sup></u>
Prepaid rent	2,000	Total liabilities	<u>\$ 26,000</u>
Office supplies inventory	800 <sup>d</sup>	Stockholders' equity:	
Unexpired insurance	800	Paid-in capital	\$100,000
Trucks	<u>28,700<sup>c</sup></u>	Retained earnings	<u>17,000</u>
Total assets	<u>\$143,000</u>	Total stockholders' equity	<u>\$117,000</u>
		Total liab. and stk. equity	<u>\$143,000</u>

<sup>c</sup> (\$33,700 – \$5,000) = \$28,700

<sup>d</sup> (\$2,000 – \$1,200) = \$800

<sup>e</sup> \$4,000 dividend declared

Note that the \$8,200 net income reported by the office manager is incorrect. There is a net income of \$3,000, as shown in requirement 1. Reconciliation: (\$8,200 – \$3,000) = \$5,200 difference, accounted for by changed expense items as follows: [\$1,000 (b) – \$2,000 (a) + \$5,000 (c) + \$1,200 (d)] = \$5,200.

2-54 (50-75 min.)

1. See Exhibit 2-54 on the following page.

2. **GECKO TOY COMPANY**  
Balance Sheet  
December 31, 20X1

Assets		Liabilities and Stockholders' Equity	
Cash	\$ 496,000	Liabilities:	
Accounts receivable	650,000	Accounts payable	\$ 900,000
Merchandise inventory	560,000	Stockholders' equity:	
Prepaid rent	63,000	Paid-in capital	360,000
Equipment	80,000	Retained earnings	589,000
		Total stockholders' equity	949,000
Total assets	<u>\$1,849,000</u>	Total liab. and stk. equity	<u>\$1,849,000</u>

**GECKO TOY COMPANY**  
Income Statement  
For the Year Ended December 31, 20X1

Sales		\$1,700,000
Deduct expenses:		
Cost of goods sold	\$1,300,000	
Rent	66,000*	
Depreciation	20,000	
Wages	200,000	
Miscellaneous	<u>70,000</u>	
Total expenses		<u>1,656,000</u>
Net income		<u>\$ 44,000</u>

\*\$45,000 for first 9 months plus \$21,000 for next 3 months = \$66,000. Note that the beginning balance of prepaid rent of \$45,000 related to the first 9 months of the year and, therefore, implies a monthly rate of \$5,000 and annual rent of \$60,000. The payment in 20X1 of \$84,000 represents an increase in the rental.

## EXHIBIT 2–54

GECKO TOY COMPANY  
Analysis of Transaction for 20X1  
(In Thousands of Dollars)

Transactions	Assets					=	Liabilities and Stockholders' Equity		
	Cash	Accounts + Receivable	Merchandise + Inventory	Prepaid + Rent	Equipment	=	Accounts Payable	Paid-in + Capital	Retained + Earnings
Bal. 12/31/X0	+ 400	+ 400	+ 860	+45	+100	=	+ 800	+360	+ 645
a.			+1,000			=	+1,000		
b.	+ 200	+1,500				=			+1,700 (Sales Revenue)
c.			-1,300			=			-1,300 (Cost of Goods Sold Expense)
d1.				-45		=			- 45 (Rent Expense)
d2.	- 84			+84		=			
d3.*				-21		=			- 21 (Rent Expense)
e.					-20	=			- 20 (Depreciation Expense)
f.	+1,250	-1,250				=			
g.	- 200					=			- 200 (Wages Exp.)
h.	- 70					=			- 70 (Misc. Exp.)
i.	- 900					=	- 900		
j.	- 100					=			- 100 (Dividends)**
Bal. 12/31/X1	<u>+ 496</u>	<u>+ 650</u>	<u>+560</u>	<u>+63</u>	<u>+80</u>	=	<u>+ 900</u>	<u>+360</u>	<u>+ 589</u>
	1,849						1,849		

\* All rent effects for the entire year are shown in three steps as part of the analysis of Transaction d. There are alternative ways of handling this transaction, but the ultimate effects on the accounts would be identical. For instance, Transaction d3 might be shown as a final separate entry after Transaction i or j. The new lease is at a rate of  $(\$84 \div 12) = \$7$  per month and 3 months elapse in 20X1.

\*\* Note that the amount of cash dividends is usually tied to the amount of net income, but not necessarily. The amount and timing of dividends is a separate decision by the board of directors.



