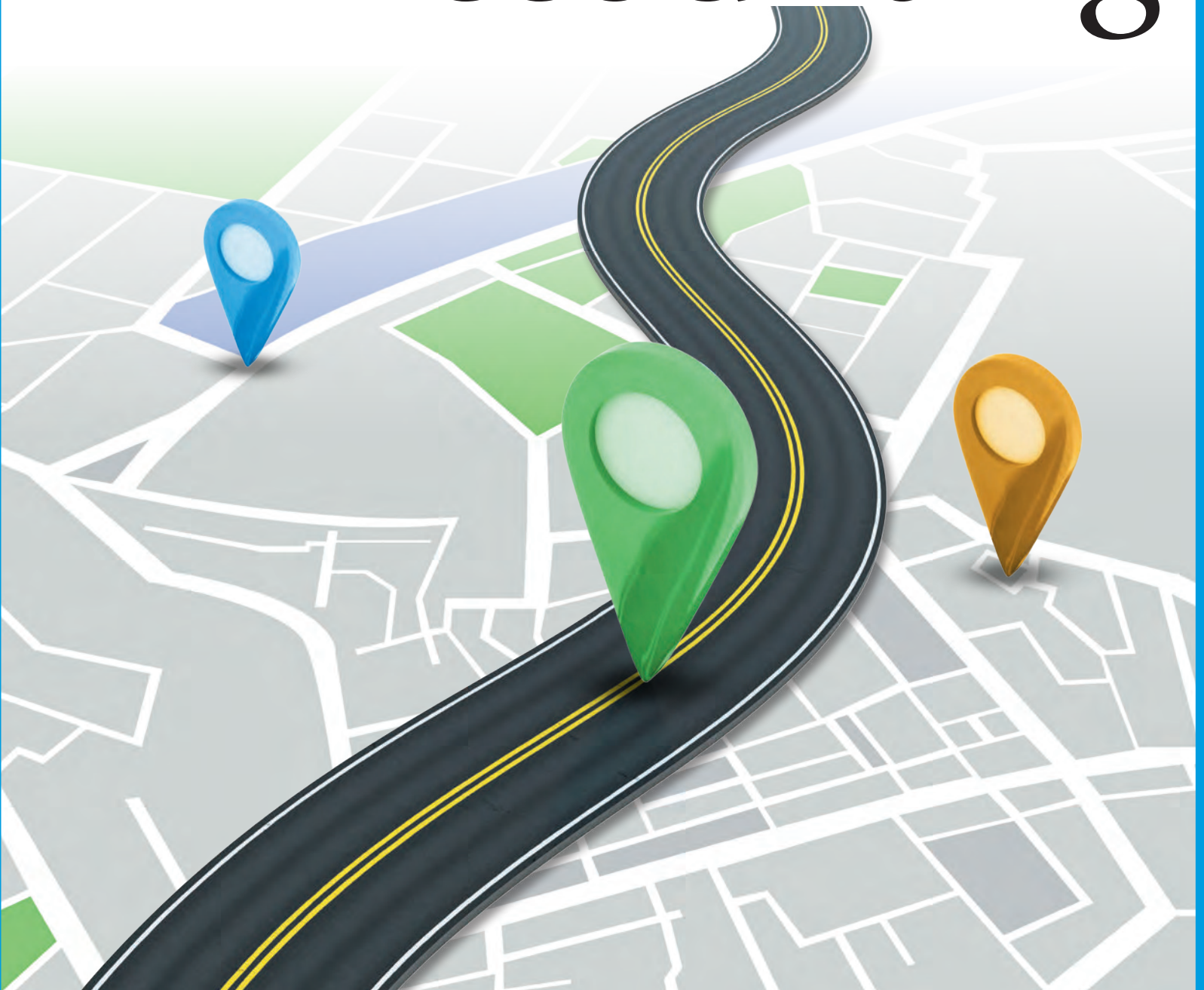


# FINANCIAL & MANAGERIAL Accounting



# The Basics

## Accounting Equation:

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

## T Account:

Account Title	
Left side debit	Right side credit

## Rules of Debit and Credit, Normal Balances:

Balance Sheet Accounts							
ASSETS		=	LIABILITIES		+	STOCKHOLDERS' EQUITY	
Asset Accounts			Liability Accounts			Common Stock + Retained Earnings	
Debit for increases (+)	Credit for decreases (-)		Debit for decreases (-)	Credit for increases (+)		Debit for decreases (-)	Credit for increases (+)
Balance			Balance			Balance	Balance

Income Statement Accounts	
Revenue Accounts	
Debit for decreases (-)	Credit for increases (+)
Balance	Balance

Expense Accounts	
Debit for increases (+)	Credit for decreases (-)
Balance	

Dividends	
Debit for increases (+)	Credit for decreases (-)
Balance	

The side of the account for recording increases and the normal balance is shaded.

- **Balance sheet:** A list of the assets, liabilities, and stockholders' equity as of a specific date, usually at the close of the last day of a month or a year.
- **Statement of cash flows:** A summary of the cash receipts and cash payments for a specific period of time, such as a month or a year.

## Accounting Cycle:

1. Transactions are analyzed and recorded in the journal.
2. Transactions are posted to the ledger.
3. An unadjusted trial balance is prepared.
4. Adjustment data are assembled and analyzed.
5. An optional end-of-period spreadsheet is prepared.
6. Adjusting entries are journalized and posted to the ledger.
7. An adjusted trial balance is prepared.
8. Financial statements are prepared.
9. Closing entries are journalized and posted to the ledger.
10. A post-closing trial balance is prepared.

## Types of Adjusting Entries:

- Accrued revenue (accrued asset)
- Accrued expense (accrued liability)
- Unearned revenue (deferred revenue)
- Prepaid expense (deferred expense)
- Depreciation expense

Each entry will always affect both a balance sheet account and an income statement account.

## Analyzing and Journalizing Transactions:

1. Carefully read the description of the transaction to determine whether an asset, liability, common stock, retained earnings, revenue, expense, or dividends account is affected.
2. For each account affected by the transaction, determine whether the account increases or decreases.
3. Determine whether each increase or decrease should be recorded as a debit or a credit, following the rules of debit and credit.
4. Record the transaction using a journal entry.
5. Periodically post journal entries to the accounts in the ledger.
6. Prepare an unadjusted trial balance at the end of the period.

## Financial Statements:

- **Income statement:** A summary of the revenue and expenses for a specific period of time, such as a month or a year.
- **Statement of stockholders' equity:** A summary of the changes in stockholders' equity that have occurred during a specific period of time, such as a month or a year.

## Closing Entries:

1. Revenue and expense account balances are transferred to the retained earnings account.
2. The balance of the dividends account is transferred to the retained earnings account.

## Shipping Terms:

	FOB Shipping Point	FOB Destination
Ownership (title) passes to buyer when merchandise is .....	delivered to freight carrier	delivered to buyer
Freight costs are paid by .....	buyer	seller

### Format for Bank Reconciliation:

Cash balance according to bank statement	\$ XXX
Add: Deposits in transit	XXX
Deduct: Outstanding checks not paid by bank	(XXX)
Adjusted balance	<u>\$ XXX</u>

Cash balance according to company's records	\$ XXX
Add: Credit memos that have not been recorded (notes collected by bank)	XXX
Deduct: Debit memos that have not been recorded (NSF checks, service charges)	(XXX)
Adjusted balance	<u>\$ XXX</u>

### Inventory Costing Methods:

- First-In, First-Out (FIFO)
- Last-In, First-Out (LIFO)
- Weighted Average Cost

### Interest Computations:

$$\text{Interest} = \text{Face Amount (or Principal)} \times \text{Rate} \times \text{Time}$$

### Methods of Determining Depreciation:

**Straight-Line:**  $\frac{\text{Cost} - \text{Estimated Residual Value}}{\text{Estimated Life}}$

**Units-of-Activity:**  $\frac{\text{Cost} - \text{Estimated Residual Value}}{\text{Total Estimated Units of Activity}} \times \text{Units of Activity}$

**Double-Declining-Balance:**  $\text{Rate}^* \times \text{Book Value at Beginning of Period}$   
\*Rate is commonly twice the straight-line rate  $(1 \div \text{Estimated Life})$ .

### Units-of-Activity Method:

**Depreciation per Unit** =  $\frac{\text{Cost} - \text{Residual Value}}{\text{Total Estimated Units of Activity}}$

**Depreciation Expense** = Depreciation per Unit  $\times$  Units of Activity for Period

### Adjustments to Net Income (Loss) Using the Indirect Method:

Net income (loss) .....	\$ XXX
Adjustments to reconcile net income (loss) to net cash flows from (used for) operating activities:	
Depreciation of fixed assets .....	XXX
Amortization of intangible assets .....	XXX
Losses on disposal of assets .....	XXX
Gains on disposal of assets .....	(XXX)
Changes in current operating assets and liabilities:	
Increases in noncash current operating assets .....	(XXX)
Decreases in noncash current operating assets .....	XXX
Increases in current operating liabilities .....	XXX
Decreases in current operating liabilities .....	(XXX)
Net cash flows from (used for) operating activities .....	\$XXX

→ **Subtract**

**Add** ←

Increases in accounts receivable  
Increases in inventory  
Increases in prepaid expenses  
Decreases in accounts payable  
Decreases in accrued expenses payable  
Decreases in income taxes payable

Decreases in accounts receivable  
Decreases in inventory  
Decreases in prepaid expenses  
Increases in accounts payable  
Increases in accrued expenses payable  
Increases in income taxes payable

**Contribution Margin Ratio** =  $\frac{\text{Sales} - \text{Variable Costs}}{\text{Sales}}$

**Break-Even Sales (Units)** =  $\frac{\text{Fixed Costs}}{\text{Unit Contribution Margin}}$

**Target Profit Sales (Units)** =  $\frac{\text{Fixed Costs} + \text{Target Profit}}{\text{Unit Contribution Margin}}$

**Margin of Safety** =  $\frac{\text{Sales} - \text{Sales at Break-Even Point}}{\text{Sales}}$

**Operating Leverage** =  $\frac{\text{Contribution Margin}}{\text{Operating Income}}$

### Variances:

Direct Materials Price Variance =  $\left( \frac{\text{Actual Price} - \text{Standard Price}}{\text{Standard Price}} \right) \times \text{Actual Quantity}$

Direct Materials Quantity Variance =  $\left( \frac{\text{Actual Quantity} - \text{Standard Quantity}}{\text{Standard Quantity}} \right) \times \text{Standard Price}$

Direct Labor Rate Variance =  $\left( \frac{\text{Actual Rate per Hour} - \text{Standard Rate per Hour}}{\text{Standard Rate per Hour}} \right) \times \text{Actual Hours}$

Direct Labor Time Variance =  $\left( \frac{\text{Actual Direct Labor Hours} - \text{Standard Direct Labor Hours}}{\text{Standard Direct Labor Hours}} \right) \times \text{Standard Rate per Hour}$

Variable Factory Overhead Controllable Variance =  $\frac{\text{Actual Variable Factory Overhead} - \text{Budgeted Variable Factory Overhead}}$

Fixed Factory Overhead Volume Variance =  $\left( \frac{\text{Standard Hours for 100\% of Normal Capacity} - \text{Standard Hours for Actual Units Produced}}{\text{Standard Hours for Actual Units Produced}} \right) \times \text{Fixed Factory Overhead Rate}$

**Return on Investment (ROI)** =  $\frac{\text{Operating Income}}{\text{Invested Assets}}$

Alternative ROI Computation:

$$\text{ROI} = \frac{\text{Operating Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Invested Assets}}$$

### Capital Investment Analysis Methods:

Methods That Ignore Present Values:

- Average Rate of Return Method
- Cash Payback Method

Methods That Use Present Values:

- Net Present Value Method
- Internal Rate of Return Method

**Average Rate of Return** =  $\frac{\text{Estimated Average Annual Income}}{\text{Average Investment}}$

**Present Value Index** =  $\frac{\text{Total Present Value of Net Cash Flow}}{\text{Amount to Be Invested}}$

**Present Value Factor for an Annuity of \$1** =  $\frac{\text{Amount to Be Invested}}{\text{Equal Annual Net Cash Flows}}$



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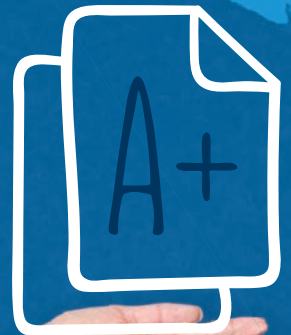
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# Financial and Managerial Accounting<sup>16e</sup>

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Cover Image Source: reklamlar/DigitalVision Vectors/Getty Images

Interior Image Source: Markus Gann/EyeEm/Getty Images

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Library of Congress Control Number: 2021924390

ISBN: 978-0-357-71404-1

LLF ISBN: 978-0-357-71405-8

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Throughout this text, real-world companies are used in the narrative, illustrations, and end-of-chapter assignments. These companies are identified in boldface color type, and any data presented was adapted from or based upon annual reports, Securities and Exchange Commission filings, or other publicly available sources. Any other individuals or companies used in illustrations or homework are fictional, and any resemblance to actual persons, living or dead, businesses, or companies is entirely coincidental.

## Roadmap for Success

Warren/Jones/Tayler *Financial and Managerial Accounting, 16e*, provides a sound pedagogy for giving students a solid foundation in business and accounting. Warren/Jones/Tayler covers the fundamentals AND motivates students to learn by showing how accounting is important to businesses.

## Inclusivity

A major objective of Warren/Jones/Tayler *Financial and Managerial Accounting, 16e*, is to create an inclusive learning experience for all students that recognizes the wide diversity in student demographics, abilities, and experiences. This edition has been revised with a learner-centric approach that understands and acknowledges that a student's learning experience may be influenced by a variety of mental, sensory, and physical factors. As a result, this edition and its ancillaries have been designed to create an accessible learning experience for all students.

This edition also recognizes that students have unique backgrounds and perspectives. As a result, chapter content, illustrations, and homework are designed to be respectful and inclusive of differences in student race, ethnicity, sexual orientation, gender, religion, age, and culture. The authors welcome suggestions and comments on how to be even more inclusive in future editions.

## New Features

This revision includes a range of new and existing features that help Warren/Jones/Tayler provide students with the context to see how accounting is valuable to their careers and business. These new features include:

- New! Updated schema at the beginning of each managerial chapter
- New! Using Data Analytics
- New! Take It Further data analytics cases
- New! Journal entries with T accounts
- New! Illustration of why accrual accounting is required by GAAP

## Data Analytics

**Using Data Analytics** examples have been added to each chapter, which describe an application of data analytics related to each chapter's content.

### Using Data Analytics

#### Sales

Retail businesses, such as **Target Corporation (TGT)**, use data analytics to answer questions such as the following:

- What are our best-selling products?
- What products are generating returns?
- What percent of our customers are using self-checkouts?
- What time of the day do we have the most sales?
- What percent of our customers use credit cards?
- What percent of our customers use debit cards?



Target has used data (predictive) analytics to improve the retail experience of its customers as well as to increase its sales. For example, Target uses data analytics to decide which products should earn shelf space in its brick-and-mortar stores and which are best serviced with its online sales app.

See TIF 5-8 for a homework assignment using data analytics.

Source: Dina Gerdeman, "On Target: Rethinking the Retail Website," *Forbes*, December 4, 2018, [www.forbes.com/sites/hbsworkingknowledge/2018/12/04/on-target-rethinking-the-retail-website/#2690a20916fb](http://www.forbes.com/sites/hbsworkingknowledge/2018/12/04/on-target-rethinking-the-retail-website/#2690a20916fb).

## Take It Further Data Analytics Cases

Take It Further data analytics cases have been added to several chapters. These TIF cases use a dataset related to the chapter content that requires a student to analyze and develop reports using Excel and Tableau. The chapters with TIF data analytics cases are as follows:

- Chapter 5: Accounting for Retail Businesses
  - TIF 5-8 "Sales analysis" (Excel application)
- Chapter 6: Inventories
  - TIF 6-5 "Out-of-stock items" (Excel application)
- Chapter 7: Internal Control and Cash
  - TIF 7-6 "Inventory losses and potential controls" (Tableau application)
- Chapter 8: Receivables
  - TIF 8-6 "Collectability of receivables by customer type" (Excel application)
- Chapter 9: Long-Term Assets: Fixed and Intangible
  - TIF 9-5 "Equipment maintenance, downtime, and costs" (Excel and Tableau applications)
- Chapter 10: Liabilities: Current, Installment Notes, and Contingencies
  - TIF 10-6 "Supplier (vendor) analyses" (Excel application)
- Chapter 15: Introduction to Managerial Accounting
  - TIF 15-7 "Cost analyses" (Excel application)
- Chapter 16: Job Order Costing
  - TIF 16-6 "Job order costing" (Excel application)
- Chapter 19: Support Department and Joint Cost Allocation
  - TIF 19-4: "Joint cost allocation" (Tableau application)
- Chapter 20: Cost-Volume-Profit Analysis
  - TIF 20-7 "Cost behavior" (Excel application)
- Chapter 22: Budgeting
  - TIF 22-7 "Budgeting" (Excel application)



Chapter 23: Evaluating Variances from Standard Costs

TIF 23-4 “Cost variances” (Excel application)

Chapter 25: Differential Analysis and Product Pricing

TIF 25-7: “Make-or-buy decision” (Tableau application)


The following is the data analytics case for Chapter 5.



#### TIF 5-8 Data Analytics: Sales analysis

Michelle Horowitz is the manager of AAAA Office Supplies, a locally owned office supply store for schools and businesses. Michelle is concerned about the large variety of products the store carries, which ties up storage space and working capital. Michelle has asked you to analyze the store's inventory and sales to determine if there are products that may be worth discontinuing.

Michelle has asked you for the following:

1. A list of the quantity of each product sold for a recent month.
2.  Recommendations for any products that should be discontinued.

Go to CNOWv2 to complete this assignment.

## Journal Entries with T Accounts

**T accounts with debit and credit postings are included with journal entries** throughout *Financial and Managerial Accounting, 16e*. The accounting equation and T accounts are shown in a smaller font so that the presentation is still focused on the journal entry. That is, the presentation is designed to subtly reinforce student learning without detracting from a journal entry focus.

