23rd edition

Fundamental ACCOUNTING PRINCIPLES

McGraw Hill Education

John J. Wild | Ken W. Shaw | Barbara Chiappetta

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23rd edition

John J. Wild
University of Wisconsin at Madison

Ken W. Shaw
University of Missouri at Columbia

Barbara Chiappetta
Nassau Community College

Mc Graw Hill Education

To my students and family, especially **Kimberly, Jonathan, Stephanie,** and **Trevor.**
To my wife **Linda** and children **Erin, Emily,** and **Jacob.**
To my mother, husband **Bob,** and sons **Michael** and **David.**

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Adapting to Today's Students

Whether the goal is to become an accountant, a businessperson, or simply an informed consumer of accounting information, *Fundamental Accounting Principles (FAP)* has helped generations of students succeed. Its leading-edge accounting content, paired with state-of-the-art technology, supports student learning and elevates understanding of key accounting principles.

FAP excels at **engaging students** with content that shows the relevance of accounting. Its chapter-opening vignettes showcase dynamic entrepreneurial companies to highlight the **usefulness of accounting.** This edition's featured companies—**Apple, Google,** and **Samsung—**capture student interest, and their annual reports are a pathway for learning. Need-to-Know demonstrations in each chapter apply key concepts and procedures and include guided video presentations.

FAP delivers innovative technology to help student performance. **Connect** provides students a media-rich eBook version of the textbook and offers instant online grading and feedback for assignments. **Connect** takes accounting content to the next level, delivering assessment material in a **more intuitive, less restrictive** format.

Our technology features:

- **A general journal interface** that looks and feels more like that found in practice.
- **An auto-calculation** feature that allows students to focus on concepts rather than rote tasks.
- **A smart (auto-fill) drop-down design.**

The result is content that prepares students for today's world.

Connect also includes digitally based, interactive, adaptive learning tools that engage students more effectively by offering varied instructional methods and more personalized learning paths that build on different learning styles, interests, and abilities.

The revolutionary technology of **SmartBook**® is available only from McGraw-Hill Education. Based on an intelligent learning system, SmartBook uses a series of adaptive questions to pinpoint each student's knowledge gaps and then provides an optimal learning path. Students spend less time in areas they already know and more time in areas they don't. The result: Students study more efficiently, learn faster, and retain more knowledge. Valuable reports provide insights into how students are progressing through textbook content and information useful for shaping in-class time or assessment.

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"A great enhancement! I love the fact that GL makes the student choose from an entire chart of accounts."

—TAMMY METZKE, Milwaukee Area Technical College

About the Authors

JOHN J. WILD is a distinguished professor of accounting at the University of Wisconsin at Madison. He previously held appointments at Michigan State University and the University of Manchester in England. He received his BBA, MS, and PhD from the University of Wisconsin.

John teaches accounting courses at both the undergraduate and graduate levels. He has received numerous teaching honors, including the Mabel W. Chipman Excellence-in-Teaching Award and the departmental Excellence-in-Teaching Award, and he is a two-time recipient of the Teaching Excellence Award from business graduates at the University of Wisconsin. He also received the Beta Alpha Psi and Roland F. Salmonson Excellence-in-Teaching Award from Michigan State University. John has received several research honors, is a past KPMG Peat Marwick National Fellow, and is a recipient of fellowships from the American Accounting Association and the Ernst and Young Foundation.

John is an active member of the American Accounting Association and its sections. He has served on several committees of these organizations, including the Outstanding Accounting Educator Award, Wildman Award, National Program Advisory, Publications, and Research Committees. John is author of *Financial Accounting, Managerial Accounting,* and *College Accounting*, all published by McGraw-Hill Education.

John's research articles on accounting and analysis appear in *The Accounting Review; Journal of Accounting Research; Journal of Accounting and Economics; Contemporary Accounting Research; Journal of Accounting*, *Auditing and Finance; Journal of Accounting and Public Policy;* and other journals. He is past associate editor of *Contemporary Accounting Research* and has served on several editorial boards including *The Accounting Review*.

In his leisure time, John enjoys hiking, sports, boating, travel, people, and spending time with family and friends.

KEN W. SHAW is an associate professor of accounting and the KPMG/Joseph A. Silvoso Distinguished Professor of Accounting at the University of Missouri. He previously was on the faculty at the University of Maryland at College Park. He has also taught in international programs at the University of Bergamo (Italy) and the University of Alicante (Spain). He received an accounting degree from Bradley University and an MBA and PhD from the University of Wisconsin. He is a Certified Public Accountant with work experience in public accounting.

Ken teaches accounting at the undergraduate and graduate levels. He has received numerous School of Accountancy, College of Business, and university-level teaching awards. He was voted the "Most Influential Professor" by four School of Accountancy graduating classes and is a two-time recipient of the O'Brien Excellence in Teaching Award. He is the advisor to his school's chapter of the Association of Certified Fraud Examiners.

Ken is an active member of the American Accounting Association and its sections. He has served on many committees of these organizations and presented his research papers at national and regional meetings. Ken's research appears in the *Journal of Accounting Research*; *The Accounting Review; Contemporary Accounting Research; Journal of Financial and Quantitative Analysis; Journal of the American Taxation Association; Strategic Management Journal; Journal of Accounting*, *Auditing, and Finance; Journal of Financial Research;* and other journals. He has served on the editorial boards of *Issues in Accounting Education; Journal of Business Research;* and *Research in Accounting Regulation.* Ken is co-author of *Financial and Managerial Accounting, Managerial Accounting,* and *College Accounting,* all published by McGraw-Hill Education.

In his leisure time, Ken enjoys tennis, cycling, music, and coaching his children's sports teams.

BARBARA CHIAPPETTA received her BBA in Accountancy and MS in Education from Hofstra University and is an emeritus tenured full professor at Nassau Community College. For many decades, she has been an active executive board member of the Teachers of Accounting at Two-Year Colleges (TACTYC), serving 10 years as vice president and as president from 1993 through 1999. As a member of the American Accounting Association, she has served on the Northeast Regional Steering Committee, chaired the Curriculum Revision Committee of the Two-Year Section, and participated in numerous national committees.

Barbara has been inducted into the American Accounting Association Hall of Fame for the Northeast Region. She has also received the Nassau Community College dean of instruction's Faculty Distinguished Achievement Award. Barbara was honored with the State University of New York Chancellor's Award for Teaching Excellence. As a confirmed believer in the benefits of the active learning pedagogy, Barbara has authored *Student Learning Tools,* an active learning workbook for a first-year accounting course, published by McGraw-Hill Education.

In her leisure time, Barbara enjoys tennis and participates on a USTA team. She also enjoys the challenge of bridge. Her husband, Robert, is an entrepreneur in the leisure sport industry. She has two sons—Michael, a lawyer specializing in intellectual property law, and David, a composer pursuing a career in music for film. Barbara has been an important member of this book's author team, and her co-authors continue to acknowledge her substantial contributions to prior editions.

Dear Colleagues and Friends,

As we roll out the new edition of *Fundamental Accounting Principles,* we thank each of you who provided suggestions to improve the textbook and its teaching resources. This new edition reflects the advice and wisdom of many dedicated reviewers, symposium and workshop participants, students, and instructors. Throughout the revision process, we steered this textbook and its teaching tools in the manner you directed. As you'll find, the new edition offers a rich set of features—especially digital features—to improve student learning and assist instructor teaching and grading. We believe you and your students will like what you find in this new edition.

Many talented educators and professionals have worked hard to create the materials for this product, and for their efforts, we're grateful. **We extend a special thank-you to our contributing and technology supplement authors,** who have worked so diligently to support this product:

Contributing Author: Kathleen O'Donnell, *Onondaga Community College*

Accuracy Checkers: Dave Krug, *Johnson County Community College;* Mark McCarthy, *East Carolina University;* Helen Roybark, *Radford University*

LearnSmart Author: April Mohr, *Jefferson Community and Technical College, SW*

Interactive Presentations: Jeannie Folk, *College of DuPage;* April Mohr, *Jefferson Community and Technical College, SW*

PowerPoint Presentations: April Mohr, *Jefferson Community and Technical College, SW*

Instructor Resource Manual: April Mohr, *Jefferson Community and Technical College, SW*

Test Bank: Kathleen O'Donnell, *Onondaga Community College;* Anna Boulware, *St. Charles Community College;* Mark McCarthy, *East Carolina University;* Beth Woods

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John J. Wild   *Ken W. Shaw*   *Barbara Chiappetta*

Innovative Textbook Features . . .

Using Accounting for Decisions

Whether we prepare, analyze, or apply accounting information, one skill remains essential: decision making. To help develop good decision-making habits and to illustrate the relevance of accounting, we use a learning framework to enhance decision-making in four ways. (See the four nearby examples for the different types of decision boxes, including those that relate to fraud.) **Decision Insight** provides context for business decisions. **Decision Ethics** and **Decision Maker** are role-playing scenarios that show the relevance of accounting. **Decision Analysis** provides key tools to help assess company performance.

Decision Analysis — Profit Margin

A useful measure of a company's operating results is the ratio of its net income to net sales. This ratio is called **profit margin,** or *return on sales,* and is computed as in Exhibit 3.15.

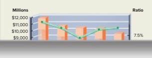
EXHIBIT 3.15
Profit Margin

$$\text{Profit margin} = \frac{\text{Net income}}{\text{Net sales}}$$

A2 Compute profit margin and describe its use in analyzing company performance.

This ratio is interpreted as reflecting the percent of profit in each dollar of sales. To illustrate how we compute and use profit margin, let's look at the results of **Limited Brands, Inc.**, in Exhibit 3.16 for its fiscal years 2011 through 2015.

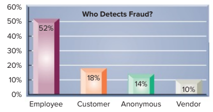
EXHIBIT 3.16
Limited Brands's Profit Margin



$ millions	2015	2014	2013	2012	2011
Net income	$ 1,042	$ 903	$ 753	$ 850	$ 805
Net sales	$11,454	$10,773	$10,459	$10,364	$9,613
Profit margin	9.1%	8.4%	7.2%	8.2%	8.4%
Industry profit margin	2.8%	2.5%	2.0%	2.2%	2.1%

Decision Insight

Fraud Discovery The Association of Certified Fraud Examiners (ACFE) reports that 43% of frauds are detected from a "tip," which is much higher than the next three detection sources (13% from management review, 17% from internal audit, and 6% by accident). The top source for a tip is an employee, followed by a customer and a vendor—see graph. [Source: 2016 Report to the Nations, ACFE (acfe.com).] ■



Decision Ethics

Financial Officer At year-end, the president instructs you, the financial officer, not to record accrued expenses until next year because they will not be paid until then. The president also directs you to record in current-year sales a recent purchase order from a customer that requires merchandise to be delivered two weeks after the year-end. Your company would report a net income instead of a net loss if you carry out these instructions. What do you do? ■ [*Answer:* Omitting accrued expenses and recognizing revenue early can mislead financial statement users. One action is to request a meeting with the president so you can explain what is required. If the president persists, you might discuss the situation with legal counsel and any auditors involved. Your ethical action might cost you, but the potential pitfalls for falsification of statements, reputation and personal integrity loss, and other costs are too great.]