2-54 (cont.)

GECKO TOY COMPANY  
Statement of Stockholders' Equity (Retained Earnings Column Only)  
For the Year Ended December 31, 20X1

Retained earnings, December 31, 20X0	\$ 645,000
Net income for the year 20X1	<u>44,000</u>
Total	\$ 689,000
Cash dividends declared	<u>(100,000)</u>
Retained earnings, December 31, 20X1	<u>\$ 589,000</u>

3. Only the balance sheet would be affected. Cash would be \$100,000 higher and a \$100,000 liability — Dividends Payable — would be created. Both accounts would be decreased by \$100,000 when the dividend disbursement is made on January 31.

We usually point out that a stockholder is simultaneously a creditor and an owner the minute the board of directors declares a dividend. Of course, the entity is never liable for a dividend until such a declaration occurs.

2-55 (10-15 min.)

This is straightforward. All computations are in millions of dollars:

$$A = 105,781 - (19,269 + 37,536) = 48,976$$

$$B = 48,047 - 41,775 = 6,272$$

$$C = 37,536 + 6,272 - 4,818 = 38,990$$

$$D = 105,128 - 38,990 - 17,953 = 48,185$$



2-56 (15-25 min.)

Entity	Assets			=	Liab. + SE
	Cash	Other Assets*	Trucks		Liabilities*
1. Fidelity Stratton	-150,000 +150,000	+ 150,000		= =	+150,000
2. Fidelity Stratton	+ 10,000 - 10,000	- 10,000		= =	- 10,000
3. Businessweek Silverton	+ 90 - 90	+ 90		= =	+ 90
4. U.S. Postal Service (millions) FedEx (millions)	- 10 + 10		+10 -10	= =	
5. U.S. Treasury Lockheed	+100,000 -100,000	+100,000		= =	+100,000
6. Safeway Simon	+ 18 - 18	+ 18		= =	+18
7. Office Depot Arrow	+100 -100	- 100		= =	-100
8. American Express Spence	+1,000 -1,000	+1,000**		= =	+1,000
9. Bank Hoskins	+600 -600 +600***			= =	+600
10. United Tanlu	+400 -400	+400		= =	+400

\* Other assets are primarily receivables, and liabilities are primarily payables. Each entity might use highly specific descriptions of the type of assets or liabilities. For example, Safeway's use of "cash deposits" implies amounts payable when bottles are returned. Similarly, United's collection of cash for tickets in advance and Businessweek's collection of a subscription in advance are payables that must be extinguished either by cash refunds or by supplying the flight services and magazines.

\*\* Travelers checks may be listed as cash or a "cash equivalent."

\*\*\* Hoskins (and nearly everyone) would ordinarily label a cash deposit in a bank as Cash or Cash in Bank. Strictly speaking, Cash in Bank is really a form of receivable from a bank; however, it is almost never labeled as such.

2-57 (20-25 min.)

The following statements follow the format used by McDonald's. Obviously, various alternative formats are possible:

1. (a) 

**McDONALD'S CORPORATION**  
**Consolidated Statement of Income**  
**For the Year Ended December 31, 2011**  
**(In Millions of Dollars)**

Revenues	<u>\$27,006.0</u>
Deduct expenses:	
Food and paper expense	6,167.2
Payroll and employee benefits	4,606.3
Selling, general, and administrative expenses	2,393.7
Occupancy and other operating expenses	3,827.6
Franchise restaurants—occupancy expenses	1,481.5
Interest and other non-operating expenses	<u>517.5</u>
Total expenses	<u>18,993.8</u>
Income before provision for income taxes*	8,012.2
Provision for income taxes*	<u>2,509.1</u>
Net income	<u>\$ 5,503.1</u>

\* This is the nomenclature used by McDonald's.

- (b) 

**McDONALD'S CORPORATION**  
**Statement of Stockholders' Equity (Retained Earnings Column)**  
**For the Year Ended December 31, 2011**  
**(In Millions of Dollars)**

Retained earnings, December 31, 2010	\$33,811.7
Net income for the year	5,503.1
Cash dividends declared	<u>(2,607.3)</u>
Retained earnings, December 31, 2011	<u>\$36,707.5</u>

2. The cash dividend is 47.4% of net income and 7.7% of beginning retained earnings. The company is distributing approximately half of its earnings in the form of dividends and retaining the other half to fund company growth.