Examples of this new presentation follow:

*Purchase of \$9,250 of inventory on account.*

Inventory			9,250	
Accounts Payable—Thomas Corporation				9,250
Purchased inventory on account.				
Assets	=	Liabilities	+	Stockholders' Equity
Inventory		Accounts Payable		
9,250		9,250		

*Discarding of fully depreciated equipment.*

Accumulated Depreciation—Equipment			4,800	
Loss on Disposal of Equipment			1,200	
Equipment				6,000
To write off equipment discarded.				
Assets	=	Liabilities	+	Stockholders' Equity
Equipment		Accumulated Depreciation		Loss on Disposal of Equipment
6,000		4,800		1,200

*Issuance of preferred stock and common stock at par value for cash.*

Cash				1,500,000	
Preferred Stock					500,000
Common Stock					1,000,000
Issued preferred stock and common stock at par for cash.					

Assets		=	Liabilities	+	Stockholders' Equity	
Cash					Preferred Stock	Common Stock
1,500,000					500,000	1,000,000

The preceding presentation has the following pedagogical advantages:

- Students can see the impact of the journal entry on the elements of the accounting equation.
- Students can see the impact of the journal entry on the financial statements.
  - The impact on the balance sheet is shown by the accounting equation.
  - The impact on the income statement is shown by revenue and expense T accounts under Stockholders' Equity.
  - The impact on the statement of stockholders' equity is shown by common stock, retained earnings, and dividend T accounts under Stockholders' Equity.
  - The impact on the statement of cash flows is shown by the cash T account under Assets.
- The presentation reinforces the rules of debits and credits.
- The accounting equation is illustrated as the foundation (framework) for all financial accounting systems.
- The presentation is consistent with today's accounting systems where posting to accounts is often done at the same time journal entries are recorded.

Why Accrual Accounting Is Required

Why the accrual basis of accounting is required by GAAP has been added to Chapter 4. This section uses the NetSolutions illustrations from Chapters 1–4 as a basis for the following exhibit.

**Exhibit 20**  
Accrual versus Cash  
Basis of Accounting  
for NetSolutions

Accrual Basis of Accounting					Interpretation
			Increase (Decrease)		
	December	November	Amount	Percent	
Revenues	\$9,460	\$7,500	\$1,960	26.1%	} NetSolutions is profitable and rapidly expanding.
Expenses	(5,405)	(4,450)	955	21.5%	
Net income (loss)	<u>\$4,055</u>	<u>\$3,050</u>	1,005	33.0%	

Cash Basis of Accounting					Interpretation
			Increase (Decrease)		
	December	November	Amount	Percent	
Revenues	\$6,980	\$7,500	\$ (520)	(6.9)%	} NetSolutions is in trouble with declining revenues and increasing expenses, which generated a net loss. This suggests that NetSolutions may not be able to continue as a viable company without significant operational changes.
Expenses	(7,915)	(4,600)	3,315	72.1%	
Net income (loss)	<u>\$ (935)</u>	<u>\$2,900</u>	(3,835)	(132.2)%	

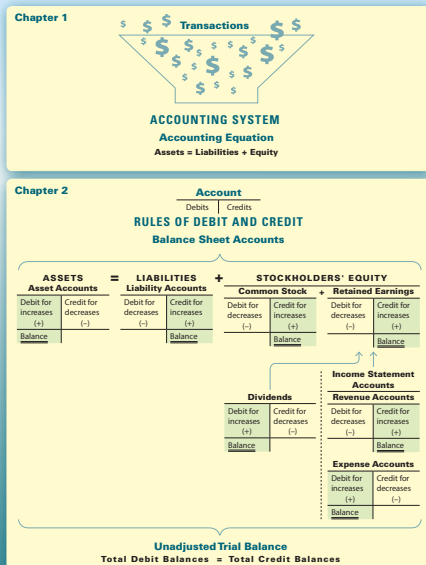
This exhibit illustrates that accrual accounting is required by GAAP because it better matches revenues and expenses and, thus, is a better indicator of a company's profitability.

Existing Features

Warren/Jones/Tayler also includes a thorough grounding in the fundamentals that any business student will need to be successful. These key features include:

- Stepwise approach to accounting cycle
- Presentation style designed around the way students learn
- A Schema, or roadmap, at the start of each chapter
- Links to the Opening Company
- Pathways Challenges
- Business Insights
- Check Up Corners
- Analysis for Decision Making
- Make a Decision

## Chapter 4 The Accounting Cycle



158

## Chapter 7 Internal Control and Cash

STATEMENT OF STOCKHOLDERS' EQUITY For the Year Ended December 31, 20Y5			
	Common Stock	Retained Earnings	Total
Balances, Jan. 1, 20Y5	\$ XXXX	\$ XXXX	\$ XXXX
Issued common stock	XXX		XXX
Net income		XXX	XXX
Dividends		(XXX)	(XXX)
Balances, Dec. 31, 20Y5	\$ XXXX	\$ XXXX	\$ XXXX

STATEMENT OF CASH FLOWS For the Year Ended December 31, 20Y5	
Cash flows from (used for)	
operating activities	\$XXX
investing activities	XXX
financing activities	XXX
Net increase (decrease) in cash	XXX
Cash balance, January 1, 20Y5	XXX
Cash balance, December 31, 20Y5	\$XXX

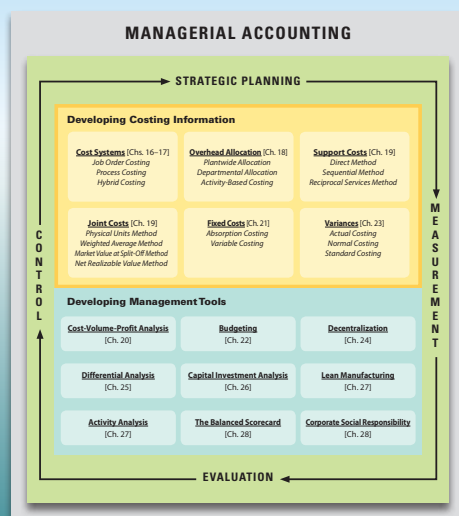
INCOME STATEMENT For the Year Ended December 31, 20Y5	
Sales	\$ XXXX
Cost of goods sold	(XXX)
Gross profit	\$ XXXX
Operating expenses:	
Wages expense	XXXX
Advertising expense	XXX
Utilities expense	XXX
Depreciation expense	XXX
Total operating expenses	(XXXX)
Operating income	\$ XXXX
Other revenue and expense	XXX
Net income	\$ XXXX

BALANCE SHEET December 31, 20Y5	
Assets	
Current assets:	
Cash	\$XXX
Accounts receivable	XXX
Inventory	XXX
Total current assets	\$XXX
Property, plant, and equipment	XXX
Total assets	\$XXX
Liabilities	
Current liabilities	\$XXX
Long-term liabilities	XXX
Total liabilities	\$XXX
Stockholders' Equity	
Common stock	XXX
Retained earnings	XXX
Total stockholders' equity	XXX
Total liabilities and stockholders' equity	\$XXX

350

## Chapter 15 Introduction to Managerial Accounting



762

## Schema

At the start of each chapter, an updated schema, or roadmap, shows students what they are going to learn and how it is connected to the larger picture. In the early chapters, the schema illustrates how the steps in the accounting cycle are interrelated. In later financial chapters, the schema shows how each chapter's topics are connected to the financial statements. The schema for the managerial chapters illustrates how the chapter content lays the foundation with managerial concepts and principles. Then it moves students through developing the information and ultimately into evaluating and analyzing information in order to make decisions.

Best Buy

Assume that in September you purchased a Sony HDTV from Best Buy (BBY). At the same time, you purchased a Denon surround sound system for \$599.99. You liked your surround sound so well that in November you purchased an identical Denon system on sale for \$549.99 for your bedroom TV. Over the holidays, you moved to a new apartment and in the process of unpacking discovered that one of the Denon surround sound systems was missing. Luckily, your renters or homeowners insurance policy will cover the theft; but the insurance company needs to know the cost of the system that was stolen.

The Denon systems were identical. However, to respond to the insurance company, you will need to identify which system was stolen. Was it the first system, which cost \$599.99, or was it the second system, which cost \$549.99? Whichever assumption you make may determine the amount that you receive from the insurance company.

Businesses such as Best Buy make similar assumptions when identical merchandise is purchased at different costs. For example, Best Buy may have purchased thousands of Denon surround sound systems over the past year at different costs. At the end of a period, some of the Denon systems will still be in inventory, and some will have been sold. But which costs relate to the sold systems, and which costs relate to the Denon systems still in inventory? Best Buy's assumption about inventory costs can involve large dollar amounts and, thus, can have a significant impact on the financial statements. For example, Best Buy reported \$5,051 million of inventory and net income of \$897 million for a recent year.

This chapter discusses such issues as how to determine the cost of merchandise in inventory and the cost of goods sold. However, this chapter begins by discussing the importance of control over inventory.



Link to Best Buy.....	Pages 301, 303, 314, 315, 316
Why It Matters.....	Page 308
Analysis for Decision Making.....	Pages 320–321

Best Buy uses scanners to screen customers as they leave the store for merchandise that has not been purchased. In addition, Best Buy stations greeters at the store's entrance to keep customers from bringing in bags that can be used to shoplift merchandise.

Link to Best Buy

Link to Opening Company

Link to the “opening company” of each chapter calls out examples of how the concepts introduced in the chapter are connected to the opening company. This shows how accounting is used in the real world by real companies.

When a real-world company is first mentioned, its stock (ticker) symbol is shown in parentheses. Doing so facilitates students’ ability to access additional information about the company, including its stock price and website.

Pathways Challenges

Pathways Challenge encourages students’ interest in accounting and emphasizes the critical thinking aspect of accounting. A suggested answer to the Pathways Challenge is provided at the end of the chapter.

Pathways Challenge



This is Accounting!

Economic Activity

Verizon Communications Inc. (VZ) is the largest wireless service provider in the United States with over 114 million retail subscribers. To deliver its products and services, Verizon must have access to spectrum—the radio frequencies that carry sound, data, and video to wireless devices. However, spectrum is a limited resource that the Federal Communications Commission (FCC) licenses to businesses for a period of 10 years, subject to renewal. In a recent year, Verizon acquired almost \$10 billion in wireless licenses.

Critical Thinking/Judgment

- How should Verizon account for its acquisition of wireless licenses?
- What is the useful life of a wireless license?
- Should Verizon expense (amortize) the cost of its wireless licenses?

Suggested answer at end of chapter.

Pathways Challenge



This is Accounting!

Information/Consequences

Because a wireless license does not exist physically, Verizon’s (VZ) wireless licenses are intangible assets. All of the costs of acquiring a wireless license should be recorded as an asset. In a recent year, Verizon reported almost \$87 billion of wireless licenses, representing 35% of its total assets.

Even though the FCC license is granted for a 10-year period, Verizon considers this license to have an indefinite useful life. This is because the license is subject to renewal at a low cost and, historically, the FCC has renewed Verizon’s licenses.

Verizon does not expense (amortize) the cost of its wireless licenses. Instead, the licenses are reviewed for any impaired value.

Suggested Answer

## Business Insights

Located in each chapter, **Business Insight** shows students how accounting is important to businesses with which they are familiar.

### Business Insight

#### Fixed Assets

**F**ixed assets often represent a significant portion of a company's total assets. The table that follows shows the fixed assets as a percent of total assets for some select companies across a variety of industries. As can be seen, the type of industry will

impact the proportion of fixed assets to total assets. Retail has the highest percent of fixed assets to total assets, while software is on the lower end of the scale. High-tech service companies often use fewer fixed assets to deliver their services than will companies that use stores, equipment, planes, cell towers, or theme parks.

Company	Industry	Percent of Fixed Assets to Total Assets
<b>Target Corporation (TGT)</b>	Merchandise Retail	62%
<b>McDonald's Corporation (MCD)</b>	Food Retail	51%
<b>Delta Air Lines, Inc. (DAL)</b>	Transportation	49%
<b>Verizon Communications Inc. (VZ)</b>	Communications	32%
<b>Facebook, Inc. (FB)</b>	Social Media	26%
<b>The Walt Disney Company (DIS)</b>	Entertainment	16%
<b>Microsoft Corporation (MSFT)</b>	Software	13%

Fixed assets have important properties that require management attention:

- Fixed assets require a long-term commitment. Mistakes in acquiring fixed assets can be very costly and difficult to reverse; thus, managers must take special care in acquiring fixed assets.
- Fixed assets wear out over time and need to be replaced. Managers must monitor fixed assets and know when to replace fixed assets due to wear and tear or obsolescence.

- Fixed assets need to be maintained during use. Managers need to develop maintenance programs to keep the investment in fixed assets productive.
- Fixed assets often require significant funds to purchase. Managers must acquire funding internally or by other sources to finance the purchase of fixed assets.

## Check Up Corners

To aid learning and problem solving, throughout each chapter **Check Up Corners** provide students with step-by-step guidance on how to solve problems. Problem-solving tips help students avoid common errors.

### Check Up Corner 9-2 Selling Fixed Assets

On the first day of the year, Firefall Company purchased equipment at a cost of \$340,000. The equipment was expected to have a useful life of four years, a residual value of \$20,000, and is depreciated at a straight-line rate of 25%. Firefall sold the equipment at the beginning of the fourth year when the balance in the accumulated depreciation account was \$240,000. Journalize the entry to record the sale if the equipment was sold for:

- \$95,000
- \$105,000

#### Solution:

- Equipment sold for \$95,000:

Cash  
Accumulated Depreciation—Equipment  
Loss on Sale of Equipment  
Equipment

95,000

240,000

5,000

340,000

Selling Price – Book Value =  
\$95,000 – \$100,000

Accumulated  
Depreciation at  
the End of Year 3

- Equipment sold for \$105,000:

Cash  
Accumulated Depreciation—Equipment  
Equipment  
Gain on Sale of Equipment

105,000

240,000

340,000

5,000

Selling Price – Book Value =  
\$105,000 – \$100,000



Analysis for Decision Making

Analysis for Decision Making highlights how companies use accounting information to make decisions and evaluate their business. This provides students with context of why accounting is important to companies.

Analysis for Decision Making

Fixed Asset Turnover Ratio

The **fixed asset turnover ratio** measures the number of sales dollars earned per dollar of fixed assets. The higher the ratio, the more efficiently a company is using its fixed assets in generating sales. The ratio is computed as follows:

Fixed Asset Turnover Ratio = Sales / Average Book Value of Fixed Assets

To illustrate, the following data (in millions) were taken from a recent financial statement of **McDonald's Corporation (MCD)**:

Sales	\$24,621.9
Fixed assets (net):	
Beginning of year	21,257.6
End of year	23,117.6

McDonald's fixed asset turnover ratio for the year is computed as follows (rounded to one decimal place):

Fixed Asset Turnover Ratio = Sales / Average Book Value of Fixed Assets = \$24,621.9 / (\$21,257.6 + \$23,117.6) ÷ 2 = \$24,621.9 / \$22,187.6 = 1.1

Is 1.1 efficient? To answer this question, McDonald's fixed asset turnover ratio can be compared to other quick-service restaurant companies, as shown in Exhibit 14. **Yum! Brands (YUM)** operates KFC, Pizza Hut, and Taco Bell quick-service restaurants. The other restaurants are likely familiar by name.

Objective 7

Describe and illustrate the fixed asset turnover ratio to assess the efficiency of a company's use of its fixed assets.

Make a Decision

Make a Decision in the end-of-chapter material gives students a chance to analyze real-world business decisions.

Make a Decision  
Fixed Asset Turnover Ratio



**MAD 9-1 Analyze and compare Amazon.com and Netflix** **Obj. 7**  
**Amazon.com, Inc. (AMZN)** is the world's leading Internet retailer of merchandise and media. Amazon also designs and sells electronic products, such as e-readers. **Netflix, Inc. (NFLX)** is one of the world's leading Internet television networks. Both companies compete in the digital media and streaming space. However, Netflix is more narrowly focused in the digital streaming business than is Amazon.

Sales and average book value of fixed assets information (in millions) are provided for Amazon and Netflix for a recent year as follows:

	Amazon.com	Netflix
Sales	\$177,866	\$20,156
Average book value of fixed assets	67,251	492

- a. Compute the fixed asset turnover ratio for each company. Round to one decimal place.
- b. Which company is more efficient in generating sales from fixed assets?
- c. Interpret your results.



**MAD 9-2 Analyze and compare Alaska Air, Delta Air Lines, and Southwest Airlines** **Obj. 7**  
**Alaska Air Group (ALK)**, **Delta Air Lines (DAL)**, and **Southwest Airlines (LUV)** reported the following financial information (in millions) in a recent year:

	Alaska Air Group	Delta Air Lines	Southwest Airlines
Sales	\$8,781	\$47,007	\$22,428
Average book value of fixed assets	6,842	29,823	18,275

- a. Determine the fixed asset turnover ratio for each airline. Round to one decimal place.
- b. Based on the fixed asset turnover ratio, which airline appears to be the most efficient in the use of its fixed assets?
- c. The most important fixed asset to an airline is the aircraft. Given this, what factors might influence the efficient use of fixed assets for an airline?

## Student Learning Aids

This edition includes a variety of student learning aids in addition to the Check Up Corners, including the following:

- At the end of each chapter, **Let's Review** is a new chapter summary and self-assessment feature that is designed to help busy students prepare for an exam. It includes a summary of each learning objective's key points, key terms, multiple-choice questions, exercises, and a sample problem that students may use to practice.
- Sample multiple-choice questions allow students to practice with the type of assessments they are likely to see on an exam.
- Short exercises and a longer problem allow students to apply their knowledge.
- **Answers** provided at the end of the Let's Review section let students check their knowledge immediately.
- **Take It Further** in the end-of-chapter activities allows instructors to assign other special activities related to ethics, communication, and teamwork.
- **Certified Management Accountant (CMA®) Examination Questions** help students prepare for the CMA exam so they can earn CMA certification.

## CNOWv2

CNOWv2 is a powerful course management and online homework resource that provides control and customization to optimize the student learning experience. Included are many proven resources, such as algorithmic activities, a test bank, course management tools, reporting and assessment options, and much more.

## Excel Online

Cengage and Microsoft have partnered in CNOWv2 to provide students with a uniform, authentic Excel experience. It provides instant feedback, built-in video tips, and easily accessible spreadsheet work. These features allow you to spend more time teaching college accounting applications and less time troubleshooting Excel.

These new algorithmic activities offer pre-populated data directly in Microsoft Excel Online. Each student receives their own version of the problem to perform the necessary data calculations in Excel Online. Their work is constantly saved in Cengage cloud storage as a part of homework assignments in CNOWv2. It's easily retrievable so students can review their answers without cumbersome file management and numerous downloads/uploads.

## Motivation: Set Expectations and Prepare Students for the Course

CNOWv2 helps motivate students and get them ready to learn by reshaping their misconceptions about the introductory accounting course and providing a powerful tool to engage students.