Decision Maker

Entrepreneur Your start-up Internet services company needs cash, and you are preparing financial statements to apply for a short-term loan. A friend suggests that you treat as many expenses as possible as capital expenditures. What are the impacts on financial statements of this suggestion? What do you think is the aim of this suggestion? ■ [*Answer:* Treating an expense as a capital expenditure means that expenses are lower and income higher in the short run. This is so because a capital expenditure is not expensed immediately but is spread over the asset's useful life. It also means that asset and equity totals are reported at higher amounts in the short run. This continues until the asset is fully depreciated. Thus, the friend's suggestion is misguided. Only an expenditure benefiting future periods is a capital expenditure.]

> "This textbook does address many learning styles and at the same time allows for many teaching styles . . . our faculty have been very pleased with the continued revisions and supplements. I'm a 'Wild' fan!"
>
> **—RITA HAYS, Southwestern Oklahoma State University**

Chapter Preview

Each chapter opens with a visual chapter preview. Students can begin their reading with a clear understanding of what they will learn and when. Learning objective numbers highlight the location of related content. Each "block" of content concludes with a Need-To-Know (NTK) to aid and reinforce student learning.

Chapter Preview

SYSTEM OF ACCOUNTS	DEBITS AND CREDITS	RECORDING TRANSACTIONS	TRIAL BALANCE	FINANCIAL STATEMENTS
C1 Source documents	T-account	**P1** Journalizing and posting	**P2** Trial balance preparation and use	**P3** Financial statement preparation
C2 Types of accounts	**C4** Debits and credits	**A1** Processing transactions—Illustration	Error identification	**A2** Debt ratio
C3 General ledger	Normal balance			
NTK 2-1	NTK 2-2	NTK 2-3	NTK 2-4	NTK 2-5

Learning Objectives

CONCEPTUAL

C1 Explain the steps in processing transactions and the role of source documents.

C2 Describe an account and its use in recording transactions.

C3 Describe a ledger and a chart of accounts.

C4 Define *debits* and *credits* and explain double-entry accounting.

ANALYTICAL

A1 Analyze the impact of transactions on accounts and financial statements.

A2 Compute the debt ratio and describe its use in analyzing financial condition.

PROCEDURAL

P1 Record transactions in a journal and post entries to a ledger.

P2 Prepare and explain the use of a trial balance.

P3 Prepare financial statements from business transactions.

CAP Model

The Conceptual/Analytical/Procedural (CAP) model allows courses to be specially designed to meet the teaching needs of a diverse faculty. This model identifies learning objectives, textual materials, assignments, and test items by C, A, or P, allowing different instructors to teach from the same materials, yet easily customize their courses toward a conceptual, analytical, or procedural approach (or a combination thereof) based on personal preferences.

Bring Accounting to Life

NEED-TO-KNOW 16-2

Reporting Operating Cash Flows (Indirect)

P2

A company's current-year income statement and selected balance sheet data at December 31 of the current and prior years follow. Prepare only the operating activities section of the statement of cash flows using the indirect method for the current year.

Income Statement For Current Year Ended December 31		
Sales revenue		$120
Expenses		
Cost of goods sold		50
Depreciation expense		30
Salaries expense		17
Interest expense		3
Net income		$ 20

Selected Balance Sheet Accounts At December 31	Current Yr	Prior Yr
Accounts receivable	$12	$10
Inventory	6	9
Accounts payable	7	11
Salaries payable	8	3
Interest payable	1	0

Solution

Cash Flows from Operating Activities—Indirect Method For Current Year Ended December 31		
Cash flows from operating activities		
Net income		$20
Adjustments to reconcile net income to net cash provided by operating activities		
Income statement items not affecting cash		
Depreciation expense	$30	
Changes in current assets and current liabilities		
Increase in accounts receivable	(2)	
Decrease in inventory	3	
Decrease in accounts payable	(4)	
Increase in salaries payable	5	
Increase in interest payable	1	33
Net cash provided by operating activities		$53

Do More: QS 16-3, QS 16-4, E 16-4, E 16-5, E 16-6

Need-to-Know Demonstrations

Need-to-Know demonstrations are located at key junctures in each chapter. These demonstrations pose questions about the material just presented—content that students "need to know" to successfully learn accounting. Accompanying solutions walk students through key procedures and analysis necessary to be successful with homework and test materials. Need-to-Know demonstrations are supplemented with narrated, animated, step-by-step walk-through videos led by an instructor and available via **Connect**.

Global View

The Global View section explains international accounting practices related to the material covered in that chapter. The aim of this section is to describe accounting practices and to identify the similarities and differences in international accounting practices versus those in the United States. The importance of student familiarity with international accounting continues to grow. This innovative section helps us begin down that path. This section is purposefully located at the very end of each chapter so that each instructor can decide what emphasis, if at all, is to be assigned to it.

GLOBAL VIEW

This section discusses differences between U.S. GAAP and IFRS in the items and costs making up merchandise inventory, in the methods to assign costs to inventory, and in the methods to estimate inventory values.

Estimating Inventory Costs Inventory value can decrease or increase as it awaits sale.

Decreases in Inventory Value Both U.S. GAAP and IFRS require companies to write down (reduce the cost recorded for) inventory when its value falls below the cost recorded. This is referred to as the *lower of cost or market* method explained in this chapter. U.S. GAAP prohibits any later increase in the recorded value of that inventory even if that decline in value is reversed through value increases in later periods. However, IFRS allows reversals of those write-downs up to the original acquisition cost. For example, if **Apple** wrote down its 2015 inventory from $2,349 million to $2,300 million, it could not reverse this in future periods even if its value increased to more than $2,349 million. However, if Apple applied IFRS, it could reverse that previous loss. (Another difference is that value refers to *replacement cost* under U.S. GAAP, but *net realizable value* under IFRS.) **APPLE**

Increases in Inventory Value Neither U.S. GAAP nor IFRS allows inventory to be adjusted upward beyond the original cost. (One exception is that IFRS requires agricultural assets such as animals, forests, and plants to be measured at fair value less point-of-sale costs.)

Nokia provides the following description of its inventory valuation procedures:

> Inventories are stated at the lower of cost or net realizable value. Cost approximates actual cost on a FIFO (first-in first-out) basis. Net realizable value is the amount that can be realized from the sale of the inventory in the normal course of business after allowing for the costs of realization.

Global View Assignments

Discussion Questions 16 & 17

Quick Study 6-23

Exercise 6-18

BTN 6-9

SUSTAINABILITY AND ACCOUNTING

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ReGreen Corporation, featured in this chapter's opening story, is committed to improving the environment by helping businesses apply sustainable solutions. ReGreen's website touts its mission: "to improve the health of our planet and economy through the implementation of profitable energy solutions."

So far, ReGreen has been able to reduce their clients' energy consumption and water costs by an average of 60%. It offers customers guaranteed payback on sustainable investments within two years. "We're pleased to have met those challenges," proclaims co-founder David Duel.

David explains that the two-year payback guarantee on sustainable investments requires use of a reliable accounting system. ReGreen uses its accounting system to track investments in assets and the cost savings associated with these assets. This information is used to make sure ReGreen can meet its two-year payback guarantee. Without such a guarantee, businesses may be less willing to invest in sustainable solutions.

ReGreen also uses accounting data to track clients' progress on sustainability initiatives. ReGreen reviews its customers' accounting systems to analyze energy and water expenses. The entrepreneurs use these data to make recommendations on how ReGreen's customers can "achieve significant energy cost savings" and reduce their impact on the environment, explains David.

Sustainability and Accounting

This edition has brief sections that highlight the importance of sustainability within the broader context of global accounting (and accountability). Companies increasingly address sustainability in their public reporting and consider the sustainability accounting standards (from the Sustainability Accounting Standards Board) and the expectations of our global society. These sections cover different aspects of sustainability, often within the context of the chapter's featured entrepreneurial company.

Outstanding Assignment Material . . .

Once a student has finished reading the chapter, how well he or she retains the material can depend greatly on the questions, brief exercises, exercises, and problems that reinforce it. This book leads the way in comprehensive, accurate assignments.

Comprehensive Need-to-Know Problems present both a problem and a complete solution, allowing students to review the entire problem-solving process and achieve success. The problems draw on material from the entire chapter.

NEED-TO-KNOW 10-6

COMPREHENSIVE

On July 14, 2016, Tulsa Company pays $600,000 to acquire a fully equipped factory. The purchase involves the following assets and information.

Asset	Appraised Value	Salvage Value	Useful Life	Depreciation Method
Land	$160,000			Not depreciated
Land improvements	80,000	$ 0	10 years	Straight-line
Building	320,000	100,000	10 years	Double-declining-balance
Machinery	240,000	20,000	10,000 units	Units-of-production*
Total	$800,000			

* The machinery is used to produce 700 units in 2016 and 1,800 units in 2017.

Required

1. Allocate the total $600,000 purchase cost among the separate assets.
2. Compute the 2016 (six months) and 2017 depreciation expense for each asset, and compute the company's total depreciation expense for both years.
3. On the last day of calendar-year 2018, Tulsa discarded machinery that had been on its books for five years. The machinery's original cost was $12,000 (estimated life of five years) and its salvage value was $2,000. No depreciation had been recorded for the fifth year when the disposal occurred. Journalize the fifth year of depreciation (straight-line method) and the asset's disposal.
4. At the beginning of year 2018, Tulsa purchased a patent for $100,000 cash. The company estimated the patent's useful life to be 10 years. Journalize the patent acquisition and its amortization for the year 2018.
5. Late in the year 2018, Tulsa acquired an ore deposit for $600,000 cash. It added roads and built mine shafts for an additional cost of $80,000. Salvage value of the mine is estimated to be $20,000. The company estimated 330,000 tons of available ore. In year 2018, Tulsa mined and sold 10,000 tons of ore. Journalize the mine's acquisition and its first year's depletion.

6[A] (This question applies this chapter's Appendix coverage.) On the first day of 2018, Tulsa exchanged the machinery that was acquired on July 14, 2016, along with $5,000 cash for machinery with a $210,000 market value. Journalize the exchange of these assets assuming the exchange has commercial substance. (Refer to background information in parts 1 and 2.)

PLANNING THE SOLUTION

- Complete a three-column table showing the following amounts for each asset: appraised value, percent of total value, and apportioned cost.

Summary

C1 Explain the steps in processing transactions and the role of source documents. Transactions and events are the starting points in the accounting process. Source documents identify and describe transactions and events and provide objective and reliable evidence. The effects of transactions and events are recorded in journals. Posting along with a trial balance helps summarize and classify these effects.

C2 Describe an account and its use in recording transactions. An account is a detailed record of increases and decreases in a specific asset, liability, equity, revenue, or expense. Information from accounts is analyzed, summarized, and presented in reports and financial statements.

C3 Describe a ledger and a chart of accounts. The ledger (or general ledger) is a record containing all accounts used by a company and their balances. It is referred to as the *books*. The chart of accounts is a list of all accounts and usually includes an identification number assigned to each account.