2-58 (15-25 min.)

The following approximates General Mills'. Student may use other acceptable formats. Cash, Accounts Payable, and Total Assets are balance sheet accounts.

1. GENERAL MILLS, INC.  
Statement of Income  
For the Year Ended May 29, 2011  
(In Millions)

Total sales	<u>\$14,880.2</u>
Costs and expenses:	
Cost of sales*	8,926.7
Other expenses	<u>3,434.1</u>
Total expenses	12,360.8
Income before income taxes	2,519.4
Provision for income taxes	<u>721.1</u>
Net income	<u>\$ 1,798.3</u>

\*Also called Cost of Goods Sold

2. GENERAL MILLS, INC.  
Statement of Retained Earnings  
For the Year Ended May 29, 2011  
(In Millions)

Retained earnings, June 1, 2010	\$ 8,122.4
Net income	1,798.3
Dividends declared	<u>(729.4)</u>
Retained earnings, May 29, 2011	<u>\$9,191.3</u>

2-59 (20-35 min.)

The solutions are underlined in the following table:

1.	Per-share Data			Ratios and Percentages		
	Company	Price	Earnings	Dividends	P-E	Div. Yield      Div. Payout
	Federal Express	<u>\$93.58</u>	\$4.61	<u>\$ .48</u>	20.3	<u>0.5%</u> 10.4%
	UPS	\$72.56	<u>\$3.88</u>	<u>\$2.10</u>	18.7	2.9% <u>54.1%</u>
	Deutsche Post	€11.88	€ .96	<u>€ .70</u>	<u>12.4</u>	<u>5.9%</u> 72.7%

Computations follow:

FedEx:

$$\begin{aligned}\text{Price} &= (\$4.61 \times 20.3) = \$93.58 \text{ per share} \\ \text{Dividends} &= (\$4.61 \times .104) = \$ .48 \text{ per share} \\ \text{Dividend-yield:} &= (\$0.48 \div \$93.58) = 0.5\%\end{aligned}$$

UPS:

$$\begin{aligned}\text{Earnings} &= (\$72.56 \div 18.7) = \$3.88 \text{ per share} \\ \text{Dividends} &= (\$72.56 \times .029) = \$2.10 \text{ per share} \\ \text{Dividend-payout} &= (\$2.10 \div \$3.88) = 54.1\%\end{aligned}$$

Deutsche Post:

$$\begin{aligned}\text{Dividends} &= (.727 \times \text{€} .96) = \text{€} .70 \text{ per share} \\ \text{P-E} &= (\text{€}11.88 \div \text{€} .96) = 12.4 \\ \text{Dividend-yield} &= (\text{€} .70 \div \text{€}11.88) = 5.9\%\end{aligned}$$

Deutsche had the highest dividend-yield and dividend-payout and the lowest P-E ratio. FedEx has the highest P-E ratio and the lowest dividend-yield and dividend-payout.

2. This information is not sufficient to answer these questions. How rapidly are prices and earnings growing? Value investors who look for “under-priced” stocks might be attracted to Deutsche Post’s low P-E. Similarly, Deutsche Post might be attractive to investors interested in receiving a higher percentage of their “return” in the form of current period dividends. Others might like the low dividend payout of FedEx in the belief that it means FedEx is reinvesting all of its earnings profitably. This opinion is consistent with the higher P-E for FedEx as it reflects market expectations of higher future earnings.

2-60 (20-30 min.)

The solutions are underlined:

1.	<u>Company</u>	<u>Per-share Data</u>			<u>Ratios and Percentages</u>		
		<u>Price</u>	<u>Earnings</u>	<u>Dividends</u>	<u>P-E</u>	<u>Div. Yield</u>	<u>Div. Payout</u>
	Royal Dutch Shell	\$36.45	\$4.98	\$1.68	<u>7.32</u>	4.6%	<u>33.7%</u>
	ExxonMobil	\$84.76	<u>\$8.43</u>	<u>\$1.86</u>	10.05	2.2%	<u>22.1%</u>
	Chevron	<u>\$106.42</u>	\$13.54	<u>\$3.09</u>	7.86	<u>2.9%</u>	22.8%

Computations follow:

