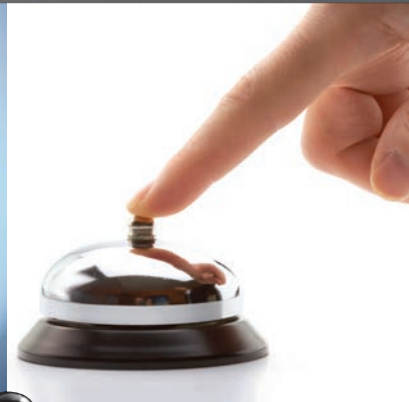


Cost Management

A Strategic Emphasis Seventh Edition



Edward J. Blocher

David E. Stout

Paul E. Juras

Gary Cokins

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Education



Cost Management

A Strategic Emphasis

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Seventh Edition

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COST MANAGEMENT: A STRATEGIC EMPHASIS, SEVENTH EDITION

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We dedicate this edition . . .

To my wife, Sandy, and our sons, Joseph
and David, and to my mentor, R. Lee
Brummet

Ed Blocher

To my wife, Anne, and our sons, David and
Kevin

David Stout

To my wife, Colleen, and my children,
Stephen and Kate

Paul Juras

To my wife, Pam Tower, and my mentor,
Robert A. Bonsack—a true craftsman in
the field of cost management

Gary Cokins

Meet the Authors



Edward J. Blocher is adjunct professor of accounting at the Kenan-Flagler Business School at the University of North Carolina at Chapel Hill. His undergraduate degree (economics) is from Rice University, his MBA from Tulane University, and his Ph.D. from the University of Texas at Austin. Professor Blocher presents regularly on strategic cost management at the national meetings of both the American Accounting Association (AAA) and the Institute of Management Accountants (IMA).

While he is involved in a number of accounting organizations, Professor Blocher has been most continually active in the IMA, where he has been a member of the IMA's Research Foundation. He is a certified management accountant (CMA), has taught review courses for the CMA exam, and has served on the IMA's national education committee. Professor Blocher is also the author or co-author of several articles in management accounting and in other areas of accounting and has served as associate editor and reviewer for a number of accounting journals. Recently he published an article in *Issues in Accounting Education* on the topic of teaching strategic cost management.

Putting research and teaching into practice is important to Professor Blocher, who has worked closely with other firms and organizations in developing products, publications, and teaching materials. He was a member of the task force for the IMA that developed a new definition of management accounting in 2008. From 2010–2014, he served as a member of the joint curriculum task force of the Management Accounting Section (MAS) of the AAA and the IMA, which was charged with the responsibility of developing curriculum recommendations for accounting education. The task force has two recent publications in *Issues in Accounting Education*. Also, he has provided expert testimony and has consulted with a number of organizations regarding cost management matters.



David E. Stout is the John S. and Doris M. Andrews Professor of Accounting, Williamson College of Business Administration, Youngstown State University. Previously, he held the position of the John M. Cooney Professor of Accounting, School of Business, Villanova University. David earned his Ph.D. in accounting (1982) from the Katz Graduate School of Business, University of Pittsburgh, and teaches in the cost/managerial accounting area. He served previously as editor of *Issues in Accounting Education* and as editor-in-chief of the *Journal of Accounting Education*. He currently serves as a member of the editorial board of each of the following journals: *China Finance and Accounting Review*; *IMA Educational Case Journal*; and *Management Accounting Quarterly/Strategic Finance*. Professor Stout has published over 90 articles in numerous professional and academic journals, including *Advances in Accounting Education*, *Issues in Accounting Education*, the *Journal of Accounting Education*, *The Accounting Educators' Journal*, *Advances in International Accounting*, *Behavioral Research in Accounting (BRIA)*, *The CPA Journal*, *Educational and Psychological Measurement*, the *IMA Educational Case Journal*, *Managerial Finance*, *Management Accounting*, *Management Accounting Quarterly*, *Financial Practice and Education*, *Strategic Finance*, and *Advances in Accounting*. David is past president of the Teaching, Learning & Curriculum (TLC) Section of the AAA, past president of the Academy of Business Education (ABE), and past president of the Ohio Region, American Accounting Association (AAA). During the period 2011–2014, he served as a member of the AAA Board of Directors. In 2007, he was the recipient of the R. Lee Brummet Award for Distinguished Accounting Educators, Institute of Management Accountants (IMA), and the recipient of the Ohio Outstanding Accounting Educator Award, which is cosponsored by the Ohio Society of CPAs and the AAA's Ohio Region. In 2008, David received the Distinguished Achievement in Accounting Education Award from the AICPA and the Distinguished Service Award for Educators given by the IMA. Also in 2008, David was inducted into the Hall of Honor, TLC Section of the AAA and was selected by *Ohio Magazine* as one of Ohio's Outstanding College and University Teachers. In 2012, he was a co-recipient of the Jim Bulloch Award for Innovations in Management Accounting Education, an award

given annually by the Management Accounting Section (MAS) of the AAA and sponsored by the Institute of Management Accountants (IMA). In 2015, Professor Stout was the recipient of the 2015 American Accounting Association (AAA) Outstanding Educator Award. From 2010–2014, he served as a member of the joint curriculum task force of the Management Accounting Section (MAS) of the AAA and the IMA, which was charged with the responsibility of developing curricular recommendations for accounting education. The task force has two recent publications in *Issues in Accounting Education*.