C4 Define *debits* and *credits* and explain double-entry accounting. *Debit* refers to left, and *credit* refers to right. Debits increase assets, expenses, and withdrawals while credits decrease them. Credits increase liabilities, owner capital, and

A1 Analyze the impact of transactions on accounts and financial statements. We analyze transactions using concepts of double-entry accounting. This analysis is performed by determining a transaction's effects on accounts.

A2 Compute the debt ratio and describe its use in analyzing financial condition. A company's debt ratio is computed as total liabilities divided by total assets. It reveals how much of the assets are financed by creditor (nonowner) financing. The higher this ratio, the more risk a company faces because liabilities must be repaid at specific dates.

P1 Record transactions in a journal and post entries to a ledger. Transactions are recorded in a journal. Each entry in a journal is posted to the accounts in the ledger. This provides information that is used to produce financial statements. Balance column accounts are widely used and include columns for debits, credits, and the account balance.

P2 Prepare and explain the use of a trial balance. A trial balance is a list of accounts from the ledger showing their debit or credit balances in separate columns. The trial balance is a summary of the ledger's contents and is useful in preparing financial statements and in revealing recordkeeping errors.

Chapter Summaries provide students with a review organized by learning objectives. Chapter Summaries are a component of the CAP model (as discussed in the "Innovative Textbook Features" section), which recaps each conceptual, analytical, and procedural objective.

Key Terms are bolded in the text and repeated at the end of the chapter. A complete glossary of key terms is available online through **Connect.**

Key Terms

Accounting period	**Cash basis accounting**	**Prepaid expenses**
Accrual basis accounting	**Contra account**	**Profit margin**
Accrued expenses	**Depreciation**	**Revenue recognition principle**
Accrued revenues	**Expense recognition** (or **matching**) **principle**	**Straight-line depreciation method**
Accumulated depreciation	**Fiscal year**	**Time period assumption**
Adjusted trial balance	**Interim financial statements**	**Unadjusted trial balance**
Adjusting entry	**Natural business year**	**Unearned revenues**
Annual financial statements	**Plant assets**	
Book value		

Helps Students Master Key Concepts

Multiple Choice Quiz questions quickly test chapter knowledge before a student moves on to complete Quick Studies, Exercises, and Problems.

Multiple Choice Quiz

1. A company forgot to record accrued and unpaid employee wages of $350,000 at period-end. This oversight would
   - **a.** Understate net income by $350,000.
   - **b.** Overstate net income by $350,000.
   - **c.** Have no effect on net income.
   - **d.** Overstate assets by $350,000.
   - **e.** Understate assets by $350,000.
2. Prior to recording adjusting entries, the Supplies account has a $450 debit balance. A physical count of supplies shows $125 of unused supplies still available. The required adjusting entry is:
   - **a.** Debit Supplies $125; Credit Supplies Expense $125.
   - **b.** Debit Supplies $325; Credit Supplies Expense $325.
   - **c.** Debit Supplies Expense $325; Credit Supplies $325.
   - **d.** Debit Supplies Expense $325; Credit Supplies $125.
   - **e.** Debit Supplies Expense $125; Credit Supplies $125.

QS 1-8
Applying the accounting equation
A1

1. Use the accounting equation to compute the missing financial statement amounts (*a*), (*b*), and (*c*).

	A	B		C		D
1	Company	Assets	=	Liabilities	+	Equity
2	1	$ 75,000		$ (a)		$ 40,000
3	2	(b)		25,000		70,000
4	3	85,000		20,000		(c)

Quick Study assignments are short exercises that often focus on one learning objective. Most are included in **Connect.** There are at least 10–15 Quick Study assignments per chapter.

Exercises are one of this book's many strengths and a competitive advantage. There are at least 10–15 per chapter, and most are included in **Connect.**

Exercise 1-20
Preparing an income statement for a global company
P2

Ford Motor Company, one of the world's largest automakers, reports the following income statement accounts for the year ended December 31, 2015 ($ in millions). Use this information to prepare Ford's income statement for the year ended December 31, 2015.

Selling and administrative costs	$ 14,999
Cost of sales	124,041
Revenues	149,558
Other expenses	3,145

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PROBLEM SET A

Problem 9-3A
Aging accounts receivable and accounting for bad debts
P2 P3

Jarden Company has credit sales of $3,600,000 for year 2017. On December 31, 2017, the company's Allowance for Doubtful Accounts has an unadjusted credit balance of $14,500. Jarden prepares a schedule of its December 31, 2017, accounts receivable by age. On the basis of past experience, it estimates the percent of receivables in each age category that will become uncollectible. This information is summarized here.

	A	B	C
1–2	December 31, 2017, Accounts Receivable	Age of Accounts Receivable	Expected Percent Uncollectible
3	$830,000	Not yet due	1.25%
4	254,000	1 to 30 days past due	2.00
5	86,000	31 to 60 days past due	6.50
6	38,000	61 to 90 days past due	32.75
7	12,000	Over 90 days past due	68.00

Required

1. Estimate the required balance of the Allowance for Doubtful Accounts at December 31, 2017, using the aging of accounts receivable method.
2. Prepare the adjusting entry to record bad debts expense at December 31, 2017.

Check (2) Dr. Bad Debts Expense, $27,150

Problem Sets A & B are proven problems that can be assigned as homework or for in-class projects. All problems are coded according to the CAP model (see the "Innovative Textbook Features" section), and Set A is included in **Connect.**

PROBLEM SET B

Problem 9-3B
Aging accounts receivable and accounting for bad debts
P2 P3

Hovak Company has credit sales of $4,500,000 for year 2017. At December 31, 2017, the company's Allowance for Doubtful Accounts has an unadjusted debit balance of $3,400. Hovak prepares a schedule of its December 31, 2017, accounts receivable by age. On the basis of past experience, it estimates the percent of receivables in each age category that will become uncollectible. This information is summarized here.

	A	B	C
1–2	December 31, 2017, Accounts Receivable	Age of Accounts Receivable	Expected Percent Uncollectible
3	$396,400	Not yet due	2.0%
4	277,800	1 to 30 days past due	4.0
5	48,000	31 to 60 days past due	8.5
6	6,600	61 to 90 days past due	39.0
7	2,800	Over 90 days past due	82.0

Required

1. Compute the required balance of the Allowance for Doubtful Accounts at December 31, 2017, using the aging of accounts receivable method.
2. Prepare the adjusting entry to record bad debts expense at December 31, 2017.

Check (2) Dr. Bad Debts Expense, $31,390

"I like the layout of the text and the readability. The illustrations and comics in the book make the text seem less intimidating and boring for students. The PowerPoint slides are easy to understand and use, the pictorials are great, and the text has great coverage of accounting material. The addition of IFRS information and the updates to the opening stories are great. I like that the Decision Insights are about businesses the students can relate to."

—JEANNIE LIU, Chaffey College

Outstanding Assignment Material . . .

Beyond the Numbers exercises ask students to use accounting figures and understand their meaning. Students also learn how accounting applies to a variety of business situations. These creative and fun exercises are all new or updated and are divided into nine types:

- Reporting in Action
- Comparative Analysis
- Ethics Challenge
- Communicating in Practice
- Taking It to the Net
- Teamwork in Action
- Hitting the Road
- Entrepreneurial Decision
- Global Decision

Beyond the Numbers

BTN 9-2 Comparative figures for **Apple** and **Google** follow.

COMPARATIVE ANALYSIS
A1 P2

APPLE
GOOGLE

$ millions	Apple Current Year	Apple One Year Prior	Apple Two Years Prior	Google Current Year	Google One Year Prior	Google Two Years Prior
Accounts receivable, net . . .	$ 16,849	$ 17,460	$ 13,102	$ 11,556	$ 9,383	$ 8,882
Net sales	233,715	182,795	170,910	74,989	66,001	55,519

Required

1. Compute the accounts receivable turnover for Apple and Google for each of the two most recent years using the data shown.
2. Using the results from part 1, compute how many days it takes each company, *on average,* to collect receivables. Compare the collection periods for Apple and Google, and suggest at least one explanation for the difference.
3. Which company is more efficient in collecting its accounts receivable? Explain.

Hint: Average collection period equals 365 divided by the accounts receivable turnover.

(This serial problem began in Chapter 1 and continues through most of the book. If previous chapter segments were not completed, the serial problem can begin at this point.)

SERIAL PROBLEM
Business Solutions
P3

© Alexander Image/Shutterstock RF

SP 8 Santana Rey receives the March bank statement for **Business Solutions** on April 11, 2018. The March 31 bank statement shows an ending cash balance of $67,566. A comparison of the bank statement with the general ledger Cash account, No. 101, reveals the following.

a. S. Rey notices that the bank erroneously cleared a $500 check against her account in March that she did not issue. The check documentation included with the bank statement shows that this check was actually issued by a company named Business Systems.
b. On March 25, the bank lists a $50 charge for the safety deposit box expense that Business Solutions agreed to rent from the bank beginning March 25.
c. On March 26, the bank lists a $102 charge for printed checks that Business Solutions ordered from the bank.
d. On March 31, the bank lists $33 interest earned on Business Solutions's checking account for the month of March.
e. S. Rey notices that the check she issued for $128 on March 31, 2018, has not yet cleared the bank.
f. S. Rey verifies that all deposits made in March do appear on the March bank statement.
g. The general ledger Cash account, No. 101, shows an ending cash balance per books of $68,057 as of March 31 (prior to any reconciliation).

Required

1. Prepare a bank reconciliation for Business Solutions for the month ended March 31, 2018.
2. Prepare any necessary adjusting entries. Use Miscellaneous Expenses, No. 677, for any bank charges. Use Interest Revenue, No. 404, for any interest earned on the checking account for the month of March.

Check (1) Adj. bank bal., $67,938

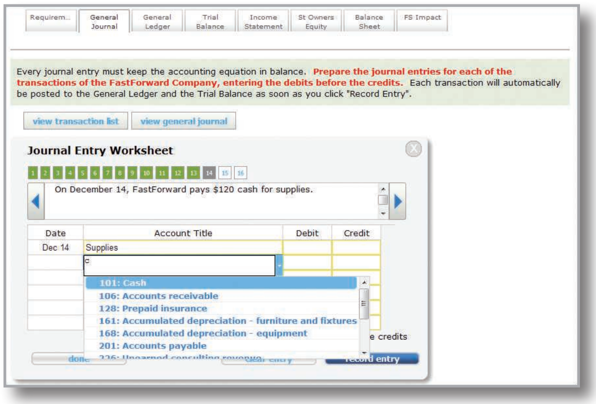
Serial Problems use a continuous running case study to illustrate chapter concepts in a familiar context. The Serial Problem can be followed continuously from the first chapter or picked up at any later point in the book; enough information is provided to ensure students can get right to work.

"The Serial Problems are excellent. . . . I like the continuation of the same problem to the next chapters if applicable. I use the Quick Studies as practice problems. . . . Students have commented that this really works for them if they work (these questions) before attempting the assigned exercises and problems. I also like the discussion (questions) and make this an assignment. You have done an outstanding job presenting accounting to our students."