Royal Dutch Shell:

$$\begin{aligned}\text{P-E} &= (\$36.45 \div \$4.98) = 7.32 \\ \text{Dividend-yield} &= (\$1.68 \div \$36.45) = 4.6\% \\ \text{Dividend-payout} &= (\$1.68 \div \$4.98) = 33.7\%\end{aligned}$$

ExxonMobil:

$$\begin{aligned}\text{Earnings} &= (\$84.76 \div 10.05) = \$8.43 \\ \text{Dividends} &= (\$84.76 \times .022) = \$1.86 \\ \text{Dividend-payout} &= (\$1.86 \div \$8.43) = 22.1\%\end{aligned}$$

Chevron:

$$\begin{aligned}\text{Price} &= (7.86 \times \$13.54) = \$106.42 \\ \text{Dividend} &= (.228 \times \$13.54) = \$3.09 \\ \text{Dividend-yield} &= (\$3.09 \div \$106.42) = 2.9\%\end{aligned}$$

Royal Dutch Shell has the highest dividend-payout and dividend-yield ratios, as well as the lowest P-E ratio.

2. This information is not sufficient to answer questions about investments. How rapidly are prices and earnings growing? Value investors who look for “under-priced” stocks might be attracted to Royal Dutch Shell’s low P-E. Similarly, Royal Dutch Shell might be attractive to investors interested in receiving a higher percentage of their “return” in the form of current period dividends. Others might like the lower dividend payout ratios for ExxonMobil and Chevron in the belief that it means these companies are reinvesting more of their earnings profitably.

The revenue recognition practices of Diebold were too aggressive. Generally Accepted Accounting Principles (GAAP) require the risks and benefits of ownership to pass to the buyer and the collection of cash to be reasonably certain before revenue is recorded. Often these conditions are satisfied at the time of shipment of the product. However, for Diebold this was not the case. At issue is whether the risks and benefits of ownership had passed to the customers at the time the products were shipped to a Diebold warehouse.

Diebold had very good reason to believe that the shipment of ATMs to a Diebold warehouse was not sufficient for the recognition of revenues. The revenue recognition practices described appear to be an effort to engage in a “bill-and-hold” transaction where revenue can be recognized on the sale of products prior to their delivery to the end customer if certain criteria are met. These criteria require that the buyer, not the seller, requests the bill-and-hold transaction and that the buyer have a substantial business purpose for requesting such an arrangement. In most cases, it was Diebold who initiated the bill-and-hold transaction. The revenue practices also violated at least two other criteria necessary for bill-and-hold transactions: (1) that a fixed schedule for ultimate delivery to the customer exists and (2) that the products and earnings process of the seller are complete. By aggressively recording the revenue, Diebold violated ethical standards that require adherence to GAAP and full and accurate disclosures of financial information.

The SEC filed a formal complaint against Diebold alleging that the company and several Diebold executives improperly inflated the company’s earnings to meet earnings forecasts. The complaint alleged that a number of improper accounting practices, including the fraudulent use of bill-and-hold accounting, were employed during the 2002 through 2007 time period. As a result, Diebold discontinued the use of bill-and-hold transactions and changed its revenue recognition policy. The new policy recognizes revenue upon a customer’s acceptance of products at a customer location.

Ultimately, the U.S. District Court found that Diebold’s financial information as reported was materially false and misleading. The company was required to restate its financial statements for the years 2003 through 2006 and the first quarter of 2007. In addition the company agreed to pay a \$25 million civil penalty.

2-62 (10 min.)

1. The timber and timberlands book value is a faithful representation of the cost of the timber and timberlands. However, that cost may not be relevant for decisions today. Land that Plum Creek bought many years ago may have increased greatly in value, but such increases are not reflected in the cost-based book value.
2. Adding together the book value of the timber and timberlands and the property, plant and equipment (that may have little relationship to today's value of the assets) with the cash and inventory values (that are at or close to today's value) is like adding apples and oranges. Using the dollar (or any currency) as the yardstick for value has the problem that dollars today do not have the same purchasing power as dollars years ago, so adding today's dollars to yesterday's dollars can be difficult to interpret.
3. Timber and timberlands could be measured at market value. This would most likely be more relevant, but there may be wide disagreement about the correct market value, meaning that the measure of market value may not faithfully represent the underlying value of the timber and timberlands. Companies must often make trade-offs between relevant data and data that faithfully represent the phenomenon measured.