## CNOWv2 Start-Up Center

Students are often surprised by the amount of time they need to spend outside of class working through homework assignments in order to succeed. The CNOWv2 Start-Up Center will help students identify what they need to do and where they need to focus in order to be successful with a variety of new resources.

- **What Is Accounting?** Module ensures students understand course expectations and how to be successful in the introductory accounting course. This module consists of two assignable videos: *Introduction to Accounting* and *Success Strategies*. The Student Advice Videos offer advice from real students about what it takes to do well in the course.
- **Math Review** Module, designed to help students get up to speed with necessary math skills, includes math review assignments and Show Me How math review videos to ensure that students have an understanding of basic math skills.
- **How to Use CNOWv2** Module focuses on learning accounting, not on a particular software system. Quickly familiarize your students with CNOWv2 and direct them to all of its built-in student resources.

## Motivation: Prepare Them for Class

With all the outside obligations accounting students have, finding time to read the textbook before class can be a struggle. Point students to the key concepts they need to know before they attend class.

- **Video: Tell Me More.** Short Tell Me More lecture activities explain the core concepts of the chapter through an engaging auditory and visual presentation. Available either on a stand-alone basis or as an assignment, they are ideal for all class formats—flipped model, online, hybrid, or face-to-face.

### Fixed Asset Turnover Ratio

- The **fixed asset turnover ratio** measures the number of sales dollars earned per dollar of fixed assets.
- The fixed asset turnover ratio is computed as follows:
 
$$\text{Fixed Asset Turnover Ratio} = \frac{\text{Sales}}{\text{Average Book Value of Fixed Assets}}$$
- The higher the ratio, the more efficiently a company is using its fixed assets in generating sales.

## Provide Help Right When Students Need It

The best way to learn accounting is through practice, but students often get stuck when attempting homework assignments on their own.

- **Video: Show Me How.** Created for the most frequently assigned end-of-chapter items, Show Me How problem demonstration videos provide a step-by-step model of a similar problem. Embedded tips help students avoid common mistakes and pitfalls.



### Average Rate of Return—New Product

Ray Zor Inc. is considering an investment in new equipment that will be used to manufacture a smartphone. The phone is expected to generate additional annual sales of 4,000 units at \$410 per unit. The equipment has a cost of \$525,000, residual value of \$75,000, and an eight-year life. The equipment can only be used to manufacture the phone. The cost to manufacture the phone is shown below.

Cost per unit:	
Direct labor	\$ 30
Direct materials	280
Factory overhead (including depreciation)	40
Total cost per unit	\$350

Determine the average rate of return on the equipment.

## Help Students Go Beyond Memorization to True Understanding

Students often struggle to understand how concepts relate to one another. For most students, an introductory accounting course is their first exposure to both business transactions and the accounting system. While these concepts are already difficult to master individually, their combination and interdependency in the introductory accounting course often pose a challenge for students.

- **Mastery Problems.** Mastery Problems enable you to assign problems and activities designed to test students' comprehension and mastery of difficult concepts.

## MindTap eReader

The MindTap eReader for Warren/Jones/Taylor's *Financial and Managerial Accounting* is the most robust digital reading experience available. Hallmark features include:

- Fully optimized for the iPad.
- Note taking, highlighting, and more.
- Embedded digital media.
- The MindTap eReader also features ReadSpeaker®, an online text-to-speech application that vocalizes, or “speech-enables,” online educational content. This feature is ideally suited for both instructors and learners who would like to listen to content instead of (or in addition to) reading it.

## Cengage Unlimited

**Cengage Unlimited** is a first-of-its-kind digital subscription designed specifically to lower costs. Students get total access to everything Cengage has to offer on demand—in one place. That's 20,000 eBooks, 2,300 digital learning products, and dozens of study tools across 70 disciplines and over 675 courses. Currently available in select markets. Details at [www.cengage.com/unlimited](http://www.cengage.com/unlimited).



## New Appendixes

Two new end-of-text appendixes have been added to this edition.

**Appendix B: Selected Topics.** This appendix allows instructors the flexibility to cover a variety of topics that might be relevant to their students. The topics include the following:

- Topic 1: Investments
- Topic 2: Foreign Currency Transactions
- Topic 3: Corporate Taxes
- Topic 4: Reporting Unusual Items and Comprehensive Income
- Topic 5: Revenue Recognition
- Topic 6: International Accounting Standards

Each topic is designed as a self-contained learning module with its own assignment materials. The modules have been written so that instructors have the flexibility of covering one or more of the modules at a variety of different places in their course depending upon their students' needs.

**Appendix C: Nike Annual Report (10-K).** This appendix includes excerpts from a recent Nike annual report (10-K). New to this appendix are student assignments for each chapter. An instructor could use all of the chapter assignments as an “annual report” project. The annual report assignments are referenced at the end of each chapter following the Take It Further section.

## Chapter Changes and Improvements

The following chapter changes and improvements have been made in this edition:

### Chapter 1

- Why It Matters boxes from prior edition have been relabeled as Business Insight boxes.
- New section on Business Activities has been added, including a related exhibit.
- Exhibit 3 has been updated with new and more current examples of accounting and business frauds.
- New Business Insight box on “Business Strategies” has been added.
- Exhibit 11 is new and illustrates the interrelationships of the financial statements with the balance sheet as the connecting link.

### Chapter 3

- The opening company has been changed from Pandora Media, Inc., which is now a subsidiary of Sirius XM, to Netflix, Inc.
- The chapter Links have been changed to relate to Netflix.

### Chapter 4

- The discussion of NetSolutons’ financial statements has been changed to include a brief discussion of the statement of cash flows, which is shown in a new appendix to the chapter. This provides instructors the flexibility to cover all four of NetSolutions’ financial statements if they choose to do so.
- A new section and learning objective have been added to the end of the chapter on why the accrual basis of accounting is required by GAAP.
- The appendix on reversing entries has been moved to an online appendix.

### Chapter 5

- The discussion of the Nature of Retail Businesses has been changed to reference business-to-business (B2B) and business-to-customer (B2C) transactions.
- The accounting for purchase discounts has been changed to use the gross method of accounting for purchase discounts.
- The accounting for sales to customers using debit cards has been added to this edition.
- The accounting for sales coupons and rebates has been added to the chapter. This discussion replaces the prior edition’s discussion of the accounting for sales discounts, which has been moved to an end-of-chapter appendix.
- The end-of-chapter Appendix 1 illustrates the accounting for sales discounts for gross and net methods. This

discussion has been simplified so that adjusting entries are not required.

- The discussion of sales returns, refunds, and allowances has been revised so that the end-of-period adjusting entry is illustrated before examples illustrating customer returns, refunds, and allowances.
- A new exhibit (Exhibit 7) has been added that summarizes the journal entries for customer sales returns, refunds, and allowances.

### Chapter 6

- New Business Insight box on radio frequency identification (RFID) has been added.
- Revised section on the effect of inventory errors on financial statements.

### Chapter 7

- Updated Ethics in Action box on employee fraud.
- Updated Business Insight box to include remote deposits.

### Chapter 8

- Updated discussion of the allowance method for uncollectible accounts to reflect the new standard on current expected credit losses.

### Chapter 10

- Updated W-4 form to reflect recent changes.

### Chapter 12

- New exhibit on the effects of dividends and stock splits has been added.

### Chapter 14

- The opening company has been changed from Nike to The Walt Disney Company.
- Appendix on the reporting of unusual items has been moved to Appendix B: Selected Topics.
- Appendix on the concepts of fair value and comprehensive income has been moved to Appendix B: Selected Topics.

### Chapter 15

- The sections covering the management process and the role of managerial accounting have received a significant rewrite, emphasizing the four basic functions of strategic planning, measurement, evaluation, and control.
- Exhibit 15 on the flow of manufacturing costs has been reworked.
- A new Business Insight box titled “Managerial Accounting and Ordering at Subway” has been added.



## Chapter 16

- The chapter has been updated with terminology changes: “job order cost system” to “job order costing” and “process cost system” to “process costing.”

## Chapter 17

- The chapter has been updated with terminology changes: “job order cost system” to “job order costing” and “process cost system” to “process costing.”
- Exhibit 1 has been updated with new examples of job order companies.
- The Business Insight box titled “Fill ‘Er Up” has been updated and rewritten.

## Chapter 18

- Significant numeric adjustments have been made throughout to add clarity to the running examples.

## Chapter 19

- The coverage on the reciprocal services method has been moved to a chapter appendix.

## Chapter 20

- The coverage on cost-volume-profit relationships has been revised and simplified.
- The coverage on sales mix considerations has been updated with a terminology change: one overall enterprise product “E” to one overall company product “M.”

## Chapter 21

- A new Business Insight box titled “Throughput Costing” has been added.
- The coverage on analyzing market segments has been revised and simplified.
- Real-world company examples have been updated.

## Chapter 22

- The coverage on the objectives of budgeting has been rewritten to tie into the four basic functions of the management process: strategic planning, measurement, evaluation, and control.
- Clarification on the cash budget has been added.
- New terminology additions include incremental budgeting, participative budgeting, and multiperiod budgeting.
- A new end-of-chapter appendix has been added: Multiperiod Budgeting.

## Chapters 24, 25, and 26

- Many significant updates around real-world company examples have been made.

## Chapter 27

- The coverage on just-in-time (lean) accounting principles has been updated and clarified, including the effects of the COVID-19 pandemic on lean practices.
- A new Business Insight box entitled “‘Not’ So Just-in-Time (Lean) Manufacturing” has been added.
- A new problem on supply chain disruptions has been added.
- Pareto chart coverage has been removed.

## Chapter 28

- The Business Insight box titled “Sustainable Papermaking” has received significant updates based on International Paper Company’s sustainability strategic objectives and associated performance metrics and targets.

# Acknowledgements

The many enhancements to this edition of *Financial and Managerial Accounting* are the direct result of reviews, surveys, and focus groups with instructors at institutions across the country. We would like to take this opportunity to thank those who have helped us better understand the challenge of the financial accounting course and provided valuable feedback on our content and digital assets.

John Alpers, Tennessee Wesleyan  
Anne Marie Anderson, Raritan Valley  
Community College  
Rick Andrews, Sinclair Community College  
Maureen Baker, Long Beach City College  
Surasakdi Bhamornsiri, University of North  
Carolina at Charlotte  
Alan Blankley, University of North Carolina  
at Charlotte  
Cindy Bolt, The Citadel  
Julie Bonner, Central Washington University  
Charles Boster, Salisbury University  
Salma Boumediene, Montana State  
University – Billings  
Jerold K. Braun, Daytona State College  
Louise Burney, University of Mississippi  
Shauna Butler, St. Thomas Aquinas College  
James N. Cannon, Iowa State University  
Kirk Canzano, Long Beach City College  
Jack Cathey, University of North Carolina at  
Charlotte  
Donna Chadwick, Sinclair Community College  
Ming Lu Chun, Santa Monica College  
Anne Clem, Iowa State University  
Dixon Cooper, Ouachita Baptist University  
Bryan Corsnitz, Long Beach City College  
Pat Creech, Northeastern Oklahoma A&M  
Stephan Davenport, University of Tennessee  
– Chattanooga  
David Deboskey, San Diego State  
Daniel De La Rosa, Fullerton College  
Heather Demshock, Lycoming College  
Scott Dotson, Tennessee Wesleyan  
University  
Hong Duong, Salisbury University  
Desiree Elias, Florida International  
University  
James Emig, Villanova University  
Valerie Evans, Kansas State University

Dave Fitzgerald, Jackson College  
Kenneth Flug, St. Thomas Aquinas College  
John Giles, North Carolina State University  
Marcye Hampton, University of Central  
Florida  
Christopher Harper, Grand Valley State  
University  
Thomas Heikkinen, Jackson College  
Melanie Hicks, Liberty University  
Susanne Holloway, Salisbury University  
Jose Hortensi, Miami Dade College  
Md Safayat Hossain, Florida International  
University  
Su-Jane Hsieh, San Francisco State University  
Aileen Huang, Santa Monica College  
Julie Ying Huang, University of Louisville  
Ann Kelley, Providence College  
Daniel Kim, Midlands Technical College  
Angela Kirkendall, South Puget Sound  
Community College  
Satoshi Kojima, East Los Angeles College  
Charles Leflar, University of Arkansas  
Tara Maciel, San Diego Mesa College  
Annette Maddox, Georgia Highlands College  
LuAnn Bean Mangold, Florida Institute of  
Technology  
Eric Martin, University of Tennessee  
Robert A. Martin, Kennesaw State University  
Michelle McFeaters, Grove City College  
Dawn McKinley, Harper College  
Allison McLeod, University of North Texas  
Rodney Michael  
Shawn Miller, Lone Star College  
Jill Mitchell, Northern Virginia Community  
College – Alexandria  
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Wisconsin – Eau Claire  
Dr. April Poe, University of the Incarnate  
Word

Francisco Rangel, Riverside City College  
Jeffery Reinking, University of Central  
Florida – Orlando  
Jenny Resnick, Santa Monica College  
Benjamin Reyes, Long Beach City College  
Vernon Richardson, University of Arkansas  
Patrick Rogan, Cosumnes River College  
Lauran B. Schmid, The University of Texas  
Rio Grande Valley  
Jennifer Schneider, University of North  
Georgia  
Mary Sheil, Kennesaw State University  
Meghna Singhvi, Loyola Marymount  
University  
Margie Snow, Norco College  
Mona Stephens, Southern New Hampshire  
University  
Linda Stoller, Bentley University  
Michael Stoots, UCLA extension  
Nirmalee Summers, University of Wisconsin  
– La Crosse  
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Patricia Tupaj, Quinsigamond Community  
College  
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Institute for the Deaf, RIT  
Mustafa Younis, Tulane University  
Fang Zhao, Florida International University  
Terri Ziegler, Ohio State University

Special thanks to our Financial Accounting Advisory Board Members:

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– Terre Haute  
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# Brief Contents

<b>1</b>	Introduction to Accounting and Business.....	2
<b>2</b>	Analyzing Transactions .....	58
<b>3</b>	The Adjusting Process .....	110
<b>4</b>	The Accounting Cycle .....	160
<b>5</b>	Accounting for Retail Businesses .....	236
<b>6</b>	Inventories.....	308
<b>7</b>	Internal Control and Cash .....	360
<b>8</b>	Receivables .....	408
<b>9</b>	Long-Term Assets: Fixed and Intangible .....	454
<b>10</b>	Liabilities: Current, Installment Notes, and Contingencies .....	506
<b>11</b>	Liabilities: Bonds Payable .....	556
<b>12</b>	Corporations: Organization, Stock Transactions, and Dividends.....	596
<b>13</b>	Statement of Cash Flows.....	644
<b>14</b>	Financial Statement Analysis .....	704
<b>15</b>	Introduction to Managerial Accounting .....	762
<b>16</b>	Job Order Costing .....	808
<b>17</b>	Process Costing.....	856
<b>18</b>	Activity-Based Costing .....	912
<b>19</b>	Support Department and Joint Cost Allocation .....	966
<b>20</b>	Cost-Volume-Profit Analysis .....	1012
<b>21</b>	Variable Costing for Management Analysis .....	1066
<b>22</b>	Budgeting .....	1114
<b>23</b>	Evaluating Variances from Standard Costs .....	1178
<b>24</b>	Evaluating Decentralized Operations .....	1228
<b>25</b>	Differential Analysis and Product Pricing.....	1278
<b>26</b>	Capital Investment Analysis .....	1332
<b>27</b>	Lean Manufacturing and Activity Analysis .....	1380
<b>28</b>	The Balanced Scorecard and Corporate Social Responsibility .....	1422
<b>Appendix A</b>	Interest Tables .....	A-2
<b>Appendix B</b>	Selected Topics .....	B-1
<b>Appendix C</b>	Nike Inc., Form 10-K for the Fiscal Year Ended May 31, 2020 Selected Excerpts.....	C-1
<b>Appendix D</b>	Reversing Entries (online).....	D-1
<b>Appendix E</b>	Special Journals and Subsidiary Ledgers (online).....	E-1
<b>Appendix F</b>	Computing Present Values (online) .....	F-1
<b>Glossary</b>	.....	G-1
<b>Index</b>	.....	I-1

## 1 Introduction to Accounting and Business 2

---

### Nature of Business and Accounting 4

- Types of Businesses 4
- Business Activities 5
- Role of Accounting in Business 5
- Role of Ethics in Accounting and Business 7
- Opportunities for Accountants 8

### Generally Accepted Accounting

#### Principles (GAAP) 10

- Characteristics of Financial Information 11
- Assumptions 12
- Principles 14

### The Accounting Equation 14

### Business Transactions and the Accounting Equation 15

- Summary 19
- Classifications of Stockholders' Equity 20

### Financial Statements 21

- Income Statement 23
- Statement of Stockholders' Equity 23
- Balance Sheet 24
- Statement of Cash Flows 25
- Interrelationships Among Financial Statements 26

### Analysis for Decision Making 29

- Ratio of Liabilities to Stockholders' Equity 29

### Continuing Problem 54

### Make a Decision 55

### Take It Further 56

### Pathways Challenge 13, 57

## 2 Analyzing Transactions 58

---

### Using Accounts to Record Transactions 61

- Chart of Accounts 62

### Double-Entry Accounting System 64

- Balance Sheet Accounts 64
- Income Statement Accounts 64
- Statement of Stockholders' Equity Accounts (Dividends) 65
- Normal Balances 65
- Journalizing 66

### Posting Journal Entries to Accounts 70

### Trial Balance 80

- Errors Affecting the Trial Balance 80
- Errors Not Affecting the Trial Balance 81

### Analysis for Decision Making 82

- Horizontal Analysis 82

### Continuing Problem 105

### Make a Decision 106

### Take It Further 108

### Pathways Challenge 77, 109

## 3 The Adjusting Process 110

---

### Nature of the Adjusting Process 113

- Accrual and Cash Bases of Accounting 113
- Revenue and Expense Recognition 114
- The Adjusting Process 114
- Types of Accounts Requiring Adjustment 115

### Adjusting Entries for Accruals 116

- Accrued Revenues 116
- Accrued Expenses 117

### Adjusting Entries for Deferrals 120

- Unearned Revenues 120
- Prepaid Expenses 121

### Adjusting Entries for Depreciation 124

### Summary of Adjusting Process 126

### Adjusted Trial Balance 130

### Analysis for Decision Making 132

- Vertical Analysis 132

### Continuing Problem 154

### Make a Decision 155

### Take It Further 157

### Pathways Challenge 131, 159

## 4 The Accounting Cycle 160

---

### Flow of Accounting Information 163

### Financial Statements 165

- Income Statement 165
- Statement of Stockholders' Equity 165
- Balance Sheet 167
- Statement of Cash Flows 168