—JERRI TITTLE, Rose State College

Helps Students Master Key Concepts

General Ledger Problems enable students to see how transactions post. Students can track an amount in any financial statement all the way back to the original journal entry. Critical thinking components then challenge students to analyze the business activities in the problem.



The **General Ledger** tool in Connect allows students to immediately see the financial statements as of a specific date. Each of the following questions begins with an unadjusted trial balance. Using transactions from the following assignment, prepare the necessary adjustments, and determine the impact each adjustment has on net income. The financial statements are automatically populated.

GL 3-1 Based on the FastForward illustration in this chapter

Using transactions from the following assignments, prepare the necessary adjustments, create the financial statements, and determine the impact each adjustment has on net income.

GL 3-2 Based on Problem 3-3A

GL 3-3 Extension of Problem 2-1A

GL 3-4 Extension of Problem 2-2A

GL 3-5 Based on Serial Problem SP 3

GENERAL LEDGER PROBLEM

Available only in Connect

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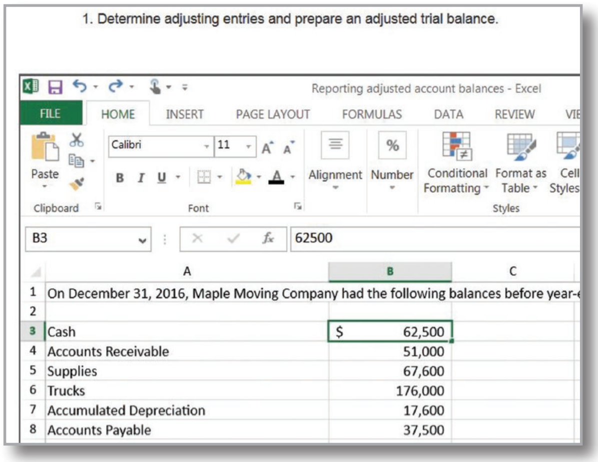
Excel Simulations allow you to practice your Excel skills, such as basic formulas and formatting, within the context of accounting. These questions feature animated, narrated Help and Show Me tutorials (when enabled by your instructor).



The End of the Chapter Is Only the Beginning Our valuable and proven assignments aren't just confined to the book. From problems that require technological solutions to materials found exclusively online, this book's end-of-chapter material is fully integrated with its technology package.

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- Quick Studies, Exercises, and Problems available in **Connect** are marked with an icon.

Assignments that focus on global accounting practices and companies are often identified with an icon.

Assignments that involve ethical or fraud risk are marked with an icon.

Assignments that involve decision analysis are identified with an icon.

Assignments that involve sustainability issues are marked with an icon.

Content Revisions Enhance Learning

This edition's revisions are driven by feedback from instructors and students. They include:

- Many new, revised, and updated assignments throughout, including entrepreneurial and real-world assignments.
- Many Need-To-Know (NTK) demonstrations added to each chapter at key junctures to reinforce learning.
- Updated Sustainability section for each chapter, with examples linked to the chapter-opening company.
- New annual reports and comparative (BTN) assignments: **Apple**, **Google**, and **Samsung**.
- Revised art program, visual infographics, and text layout.
- Updated ratio/tool analysis using data from well-known firms.
- Revised General Ledger assignments for most chapters.
- New and revised entrepreneurial examples and elements.
- New technology content integrated and referenced in the book.
- Revised Global View section moved to the very end of each chapter following assignments.

Chapter 1

Updated opener—**Apple** and entrepreneurial assignment.
Updated salary info for accountants and for those with college degrees.
Streamlined "Fraud Triangle" section.
Updated "Cooking the Books" Fraud box.
Moved "Enforcing Ethics" section to earlier in chapter.
Streamlined the "Fundamentals of Accounting" section.
Streamlined the "International Standards" section.
Updated the revenue recognition section.
New margin point to highlight layout of statement of owner's equity.
Updated Sustainability section for **Apple**'s renewable energy efforts, including SASB.
Updated Decision Insight box on sustainability returns.
New company, **Verizon**, for Decision Analysis section.
Streamlined Appendix 1A and 1B.
Added new Exercise.

Chapter 2

NEW opener—**Soko** and entrepreneurial assignment.
Simplified discussion on analyzing and recording process.
Streamlined discussion of classified vs. unclassified balance sheet.
Enhanced explanation of computing equity.
Enhanced Exhibit 2.4 to identify account categories.
Improved summary of transactions in the ledger.
Streamlined explanation of error correction in entries.
New accounting quality box with reference to KPMG data.
Revised Sustainability section on cost savings for small business.
Updated debt ratio analysis using **Skechers**.
Added two Quick Study assignments.
Updated **Piaggio**'s (IFRS) balance sheet.

Chapter 3

NEW opener—**re:char** and entrepreneurial assignment.
Streamlined accrual-basis vs. cash-basis section.
New box on how accounting is used to claw back false gains.
Streamlined introduction to accounting adjustments.
Continue to emphasize 3-step adjusting process.
Simplified the "Explanation" section for each adjustment.
Enhanced Exhibit 3.12 on summary of adjustments.
Updated Sustainability section on how accounting aided funding of recycling business.
Updated profit margin analysis using **Limited Brands**.
Added one Quick Study and one Exercise.
Updated **Piaggio**'s classified balance sheet.

Chapter 4

NEW opener—**LuminAID** and entrepreneurial assignment.
New art distinguishing between temporary vs permanent accounts.
Enhanced Exhibit 4.7 on steps of the accounting cycle.
Sustainability section on key to tracking numbers for **LuminAID**.
Updated current ratio analysis using **Limited Brands**.
Reorganized Global View section.

Chapter 5

NEW opener—**Sword & Plough** and entrepreneurial assignment.
Revised introduction for servicers vs. merchandisers using **Liberty Tax** and **Nordstrom** as examples.
New NTK 5-1 to aid learning of merchandising.
Reorganization of "Purchases" section to aid learning.
Enhanced entries on payment of purchases within vs. after discount period.
Simplified purchase returns illustration.
Reorganized explanation for FOB terms.
Reorganized entries for sales with vs. sales without discounts.
Enhanced entries to explain sales returns and how to account for inventory returned.
New section introducing adjusting entries for future sales discounts and sales returns and allowances—details in new Appendix 5C.
Introduced new accounts under new revenue recognition rules.
Expanded Exhibit 5.12 to cover updated merchandising transactions.
Updated "Shenanigans" box with data from KPMG.
Sustainability section on accounting for merchandising as key to **Sword & Plough**.
Updated acid-test ratio and gross margin analysis of **JCPenney**.
New Appendix 5D showing entries for gross vs. net method.
Added five Quick Study assignments and three Exercises.
Updated **Volkswagen** income report in Global View.

Chapter 6

NEW opener—**Homegrown Sustainable Sandwich** and entrepreneurial assignment.
Simplified specific identification calculations in Exhibit 6.4.
New image for each inventory method to show cost flows of goods at each sale date.
Added colored arrow lines to weighted average Exhibit 6.7 to show cost flows from purchase to sale.
Updated box on purchasing kickbacks using KPMG data.
Lower-of-cost-or-market section simplified.
Enhanced layout to explain effects of inventory errors across years.
Updated Sustainability section explains importance of perpetual inventory for organic producers.
Updated inventory turnover and days' sales in inventory analysis using **Toys 'R' Us**.
Appendix 6A: New images show cost flow of goods at each period end for each inventory measurement method.
Appendix 6B: Revised to be consistent with new revenue recognition rules.
Updated global accounting to remove convergence project reference.

Chapter 7

NEW opener—**Box** and entrepreneurial assignment.
Streamlined "System Principles" section.
Streamlined "System Components" section.
New Exhibit 7.4 to show the relation between a general ledger account and its subsidiary ledger.
Streamlined section on technology-based systems.
New image to show how **Sage** captures accounting basics.
Updated Sustainability section shows how **Box** helps nonprofits succeed.
Updated segment return analysis using **Callaway Golf**.

Chapter 8

NEW opener—**Robinhood** and entrepreneurial assignment.
New image for certificate of bond coverage.
New discussion of controls over social media with reference to **Facebook**'s "mood" posts.
New discussion box on how fraud is detected.
New evidence on how cash is stolen from companies.
Simplified the petty cash illustration.
Simplified the bank statement for learning.
Simplified discussion of debit and credit memoranda.
New table to identify timing differences for bank reconciliation.
New pie chart on the top contributors to fraud.
Updated Sustainability section highlights cash controls as necessary for **Robinhood**'s success.
Updated days' sales uncollected analysis using **Hasbro** and **Mattel**.
Deleted Appendix 8B (now Appendix 5D).

Chapter 9

NEW opener—**ReGreen** and entrepreneurial assignment.
Updated data in Exhibit 9.1.
New section for sales using store credit cards.
Simplified section for sales using bank (third-party) credit cards to show only entries for cash received at point of sale.
Revised NTK 9-1 for new credit card entries.
Reorganized section on direct write-off method.
New Exhibit 9.9 showing allowances set aside for future bad debts.
Continued 3-step process to estimate allowance for doubtful accounts.
New marginal T-account to show numbers flowing through Allowance account.
Continued Exhibit 9.13 arriving at the accounting adjustment.
New calendar graphic added as learning aid in Exhibit 9.15.
New Sustainability section on **ReGreen**'s efforts.
Updated accounts receivable analysis using **IBM** and **Oracle**.
Added one new Exercise.

Chapter 10

NEW opener—**Westland Distillery** and entrepreneurial assignment.
Updated data in Exhibit 10.1.
Revised images for Exhibit 10.2.
Simplified Exhibit 10.4 for lump-sum purchases.
Enhanced Exhibit 10.7 with actual numbers.
Added margin Excel computations for Exhibit 10.12.
Added margin table to Exhibit 10.14 as learning aid.
Updated **Dale Jarrett Racing** asset listing.
Added table to explain additional expenditures, including examples and entries.
New simple introduction to operating and capital leases.
Added paragraph on R&D expenditures.
Updated "In Control" fraud box with new KPMG data.
Sustainability section on how **Westland Distillery** relies on accounting for its success.
Updated asset turnover analysis using **Molson Coors** and **Boston Beer**.
Simplified Appendix 10A by excluding exchanges without commercial substance.

Chapter 11

NEW opener—**Hello Alfred** and entrepreneurial assignment.
Updated data in Exhibit 11.2.
Updated payroll tax rates and explanations.
New explanation of Additional Medicare Tax.
Updated unemployment tax rate section.
New section on internal controls for payroll.
New box on payroll fraud with KPMG data.
Simplified bonus explanation and computations.
Updated NTK 11-2 and NTK 11-3.
Sustainability section explains accounting for "Alfreds."
Updated payroll reports in Appendix 11A.

Chapter 12

NEW opener—**Scholly** and entrepreneurial assignment.
Streamlined discussion of partnership characteristics.
New margin T-accounts for Exhibits 12.1 and 12.2.
Updated Sustainability section describes accounting for nonprofit sales of **Scholly**.
Added two Quick Study assignments, one Exercise, and one Problem.