2-63 (10 min.)

Because Balkan Airlines is committed to selling its assets and using the proceeds to pay off creditors, the appropriate valuation of its assets is the market price Balkan expects to receive for them. Because Balkan's aircraft will no longer continue to be used in the way anticipated when they were purchased, their original purchase price less accumulated depreciation is no longer relevant. Similarly, the book value of any other fixed assets held by Balkan will no longer be meaningful. Rather, all assets should be a function of their current market value.

An operating airline would continue to use the book value, original cost less accumulated depreciation, for its depreciable assets and would continue to value other assets at their existing book values. In contrast, an airline in liquidation should use the current market value for its assets.

2-64 (60 min. or more)

This exercise has three main purposes:

1. Learn how to find financial information about companies.
2. Compute ratios.
3. Determine reasons for ratios to vary across companies.

We believe the third purpose is especially important. Finding information and computing ratios is mechanical, but finding reasons for variations in ratios across companies requires much thought and reasoning. Doing this in teams is extremely helpful; ideas can build on one another, and students can see how other students think through the issue. It also allows students with more experience and knowledge of business practices to share this knowledge with those with less experience.

If time permits, we suggest discussing the third requirement in class. Groups will find it informative to learn the conclusions reached by other groups.

2-65 (15-30 min.)

Each solution will be unique and will change each year. The purpose of this problem is to focus on the income statement and statement of retained earnings.

2-66 (10-15 min.) (In millions except per share amounts)

1. Net revenues = \$11,700.4; net earnings = \$1,245.7. These net earnings are those attributable to Starbucks' shareholders. Net earnings before noncontrolling items (which are not discussed in this chapter) were \$1,248.0. Either answer is acceptable.
2. Starbucks' net income increased its retained earnings by \$1,245.7. Dividends decreased retained earnings by \$419.5.
3. Earnings per share =  $(\$1,245.7 \div 748.3) = \$1.66$  per share

This amount is shown at the bottom of Starbucks' income statement. Also shown is diluted earnings per share, which is beyond the scope of our discussion at this point.

Price-Earnings ratio =  $(\$35.93 \div \$1.66) = 21.64$

4. The Starbucks P-E ratio is 1.44 times the average P-E in the market. Thus, investors must think that Starbucks' income will grow faster than average in the future.



2-67 (30-40 min.)

NOTE TO INSTRUCTOR: This solution is based on the web site as it was in early 2012 based on the 2011 annual report. Be sure to examine the current web site before assigning this problem, as the information there may have changed.

1. Revenue categories are Subscription, Advertising, Content, and Other. Total revenue is \$28,974 million. The Content category comprises the largest percentage (43.6%) of total revenues, with \$12,635 million.
2. Revenue recognition policies are discussed in Footnote 1. The company does not use the same revenue recognition policy for all of its revenue generating activities. The revenue recognition footnote contains multiple categories, including (but not limited to) Networks, Filmed Entertainment and Publishing. Time Warner recognizes revenues from magazine subscriptions on the magazine's cover date. Subscriptions paid in advance are put into a deferred revenue account until the magazine cover date, at which time the subscription price, net of any commissions paid to subscription agents is included in revenues. Revenue from magazines sold by the copy in stores and newsstands is recognized when magazines are shipped, less an estimated amount for returns.
3. Unearned revenue (or deferred revenue) represents amounts received in advance from customers. Time Warner has not yet provided goods or services to customers. Therefore, Time Warner has a liability. The dollar amount of deferred revenue is \$1,084 million included with current liabilities and another \$549 million included with long-term liabilities. This means that most subscriptions will be fulfilled in the next year, but there are some subscriptions that are for more than one year. These accounts are found on the balance sheet.
4. Like all large companies, Time Warner uses the accrual method. This is perhaps most clear from the account titles Receivables and Prepaid Expenses among the assets and Accounts Payable, Deferred Revenue, and Accrued Liabilities among the liabilities on the balance sheet. It is also evident from the use of "revenues" rather than cash receipts and "expenses" rather than cash disbursements on the income statement.
5. Time Warner is clearly a profit-seeking organization. This is evident from the income statement, where it shows not only net income (loss) but also income per common share. On the balance sheet, it is evident from the shareholders' equity section. It is also clear from the presence of income taxes.