### Closing Entries 170

- Journalizing and Posting Closing Entries 171
- Post-Closing Trial Balance 176



## Accounting Cycle 177

### Illustration of the Accounting Cycle 180

- Step 1. Analyzing and Recording Transactions in the Journal 180
- Step 2. Posting Transactions to the Ledger 181
- Step 3. Preparing an Unadjusted Trial Balance 181
- Step 4. Assembling and Analyzing Adjustment Data 181
- Step 5. Preparing an Optional End-of-Period Spreadsheet 183
- Step 6. Journalizing and Posting Adjusting Entries 184
- Step 7. Preparing an Adjusted Trial Balance 184
- Step 8. Preparing the Financial Statements 184
- Step 9. Journalizing and Posting Closing Entries 187
- Step 10. Preparing a Post-Closing Trial Balance 187

### Why Is the Accrual Basis of Accounting Required by GAAP? 190

#### Analysis for Decision Making 192

- Working Capital and Current Ratio 192

### Appendix 1 End-of-Period Spreadsheet 194

- Step 1. Enter the Title 194
- Step 2. Enter the Unadjusted Trial Balance 194
- Step 3. Enter the Adjustments 195
- Step 4. Enter the Adjusted Trial Balance 196
- Step 5. Extend the Accounts to the Income Statement and Balance Sheet Columns 197
- Step 6. Total the Income Statement and Balance Sheet Columns, Compute the Net Income or Net Loss, and Complete the Spreadsheet 198
- Preparing the Financial Statements from the Spreadsheet 199

### Appendix 2 Statement of Cash Flows for NetSolutions 199

#### Continuing Problem 228

#### Comprehensive Problem 1 229

#### Make a Decision 231

#### Take It Further 233

#### Pathways Challenge 177, 235

## 5 Accounting for Retail Businesses 236

### Nature of Retail Businesses 238

- Operating Cycle 238
- Financial Statements 239

### Merchandise Transactions 240

- Chart of Accounts for Retail Business 240
- Subsidiary Ledgers 241
- Purchases Transactions 241
- Sales Transactions 246
- Freight 256
- Summary: Recording Inventory Transactions 258
- Dual Nature of Merchandise Transactions 259
- Sales Taxes and Trade Discounts 259

### The Adjusting Process 261

- Inventory Shrinkage 261
- Customer Returns, Refunds, and Allowances 262
- Adjusted Trial Balance 263

### Financial Statements and Closing Entries for a Retail Business 264

- Multiple-Step Income Statement 264
- Single-Step Income Statement 266
- Statement of Stockholders' Equity 266
- Balance Sheet 267
- The Closing Process 268

#### Analysis for Decision Making 269

- Asset Turnover Ratio 269

### Appendix 1 Sales Discounts 270

- Gross Method 270
- Net Method 272
- Comparison of Gross and Net Methods 273

### Appendix 2 The Periodic Inventory System 273

- Chart of Accounts Under the Periodic Inventory System 273
- Recording Merchandise Transactions Under the Periodic Inventory System 274
- Adjusting Process Under the Periodic Inventory System 275
- Financial Statements Under the Periodic Inventory System 276
- Closing Entries Under the Periodic Inventory System 276

#### Comprehensive Problem 2 302

#### Make a Decision 303

#### Take It Further 305

#### Pathways Challenge 246, 307

## 6 Inventories 308

### Control of Inventory 310

- Safeguarding Inventory 310
- Reporting Inventory 311

### Inventory Cost Flow Assumptions 311

### Inventory Costing Methods Under a Perpetual Inventory System 313

- First-In, First-Out Method 313
- Last-In, First-Out Method 315
- Weighted Average Cost Method 317

### Inventory Costing Methods Under a Periodic Inventory System 319

- First-In, First-Out Method 319
- Last-In, First-Out Method 319
- Weighted Average Cost Method 320

### Comparing Inventory Costing Methods 323

### Reporting Inventory in the Financial Statements 324

- Valuation at Lower of Cost or Market 324

Inventory on the Balance Sheet 326  
Effects of Inventory Errors on the Financial Statements 327

### Analysis for Decision Making 330

Inventory Turnover and Days' Sales in Inventory 330

### Appendix Estimating Inventory Cost 332

Retail Method of Inventory Costing 332  
Gross Profit Method of Inventory Costing 333

### Make a Decision 355

### Take It Further 356

### Pathways Challenge 327, 358

## 7 Internal Control and Cash 360

### Sarbanes-Oxley Act 362

### Internal Control 364

Objectives of Internal Control 364  
Elements of Internal Control 364  
Control Environment 365  
Risk Assessment 366  
Control Procedures 366  
Monitoring 368  
Information and Communication 368  
Limitations of Internal Control 369

### Cash Controls over Receipts and Payments 370

Control of Cash Receipts 370  
Control of Cash Payments 373

### Bank Accounts 374

Bank Statement 374  
Using the Bank Statement as a Control over Cash 376

### Bank Reconciliation 377

### Special-Purpose Cash Funds 381

### Financial Statement Reporting of Cash 382

### Analysis for Decision Making 383

Days' Cash on Hand 383

### Make a Decision 403

### Take It Further 404

### Pathways Challenge 383, 406

## 8 Receivables 408

### Classification of Receivables 410

Accounts Receivable 410  
Notes Receivable 410  
Other Receivables 411

### Uncollectible Receivables 411

### Direct Write-Off Method for Uncollectible Accounts 412

### Allowance Method for Uncollectible Accounts 413

Write-Offs to the Allowance Account 413  
Estimating Uncollectibles 415

### Comparing Direct Write-Off and Allowance Methods 422

### Notes Receivable 423

Characteristics of Notes Receivable 423  
Accounting for Notes Receivable 424

### Reporting Receivables on the Balance Sheet 427

### Analysis for Decision Making 428

Accounts Receivable Turnover and Days' Sales in Receivables 428

### Make a Decision 450

### Take It Further 452

### Pathways Challenge 426, 453

## 9 Long-Term Assets: Fixed and Intangible 454

### Nature of Fixed Assets 456

Classifying Costs 456  
The Cost of Fixed Assets 458  
Leasing Fixed Assets 459

### Accounting for Depreciation 460

Factors in Computing Depreciation Expense 460  
Straight-Line Method 461  
Units-of-Activity Method 463  
Double-Declining-Balance Method 465  
Comparing Depreciation Methods 466  
Partial-Year Depreciation 469  
Revising Depreciation Estimates 470  
Repair and Improvements 471

### Disposal of Fixed Assets 473

Discarding Fixed Assets 473  
Selling Fixed Assets 474

### Natural Resources 475

### Intangible Assets 477

Patents 477  
Copyrights and Trademarks 478  
Goodwill 478

### Financial Reporting for Long-Term Assets: Fixed and Intangible 480

### Analysis for Decision Making 481

Fixed Asset Turnover Ratio 481

### Appendix Exchanging Similar Fixed Assets 483

Gain on Exchange 483  
Loss on Exchange 484

### Make a Decision 502

### Take It Further 503

### Pathways Challenge 479, 505

# 10 Liabilities: Current, Installment Notes, and Contingencies 506

---

## Current Liabilities 508

- Accounts Payable and Accruals 508
- Short-Term Notes Payable 509
- Current Portion of Long-Term Debt 511

## Payroll Liabilities 511

- Liability for Employee Earnings 512
- Deductions from Employee Earnings 512
- Computing Employee Net Pay 513
- Employer's Payroll Taxes 514
- Recording Payroll 515
- Paying Payroll 517
- Internal Controls for Payroll 517

## Employees' Fringe Benefits 517

- Vacation Pay 517
- Pensions 518
- Postretirement Benefits Other than Pensions 520

## Installment Notes 520

- Issuance 520
- Periodic Payments 520

## Contingent Liabilities 523

- Probable and Estimable 523
- Probable and Not Estimable 523
- Reasonably Possible 524
- Remote 524

## Reporting Liabilities 526

### Analysis for Decision Making 527

- Short-Term Liquidity Analysis 527

### Comprehensive Problem 3 547

### Make a Decision 549

### Take It Further 552

### Pathways Challenge 525, 554

# 11 Liabilities: Bonds Payable 556

---

## Nature of Bonds Payable 558

- Bond Characteristics and Terminology 558
- Proceeds from Issuing Bonds 559

## Accounting for Bonds Payable 561

- Bonds Issued at Face Amount 561
- Bonds Issued at a Discount 562
- Amortizing a Bond Discount 562
- Bonds Issued at a Premium 564
- Amortizing a Bond Premium 565
- Bond Redemption 567

## Reporting Bonds Payable 569

### Analysis for Decision Making 570

- Times Interest Earned 570

## Appendix 1 Present Value Concepts and Pricing Bonds Payable 572

- Present Value Concepts 572
- Pricing Bonds 575
- Computing Present Values 576

## Appendix 2 Effective Interest Rate Method of Amortization 576

- Amortization of Discount by the Interest Method 577
- Amortization of Premium by the Interest Method 578

### Make a Decision 593

### Take It Further 594

### Pathways Challenge 568, 595

# 12 Corporations: Organization, Stock Transactions, and Dividends 596

---

## Nature of a Corporation 598

- Characteristics of a Corporation 598
- Forming a Corporation 599

## Paid-In Capital from Stock 601

- Characteristics of Stock 601
- Types of Stock 602
- Issuing Stock 604
- Premium on Stock 605
- No-Par Stock 606

## Accounting for Dividends 607

- Cash Dividends 608
- Stock Dividends 609

## Stock Splits 611

## Treasury Stock Transactions 612

## Reporting Stockholders' Equity 614

- Stockholders' Equity on the Balance Sheet 614
- Reporting Retained Earnings 615
- Statement of Stockholders' Equity 617
- Reporting Stockholders' Equity for Alphabet 618

### Analysis for Decision Making 619

- Earnings per Share 619

### Comprehensive Problem 4 637

### Make a Decision 639

### Take It Further 640

### Pathways Challenge 604, 643

# 13 Statement of Cash Flows 644

---

## Reporting Cash Flows 646

- Cash Flows: Operating Activities 647
- Cash Flows: Investing Activities 649
- Cash Flows: Financing Activities 649

Noncash Investing and Financing Activities 650  
 Format of the Statement of Cash Flows 650  
 No Cash Flow per Share 651

### Cash Flows: Operating Activities 651

Net Income 653  
 Adjustments to Net Income 653

### Cash Flows: Investing Activities 657

Land 657  
 Building and Accumulated Depreciation—Building 658

### Cash Flows: Financing Activities 659

Bonds Payable 659  
 Common Stock 659  
 Dividends and Dividends Payable 660

### Preparing the Statement of Cash Flows 661

#### Analysis for Decision Making 663

Free Cash Flow 663

### Appendix 1 Spreadsheet (Work Sheet) for Statement of Cash Flows—The Indirect Method 664

Analyzing Accounts 665  
 Retained Earnings 666  
 Other Accounts 666  
 Preparing the Statement of Cash Flows 667

### Appendix 2 Preparing the Statement of Cash Flows—The Direct Method 667

Cash Received from Customers 668  
 Cash Payments for Merchandise 668  
 Cash Payments for Operating Expenses 669  
 Gain on Sale of Land 669  
 Interest Expense 670  
 Cash Payments for Income Taxes 670  
 Reporting Cash Flows from (Used for) Operating Activities—Direct Method 670

#### Make a Decision 698

#### Take It Further 701

#### Pathways Challenge 661, 702

## 14 Financial Statement Analysis 704

### Analyzing and Interpreting Financial Statements 706

The Value of Financial Statement Information 706  
 Techniques for Analyzing Financial Statements 707

### Analytical Methods 707

Horizontal Analysis 707  
 Vertical Analysis 709  
 Common-Sized Statements 711

### Analyzing Liquidity 713

Current Position Analysis 713  
 Accounts Receivable Analysis 714  
 Inventory Analysis 715

### Analyzing Solvency 718

Ratio of Fixed Assets to Long-Term Liabilities 718  
 Ratio of Liabilities to Stockholders' Equity 718  
 Times Interest Earned 719

### Analyzing Profitability 720

Asset Turnover 721  
 Return on Total Assets 721  
 Return on Stockholders' Equity 722  
 Return on Common Stockholders' Equity 723  
 Earnings per Share on Common Stock 724  
 Price-Earnings Ratio 725  
 Dividends per Share 726  
 Dividend Yield 726  
 Summary of Analytical Measures 728

### Corporate Annual Reports 729

Management Discussion and Analysis 729  
 Report on Internal Control 730  
 Report on Fairness of the Financial Statements 730

#### Make a Decision 757

#### Take It Further 758

#### Pathways Challenge 725, 760

## 15 Introduction to Managerial Accounting 762

### Managerial Accounting 764

The Management Process 764  
 The Role of Managerial Accounting 765  
 Differences Between Financial and Managerial Accounting 767  
 Managerial Accounting within the Organization 769

### Manufacturing Operations 772

Nature of Manufacturing 772  
 Direct and Indirect Costs 772  
 Manufacturing Costs 773

### Financial Statements for a Manufacturing Business 778

Balance Sheet 778  
 Income Statement 779

### Analysis for Decision Making 782

Utilization Rates 782

#### Make a Decision 802

#### Take It Further 804

### Certified Management Accountant (CMA®) Examination Questions (Adapted) 807

#### Pathways Challenge 774, 807

## 16 Job Order Costing 808

### Cost Systems Overview 810

Job Order Costing 810  
 Process Costing 810  
 Hybrid Costing 810

### Job Order Costing for Manufacturing Businesses 811

Materials 812  
 Factory Labor 814  
 Factory Overhead 815

Work in Process 822  
 Finished Goods 823  
 Sales and Cost of Goods Sold 823  
 Period Costs 824  
 Summary of Cost Flows for Legend Guitars 824

### Job Order Costing for Service Businesses 826

Types of Service Businesses 826  
 Flow of Costs in a Service Business Using Job Order Costing 827

### Analysis for Decision Making 828

Analyzing Job Costs 828

### Make a Decision 848

### Take It Further 851

### Certified Management Accountant (CMA®) Examination Questions (Adapted) 854

### Pathways Challenge 821, 855

## 17 Process Costing 856

### Process Manufacturers 858

Comparing Job Order Costing and Process Costing 859  
 Cost Flows for a Process Manufacturer 860

### Cost of Production Report 863

Step 1: Determine the Units to Be Assigned Costs 864  
 Step 2: Compute Equivalent Units of Production 864  
 Step 3: Determine the Cost per Equivalent Unit 868  
 Step 4: Allocate Costs to Units Transferred  
     Out and Partially Completed Units 869  
 Preparing the Cost of Production Report 871

### Journal Entries for Process Costing 874

### Using the Cost of Production Report 878

### Analysis for Decision Making 879

Analyzing Process Costs 879

### Appendix Weighted Average Method 880

Determining Costs Using the Weighted Average Method 880  
 The Cost of Production Report 882

### Make a Decision 904

### Take It Further 907

### Certified Management Accountant (CMA®) Examination Questions (Adapted) 909

### Pathways Challenge 874, 911

## 18 Activity-Based Costing 912

### Product Costing Allocation Methods 914

Single Plantwide Factory Overhead Rate  
 Method 915

### Multiple Production Department Factory Overhead Rate Method 917

Department Overhead Rates and Allocation 918  
 Distortion of Product Costs 919

### Activity-Based Costing Method 922

Activity Rates 924  
 Allocating Costs 925  
 Distortion in Product Costs 927  
 Dangers of Product Cost Distortion 927

### Activity-Based Costing for Selling and Administrative Expenses 929

### Activity-Based Costing in Service Businesses 930

### Analysis for Decision Making 935

Using ABC Product Cost Information to Reduce Costs 935

### Make a Decision 961

### Take It Further 963

### Certified Management Accountant (CMA®) Examination Questions (Adapted) 964

### Pathways Challenge 933, 965

## 19 Support Department and Joint Cost Allocation 966

### Support Departments 968

### Support Department Cost Allocation 969

Single Plantwide Rate 970  
 Multiple Production Department Rates 970  
 Activity-Based Costing 971

### Allocating Support Department Costs to Production Departments 972

Direct Method 973  
 The Sequential Method 975  
 Comparison of Support Department Cost Allocation Methods 979

### Joint Costs 980

### Joint Cost Allocation 980

The Physical Units Method 980  
 The Weighted Average Method 981  
 The Market Value at Split-Off Method 981  
 The Net Realizable Value Method 982  
 Comparison of Joint Cost Allocation Methods 984  
 By-Products 985

### Analysis for Decision Making 986

Using Support Department and Joint Cost Allocations for  
 Performance Evaluation 986

### Appendix Reciprocal Services Method 987

### Make a Decision 1006

### Take It Further 1008

### Certified Management Accountant (CMA®) Examination Questions (Adapted) 1010

### Pathways Challenge 979, 1011



## 20 Cost-Volume-Profit Analysis 1012

### Cost Behavior 1014

- Variable Costs 1015
- Fixed Costs 1016
- Mixed Costs 1018
- Summary of Cost Behavior Concepts 1020

### Cost-Volume-Profit Relationships 1022

- Contribution Margin 1022
- Contribution Margin Ratio 1022
- Unit Contribution Margin 1023

### Mathematical Approach to Cost-Volume-Profit Analysis 1024

- Break-Even Point 1024
- Target Profit 1029

### Graphic Approach to

### Cost-Volume-Profit Analysis 1030

- Cost-Volume-Profit (Break-Even) Chart 1030
- Profit-Volume Chart 1032
- Use of Spreadsheets in Cost-Volume-Profit Analysis 1033
- Assumptions of Cost-Volume-Profit Analysis 1034

### Special Cost-Volume-Profit Relationships 1036

- Sales Mix Considerations 1036
- Operating Leverage 1038
- Margin of Safety 1039

### Analysis for Decision Making 1041

- Cost-Volume-Profit Analysis for Service Companies 1041

### Make a Decision 1061

### Take It Further 1062

### Certified Management Accountant (CMA®) Examination Questions (Adapted) 1064

### Pathways Challenge 1020, 1065

## 21 Variable Costing for Management Analysis 1066

### Operating Income: Absorption and Variable Costing 1068

- Absorption Costing 1068
- Variable Costing 1069
- Effects of Inventory 1070

### Analyzing Operating Income Using Absorption and Variable Costing 1074

### Using Absorption and Variable Costing 1079

- Controlling Costs 1079
- Pricing Products 1079
- Planning Production 1080
- Analyzing Market Segments 1080