Chapter 13

NEW opener—**Tesla Motors** and entrepreneurial assignment.
Streamlined discussion of corporate characteristics.
Updated the **Target** stock quote data.
Simplified section on stock dividends.
Continued 5-step process for stock dividends.
Revised Exhibit 13.8 to show dividend effects.
New reference to **Apple**'s 7-for-1 stock split.
Streamlined section on dividend preference of preferred stock.
Updated the **Apple** statement of equity.
Sustainability section explains how **Tesla** relies on accounting data to make energy-wise decisions.
Updated PE and dividend yield ratios for **Amazon** and **Altria**.
Simplified book value per share computations.

Chapter 14

NEW opener—**Uber** and entrepreneurial assignment.
Simplified Exhibit 14.1 for ease of learning.
Updated the **IBM** stock quote data.
New bond image from **Minnesota Vikings** stadium bonds.
New NTK 14-1 covering bonds issued at par.
Simplified Exhibit 14.6 on discount bonds.
New T-accounts with Exhibit 14.6 to show bonds payable and the discount on bonds payable.
Simplified Exhibit 14.10 on premium bonds.
Bond pricing moved to Appendix 14A.
Simplified Exhibit 14.14 for note amortization schedule.
Updated "Missing Debt" box using new data from KPMG.
Sustainability section explains bond financing for **Uber**.
Updated debt-to-equity analysis using **Amazon**.
New margin Excel computations for bond pricing.
Added margin T-accounts for bonds in Appendix 14B.
Simplified lease example in Appendix 14C.

Chapter 15

NEW opener—**Echoing Green** and entrepreneurial assignment.
Updated data in Exhibit 15.1.
Continued 3-step process for fair value adjustment.
Reorganized section on securities with significant influence.
New Exhibit 15.7 to describe accounting for equity securities by ownership level.
Updated **Google** example for comprehensive income.
Updated Sustainability section stresses investment accounting for **Echoing Green**.
Updated component-returns analysis using **Gap**.
Investments in international operations set online in Appendix 15A.

Chapter 16

NEW opener—**Amazon** and entrepreneurial assignment.
Continued infographics on examples of operating, investing, and financing cash flows.
Kept 5-step process for preparing statement of cash flows.
New graphic on use of indirect vs. direct methods.
New presentation to highlight indirect adjustments to income.
Updated box comparing operating cash flows to income for companies.
Kept "Summary T-Account" for learning statement of cash flows.
New Sustainability section on **Amazon**'s initiatives.
Updated cash flow on total assets analysis using **Nike**.

Chapter 17

NEW opener—**Morgan Stanley** and entrepreneurial assignment.
Streamlined the "Basics of Analysis" section.
Simplified computations for comparative statements.
Updated data for analysis of **Apple** using horizontal, vertical, and ratio analysis.
Updated comparative analysis using **Google** and **Samsung**.
New evidence on accounting ploys by CFOs.
New Sustainability section on **Morgan Stanley**'s initiatives.
Revised "All Else Being Equal" Fraud box using KPMG data.
Revised Appendix 17A to reflect new rules that remove separate disclosure of extraordinary items.
Revised assignments for new standard on extraordinary items.

Chapter 18

NEW opener—**NatureBox** and entrepreneurial assignment.
Simplified discussion on purpose of managerial accounting.
Added references to more real-world companies.
Added discussion of enterprise risk management.
Revised Exhibit 18.1 to show common managerial decisions.
Simplified discussion on nature of managerial accounting.
New section on careers in managerial accounting and importance of managerial accounting for nonaccountants.
New exhibit on managerial accounting salaries.
Added example on cost of iPhone.
New section head and revised discussion for nonmanufacturing costs.
Added graphics to cost flow exhibit.
Reduced number of overhead items in exhibit for cost of goods manufactured statement.
Added section on computing cost per unit.
Updated "trends" section to include *gig economy* (**Uber**), triple bottom line, and ISO 9000 standards.
Expanded discussion of sustainability and SASB.
Expanded Sustainability section with Decision Insight chart and **NatureBox** example.
Added Discussion Question on triple bottom line.
Added two Quick Studies on raw materials activity for **3M Co**.
Added Exercises on sustainability reporting for **Starbucks** and **Hyatt**.

Chapter 19

NEW opener—**Neha Assar** and entrepreneurial assignment.
Simplified discussion of cost accounting systems.
Simplified direct material and direct labor cost flows and entries.
Added time period information to graphic on 4-step overhead process.

Simplified discussion of recording overhead costs.
Added journal entry for depreciation expense on equipment in NTK 19-5.
Revised exhibits for posting of direct materials, direct labor, and overhead to general ledger accounts and job cost sheets.
Added section on using job cost sheet for managerial decisions.
Added entries for transfers of costs to Finished Goods Inventory and to COGS.
Expanded discussion of job order costing for service firms.
New exhibit and cost flows for service firms.
Expanded Sustainability section, including **USPS** and **Neha Assar** examples.
New NTK on using the job cost sheet.
Added new Quick Study and new Exercise on costing for service firms.

Chapter 20

NEW opener—**Stance** and entrepreneurial assignment.
Revised exhibit on cost flows in job order and process costing systems.
Revised exhibit on production data and physical flow of units.
Added transfer to finished goods and updated ending balance to WIP T-account for second process.
New section on using process cost summary for decisions.
Added discussion of the raw materials yield to "trends" section.
Revised exhibit and discussion of assigning cost using FIFO.
Expanded discussion of hybrid and operation costing.
Expanded Sustainability discussion, including **General Mills** and **Stance** examples.
Added Discussion Question on sustainable raw materials sourcing.

Chapter 21

NEW opener—**Sweetgreen** and entrepreneurial assignment.
New exhibit on building blocks of CVP analysis.
Revised discussion on uses of CVP analysis.
Revised discussion of fixed and variable costs.
Added data points to margin of fixed and variable cost exhibit.
New graphic on examples of fixed, variable, and mixed costs.
Revised discussion on step-wise and curvilinear costs.
Revised cost data for measuring cost behavior.
Reorganized break-even section into three methods.
Revised discussions of contribution margin income statement and CVP charts.
Moved margin of safety to section on applying CVP.
Added discussion of sales mix and break-even for **Amazon**.
Revised discussion of assumptions in CVP.
Revised Sustainability section with **Nike**, CVP analysis, and **Sweetgreen** example.
Expanded appendix on variable and absorption costing.
Added Discussion Question, four Quick Studies, and 1 Exercise on variable and absorption costing.
Revised Global View on **BMW**'s i3 break-even point.

Chapter 22

NEW opener—**TaTa Topper** and entrepreneurial assignment.
Revised discussion, with new exhibit, of budgeting as a management tool.
Revised discussion on benefits of budgeting.
Added new graphic on benefits of budgeting.
Revised discussion of budgeting and human behavior.
New Decision Insight on zero-based budgeting.
New NTK on the benefits and potential costs of budgeting.
Revised master budget process exhibit to reflect types of activities.
Added graphics showing formulas to compute direct materials requirements and direct labor cost.
Revised discussions of direct materials, direct labor, and factory overhead budgets.
Added discussion and exhibits of estimated cash receipts with alternative collection timing and uncollectible accounts.
Added T-account to cash budget exhibit.
New NTKs on the cash budget.
Added margin point on the impact of credit and debit card fees on cash receipts.
Added section with exhibit on budgeting for service companies.
New Sustainability section with discussion of **Johnson & Johnson** and exhibit and **TaTa Topper** example.
Added Discussion Question and Quick Study on sustainability and budgeting.
Added Exercise on budgeted cash payments on account.

Chapter 23

NEW opener—**Riide** and entrepreneurial assignment.
New exhibit on fixed versus flexible budgets.
Revised discussion of fixed versus flexible budgets.
New 3-step process to prepare a flexible budget.
Added section on formula for computing total budgeted cost in a flexible budget.
Revised discussion of setting standard costs.
Revised exhibit on cost variance formula.
Added discussion of potential causes of direct labor variances.
New 3-step process for determining standard overhead rate.
New exhibit, formula, and computation of standard overhead applied.
Revised discussion of overhead volume and controllable variances.
Added calculations of controllable variance and budgeted overhead costs.
Added discussion, exhibit, and Discussion Question of the pros and cons of standard costing.
Added discussion of the International Integrated Reporting Council.
New Sustainability section with discussion of **Intel** and executive pay and **Riide** examples.
Added two Quick Studies on sustainability and standard costs.

Chapter 24

NEW opener—**Ministry of Supply** and entrepreneurial assignment.
Reorganized chapter.
Revised discussion of performance evaluation and decentralization.
Revised discussion of **Kraft Heinz** responsibility centers.
Revised exhibit on responsibility accounting.
Revised discussion of responsibility accounting reports.
Added NTKs on responsibility accounting, cost allocations, and balanced scorecard.
Revised discussion of indirect expense allocations.
New exhibit and discussion of general model of expense allocation.
New exhibit on common allocation bases for indirect expenses.
Revised discussion of preparing departmental income.
New exhibit and formula for computing departmental income.
Added short section on transfer pricing to the chapter.
New Sustainability section with discussion of **General Mills**, **Target** performance reporting, and **Ministry of Supply** example.

Chapter 25

NEW opener—**Simply Gum** and entrepreneurial assignment.
Added exhibit and discussion of capital budgeting process.
Added exhibit and discussion of cash inflows and outflows in capital budgeting.
Added lists of strengths and weaknesses, with revised discussion, of payback period.
Added list of weaknesses of accounting rate of return method.
New art showing timeline of NPV calculation.
Added discussion of outsourcing in make or buy decisions.
Added discussion of capital rationing.
Added financial calculator and Excel steps for many calculations.
Revised discussion of relevant costs and benefits.
Revised Sustainability section on capital budgeting for solar investments and **Simply Gum** example.
Added two Quick Studies on capital budgeting for solar investments.
Added Appendix and end-of-chapter assignments on product pricing.

Appendix A

New financial statements for **Apple, Google**, and **Samsung**.

Appendix B

New organization with detailed subheadings.
Added Excel computation for PV and FV calculations.
Added Excel computation for PV and FV of annuity calculations.

Appendix C

New 3-step method for activity-based costing.
Revised discussion of applying activity-based costing.
Revised example and new exhibits of activity-based costing.
Added discussion of value-added activities.