### Analyzing Market Segments 1080

### Variable Costing for Service Businesses 1083

- Reporting Income 1083
- Analyzing Segments 1084

### Analysis for Decision Making 1086

- Segment Analysis and EBITDA 1086

### Make a Decision 1108

### Take It Further 1110

### Certified Management Accountant (CMA®) Examination Questions (Adapted) 1111

### Pathways Challenge 1078, 1112

## 22 Budgeting 1114

### Nature and Objectives of Budgeting 1116

- Objectives of Budgeting 1116
- Human Behavior and Budgeting 1117

### Budgeting Systems 1118

- Static Budget 1119
- Flexible Budget 1120

### Master Budget 1122

### Operating Budgets 1123

- Sales Budget 1123
- Production Budget 1124
- Direct Materials Purchases Budget 1125
- Direct Labor Cost Budget 1126
- Factory Overhead Cost Budget 1128
- Cost of Goods Sold Budget 1128
- Selling and Administrative Expenses Budget 1131
- Budgeted Income Statement 1131

### Financial Budgets 1133

- Cash Budget 1133
- Capital Expenditures Budget 1138
- Budgeted Balance Sheet 1138

### Analysis for Decision Making 1139

- Nonmanufacturing Staffing Budgets 1139

### Appendix Multiperiod Budgeting 1140

- Sales Budget 1140
- Production Budget 1140
- Direct Materials Purchases Budget 1141
- Direct Labor Cost Budget 1142
- Factory Overhead Cost Budget 1142
- Cost of Goods Sold Budget 1143
- Selling and Administrative Expenses Budget 1144
- Budgeted Income Statement 1144

### Make a Decision 1172

### Take It Further 1173

### Certified Management Accountant (CMA®) Examination Questions (Adapted) 1176

### Pathways Challenge 1132, 1177

## 23 Evaluating Variances from Standard Costs 1178

### Standards 1180

- Setting Standards 1180
- Types of Standards 1181
- Reviewing and Revising Standards 1181
- Criticisms of Standard Costs 1181

### Budgetary Performance Evaluation 1182

- Budget Performance Report 1183
- Manufacturing Cost Variances 1183

### Direct Materials and

### Direct Labor Variances 1184

- Direct Materials Variances 1185
- Direct Labor Variances 1187

### Factory Overhead Variances 1190

- The Factory Overhead Flexible Budget 1191
- Variable Factory Overhead Controllable Variance 1192
- Fixed Factory Overhead Volume Variance 1192
- Reporting Factory Overhead Variances 1194
- Factory Overhead Account 1195

### Recording and Reporting Variances from Standards 1198

### Analysis for Decision Making 1200

- Service Staffing Variances 1200

### Appendix Revenue Variances 1201

### Comprehensive Problem 5 1221

### Make a Decision 1223

### Take It Further 1224

### Certified Management Accountant (CMA®) Examination Questions (Adapted) 1226

### Pathways Challenge 1186, 1227

## 24 Evaluating Decentralized Operations 1228

### Centralized and Decentralized Operations 1230

- Advantages of Decentralization 1230
- Disadvantages of Decentralization 1231
- Responsibility Accounting 1232

### Responsibility Accounting for Cost Centers 1233

### Responsibility Accounting for Profit Centers 1236

- Support Department Allocations 1236
- Profit Center Reporting 1238

### Responsibility Accounting for Investment Centers 1240

- Return on Investment 1240
- Residual Income 1244

### Transfer Pricing 1247

- Market Price Approach 1248

Negotiated Price Approach 1248

Cost Price Approach 1251

### Analysis for Decision Making 1251

Franchise Operations 1251

### Make a Decision 1272

### Take It Further 1274

### Certified Management Accountant (CMA®) Examination Questions (Adapted) 1276

### Pathways Challenge 1231, 1277

## 25 Differential Analysis and Product Pricing 1278

### Differential Analysis 1280

- Lease or Sell 1282
- Discontinue a Segment or Product 1283
- Make or Buy 1284
- Replace Equipment 1286
- Process or Sell 1287
- Accept Business at a Special Price 1287

### Setting Normal Product Selling Prices 1290

- Cost-Plus Methods 1291
- Product Cost Method 1291
- Illustration 1293
- Target Costing Method 1293

### Production Bottlenecks 1296

- Managing Bottlenecks 1296
- Pricing Bottleneck Products 1296

### Analysis for Decision Making 1297

- Yield Pricing in Service Businesses 1297

### Appendix Total and Variable Cost Methods to Setting Normal Price 1298

- Total Cost Method 1298
- Variable Cost Method 1301

### Make a Decision 1325

### Take It Further 1327

### Certified Management Accountant (CMA®) Examination Questions (Adapted) 1329

### Pathways Challenge 1285, 1330

## 26 Capital Investment Analysis 1332

### Nature of Capital Investment Analysis 1334

### Methods Not Using Present Values 1335

- Average Rate of Return Method 1335
- Cash Payback Method 1336

**Methods Using Present Values 1338**

- Present Value Concepts 1339
- Net Present Value Method and Index 1341
- Internal Rate of Return Method 1344

**Factors That Complicate Capital Investment Analysis 1347**

- Income Tax 1347
- Unequal Proposal Lives 1347
- Lease Versus Capital Investment 1349
- Uncertainty 1349
- Changes in Price Levels 1350
- Qualitative Considerations 1351

**Capital Rationing 1351****Analysis for Decision Making 1352**

- Uncertainty: Sensitivity and Expected Value Analyses 1352

**Make a Decision 1373****Take It Further 1375****Certified Management Accountant (CMA®) Examination Questions (Adapted) 1377****Pathways Challenge 1343, 1378**

## 27 Lean Manufacturing and Activity Analysis 1380

**Lean Principles 1382**

- Reducing Inventory 1383
- Reducing Lead Times 1384
- Reducing Setup Time 1385
- Emphasizing Product-Oriented Layout 1388
- Emphasizing Employee Involvement 1388
- Emphasizing Pull Manufacturing 1389
- Emphasizing Zero Defects 1389
- Emphasizing Supply Chain Management 1390

**Lean Accounting 1391**

- Fewer Transactions 1392
- Combined Accounts 1392
- Nonfinancial Performance Measures 1393
- Direct Tracing of Overhead 1394

**Activity Analysis 1394**

- Costs of Quality 1395
- Quality Activity Analysis 1396
- Value-Added Activity Analysis 1397
- Process Activity Analysis 1399

**Analysis for Decision Making 1400**

- Lean Performance for Nonmanufacturing 1400

**Make a Decision 1417****Take It Further 1418****Certified Management Accountant (CMA®) Examination Questions (Adapted) 1420****Pathways Challenge 1388, 1421**

## 28 The Balanced Scorecard and Corporate Social Responsibility 1422

**Performance Measurement Systems 1424****The Balanced Scorecard 1425**

- Performance Perspectives 1425
- Strategic Objectives 1427
- Performance Metrics 1427
- Strategic Initiatives 1428
- Performance Targets 1429

**Using the Balanced Scorecard 1429**

- Strategy Maps 1429
- Measure Maps 1431
- Strategic Learning 1433
- Scorecard Cascading 1435
- Cognitive Biases 1435

**Corporate Social Responsibility 1438**

- CSR Reporting 1439
- Corporate Social Responsibility and the Balanced Scorecard 1440
- Encouraging Corporate Social Responsibility 1442

**Analysis for Decision Making 1442**

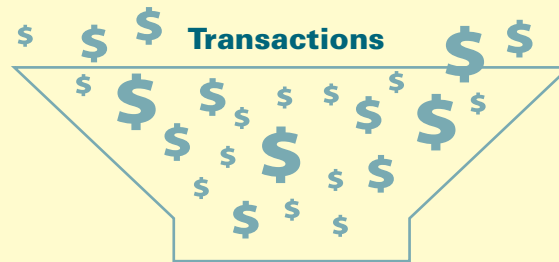
- Capital Investment in CSR 1442

**Make a Decision 1460****Take It Further 1461****Certified Management Accountant (CMA®) Examination Questions (Adapted) 1463****Pathways Challenge 1437, 1464****Appendix A Interest Tables A-2****Appendix B Selected Topics B-1**

- Topic 1: Investments
- Topic 2: Foreign Currency Transactions
- Topic 3: Corporate Taxes
- Topic 4: Reporting Unusual Items and Comprehensive Income
- Topic 5: Revenue Recognition
- Topic 6: International Accounting Standards

**Appendix C Nike Inc., Form 10-K for the Fiscal Year Ended May 31, 2020 Selected Excerpts C-1****Appendix D Reversing Entries (online) D-1****Appendix E Special Journals and Subsidiary Ledgers (online) E-1****Appendix F Computing Present Values (online) F-1****Glossary G-1****Index I-1**

# 1 Introduction to Accounting and Business

**Chapter 1****ACCOUNTING SYSTEM****Accounting Equation**

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

**Chapter 2****ANALYZING TRANSACTIONS****Chapter 3****THE ADJUSTING PROCESS****Chapter 4****THE ACCOUNTING CYCLE**

# Twitter, Inc.

When two teams pair up for a game of football, there is often a lot of noise. The band plays, the fans cheer, and fireworks light up the scoreboard. Obviously, the fans are committed and care about the outcome of the game. Just like fans at a football game, the owners of a business want their business to “win” against their competitors in the marketplace. While having your football team win can be a source of pride, winning in the marketplace goes beyond pride and has many tangible benefits. Companies that are winners are better able to serve customers, provide good jobs for employees, and make money for their owners.

**Twitter, Inc. (TWTR)** is one of the most visible companies on the Internet. It provides a real-time information network where members can post messages, called tweets, for free. Millions post tweets every day throughout the world.

Do you think Twitter is a successful company? Does it make money? How would you know? Accounting helps to answer these questions.

This textbook introduces you to accounting, the language of business. Chapter 1 begins by discussing what a business is, how it operates, and the role that accounting plays.



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<b>Link to Twitter</b> .....	Pages 4, 6, 7, 8, 12, 13, 15, 23, 25
<b>Analysis for Decision Making</b> .....	Page 29



# What's Covered

## Introduction to Accounting and Business

### Nature of Business

- Types of Business (Obj. 1)
- Role of Accounting (Obj. 1)
- Ethics (Obj. 1)

### Nature of Accounting

- Managerial and Financial Accounting (Obj. 1)
- Career Opportunities (Obj. 1)

### Analyzing Business Transactions

- Generally Accepted Accounting Principles (Obj. 2)
- Accounting Equation (Obj. 3)
- Transactions (Obj. 4)

### Financial Statements

- Income Statement (Obj. 5)
- Statement of Stockholders' Equity (Obj. 5)
- Balance Sheet (Obj. 5)
- Statement of Cash Flows (Obj. 5)

## Learning Objectives

- |  |   |
|--|---|
| <p><b>Obj. 1</b> Describe the nature of business and the role of accounting and ethics in business.</p> <p><b>Obj. 2</b> Describe generally accepted accounting principles, including the underlying assumptions and principles.</p> <p><b>Obj. 3</b> State the accounting equation and define each element of the equation.</p> | <p><b>Obj. 4</b> Describe and illustrate how business transactions can be recorded in terms of the resulting change in the elements of the accounting equation.</p> <p><b>Obj. 5</b> Describe the financial statements of a corporation and explain how they interrelate.</p> |
|--|---|

## Analysis for Decision Making

- Obj. 6** Describe and illustrate the use of the ratio of liabilities to stockholders' equity in evaluating a company's financial condition.

### Objective 1

Describe the nature of business and the role of accounting and ethics in business.

## Nature of Business and Accounting

A **business**<sup>1</sup> is an organization in which basic resources (inputs), such as materials and labor, are assembled and processed to provide goods or services (outputs) to customers. Businesses come in all sizes, from a local coffee house to **Starbucks (SBUX)**, which sells over \$15 billion of coffee and related products each year.

The objective of most businesses is to earn a **profit**. Profit is the difference between the amounts received from customers for goods or services and the amounts paid for the inputs used to provide the goods or services. This text focuses on businesses operating to earn a profit. However, many of the same concepts and principles also apply to not-for-profit organizations such as hospitals, churches, and government agencies.

## Types of Businesses

Three types of businesses operating for profit include service, retail, and manufacturing businesses. Some examples of each type of business follow:

- **Service businesses** provide services rather than products to customers.
  - Delta Air Lines (DAL)** (transportation services)
  - The Walt Disney Company (DIS)** (entertainment services)
- **Retail businesses** sell products they purchase from other businesses to customers.
  - Walmart Inc. (WMT)** (general merchandise)
  - Target Corporation (TGT)** (general merchandise)
- **Manufacturing businesses** change basic inputs into products that are sold to customers.
  - Ford Motor Company (F)** (cars, trucks, vans)
  - Merck & Co., Inc. (MRK)** (pharmaceutical drugs)

Link to Twitter

**Twitter** is a service company that provides a platform for individuals to send text messages called tweets.

<sup>1</sup> A complete glossary of terms appears at the end of the text.

## Business Activities

Businesses engage in the following three types of activities:

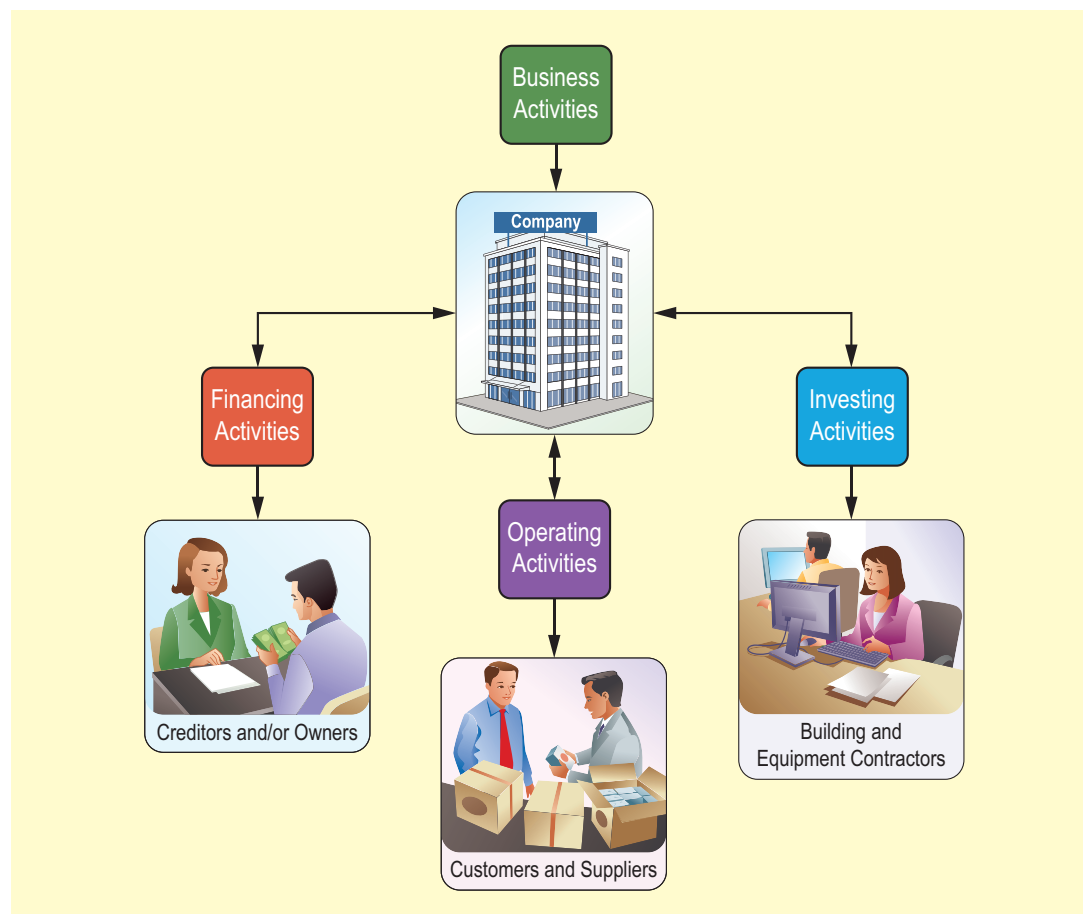
- Operating activities
- Investing activities
- Financing activities

**Operating activities** are those activities by which the company generates revenues from customers. Operating activities include producing, marketing, and distributing a product or service to customers. For example, operating activities of **Dell Technologies Inc. (DVMT)** include product development, acquiring component parts, assembly, marketing, and distribution of its products.

**Investing activities** are those activities by which a company acquires long-term assets for use in the operating activities of the company. For example, the acquisition by **Delta Air Lines, Inc. (DAL)** of Boeing 787 and Airbus 321 airplanes is an investing activity. Likewise, the purchase of land and the construction of buildings to use for training, maintenance, flight monitoring, and corporate offices are investing activities.

**Financing activities** include activities by which the company obtains funds to start and operate the company. Funds are normally obtained from creditors and owners. For example, companies can obtain funds by issuing stock to the public. The payments to creditors and owners are also classified as financing activities.

The preceding business activities are summarized in Exhibit 1.



**Exhibit 1**

Business Activities

## Role of Accounting in Business

The role of accounting in business is to provide information for managers to use in operating the business. In addition, accounting provides information to other users in assessing the economic performance and condition of the business.

*note:*

Accounting is an information system that provides reports to users about the economic activities and condition of a business.

Thus, **accounting** can be defined as an information system that provides reports to users about the economic activities and condition of a business. You could think of accounting as the “language of business.” This is because accounting is the means by which businesses’ financial information is communicated to users.

*Link to Twitter*

**Twitter** communicates to investors in an annual report that includes accounting information.

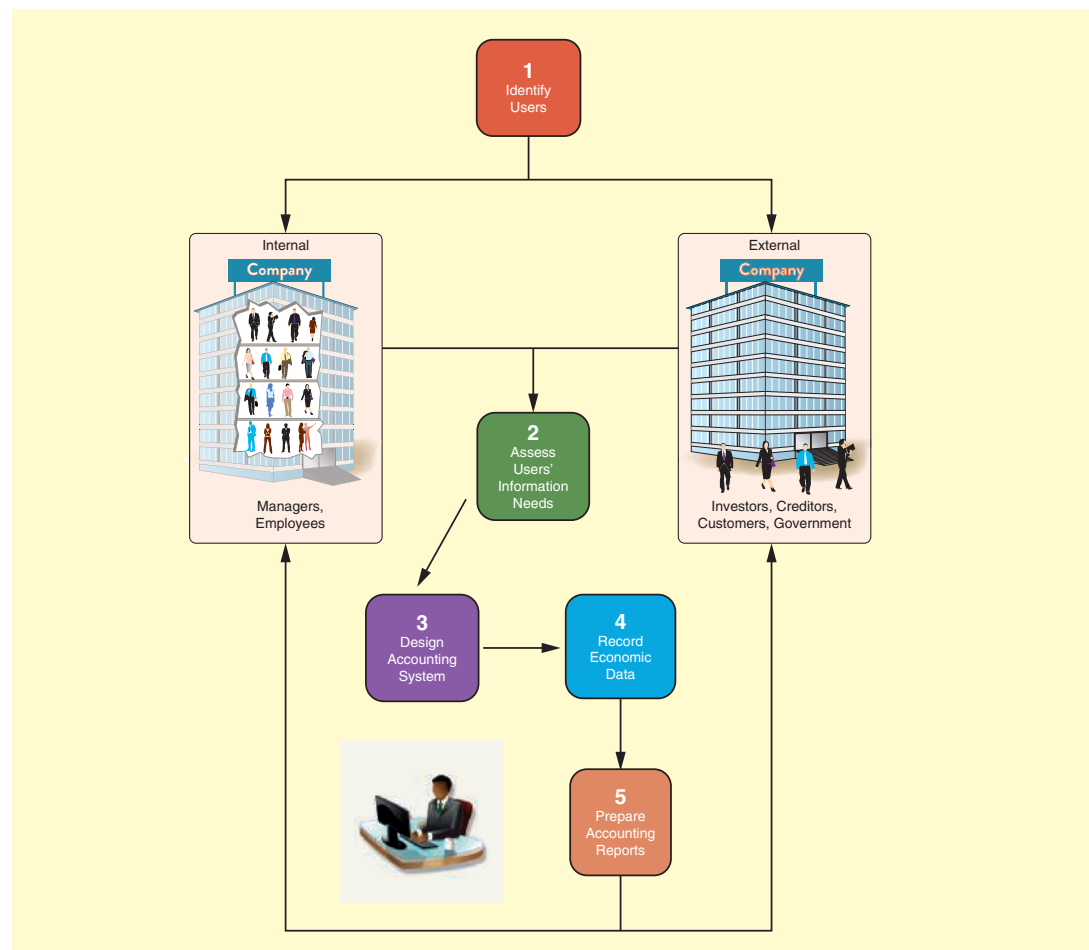
The process by which accounting provides information to users is as follows:

1. Identify users.
2. Assess users’ information needs.
3. Design the accounting information system to meet users’ needs.
4. Record economic data about business activities and events.
5. Prepare accounting reports for users.

As illustrated in Exhibit 2, users of accounting information can be divided into two groups: internal users and external users.

### Exhibit 2

Accounting as an Information System



**Managerial Accounting** Internal users of accounting information include managers and employees. These users are directly involved in managing and operating the business. The area

of accounting that provides internal users with information is called **managerial accounting**, or **management accounting**.

The objective of managerial accounting is to provide relevant and timely information for managers' and employees' decision-making needs. Often, such information is sensitive and is not distributed outside the business. Examples of sensitive information might include information about customers, prices, and plans to expand the business. Managerial accountants employed by a business are employed in **private accounting**.

**Financial Accounting** External users of accounting information include investors, creditors, customers, and the government. These users are not directly involved in managing and operating the business. The area of accounting that provides external users with information is called **financial accounting**.

The objective of financial accounting is to provide relevant and timely information for the decision-making needs of users outside of the business. For example, financial reports on the operations and condition of the business are useful for banks and other creditors in deciding whether to lend money to the business. **General-purpose financial statements** are one type of financial accounting report that is distributed to external users. The term *general-purpose* refers to the wide range of decision-making needs that these reports are designed to serve. Later in this chapter, general-purpose financial statements are described and illustrated.

**Twitter** uses financial accounting to prepare and distribute general-purpose financial statements.

[Link to Twitter](#)

## Role of Ethics in Accounting and Business

The objective of accounting is to provide relevant, timely information for user decision making. Accountants must behave in an ethical manner so that the information they provide users will be trustworthy and, thus, useful for decision making. Managers and employees must also behave in an ethical manner in managing and operating a business. Otherwise, no one will be willing to invest in or loan money to the business.

**Ethics** are moral principles that guide the conduct of individuals. Unfortunately, business managers and accountants sometimes behave in an unethical manner. Many of the managers of the companies listed in Exhibit 3 engaged in accounting or business fraud. These ethical violations led to fines, firings, and lawsuits. In some cases, managers were criminally prosecuted, convicted, and sent to prison.



ETHICS

## Business Insight

### Business Strategies

**B**usinesses normally use a (1) product-differentiation or (2) low-cost strategy to gain a competitive advantage and maximize their profits.

Using a product-differentiation strategy, a company distinguishes its product(s) in such a way that it is desirable to customers and uniquely different from its competitor's. Using this strategy, a company tries to win over customers to its product(s) and establish customer loyalty. If successful, the company can charge premium prices for its products. For example, **Apple Inc. (AAPL)** uses a product-differentiation strategy in developing and marketing its products.

Using a low-cost strategy, a company offers product(s) to customers at a lower cost (price) than its competitors. The low-cost strategy is normally used for products that are uniform in nature, and thus the company cannot use a product-differentiation strategy. For example, **Southwest Airlines Co. (LUV)** uses a low-cost strategy in providing airline services to passengers.

Risks of a product-differentiation strategy are that customers may not value the uniqueness of the company's product, competitors may duplicate the product's uniqueness, or that competitors may develop even more desirable attributes for their products. Risks of the low-cost strategy are that competitors may duplicate the company's low-cost processes or that competitors may develop new processes for achieving even lower costs.

**Exhibit 3** Accounting and Business Frauds

Company	Nature of Accounting or Business Fraud	Result
<b>Countrywide</b>	CEO misled investors.	CEO paid \$22.5 million penalty and was permanently banned from serving as an officer or director of a public company.
<b>Enron</b>	Fraudulently inflated its financial results.	Bankruptcy. Senior executives criminally convicted. More than \$60 billion in stock market losses.
<b>Goldman Sachs</b>	Misstated and omitted key facts from investors.	Company agreed to pay \$550 million fine and reformed business practices.
<b>Wells Fargo</b>	Improperly opened customer accounts without their permission.	CEO fined \$17.5 million and banned from banking industry for life.
<b>Xerox Corporation</b>	Recognized \$3 billion in sales prior to when it should have been recorded.	\$10 million fine to SEC. Six executives forced to pay \$22 million.

What went wrong for the managers and companies listed in Exhibit 3? The answer normally involved one or both of the following two factors:

- **Failure of Individual Character:** Ethical managers and accountants are honest and fair. However, managers and accountants often face pressures from supervisors to meet company and investor expectations. In many of the cases in Exhibit 3, managers and accountants justified small ethical violations to avoid such pressures. However, these small violations became big violations as the company's financial problems became worse.
- **Culture of Greed and Ethical Indifference:** By their behavior and attitude, senior managers set the company culture. In most of the companies listed in Exhibit 3, the senior managers created a culture of greed and indifference to the truth.

As a result of the accounting and business frauds shown in Exhibit 3, Congress passed laws to monitor the behavior of accounting and business. For example, the **Sarbanes-Oxley Act (SOX)** was enacted. SOX established a new oversight body for the accounting profession called the **Public Company Accounting Oversight Board (PCAOB)**. In addition, SOX established standards for independence, corporate responsibility, and disclosure.

How does one behave ethically when faced with financial or other types of pressure? Guidelines for behaving ethically follow:<sup>2</sup>

1. Identify an ethical decision by using your personal ethical standards of honesty and fairness.
2. Identify the consequences of the decision and its effect on others.
3. Consider your obligations and responsibilities to those who will be affected by your decision.
4. Make a decision that is ethical and fair to those affected by it.

*Link to Twitter*

**Twitter's** "Code of Business Conduct and Ethics" can be found at <https://investor.twitterinc.com/corporate-governance.cfm>.

## Opportunities for Accountants

Numerous career opportunities are available for students majoring in accounting. Currently, the demand for accountants exceeds the number of new graduates entering the job market. This is

<sup>2</sup> Many companies have ethical standards of conduct for managers and employees. In addition, the Institute of Management Accountants and the American Institute of Certified Public Accountants have professional codes of conduct, which can be obtained from their websites at [www.imanet.org](http://www.imanet.org) and [www.aicpa.org](http://www.aicpa.org), respectively.



partly due to the increased regulation of business caused by the accounting and business frauds shown in Exhibit 3. Also, more and more businesses have come to recognize the importance and value of accounting information.

As indicated earlier, accountants employed by a business are employed in private accounting. Private accountants have a variety of possible career options within a company. Some of these career options are shown in Exhibit 4 along with their starting salaries. As shown in Exhibit 4, several private accounting careers have certification options. Accountants who provide audit services, called *auditors*, verify the accuracy of financial records, accounts, and systems.

**Exhibit 4** Accounting Career Paths and Salaries

Accounting Career Track	Description	Career Options	Annual Starting Salaries*	Certification
Private Accounting	Accountants employed by companies, government, and not-for-profit entities.	Bookkeeper	\$40,000	Certified Payroll Professional (CPP)
		Payroll clerk	\$40,000	
		General accountant	\$49,000	
		Budget analyst	\$53,000	Certified Management Accountant (CMA) Certified Internal Auditor (CIA) Certified Information Systems Auditor (CISA)
		Cost accountant	\$65,000	
		Internal auditor	\$48,000	
		Information technology auditor	\$53,000	
Public Accounting	Accountants employed individually or within a public accounting firm in audit and tax services.		\$49,000	Certified Public Accountant (CPA)

\*Average salaries rounded to the nearest thousand. Salaries may vary by size of company and region.

Source: Robert Half 2020 U.S. Salary Guide (Finance and Accounting), Robert Half International, Inc. (RHI) (<https://www.roberthalf.com/salary-guide/accounting-and-finance>).

Accountants and their staff who provide services on a fee basis are said to be employed in **public accounting**. In public accounting, an accountant may practice as an individual or as a member of a public accounting firm. Public accountants who have met a state's education, experience, and examination requirements may become **Certified Public Accountants (CPAs)**. CPAs typically perform general accounting, audit, or tax services. CPAs often have slightly better starting salaries than private accountants. Career statistics indicate, however, that these salary differences tend to disappear over time. The American Institute of Certified Public Accountants (AICPA) provides information and resources for students interested in accounting at [www.startheregoplaces.com](http://www.startheregoplaces.com).



## Ethics in Action

### Bernie Madoff

Bernard L. "Bernie" Madoff was sentenced to 150 years in prison for defrauding thousands of investors in one of the biggest frauds in American history. Madoff's fraud started several decades earlier when he began a "Ponzi scheme" in his investment management firm, Bernard L. Madoff Investment Securities LLC.

In a Ponzi scheme, the investment manager uses funds received from new investors to pay a return to existing investors,

rather than basing returns on the investments' actual performance. As long as the investment manager is able to attract new investors, he or she will have new funds to pay existing investors and continue the fraud. While most Ponzi schemes collapse quickly when the investment manager runs out of new investors, Madoff's reputation, popularity, and personal contacts provided a steady stream of investors, which allowed the fraud to survive for decades.

Because all functions within a business use accounting information, experience in private or public accounting provides a solid foundation for a career. Many positions in industry and in government agencies are held by individuals with accounting backgrounds.

### Objective 2

Describe generally accepted accounting principles, including the underlying assumptions and principles.

## Generally Accepted Accounting Principles (GAAP)

Financial information in the United States is based on **generally accepted accounting principles (GAAP)**. GAAP is a collection of *accounting standards*, *principles*, and *assumptions* that define how financial information will be reported.

- **Accounting standards** are the rules that determine the accounting for individual business transactions.
- **Accounting principles and assumptions** provide the framework upon which accounting standards are constructed.

Within the United States, the **Financial Accounting Standards Board (FASB)** has the primary responsibility for developing accounting standards. The FASB maintains an electronic database, called the **Accounting Standards Codification**, that contains all the accounting standards that make up GAAP. Changes in the FASB Codification are made using **Accounting Standards Updates**.

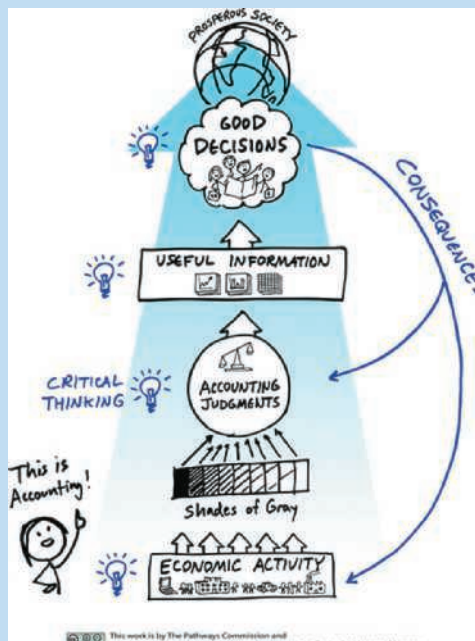
The **Securities and Exchange Commission (SEC)**, an agency of the U.S. government, has authority over the accounting and financial disclosures for companies whose shares of ownership (stock) are traded and sold to the public. The SEC normally accepts the accounting standards set forth by the FASB. However, the SEC may issue *Staff Accounting Bulletins* on accounting matters that may not have been addressed by the FASB.

Outside the United States, most countries use accounting standards and principles adopted by the **International Accounting Standards Board (IASB)**. The IASB issues *International Financial Reporting Standards* (IFRS). In some cases, differences exist between FASB and IASB accounting principles. These differences are identified throughout the chapters of this text and in Appendix A.

## Business Insight

### Pathways Commission

The Pathways Commission issued its study titled *Charting a National Strategy for the Next Generation of Accountants*. The Commission was made up of diverse members and was jointly sponsored by the American Institute of Certified Public Accountants (AICPA) and the American Accounting Association (AAA). The Commission emphasized the importance of accounting for a prosperous society and good decision making. The Commission also emphasized that accountants must be critical thinkers who are comfortable addressing the shades of gray required by accounting judgments.



Source: *Charting a National Strategy for the Next Generation of Accountants*, The Pathways Commission, July 2012.

## Using Data Analytics

### What Is It?

A company's success will increasingly rely on the ability to collect, interpret, and gather insights from massive volumes of data. **Data analytics** is the science of analyzing raw data to discover patterns, identify anomalies, or gain other useful insights. The four basic types of data analytics are as follows:



*Descriptive analytics* Describes and summarizes outcomes.

Example: a sales report by product, region of country, and customer.

*Diagnostic analytics* Tries to explain results by identifying relationships among data.

Example: determining whether a YouTube video featuring a product increased sales within 48 hours after its first showing.

*Predictive analytics* Uses statistical methods to predict future outcomes.

Example: predicting the effects of methods for creating customer satisfaction on future sales.

*Prescriptive analytics* Recommends future actions for achieving company goals and objectives.

Example: analyzing the effects of energy saving alternatives on meeting the company's goal of reducing greenhouse gas emissions by 25%.

Data analytics is conducted using a variety of mathematical models, algorithms, and visualizations. Because of accounting's role in providing useful information, accountants are increasingly using data analytics to help businesses make better decisions. For this reason, we provide suggestions for the use of data analytics throughout the remainder of this text.

## Characteristics of Financial Information

The primary goal of financial accounting is to provide information that is useful for decision making. To be useful, financial reports must possess two important characteristics: *relevance* and *faithful representation*.

- **Relevant** information has the potential to impact decision making.
- **Faithful representation** means that the information accurately reflects an entity's economic activity or condition.

The characteristics of relevant and faithful representation are enhanced by the following:

- **Comparability**, which includes consistent reporting, allows users to identify similarities and differences among reported items.
- **Verifiability** allows users to agree on the meaning of reported items.
- **Timeliness** requires distribution of financial reports in time to influence a user's decision.
- **Understandability** requires clear and concise financial reports that facilitate user interpretation and analysis.

### Business Insight

#### Covid-19 Pandemic

**T**he coronavirus (COVID-19) pandemic is causing significant disruptions to companies and their business operations in the United States and throughout the world. As a result, the Financial Accounting Standards Board (FASB) has delayed the effective

date of several accounting standards and is considering how to apply generally accepted accounting principles (GAAP) to a variety of issues generated by the pandemic. For example, companies with less than 500 employees may have received payroll loans under the Payroll Protection Program (PPP). Some or all of these loans may be forgiven if certain conditions are met. Currently, GAAP does not have specific guidance on the accounting and disclosures for this type of government assistance.

## Assumptions

Financial accounting and generally accepted accounting principles are based upon the following assumptions:

- Monetary unit
- Time period
- Business entity
- Going concern

The **monetary unit assumption** requires that financial reports be expressed in a single money unit, or currency. This provides a common measurement of the effects of economic events and transactions on an entity. The monetary unit used is normally determined by the country in which the company operates. For example, in the United States, the U.S. dollar is used as the monetary unit.

The **time period assumption** allows a company to report its economic activities on a regular basis for a specific period of time. In doing so, financial condition and changes in financial condition are reported periodically on a consistent basis. In the United States, reports are normally required on a yearly basis supplemented with quarterly reports.

*Link to Twitter*

**Twitter** publishes quarterly as well as yearly financial reports that are available at <https://investor.twitterinc.com>.

The annual accounting period adopted by a company is called its **fiscal year**. The fiscal year most commonly used is the calendar year beginning January 1 and ending December 31. However, other periods are not unusual, especially for companies organized as corporations. For example, a corporation may adopt a fiscal year that ends when business activities have reached the lowest point in its annual operating cycle, which allows more time to prepare financial reports. Such a fiscal year is called the **natural business year**. For example, a company's fiscal year could begin August 1, 20Y7, and end on July 31, 20Y8, as follows:



The **business entity assumption** limits the economic data in financial reports to that directly related to the activities of the business. In other words, the business is viewed as an entity separate from its owners, creditors, or other businesses. For example, the accountant for a business with one owner would record the activities of the business only and would not record the personal activities, property, or debts of the owner.

A business entity may take the form of a proprietorship, partnership, corporation, or limited liability company (LLC). Each of these forms and their major characteristics are listed in Exhibit 5.

The three types of businesses discussed earlier—service, retail, and manufacturing—may be organized as proprietorships, partnerships, corporations, or limited liability companies.

## International Connection





### IFRS International Financial Reporting Standards (IFRS)

IFRS are considered to be more “principles-based” than U.S. GAAP, which is considered to be more “rules-based.” For example, U.S. GAAP consists of approximately 17,000 pages, which include numerous industry-specific accounting rules. In

contrast, IFRS allow more judgment in deciding how business transactions are recorded. Many believe that the strong regulatory and litigation environment in the United States is the cause for the more rules-based GAAP approach. Regardless, IFRS and GAAP share many common principles.\*

\*Differences between U.S. GAAP and IFRS are further discussed and illustrated in Appendix B.