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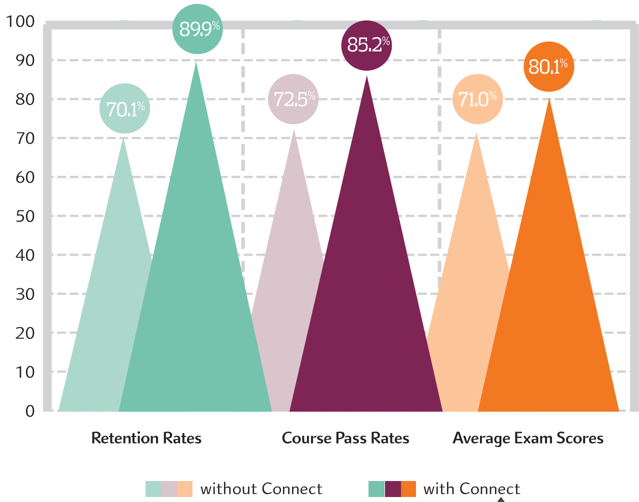

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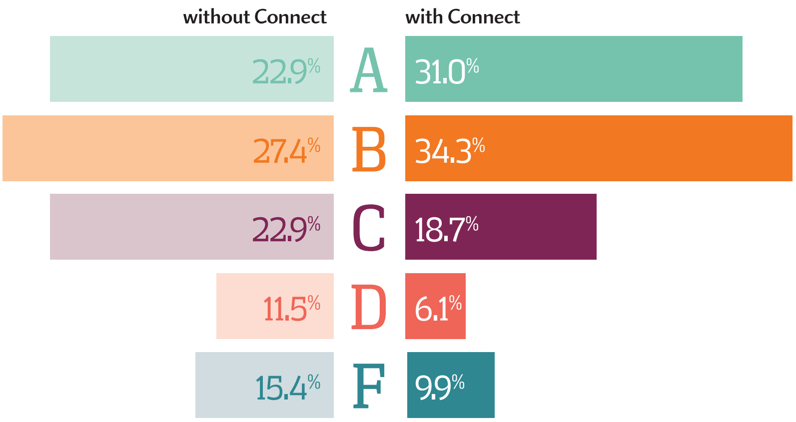

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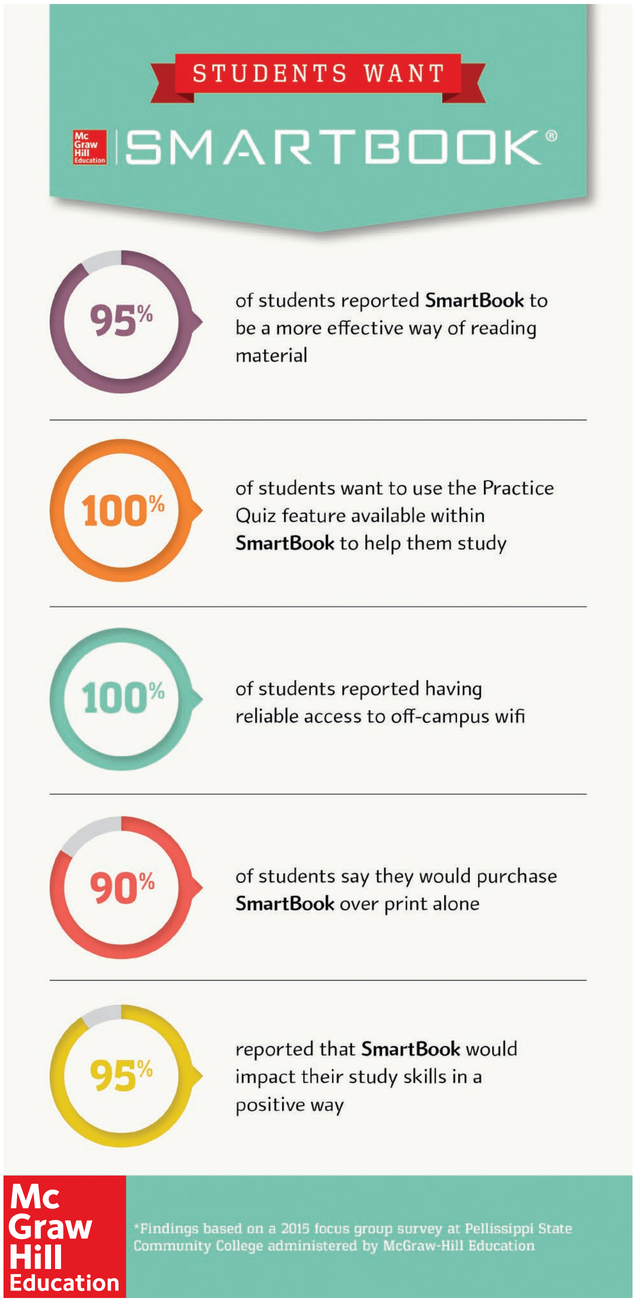

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Susan Blizzard, San Antonio College
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Gary Bower, Community College of Rhode Island–Flanagan
Leslee Brock, Southwest Mississippi Community College
Gregory Brookins, Santa Monica College
Regina Brown, Eastfield College
Tracy L. Bundy, University of Louisiana at Lafayette
Roy Carson, Anne Arundel Community College
Deborah Carter, Coahoma Community College
Roberto Castaneda, DeVry University Online
Amy Chataginer, Mississippi Gulf Coast Community College
Gerald Childs, Waukesha County Technical College
Colleen Chung, Miami Dade College–Kendall
Shifei Chung, Rowan University
Robert Churchman, Harding University
Marilyn Ciolino, Delgado Community College
Thomas Clement, University of North Dakota
Oyinka Coakley, Broward College
Susan Cockrell, Birmingham-Southern College
Lisa Cole, Johnson County Community College
Robbie R. Coleman, Northeast Mississippi Community College
Christie Comunale, Long Island University–C.W. Post Campus
Jackie Conrecode, Florida Gulf Coast University
Debora Constable, Georgia Perimeter College
Susan Cordes, Johnson County Community College
Anne Cordozo, Broward College
Cheryl Corke, Genesee Community College
James Cosby, John Tyler Community College
Ken Couvillion, Delta College
Loretta Darche, Southwest Florida College
Judy Daulton, Piedmont Technical College
Annette Davis, Glendale Community College
Dorothy Davis, University of Louisiana–Monroe
Walter DeAguero, Saddleback College
Mike Deschamps, MiraCosta College
Pamela Donahue, Northern Essex Community College
Steve Doster, Shawnee State University
Larry Dragosavac, Edison Community College
Samuel Duah, Bowie State University
Robert Dunlevy, Montgomery County Community College
Jerrilyn Eisenhauer, Tulsa Community College–Southeast
Ronald Elders, Virginia College
Terry Elliott, Morehead State University
Patricia Feller, Nashville State Community College
Annette Fisher, Glendale Community College
Ron Fitzgerald, Santa Monica College
David Flannery, Bryant and Stratton College
Hollie Floberg, Tennessee Wesleyan College
Linda Flowers, Houston Community College
Jeannie Folk, College of DuPage
Rebecca Foote, Middle Tennessee State University
Paul Franklin, Kaplan University
Tim Garvey, Westwood College
Barbara Gershman, Northern Virginia Community College–Woodbridge
Barbara Gershowitz, Nashville State Technical Community College
Mike Glasscock, Amarillo College
Diane Glowacki, Tarrant County College
Ernesto Gonzalez, Florida National College
Lori Grady, Bucks County Community College
Gloria Grayless, Sam Houston State University
Ann Gregory, South Plains College
Rameshwar Gupta, Jackson State University
Amy Haas, Kingsborough Community College
Pat Halliday, Santa Monica College
Keith Hallmark, Calhoun Community College
Rebecca Hancock, El Paso Community College–Valley Verde
Mechelle Harris, Bossier Parish Community College
Tracey Hawkins, University of Cincinnati–Clermont College
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Laurie Hays, Western Michigan University
Roger Hehman, University of Cincinnati–Clermont College
Cheri Hernandez, Des Moines Area Community College
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Melanie Hicks, Liberty University
James Higgins, Holy Family University
Patricia Holmes, Des Moines Area Community College
Barbara Hopkins, Northern Virginia Community College–Manassas
Wade Hopkins, Heald College
Aileen Huang, Santa Monica College
Les Hubbard, Solano College
Deborah Hudson, Gaston College
James Hurst, National College
Constance Hylton, George Mason University
Christine Irujo, Westfield State University

Tamela Jarvais, Prince George's Community College
Fred Jex, Macomb Community College
Gina M. Jones, Aims Community College
Jeff Jones, College of Southern Nevada
Rita Jones, Columbus State University
Dmitriy Kalyagin, Chabot College
Thomas Kam, Hawaii Pacific University
Naomi Karolinski, Monroe Community College
Shirly A. Kleiner, Johnson County Community College
Kenneth A. Koerber, Bucks County Community College
Jill Kolody, Anne Arundel Community College
Tamara Kowalczyk, Appalachian State University
Anita Kroll, University of Wisconsin–Madison
David Krug, Johnson County Community College
Christopher Kwak, DeAnza College
Jeanette Landin, Empire College
Beth Lasky, Delgado Community College
Neal Leviton, Santa Monica College
Danny Litt, University of California Los Angeles
James L. Lock, Northern Virginia Community College
Steve Ludwig, Northwest Missouri State University
Debra Luna, El Paso Community College
Amado Mabul, Heald College
Lori Major, Luzerne County Community College
Jennifer Malfitano, Delaware County Community College
Maria Mari, Miami Dade College–Kendall
Thomas S. Marsh, Northern Virginia Community College–Annandale
Karen Martinson, University of Wisconsin–Stout
Brenda Mattison, Tri-County Technical College
Stacie Mayes, Rose State College
Mark McCarthy, East Carolina University
Clarice McCoy, Brookhaven College
Tammy Metzke, Milwaukee Area Technical College
Jeanine Metzler, Northampton Community College
Theresa Michalow, Moraine Valley Community College
Julie Miller, Chippewa Valley Tech College
Tim Miller, El Camino College
John Minchin, California Southern University
Edna C. Mitchell, Polk State College
Jill Mitchell, Northern Virginia Community College
April Mohr, Jefferson Community and Technical College, SW
Lynn Moore, Aiken Technical College
Angela Mott, Northeast Mississippi Community College
Andrea Murowski, Brookdale Community College
Timothy Murphy, Diablo Valley College
Kenneth F. O'Brien, Farmingdale State College
Kathleen O'Donnell, Onondaga Community College
Ahmed Omar, Burlington County College
Robert A. Pacheco, Massasoit Community College
Margaret Parilo, Cosumnes River College
Paige Paulsen, Salt Lake Community College
Yvonne Phang, Borough of Manhattan Community College
Gary Pieroni, Diablo Valley College
Debbie Porter, Tidewater Community College, Virginia Beach
Kristen Quinn, Northern Essex Community College
David Ravetch, University of California Los Angeles
Ruthie Reynolds, Howard University
Cecile Roberti, Community College of Rhode Island
Morgan Rockett, Moberly Area Community College
Patrick Rogan, Cosumnes River College
Paul Rogers, Community College of Beaver County
Brian Routh, Washington State University–Vancouver
Helen Roybark, Radford University
Alphonse Ruggiero, Suffolk County Community College
Martin Sabo, Community College of Denver
Arjan Sadhwani, South University
Gary K. Sanborn, Northwestern Michigan College
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Jean Wells-Jessup, Howard University
Christopher Widmer, Tidewater Community College
Andrew Williams, Edmonds Community College
Jonathan M. Wild, University of Wisconsin–Madison
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Brief Contents

Contents


CARLA HARRIS

Fundamental Accounting Principles

chapter 1

Accounting in Business

Chapter Preview

ACCOUNTING USES	ETHICS AND ACCOUNTING	TRANSACTION ANALYSIS	FINANCIAL STATEMENTS
C1 Purpose of accounting **C2** Accounting information users Opportunities in accounting	**C3** Ethics—Key concept **C4** Generally accepted accounting principles Conceptual framework	**A1** Accounting equation and its components **P1** Transaction analysis—Illustrated	**P2** Income statement Statement of owner's equity Balance sheet Statement of cash flows **A2** Financial analysis
NTK 1-1	NTK 1-2	NTK 1-3, 1-4	NTK 1-5

***Chapter Preview** is organized by key topics and includes learning objectives and **Need-To-Know (NTK)** guided examples*

***Learning Objectives** are classified as conceptual, analytical, or procedural*

Learning Objectives

CONCEPTUAL

C1 Explain the purpose and importance of accounting.