**Exhibit 5** Forms of Business Entities

Form of Business Entity	Characteristics and Advantages	Examples
 <b>Proprietorship</b> is owned by one individual.	<ul style="list-style-type: none"> <li>• 70% of business entities in the United States.</li> <li>• Easy and inexpensive to organize.</li> <li>• Resources are limited to those of the owner.</li> <li>• Used by small businesses.</li> </ul>	<ul style="list-style-type: none"> <li>• A &amp; B Painting</li> </ul>
 <b>Partnership</b> is owned by two or more individuals.	<ul style="list-style-type: none"> <li>• 10% of business organizations in the United States (combined with limited liability companies).</li> <li>• Combines the skills and resources of more than one person.</li> </ul>	<ul style="list-style-type: none"> <li>• Jones &amp; Smith, Architects</li> </ul>
 <b>Corporation</b> is organized under state or federal statutes as a separate legal taxable entity.	<ul style="list-style-type: none"> <li>• Generates 90% of business revenues.</li> <li>• 20% of the business organizations in the United States.</li> <li>• Ownership is divided into shares called stock.</li> <li>• Can obtain large amounts of resources by issuing stock.</li> <li>• Used by large businesses.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Alphabet Inc. (GOOG)</b></li> <li>• <b>Apple Inc. (AAPL)</b></li> <li>• <b>Ford Motor Company (F)</b></li> </ul>
 <b>Limited liability company (LLC)</b> combines the attributes of a partnership and a corporation.	<ul style="list-style-type: none"> <li>• 10% of business organizations in the United States (combined with partnerships).</li> <li>• Often used as an alternative to a partnership.</li> <li>• Has tax and legal liability advantages for owners.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Boston Basketball Partners, LLC</b></li> </ul>

Because of the large amount of resources required to operate a manufacturing business, most manufacturers such as **Ford Motor Company (F)** are corporations. Most large retailers such as **Walmart (WMT)** and **The Home Depot (HD)** are also corporations. Companies organized as corporations often include Inc. as part of their name to indicate that they are incorporated. For example, Twitter's legal name is **Twitter, Inc.**

Although **Twitter** is organized as a corporation in Delaware, its principal offices are in San Francisco.

*[Link to Twitter](#)*

The **going concern assumption** requires that financial reports be prepared assuming that the entity will continue operating into the future. This assumption justifies reporting items such as equipment, buildings, and land at their initial or historical cost rather than liquidation or forced sale values.

## Pathways Challenge



### This is Accounting!

#### Economic Activity

Over 20 years ago, **Starbucks (SBUX)** and **Pepsi (PEP)** created a business called **The North American Coffee Partnership**. The business combined Starbucks' expertise in coffee with Pepsi's ability to manufacture, market, and sell ready-to-drink coffee products. Its first product, Frappuccino, took off and today the business dominates the ready-to-drink market with over \$2 billion in annual sales.

#### Critical Thinking/Judgment

- Should the \$2 billion in annual sales be reported as part of Starbucks' annual report?
- Should the \$2 billion in annual sales be reported as part of Pepsi's annual report?
- Should the \$2 billion in annual sales be reported as part of a separate business's annual report?

Suggested answer at end of chapter.



Principles

In addition to the preceding characteristics and assumptions, the following four principles are an integral part of financial accounting:

- Measurement
- Historical cost
- Revenue recognition
- Expense recognition

The **measurement principle** determines the amount that will be recorded and reported. The measurement principle requires that amounts be *objective* and verifiable. An amount is objective if it is based upon independent, unbiased evidence. An amount is *verifiable* if it can be confirmed by a third party. Transactions between two independent parties, called **arm’s-length transactions**, provide amounts that are objective and verifiable.

To illustrate, assume that Aaron Publishers purchased the following building from Schenk Enterprises on February 20, 20Y1, for \$150,000:

Price listed by Schenk Enterprises on January 1, 20Y1	\$160,000
Aaron Publishers’ initial offer to buy on January 31, 20Y1	140,000
Aaron Publishers’ purchase price on February 20, 20Y1	150,000
Estimated selling price on December 31, 20Y3	220,000
Assessed value for property taxes, December 31, 20Y3	190,000

Aaron Publishers would record the building at the February 20, 20Y1, purchase price of \$150,000. This amount is both objective and verifiable, as it was the result of a transaction between two independent parties. Recording an item at its initial transaction price is called the **historical cost principle** or **cost principle**. Under the historical cost principle, amounts do not normally change until another transaction occurs.

To illustrate, the fact that the preceding building has an estimated selling price of \$220,000 on December 31, 20Y3, indicates that the building’s value has increased. However, the \$220,000 is not recorded in the accounting records because Aaron Publishers has not sold the building. If, however, Aaron sells the building on January 9, 20Y4, for \$240,000, a profit of \$90,000 (\$240,000 – \$150,000) would be recorded by Aaron Publishers.

**Revenue** is the amount earned (received) from providing services or selling goods to customers. The **revenue recognition principle** determines when revenue is recorded in the accounting records. Normally, revenue is recorded when the services have been performed or goods are delivered to the customer.

**Expenses** are amounts used to generate revenue. The **expense recognition principle**, sometimes called the *matching principle*, requires expenses to be recorded in the same period as the related revenue. Doing so allows the reporting of a profit or loss for the period.

Objective 3

State the accounting equation and define each element of the equation.

The Accounting Equation

The resources owned by a business are its **assets**. Examples of assets include cash, land, buildings, and equipment. The rights or claims to the assets are divided into two types: (1) the rights of creditors and (2) the rights of owners. The rights of creditors are the debts of the business and are called **liabilities**. The rights of owners are called **equity**. Since stockholders own a corporation, equity is called **stockholders’ equity**. For a proprietorship, partnership, or limited liability company, equity is called **owner’s equity**.

The following equation shows the relationship among assets, liabilities, and equity:

Assets = Liabilities + Equity

This equation is called the **accounting equation**. Liabilities usually are shown before equity in the accounting equation because creditors have first rights to the assets.

Throughout this text, we use the corporate form of business. However, most of the concepts and principles described and illustrated also apply to proprietorships, partnerships, and limited liability companies.

Given any two amounts, the accounting equation may be solved for the third unknown amount. To illustrate, if the assets owned by a corporation amount to \$100,000 and the liabilities amount to \$30,000, the stockholders' equity is equal to \$70,000, computed as follows:

$$\begin{array}{rcccl} \text{Assets} & - & \text{Liabilities} & = & \text{Stockholders' Equity} \\ \$100,000 & - & \$30,000 & = & \$70,000 \end{array}$$

**Twitter's** accounting equation for a recent year is: Assets (\$10,163 million) = Liabilities (\$3,357 million) + Stockholders' Equity (\$6,806 million).

*Link to Twitter*

The accounting equation is useful for reporting the financial condition and changes in financial condition of a company. For this reason, the accounting equation serves as the basis for designing financial accounting and reporting systems.

## Business Transactions and the Accounting Equation

Paying a monthly bill, such as a telephone bill of \$168, affects a business's financial condition because it now has less cash on hand. Such an economic event or condition that directly changes an entity's financial condition or its results of operations is a **business transaction**. For example, purchasing land for \$50,000 is a business transaction. In contrast, a change in a business's credit rating does not directly affect cash or any other asset, liability, or stockholders' equity amount.

### Objective 4

Describe and illustrate how business transactions can be recorded in terms of the resulting change in the elements of the accounting equation.

## Business Insight

### The Accounting Equation

**T**he accounting equation serves as the basic foundation for the accounting systems of all companies. The accounting equation is used by the smallest business, such as the

local convenience store, to the largest business, such as **The Coca-Cola Company (KO)**. Some examples taken from recent financial reports of well-known companies follow:

Company	Assets*	=	Liabilities	+	Stockholders' Equity
<b>Alphabet Inc. (GOOG)</b>	\$232,792	=	\$55,164	+	\$177,628
<b>The Coca-Cola Company (KO)</b>	\$83,216	=	\$64,158	+	\$19,058
<b>DuPont (DD)</b>	\$187,855	=	\$93,563	+	\$94,292
<b>eBay (EBAY)</b>	\$22,819	=	\$16,538	+	\$6,281
<b>Ford Motor Company (F)</b>	\$256,540	=	\$220,608	+	\$35,932
<b>Microsoft Corporation (MSFT)</b>	\$286,556	=	\$184,226	+	\$102,330
<b>Southwest Airlines Co. (LUV)</b>	\$25,895	=	\$16,063	+	\$9,832
<b>Walmart Inc. (WMT)</b>	\$219,295	=	\$146,799	+	\$72,496

\*Amounts are shown in millions of dollars.

*note:*  
All business transactions can be stated in terms of changes in the elements of the accounting equation.

All business transactions can be stated in terms of changes in the elements of the accounting equation. How business transactions affect the accounting equation can be illustrated by using some typical transactions. As a basis for illustration, a business organized by Chris Clark is used. Assume that on November 1, 20Y3, Chris Clark organizes a corporation that will be known as **NetSolutions**. The first phase of Chris’s business plan is to operate NetSolutions as a service business assisting individuals and small businesses in developing web pages and installing computer software. Chris expects this initial phase of the business to last one to two years. During this period, Chris plans on gathering information on the software and hardware needs of customers. During the second phase of the business plan, Chris plans to expand NetSolutions into a personalized retailer of software and hardware for individuals and small businesses. Each transaction during NetSolutions’ first month of operations is described in the following paragraphs. The effect of each transaction on the accounting equation is then shown.

**Transaction a**    *Nov. 1, 20Y3    Chris Clark deposited \$25,000 in a bank account in the name of NetSolutions in exchange for shares of common stock in the corporation.*

A corporation issues **common stock** to investors as proof of their ownership rights.<sup>3</sup> This transaction increases Cash under Assets (on the left side of the equation) by \$25,000. To balance the equation, Common Stock under Stockholders’ Equity (on the right side of the equation) increases by the same amount. The effect of this transaction on NetSolutions’ accounting equation is as follows:

Assets		=	Stockholders’ Equity
Cash			Common Stock
a. 25,000		=	25,000

The preceding accounting equation is only for the business, NetSolutions. Under the business entity assumption, Chris’s personal assets, such as a home or personal bank account, and personal liabilities are excluded from the equation.

**Transaction b**    *Nov. 5, 20Y3    NetSolutions paid \$20,000 for the purchase of land as a future building site.*

The land is located in a business park with access to transportation facilities. Chris Clark plans to rent office space and equipment during the first phase of the business plan. During the second phase, Chris plans to build an office and a warehouse for NetSolutions on the land. The purchase of the land changes the makeup of the assets, but it does not change the total assets. The items in the equation prior to this transaction and the effect of the transaction follow. The new amounts are called *balances*.

Assets			=	Stockholders’ Equity
Cash	+	Land		Common Stock
Bal. 25,000			=	25,000
b. -20,000		+20,000		
Bal. 5,000		20,000		25,000
25,000			=	25,000

**Transaction c**    *Nov. 10, 20Y3    NetSolutions purchased supplies for \$1,350 and agreed to pay the supplier in the near future.*

You have probably used a credit card to buy clothing or other merchandise. In this type of transaction, you received clothing for a promise to pay your credit card bill in the future. That is, you received an asset and incurred a liability to pay a future bill. NetSolutions entered into a similar transaction by purchasing

<sup>3</sup> To simplify, we assume that NetSolutions issued no-par stock. Types of stock as well as par and stated values are discussed in Chapter 12.

supplies for \$1,350 and agreeing to pay the supplier in the near future. This type of transaction is called a purchase *on account* and is often described as follows: *Purchased supplies on account, \$1,350.*

The liability created by a purchase on account is called an **account payable**. Items such as supplies that will be used in the business in the future are called **prepaid expenses**, which are assets. Thus, the effect of this transaction is to increase assets (Supplies) and liabilities (Accounts Payable) by \$1,350, as follows:

Assets			=	Liabilities + Stockholders' Equity	
Cash	+ Supplies	+ Land		Accounts Payable	+ Common Stock
Bal. 5,000		20,000	=		25,000
c. <u>          </u>	<u>+1,350</u>	<u>          </u>		<u>+1,350</u>	<u>          </u>
Bal. 5,000	1,350	20,000		1,350	25,000
<u>26,350</u>			=	<u>26,350</u>	

Nov. 18, 20Y3 NetSolutions received cash of \$7,500 for providing services to customers.

#### Transaction d

You may have earned money by painting houses or mowing lawns. If so, you received money for rendering services to a customer. Likewise, a business earns money by selling goods or services to its customers. This amount is called revenue.

During its first month of operations, NetSolutions received cash of \$7,500 for providing services to customers. The receipt of cash increases NetSolutions' assets and also increases stockholders' equity in the business. The revenues of \$7,500 are recorded in a Fees Earned column to the right of Common Stock. The effect of this transaction is to increase Cash and Fees Earned by \$7,500, as follows:

Assets			=	Liabilities + Stockholders' Equity		
Cash	+ Supplies	+ Land		Accounts Payable	+ Common Stock	+ Fees Earned
Bal. 5,000	1,350	20,000	=	1,350	25,000	
d. <u>+7,500</u>	<u>          </u>	<u>          </u>		<u>          </u>	<u>          </u>	<u>+7,500</u>
Bal. 12,500	1,350	20,000		1,350	25,000	7,500
<u>33,850</u>			=	<u>33,850</u>		

Different terms are used for the various types of revenues. As illustrated for NetSolutions, revenue from providing services is recorded as **fees earned**. Revenue from the sale of merchandise is recorded as **sales**. Other examples of revenue include rent, which is recorded as **rent revenue**, and interest, which is recorded as **interest revenue**.

Instead of receiving cash at the time services are provided or goods are sold, a business may accept payment at a later date. Such revenues are described as *fees earned on account* or *sales on account*. For example, if NetSolutions had provided services on account instead of for cash, transaction (d) would have been described as follows: *Fees earned on account, \$7,500.*

In such cases, the firm has an asset, called an **account receivable**, which is a claim against the customer. The effect of the transaction increases Accounts Receivable and Fees Earned. When customers pay their accounts, Cash increases and Accounts Receivable decreases.

## Business Insight

### Round-Tripping

Accounting principles require that a transaction have *commercial substance*. Commercial substance means that the transaction has an economic impact on the entity. An example of a transaction lacking commercial substance is round-tripping. Round-tripping is a situation whereby a company "sells" goods and services to another

company and then, under a prearranged agreement, the customer resells the exact same goods and services back to the original company. Round-tripping has been used by companies to artificially inflate their sales. However, such agreements do not have commercial substance, since there is no economic change to either company after the round-trip. Thus, round-tripped sales are not transactions from an accounting perspective.

**Transaction e** Nov. 30, 20Y3 *NetSolutions paid the following expenses during the month: wages, \$2,125; rent, \$800; utilities, \$450; and miscellaneous, \$275.*

During the month, NetSolutions spent cash or used up other assets in earning revenue. Assets used in this process of earning revenue are called expenses. Expenses include supplies used and payments for employee wages, utilities, and other services.

NetSolutions paid the following expenses during the month: wages, \$2,125; rent, \$800; utilities, \$450; and miscellaneous, \$275. Miscellaneous expenses include small amounts paid for such items as postage, coffee, and newspapers. The effect of expenses is the opposite of revenues in that expenses reduce assets and stockholders' equity. Like fees earned, the expenses are recorded in columns to the right of Common Stock. However, since expenses reduce stockholders' equity, the expenses are entered as negative amounts. The effect of this transaction is as follows:

Assets			=	Liabilities +		Stockholders' Equity					
Cash	+ Supplies	+ Land		Accounts Payable	+ Common Stock	Fees Earned	Wages Exp.	Rent Exp.	Utilities Exp.	Misc. Exp.	
Bal. 12,500	1,350	20,000	=	1,350	25,000	7,500					
e. -3,650							-2,125	-800	-450	-275	
Bal. 8,850	1,350	20,000	=	1,350	25,000	7,500	-2,125	-800	-450	-275	
30,200			=	30,200							

Businesses usually record each revenue and expense transaction as it occurs. However, to simplify, NetSolutions' revenues and expenses are summarized for the month in transactions (d) and (e).

**Transaction f** Nov. 30, 20Y3 *NetSolutions paid creditors on account, \$950.*

When you pay your monthly credit card bill, you decrease the cash and decrease the amount you owe to the credit card company. Likewise, when NetSolutions paid \$950 to creditors during the month, it reduced assets and liabilities, as follows:

Assets			=	Liabilities +		Stockholders' Equity					
Cash	+ Supplies	+ Land		Accounts Payable	+ Common Stock	Fees Earned	Wages Exp.	Rent Exp.	Utilities Exp.	Misc. Exp.	
Bal. 8,850	1,350	20,000	=	1,350	25,000	7,500	-2,125	-800	-450	-275	
f. -950				-950							
Bal. 7,900	1,350	20,000	=	400	25,000	7,500	-2,125	-800	-450	-275	
29,250			=	29,250							

Paying an amount on account is different from paying an expense. The paying of an expense reduces stockholders' equity, as illustrated in transaction (e). Paying an amount on account reduces the amount owed on a liability.

**Transaction g** Nov. 30, 20Y3 *Chris Clark determined that the cost of supplies on hand at the end of the month was \$550.*

The cost of the supplies on hand (not yet used) at the end of the month is \$550. Thus, \$800 (\$1,350 - \$550) of supplies must have been used during the month. This decrease in supplies is recorded as an expense, as follows:

Assets			=	Liabilities +		Stockholders' Equity					
Cash	+ Supplies	+ Land		Accounts Payable	+ Common Stock	Fees Earned	Wages Exp.	Rent Exp.	Supplies Exp.	Utilities Exp.	Misc. Exp.
Bal. 7,900	1,350	20,000	=	400	25,000	7,500	-2,125	-800		-450	-275
g. -800									-800		
Bal. 7,900	550	20,000	=	400	25,000	7,500	-2,125	-800	-800	-450	-275
28,450			=	28,450							



Nov. 30, 20Y3 Paid dividends, \$2,000.