C2 Identify users and uses of, and opportunities in, accounting.

C3 Explain why ethics are crucial to accounting.

C4 Explain generally accepted accounting principles and define and apply several accounting principles.

C5 *Appendix 1B*—Identify and describe the three major activities of organizations.

ANALYTICAL

A1 Define and interpret the accounting equation and each of its components.

A2 Compute and interpret return on assets.

A3 *Appendix 1A*—Explain the relation between return and risk.

PROCEDURAL

P1 Analyze business transactions using the accounting equation.

P2 Identify and prepare basic financial statements and explain how they interrelate.

Apple of My Eye

*A **Decision Feature** launches each chapter showing the relevance of accounting for a real entrepreneur. An **Entrepreneurial Decision** assignment returns to this feature with a mini-case*

CUPERTINO, CA—"When I designed the Apple stuff," says Steve Wozniak (a.k.a. the *Wizard of Woz*), "I never thought in my life I would have enough money to fly to Hawaii or make a down payment on a house." But some dreams do come true. Woz, along with Steve Jobs and Ron Wayne, founded **Apple** (**Apple.com**) when Woz was 25 and Jobs was 21.

The young entrepreneurs faced challenges, including how to read and interpret accounting data. Another challenge was how to finance the company, which they did by selling their prized possessions—Woz's Hewlett-Packard calculator and Jobs's Volkswagen van. The $1,300 raised helped them purchase the equipment Woz used to build the first Apple computer.

"The first Apple was . . . my whole life"

—Steve Wozniak

In setting up their company, the owners had to decide what type of entity to form—a partnership or a corporation. They decided on a partnership, and Ron "sat down at a typewriter and typed our partnership contract right out of his head," recalls Woz. "He did an etching of Newton under the apple tree for the cover of our Apple I manual."

The partnership agreement included Ron as a third partner with 10% ownership. However, a few days later, Ron had a change of heart when he considered the unlimited liability of a partnership. He pulled out, leaving Woz and Jobs holding 50% each. Within nine months, Woz and Jobs identified some advantages to the corporate form, and they converted Apple to a corporation.

As their company grew, Woz and Jobs had to learn more accounting, along with details of preparing and interpreting financial statements. Important questions involving transaction analysis and financial reporting arose, and the owners took care to do things right. "Everything we did," asserts Woz, "we were setting the tone for the world."

Woz and Jobs improved their accounting system and focused it on providing information for Apple's business decisions. Today, Woz believes that Apple is integral to the language of technology, just as accounting is the language of business. In retrospect, Woz says, "Every dream I have ever had in life has come true ten times over."

Sources: *Woz website,* Woz.org, January 2017; *iWoz: From Computer Geek to Cult Icon,* W.W. Norton & Co., 2006; *Founders at Work,* Apress, 2007; *Apple website,* January 2017

IMPORTANCE OF ACCOUNTING

C1 Explain the purpose and importance of accounting.

Why is accounting so popular on campus? Why are there so many openings for accounting jobs? Why is accounting so important to companies? Why do politicians and business leaders focus on accounting regulations? The answer is that we live in an information age in which accounting information impacts us all.

Accounting is an information and measurement system that identifies, records, and communicates information about an organization's business activities. Exhibit 1.1 portrays these accounting functions.

EXHIBIT 1.1

Accounting Functions

Identifying | Recording | Communicating

Select transactions and events | Input, measure, and log | Prepare, analyze, and interpret

Our most common contact with accounting is through credit approvals, checking accounts, tax forms, and payroll. These experiences focus on **recordkeeping,** or **bookkeeping,** which is the recording of transactions and events. This is just one part of accounting. Accounting also includes the analysis and interpretation of information.

Technology is a key part of modern business and plays a major role in accounting. Technology reduces the time, effort, and cost of recordkeeping while improving accuracy. Some small organizations perform accounting tasks manually, but even they are impacted by technology. As technology makes more information available, the demand for accounting knowledge increases. Consulting, planning, and other financial services are now closely linked to accounting.

Point: Technology is only as useful as the accounting data available, and users' decisions are only as good as their understanding of accounting.

Users of Accounting Information

C2 Identify users and uses of, and opportunities in, accounting.

Accounting is called the *language of business* because all organizations set up an accounting system to communicate data that help people make better decisions. Exhibit 1.2 divides these people into two user groups, *external users* and *internal users,* and provides examples of each.

EXHIBIT 1.2

Users of Accounting Information

Infographics reinforce key concepts through visual learning

External users

- Lenders
- Shareholders
- Governments
- Consumer groups
- External auditors
- Customers

Internal users

- Executives
- Managers
- Internal auditors
- Sales staff
- Budget analysts
- Controllers

External Information Users **External users** of accounting information do *not* directly run the organization and have limited access to its accounting information. **Financial accounting** is the area of accounting aimed at serving external users by providing them with *general-purpose financial statements*. The term *general-purpose* refers to the broad range of purposes for which external users rely on these statements. Following is a partial list of external users and decisions they make with accounting information.

- *Lenders* (creditors) loan money or other resources to an organization. Banks, savings and loans, co-ops, and mortgage and finance companies are lenders. Lenders use information to assess whether an organization will repay its loans with interest.
- *Shareholders* (*investors*) are the owners of a corporation. They use accounting reports in deciding whether to buy, hold, or sell stock.
- *Directors* are elected to a *board of directors* that oversees an organization. Directors report to shareholders and they hire top executive management.
- *External* (independent) *auditors* examine financial statements to verify that they are prepared according to generally accepted accounting principles.
- *Nonexecutive employees* and *labor unions* use financial statements to judge the fairness of wages, assess job prospects, and bargain for better wages.
- *Regulators* have legal authority over certain activities of organizations. For example, the Internal Revenue Service (IRS) requires accounting reports in computing taxes.
- *Voters, legislators,* and *government officials* use accounting information to monitor and evaluate government receipts and expenses.
- *Contributors* to nonprofit organizations use accounting information to evaluate the use and impact of their donations.
- *Suppliers* use accounting information to judge the financial health of a customer before making sales on credit.
- *Customers* use financial reports to assess the staying power of potential suppliers.

Internal Information Users **Internal users** of accounting information directly manage and operate the organization such as the chief executive officer (CEO) and other executive or managerial-level employees. **Managerial accounting** is the area of accounting that serves the decision-making needs of internal users. Internal reports are not subject to the same rules as external reports and are designed for the unique needs of internal users. Following is a partial list of internal users and decisions they make with accounting information.

- *Research and development managers* need information about projected costs and revenues of innovations.
- *Purchasing managers* need to know what, when, and how much to purchase.
- *Human resource managers* need information about employees' payroll, benefits, performance, and compensation.
- *Production managers* depend on information to monitor costs and ensure quality.
- *Distribution managers* need reports for timely, accurate, and efficient delivery of products and services.
- *Marketing managers* use reports about sales and costs to target consumers, set prices, and monitor consumer needs, tastes, and price concerns.
- *Service managers* require information on the costs and benefits of looking after products and services.

Opportunities in Accounting

Accounting has four broad areas of opportunities: financial, managerial, taxation, and accounting-related. Exhibit 1.3 lists selected opportunities in each area.

EXHIBIT 1.3

Accounting Opportunities

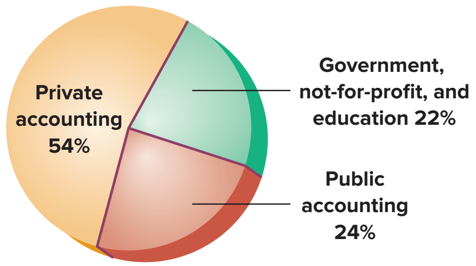
Opportunities in Accounting

Financial	Managerial	Taxation	Accounting-related	
• Preparation	• General accounting	• Preparation	• Lenders	• FBI investigators
• Analysis	• Cost accounting	• Planning	• Consultants	• Market researchers
• Auditing	• Budgeting	• Regulatory	• Analysts	• Systems designers
• Regulatory	• Internal auditing	• Investigations	• Traders	• Merger services
• Consulting	• Consulting	• Consulting	• Directors	• Business valuation
• Planning	• Controller	• Enforcement	• Underwriters	• Forensic accounting
• Criminal investigation	• Treasurer	• Legal services	• Planners	• Litigation support
	• Strategy	• Estate plans	• Appraisers	• Entrepreneurs

Exhibit 1.4 shows that the majority of opportunities are in *private accounting,* which are employees working for businesses. *Public accounting* offers the next largest number of opportunities, which involve accounting services such as auditing and taxation. Opportunities also exist in government and not-for-profit agencies, including business regulation and investigation of law violations.

EXHIBIT 1.4

Accounting Jobs by Area



Point: The largest accounting firms are **EY, KPMG, PwC,** and **Deloitte.**

Accounting specialists are highly regarded and their professional standing is often denoted by a certificate. Certified public accountants (CPAs) must meet education and experience requirements, pass an examination, and exhibit ethical character. Many accounting specialists hold certificates in addition to or instead of the CPA. Two of the most common are the certificate in management accounting (CMA) and the certified internal auditor (CIA). Employers also look for specialists with designations such as certified bookkeeper (CB), certified payroll professional (CPP), certified fraud examiner (CFE), and certified forensic accountant (CrFA).

Point: Census Bureau reports that higher education yields higher average pay:

Master's degree	$73,738
Bachelor's degree	56,665
Associate's degree	39,771
High school degree	30,627
No high school degree	20,241

Demand for accounting specialists is strong. Exhibit 1.5 reports average annual salaries for several accounting positions. Salary variation depends on location, company size, professional designation, experience, and other factors. For example, salaries for chief financial officers (CFOs) range from under $100,000 to more than $1 million per year. Likewise, salaries for bookkeepers range from under $30,000 to more than $80,000.

EXHIBIT 1.5

Accounting Salaries for Selected Positions

Field	Title (experience)	2016 Salary	2021 Estimate*
Public Accounting	Partner	$240,000	$265,000
	Manager (6–8 years)	109,500	121,000
	Senior (3–5 years)	88,000	97,000
	Junior (0–2 years)	60,500	67,000
Private Accounting	CFO	290,000	320,000
	Controller/Treasurer	180,000	199,000
	Manager (6–8 years)	98,500	109,000
	Senior (3–5 years)	81,500	90,000
	Junior (0–2 years)	58,000	64,000
Recordkeeping	Full-charge bookkeeper	60,500	67,000
	Accounts manager	58,000	64,000
	Payroll manager	59,500	65,500
	Accounting clerk (0–2 years)	39,500	43,500

*Estimates assume a 2% compounded annual increase over current levels (rounded to nearest $500).