**Transaction h**

**Dividends** are distributions of earnings to stockholders. The payment of dividends decreases cash and stockholders' equity. Like expenses, dividends are recorded in a separate column to the right of Common Stock as a negative amount. The effect of the payment of dividends of \$2,000 is as follows:

Assets			=	Liabilities +		Stockholders' Equity							
Cash	+ Supp.	+ Land	=	Accounts Payable	+ Common Stock	- Dividends	+ Fees Earned	- Wages Exp.	- Rent Exp.	- Supplies Exp.	- Utilities Exp.	- Misc. Exp.	
Bal. 7,900	550	20,000	=	400	25,000		7,500	-2,125	-800	-800	-450	-275	
<b>h. -2,000</b>						<b>-2,000</b>							
Bal. 5,900	550	20,000	=	400	25,000	-2,000	7,500	-2,125	-800	-800	-450	-275	
26,450			=	26,450									

Dividends should not be confused with expenses. Dividends do not represent assets or services used in the process of earning revenues. Instead, dividends are considered a distribution of earnings to stockholders.

## Summary

The transactions of **NetSolutions** are summarized in Exhibit 6. Each transaction is identified by letter, and the balance of each accounting equation element is shown after every transaction.

### Exhibit 6 Summary of Transactions for NetSolutions

Assets			=	Liabilities +		Stockholders' Equity							
Cash	+ Supp.	+ Land	=	Accounts Payable	+ Common Stock	- Dividends	+ Fees Earned	- Wages Exp.	- Rent Exp.	- Supplies Exp.	- Utilities Exp.	- Misc. Exp.	
a. +25,000					+25,000								
b. -20,000		+20,000											
Bal. 5,000		20,000			25,000								
c. +1,350				+1,350									
Bal. 5,000	+1,350	20,000		+1,350	25,000								
d. +7,500							+7,500						
Bal. 12,500	1,350	20,000		1,350	25,000		7,500						
e. -3,650								-2,125	-800		-450	-275	
Bal. 8,850	1,350	20,000		1,350	25,000		7,500	-2,125	-800		-450	-275	
f. -950				-950									
Bal. 7,900	1,350	20,000		400	25,000		7,500	-2,125	-800		-450	-275	
g. -800										-800			
Bal. 7,900	550	20,000		400	25,000		7,500	-2,125	-800	-800	-450	-275	
h. -2,000						-2,000							
Bal. 5,900	550	20,000		400	25,000	-2,000	7,500	-2,125	-800	-800	-450	-275	
26,450			=	26,450									

You should note the following:

- The effect of every transaction is an increase or a decrease in one or more of the accounting equation elements.
- The two sides of the accounting equation are always equal.
- The stockholders' equity is increased by amounts invested by stockholders (common stock).
- The stockholders' equity is increased by revenues and decreased by expenses.
- The stockholders' equity is decreased by dividends paid to stockholders.

Classifications of Stockholders' Equity

Stockholders' equity is classified as:

- Common Stock
- Retained Earnings

Common stock is shares of ownership distributed to investors of a corporation. It represents the portion of stockholders' equity contributed by investors. For **NetSolutions**, shares of common stock of \$25,000 were distributed to Chris Clark in exchange for investing in the business.

**Retained earnings** is the stockholders' equity created from business operations through revenue and expense transactions. For NetSolutions, retained earnings of \$3,050 were created by its November operations (revenue and expense transactions), computed as follows:

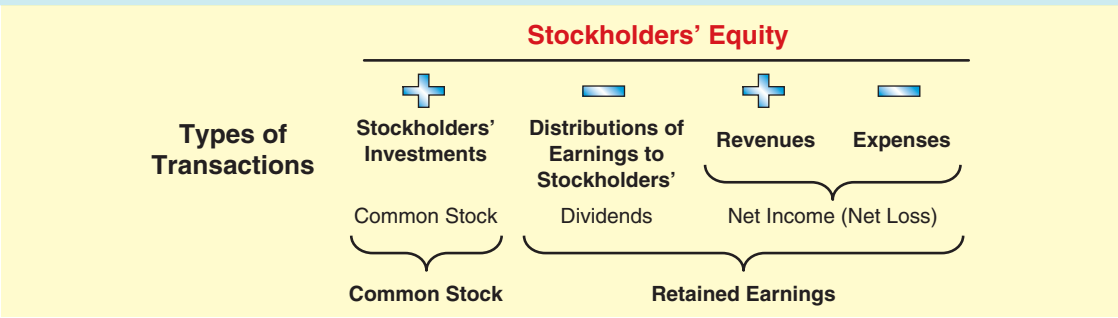
NetSolutions Retained Earnings November Operations (Revenue and Expense Transactions)											
	Fees Earned	–	Wages Exp.	–	Rent Exp.	–	Supplies Exp.	–	Utilities Exp.	–	Misc. Exp.
Transaction d.	+7,500										
Transaction e.			–2,125		–800				–450		–275
Transaction g.							–800				
Balance, Nov. 30	<u>7,500</u>		<u>–2,125</u>		<u>–800</u>		<u>–800</u>		<u>–450</u>		<u>–275</u>
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Stockholders' equity created by investments by stockholders (common stock) and by business operations (retained earnings) are reported separately. Since dividends are distributions of earnings to stockholders, dividends reduce retained earnings. NetSolutions paid \$2,000 in dividends during November, thus reducing retained earnings to \$1,050 (\$3,050 – \$2,000).

The effects of investments by stockholders, dividends, revenues, and expenses on stockholders' equity are illustrated in Exhibit 7.

Exhibit 7

Effects of Transactions on Stockholders' Equity



Check Up Corner 1-1 Business Transactions and the Accounting Equation

Drive Time Delivery is a local delivery service operating in Cleveland, Ohio. On February 1, Drive Time has the following balances: Cash, \$32,500; Accounts Receivable, \$5,000; Accounts Payable, \$2,500; Common Stock, \$32,500; Fees Earned, \$5,000; Wages Expense, \$2,500.

Drive Time Delivery completed the following transactions during February:

- a. Received cash from owner as an additional investment in common stock, \$20,000.
- b. Paid creditors on account, \$2,000.
- c. Received cash from customers on account, \$5,000.
- d. Billed customers for delivery services on account, \$18,000.
- e. Paid wages expense, \$10,000.
- f. Paid utilities expense, \$3,000.
- g. Paid dividends, \$4,500.

Indicate the effect that each of these transactions has on the following accounting equation elements: Cash, Accounts Receivable, Accounts Payable, Common Stock, Dividends, Fees Earned, Wages Expense, Utilities Expense.

### Solution:

Each transaction affects one or more accounting equation elements.

	Assets		=	Liabilities	+	Stockholders' Equity					
	Cash	+ Accounts Receivable	=	Accounts Payable	+	Common Stock	- Dividends	+ Fees Earned	- Wages Expense	- Utilities Expense	
Bal.	32,500	5,000	=	2,500	+	32,500		5,000	-2,500		
a.	20,000				+	20,000					
b.	-2,000			-2,000							
c.	5,000	-5,000									
d.		18,000						18,000			
e.	-10,000								-10,000		
f.	-3,000									-3,000	
g.	-4,500						-4,500				
Bal.	38,000	18,000	=	500	+	52,500	-4,500	23,000	-12,500	-3,000	
	56,000		=	56,000							

### Check Up Corner

## Financial Statements

After transactions have been recorded and summarized, reports are prepared for users. The accounting reports providing this information are called **financial statements**. The primary financial statements of a corporation are the income statement, statement of stockholders' equity, balance sheet, and statement of cash flows. The order in which the financial statements are prepared and the nature of each statement are described in Exhibit 8.

### Objective 5

Describe the financial statements of a corporation and explain how they interrelate.

Order Prepared	Financial Statement	Description of Statement
1.	<b>Income statement</b>	A summary of the revenue and expenses <i>for a specific period of time</i> , such as a month or a year.
2.	<b>Statement of stockholders' equity</b>	A summary of the changes in stockholders' equity that have occurred <i>during a specific period of time</i> , such as a month or a year.
3.	<b>Balance sheet</b>	A list of the assets, liabilities, and stockholders' equity <i>as of a specific date</i> , usually at the close of the last day of a month or a year.
4.	<b>Statement of cash flows</b>	A summary of the cash receipts and cash payments <i>for a specific period of time</i> , such as a month or a year.

### Exhibit 8

Financial Statements

The four financial statements and their interrelationships are illustrated in Exhibit 9. The data for the statements are taken from the summary of **NetSolutions'** transactions in Exhibit 6.

All financial statements are identified by the name of the business, the title of the statement, and the *date* or *period of time*. The data presented in the income statement, the statement of stockholders' equity, and the statement of cash flows are for a period of time. The data presented in the balance sheet are for a specific date.

**Exhibit 9**

Financial  
Statements for  
NetSolutions

**NetSolutions  
Income Statement  
For the Month Ended November 30, 20Y3**

Fees earned.....		\$ 7,500
Expenses:		
Wages expense.....	\$2,125	
Rent expense.....	800	
Supplies expense.....	800	
Utilities expense.....	450	
Miscellaneous expense.....	<u>275</u>	
Total expenses.....		<u>(4,450)</u>
Net income.....		<u>\$ 3,050</u>

**NetSolutions  
Statement of Stockholders' Equity  
For the Month Ended November 30, 20Y3**

	<b>Common Stock</b>	<b>Retained Earning</b>	<b>Total</b>
Balances, November 1, 20Y3.....	\$ 0	\$ 0	\$ 0
Issued common stock.....	25,000		25,000
Net income.....		3,050	3,050
Dividends.....		(2,000)	(2,000)
Balances, November 30, 20Y3.....	<u>\$ 25,000</u>	<u>\$ 1,050</u>	<u>\$ 26,050</u>

**NetSolutions  
Balance Sheet  
November 30, 20Y3**

<b>Assets</b>	
Cash.....	\$ 5,900
Supplies.....	550
Land.....	<u>20,000</u>
Total assets.....	<u>\$26,450</u>
<b>Liabilities</b>	
Accounts payable.....	\$ 400
<b>Stockholders' Equity</b>	
Common stock.....	\$25,000
Retained earnings.....	<u>1,050</u>
Total stockholders' equity.....	<u>26,050</u>
Total liabilities and stockholders' equity.....	<u>\$26,450</u>

**NetSolutions  
Statement of Cash Flows  
For the Month Ended November 30, 20Y3**

Cash flows from (used for) operating activities:		
Cash received from customers.....	\$ 7,500	
Cash paid for expenses and to creditors.....	<u>(4,600)</u>	
Net cash flows from operating activities.....		\$ 2,900
Cash flows from (used for) investing activities:		
Cash paid for acquisition of land.....		(20,000)
Cash flows from (used for) financing activities:		
Cash received from issuing common stock.....	\$ 25,000	
Cash dividends.....	<u>(2,000)</u>	
Net cash flows from financing activities.....		<u>23,000</u>
Net increase in cash.....		\$ 5,900
Cash balance, November 1, 20Y3.....		0
Cash balance, November 30, 20Y3.....		<u>\$ 5,900</u>

## Income Statement

The income statement reports the revenues and expenses for a period of time, based on the revenue and expense recognition principles. These principles match revenues and their related expenses so that they are reported in the same period. The excess of the revenue over the expenses is called **net income**, **net profit**, or **earnings**. If the expenses exceed the revenue, the excess is a **net loss**.

*note:*

When revenues exceed expenses, it is referred to as **net income**, **net profit**, or **earnings**. When expenses exceed revenues, it is referred to as **net loss**.

For a recent year, **Twitter** reported net income of \$1,206 million.

[Link to Twitter](#)

The revenue and expenses for **NetSolutions** were shown in Exhibit 6 as separate increases and decreases. Net income for a period increases the stockholders' equity (retained earnings) for the period. A net loss decreases stockholders' equity (retained earnings) for the period.

The revenue, expenses, and net income of \$3,050 for NetSolutions are reported on the income statement in Exhibit 9. The order in which the expenses are listed in the income statement varies among businesses. Most businesses list expenses in order of size, beginning with the larger items. Miscellaneous expense is usually shown as the last item, regardless of the amount.

## Business Insight

### Inclusivity

Investors and other business stakeholders are increasingly concerned not only about whether a company earns a net income, but also about a company's impact on society. For example,

a company that practices inclusivity has as an objective that every person should have equal rights, support, consideration, and opportunities to achieve their full potential. To achieve this objective, an inclusive company will enact policies and procedures that are accommodating and respectful of a person's race, ethnicity, sexual orientation, gender identity, physical abilities, religion, age, and culture.

## Statement of Stockholders' Equity

The statement of stockholders' equity reports the changes in stockholders' equity for a period of time. It is prepared *after* the income statement, because the net income or net loss for the period is reported in the Retained Earnings column. It is prepared *before* the balance sheet, because the amount of common stock and retained earnings at the end of the period is reported on the balance sheet. Because of this, the statement of stockholders' equity is viewed as the connecting link between the income statement and the balance sheet.

NetSolutions had three types of transactions during November that affected its stockholders' equity:

- Common stock of \$25,000 issued to Chris Clark.
- Revenues and expenses, which resulted in net income of \$3,050.
- Dividends of \$2,000 paid to stockholders (Chris Clark).

These transactions are summarized in the statement of stockholders' equity for **NetSolutions** shown in Exhibit 9.

Changes in each stockholders' equity element are reported in a separate column on the statement of stockholders' equity. Since NetSolutions was organized on November 1, there are no beginning balances for Common Stock or Retained Earnings. During November, common stock of \$25,000 was issued and, thus, is entered in the Common Stock column. Net income of \$3,050 and dividends of \$2,000 are entered in the Retained Earnings column, yielding an ending balance of \$1,050. Each change is carried over to the Total column. After all changes are entered, the columns are totaled, representing the final balances as of November 30.

These ending balances for Common Stock and Retained Earnings and the total stockholders' equity are reported on the November 30, 20Y3, balance sheet shown in Exhibit 9.

The ending common stock and retained earnings balances for November become the beginning balances for December. To illustrate, assume that during December NetSolutions issued no common stock, earned net income of \$4,055, and paid dividends of \$2,000. The statement of stockholders' equity for December would be as follows:

<b>NetSolutions</b> <b>Statement of Stockholders' Equity</b> <b>For the Month Ended December 31, 20Y3</b>			
	<b>Common Stock</b>	<b>Retained Earnings</b>	<b>Total</b>
Balances, December 1, 20Y3.....	\$25,000	\$ 1,050	\$26,050
Net income .....		4,055	4,055
Dividends.....		(2,000)	(2,000)
Balances, December 31, 20Y3 .....	<u>\$25,000</u>	<u>\$ 3,105</u>	<u>\$28,105</u>

Instead of a statement of stockholders' equity, companies may prepare a **retained earnings statement**. This is often the case when a company has few (if any) common stock transactions. In such cases, only retained earnings changes from period to period.

To illustrate, a retained earnings statement for NetSolutions for December is as follows:

<b>NetSolutions</b> <b>Retained Earnings Statement</b> <b>For the Month Ended December 31, 20Y3</b>		
Retained earnings, December 1, 20Y3.....		\$1,050
Net income.....	\$ 4,055	
Dividends.....	<u>(2,000)</u>	
Increase in retained earnings.....		<u>2,055</u>
Retained earnings, December 31, 20Y3.....		<u>\$3,105</u>

Since most large companies report a statement of stockholders' equity, the statement of stockholders' equity will be used throughout the remainder of this text.

## Balance Sheet

The balance sheet in Exhibit 9 reports the amounts of **NetSolutions'** assets, liabilities, and stockholders' equity as of November 30, 20Y3, in a vertical format. This form of balance sheet is commonly used and is called the **report form**.<sup>4</sup>

The asset and liability amounts are taken from the last line of the summary of transactions in Exhibit 6. The amounts for common stock, retained earnings, and total stockholders' equity are taken from the statement of stockholders' equity.

The Assets section of the balance sheet presents assets in the order that they will be converted into cash or used in operations. Cash is presented first, followed by receivables, supplies, prepaid insurance, and other assets. The assets of a more permanent nature are shown next, such as land, buildings, and equipment.

In the Liabilities section of the balance sheet in Exhibit 9, accounts payable is the only liability. When there are two or more liabilities, each should be listed and the total amount of liabilities presented as follows:

<b>Liabilities</b>		
Accounts payable	\$12,900	
Wages payable	<u>2,570</u>	
Total liabilities		\$15,470

<sup>4</sup> An alternative form of balance sheet reports assets, liabilities, and stockholders' equity in a horizontal format, called the account form.



## Statement of Cash Flows

As discussed earlier, businesses engage in three types of activities. As a result, the statement of cash flows consists of the following three sections, as shown in Exhibit 9:

1. operating activities
2. investing activities
3. financing activities

**Cash Flows from Operating Activities** This section reports a summary of cash receipts and cash payments from operations. The net cash flow from operating activities normally differs from the amount of net income for the period. In Exhibit 9, **NetSolutions** reported net cash flows from operating activities of \$2,900 and net income of \$3,050. This difference occurs because revenues and expenses may not be recorded at the same time that cash is received from customers or paid to creditors.

**Cash Flows from Investing Activities** This section reports the cash transactions for the acquisition and sale of relatively permanent assets. Exhibit 9 reports that **NetSolutions** paid \$20,000 for the purchase of land during November.

**Cash Flows from Financing Activities** This section reports the cash transactions related to cash investments by stockholders, borrowings, and dividends. Exhibit 9 shows that Chris Clark invested \$25,000 in exchange for common stock of **NetSolutions**. **NetSolutions** also paid \$2,000 of dividends during November.

For a recent year, **Twitter** reported \$1,340 million of cash inflows from operating activities, \$2,056 million of cash used for investing activities, \$978 million of cash from financing activities, and net increase in cash of \$262 million.

*Link to Twitter*

**Preparing NetSolutions' Statement of Cash Flows** Preparing the statement of cash flows requires that each of the November cash transactions for **NetSolutions** be classified as an operating, investing, or financing activity. Using the summary of transactions shown in Exhibit 6, the November cash transactions for **NetSolutions** are classified as follows:

Transaction	Amount	Cash Flow Activity
a.	\$25,000	Financing (Issued common stock)
b.	–20,000	Investing (Purchase of land)
d.	7,500	Operating (Fees earned)
e.	–3,650	Operating (Payment of expenses)
f.	–950	Operating (Payment of account payable)
h.	–2,000	Financing (Paid dividends)

Transactions (c) and (g) are not listed since they did not involve a cash receipt or payment. In addition, the payment of accounts payable in transaction (f) is classified as an operating activity because the account payable arose from the purchase of supplies, which are used in operations. Using the preceding classifications of November cash transactions, the statement of cash flows is prepared as shown in Exhibit 9.<sup>5</sup>

The ending cash balance shown on the statement of cash flows is also reported on the balance sheet as of the end of the period. To illustrate, the ending cash of \$5,900 reported on the November statement of cash flows in Exhibit 9 is also reported as the amount of cash on hand in the November 30, 20Y3, balance sheet.

<sup>5</sup> This method of preparing the statement of cash flows is called the "direct method." This method and the indirect method are discussed further in Chapter 13.