Point: U.S. Bureau of Labor reports higher education is linked to a lower unemployment rate:

Bachelor's degree or more	3.2%
Associate's degree	4.5%
High school degree	6.0%
No high school degree	9.0%

Point: For more salary info:
Abbott-Langer.com
AICPA.org
Kforce.com

NEED-TO-KNOWs highlight key procedures and concepts in learning accounting

NEED-TO-KNOW 1-1

Accounting Users

C1 C2

Do More: QS 1-1, QS 1-2, E 1-1, E 1-2, E 1-3

Identify the following users of accounting information as either an (a) external or (b) internal user.

1. ____ Regulator	**4.** ____ Controller	**7.** ____ Production manager
2. ____ CEO	**5.** ____ Executive employee	**8.** ____ Nonexecutive employee
3. ____ Shareholder	**6.** ____ External auditor	

Solution

1. a **2.** b **3.** a **4.** b **5.** b **6.** a **7.** b **8.** a

FUNDAMENTALS OF ACCOUNTING

Accounting is guided by principles, standards, concepts, and assumptions. This section describes several of these key fundamentals of accounting.

Ethics—A Key Concept

C3

Explain why ethics are crucial to accounting.

For information to be useful, it must be trusted. This demands ethics in accounting. **Ethics** are beliefs that distinguish right from wrong. They are accepted standards of good and bad behavior.

Identifying the ethical path is a course of action that avoids casting doubt on one's decisions. For example, accounting users are less likely to trust an auditor's report if the auditor's pay depends on that client's success. To avoid such concerns, ethics rules are often set. For example, auditors are banned from direct investment in their client and cannot accept pay that depends on figures in the client's reports. Exhibit 1.6 gives a three-step process for making ethical decisions.

EXHIBIT 1.6

Ethical Decision Making

1. Identify ethical concerns	2. Analyze options	3. Make ethical decision

Use personal ethics to recognize an ethical concern.	Consider all good and bad consequences.	Choose best option after weighing all consequences.

Accountants face ethical choices as they prepare financial reports. These choices can affect the salaries and bonuses paid to workers. They can even affect the success of products and services. Misleading information can lead to a wrongful closing of a division that harms workers and the business. There is an old saying: *Good ethics are good business.*

Point: A *Code of Professional Conduct* is available at AICPA.org.

Fraud Triangle: Ethics under Attack The fraud triangle asserts that *three* factors must exist for a person to commit fraud: opportunity, pressure, and rationalization.

- *Opportunity*. A person must be able to commit fraud with a low risk of getting caught.
- *Pressure,* or incentive. A person must feel pressure or have incentive to commit fraud.
- *Rationalization,* or attitude. A person justifies the fraud and fails to see its criminal nature.

The key to dealing with fraud is to focus on prevention. It is less expensive and more effective to prevent fraud from happening than it is to detect it. By the time a fraud is discovered, the money is often gone and chances for recovery are slim.

Point: ACFE reports 86% of fraud victims recover none or only part of their losses.

Both internal and external users rely on internal controls to reduce the likelihood of fraud. *Internal controls* are procedures set up to protect company property and equipment, ensure reliable accounting, promote efficiency, and encourage adherence to policies. Examples are good records, physical controls (locks, passwords, guards), and independent reviews.

Decision Insight boxes highlight relevant items from practice

Decision Insight

Cooking the Books Our economic and social welfare depends on reliable accounting. Some individuals forgot that and are now paying their dues. They include Hisao Tanaka of **Toshiba**, guilty of inflating income by $1.2 billion over five years; Tsuyoshi Kikukawa of **Olympus**, guilty of hiding $1.7 billion in losses; Bernard Ebbers of **WorldCom**, convicted of an $11 billion accounting scandal; Andrew Fastow of **Enron**, guilty of hiding debt and inflating income; and Ramalinga Raju of **Satyam Computers**, accused of overstating assets by $1.5 billion. ■

© Craig Ruttle/AP Images

Real company names are in bold magenta

Enforcing Ethics In response to major accounting scandals, like those at **Enron** and **WorldCom**, Congress passed the **Sarbanes-Oxley Act,** also called *SOX,* to help curb financial abuses at companies that sell their stock to the public. Compliance with SOX requires documentation and verification of internal controls and increased emphasis on internal control effectiveness. Failure to comply can yield financial penalties, stock market delisting, and criminal prosecution of executives. Management must issue a report stating that internal controls are effective. CEOs and CFOs who knowingly sign off on bogus accounting reports risk millions of dollars in fines and years in prison. **Auditors** also must verify the effectiveness of internal controls.

A listing of some of the more publicized accounting scandals in recent years follows.

Point: An **audit** examines whether financial statements are prepared using GAAP. It does *not* ensure *absolute* accuracy of the statements.

Point: *Bloomberg Businessweek* reports that external audit costs run about $35,000 for start-ups, up from $15,000 pre-SOX.

Company	Alleged Accounting Abuses
Tesco, Plc	Inflated revenues and income, and deferred expenses
WorldCom	Understated expenses to inflate income and hid debt
AOL Time Warner.	Inflated revenues and income
Fannie Mae	Inflated income
Xerox	Inflated income
Bristol-Myers Squibb	Inflated revenues and income
Tyco	Hid debt and CEO evaded taxes
Global Crossing	Inflated revenues and income
Nortel Networks.	Understated expenses to inflate income
Enron	Inflated income, hid debt, and bribed officials

Congress passed the **Dodd-Frank Wall Street Reform and Consumer Protection Act,** or *Dodd-Frank,* to (1) promote accountability and transparency, (2) put an end to the notion of "too big to fail," and (3) protect consumers from abusive financial services. Two of its notable provisions are:

- *Clawback* Mandates recovery (clawback) of excess incentive compensation.
- *Whistleblower* Requires the SEC to pay whistleblowers between 10% and 30% of any sanction exceeding $1 million.

Point: Sarbanes-Oxley Act requires a business that sells stock to disclose if it has adopted a code of ethics for its executives and the contents of that code.

C4

Explain generally accepted accounting principles and define and apply several accounting principles.

Generally Accepted Accounting Principles

Financial accounting is governed by concepts and rules known as **generally accepted accounting principles (GAAP).** GAAP aims to make information *relevant, reliable,* and *comparable*. Relevant information affects decisions of users. Reliable information is trusted by users. Comparable information aids in contrasting organizations.

In the United States, the **Securities and Exchange Commission (SEC),** a government agency, has the legal authority to set GAAP. The SEC oversees proper use of GAAP by companies that raise money from the public through issuance of stock and debt. The SEC has largely delegated the task of setting U.S. GAAP to the **Financial Accounting Standards Board (FASB),** which is a private-sector group that sets both broad and specific principles.

Point: State ethics codes require CPAs who audit financial statements to disclose areas where those statements fail to comply with GAAP. If CPAs fail to report noncompliance, they can lose their licenses and be subject to criminal and civil actions and fines.

International Standards

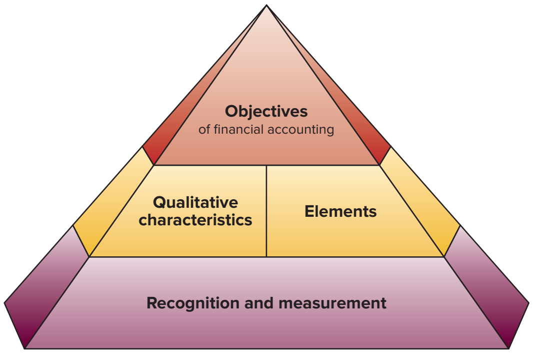
Our global economy creates demand by external users for comparability in accounting reports. To that end, the **International Accounting Standards Board (IASB),** an independent group (consisting of individuals from many countries), issues **International Financial Reporting Standards (IFRS)** that identify preferred accounting practices. These standards are in many ways similar to, but sometimes different from, U.S. GAAP. Differences between U.S. GAAP and IFRS have been decreasing in recent years as the FASB and IASB pursued a process aimed at reducing inconsistencies.

***Global View** section discusses international accounting relevant to each chapter—it is located after each chapter's assignments*

Conceptual Framework

The FASB **conceptual framework** consists broadly of the following:

- **Objectives**—to provide information useful to investors, creditors, and others.
- **Qualitative Characteristics**—to require *relevant, reliable,* and *comparable* information.
- **Elements**—to define items that financial statements can contain.
- **Recognition and Measurement**—to set criteria for an item to be recognized as an element; and how to measure it.



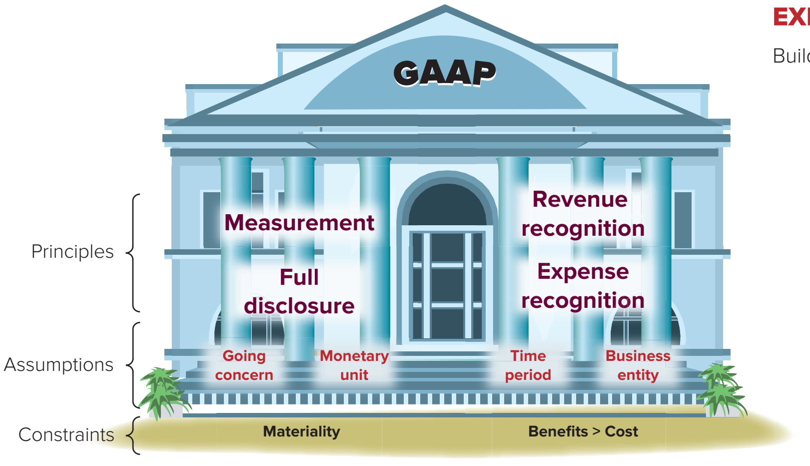
Point: For updates on the FASB and IASB conceptual framework, check FASB.org or ifrs.org.

Principles and Assumptions of Accounting

Accounting principles (and assumptions) are of two types. *General principles* are the assumptions, concepts, and guidelines for preparing financial statements; these are shown in purple font with white shading in Exhibit 1.7, along with key assumptions in red font with white shading. *Specific principles* are detailed rules used in reporting business transactions and events; they often arise from rulings of authoritative groups and are described as we encounter them.

EXHIBIT 1.7

Building Blocks for GAAP



Accounting Principles General principles consist of at least four basic principles, four assumptions, and two constraints.

- *Measurement* The **measurement principle,** also called the **cost principle,** prescribes that accounting information is based on actual cost (with possible later adjustments to market). Cost is measured on a cash or equal-to-cash basis. This means if cash is given for a service, its cost is measured by the cash paid. If something besides cash is exchanged (such as a car traded for a truck), cost is measured as the cash value of what is given up or received. The cost principle emphasizes reliability and verifiability, and information based on cost is considered objective. *Objectivity* means that information is supported by independent, unbiased evidence; it is more than an opinion. Later chapters introduce *fair value*.

Point: A company pays $500 for equipment. The cost principle requires it be recorded at $500. It makes no difference if the owner thinks this equipment is worth $700.

- *Revenue recognition* Revenue (sales) is the amount received from selling products and services. The **revenue recognition principle** prescribes that revenue is recognized (1) when