Paul E. Juras is the Vander Wolk Professor of Managerial Accounting and Operational Performance and Chair of the Accountancy and Law Division at Babson College. Previously he was a professor of accountancy at Wake Forest University. He earned both his BBA and MBA at Pace University and his Ph.D. from Syracuse University. He is a certified management accountant (CMA) and has a certified public accountant (CPA) license from New York. Professor Juras has experience in strategic management accounting. He has published articles and cases in many journals, including the *Journal of Corporate Accounting and Finance*, *Issues in Accounting Education*, *The CPA Journal*, and *Strategic Finance*. He has made numerous presentations at meetings of both the American Accounting Association (AAA) and the Institute of Management Accountants (IMA). In 2014, he received the IMA's Lybrand Gold Medal, awarded to the author(s) of the outstanding article of the year published in *Strategic Finance*, and in 2015 he received the IMA's R. Lee Brummet Award for Distinguished Accounting Educators.

Professor Juras teaches managerial accounting and strategic cost management courses and has taught in the undergraduate program, the Masters of Science in Accountancy program, and the MBA program at Wake Forest University. He has also taught in the undergraduate, the full-time MBA, the evening MBA, and the blended-learning MBA programs at Babson College.

While he was active in CAM-I, the Consortium for Advanced Management-International, and has served in leadership roles in the Management Accounting Section of the AAA, Professor Juras dedicates most of his efforts outside the classroom to the IMA. He is currently a member of the IMA Global Board of Directors and recently served as a Regent of the Institute of Certified Management Accountants, the organization responsible for the CMA certification. In addition, Professor Juras served a three-year term as the chair of the IMA Research Foundation and is an associate editor of the *IMA Educational Case Journal*.



Gary Cokins is an internationally recognized expert, speaker, and author in enterprise and corporate performance management (EPM/CPM) improvement methods and business analytics. He is the founder of Analytics-Based Performance Management, an advisory firm located in Cary, North Carolina, at www.garycokins.com. He received a BS degree with honors in industrial engineering/operations research from Cornell University in 1971 and an MBA from Northwestern University's Kellogg School of Management in 1974. Gary began his career as a strategic planner with FMC Corporation and then served as a division financial controller and operations manager there. In 1981, Gary began his management consulting career first with Deloitte consulting, and then in 1988 with KPMG consulting. In 1992, Gary headed the National Cost Management Consulting Services for Electronic Data Systems (EDS), which is now part of Hewlett-Packard (HP). From 1997 until 2013, Gary was in business development with SAS, a leading provider of business analytics software. He has authored popular books on activity-based costing, enterprise and corporate performance management (EPM/CPM), supply chain management, cost of quality, and business analytics. Gary participates and serves on professional society committees for the AICPA, Chartered Institute of Management Accountants (CIMA), The American Production and Inventory Control Society (APICS), and the Institute for Management Accountants (IMA). For the IMA, he serves as its Executive in Residence. Gary is a regular writer and blogger for websites that include www.businessfinancemag.com, www.informs.com, www.epmchannel.com, and www.ianalytics.com.

The Author Team was selected to create a leading book in cost management based on leadership in teaching experience, commitment to learning, and a connection to the profession and practice of management accounting that provides students with up-to-date knowledge of real-world management accounting issues and practices.

Blocher/Stout/Juras/Cokins

Welcome to Students:

We have written this book to help you understand the role of cost management in helping an organization succeed. Unlike many books that aim to teach you *about* accounting, we aim to show you how an important area of accounting, cost management, is *used* by managers to help organizations achieve their goals.

An important aspect of cost management in our text is the strategic focus. By strategy we mean the long-term plan the organization has developed to compete successfully. Most organizations strive to achieve a competitive edge through the execution of a specific strategy. For some firms it is low cost, and for others it might be high quality, customer service, or some unique feature or attribute of its product or service. We know in these competitive times that an organization does not succeed by being ordinary. Rather, it develops a strategy that will set it apart from competitors and ensure its attractiveness to customers and other stakeholders into the future. The role of cost management is to help management of the organization attain and maintain success through strategy implementation. Thus, for every major topic covered in our text there is a larger issue, which is: “How does this organization compete? What type of cost-management information does it need?” We do *not* cover a cost-management method simply to become proficient at it. We want you to know why, when, and how the technique is used to help the organization succeed.

A strategic understanding of cost management today is so important that many senior financial managers and many CPAs—both in public and in private practice—are coming back to school to learn more about strategy, competitive analysis, and new cost-management techniques. Knowing how to do the accounting alone, no matter how well you do it, is by itself no longer sufficient. Cost management with a strategic emphasis is one way to enhance your career and to add value to your employer, whatever type of organization it might be.

Key Text Features that Integrate the Strategy Emphasis

REAL-WORLD FOCUS Globalization, Strategy, and Exchange Rates: The Euro

Since January 1999, the euro has been used as the common currency of most European Union (EU) countries. For the first 20 months following its introduction, the euro steadily lost about 25% of its value relative to the U.S. dollar. Due to changing economic circumstances, the euro began to rise in early 2002 and in August 2008 had risen to \$1.60. It then fell to a value of \$1.25 in March 2009 due in part to falling oil prices and recession pressures in the EU during the fall of 2008. The euro then increased to \$1.35 in February 2012 due in part to rising oil prices. The euro remained steady at that level from 2012 through August 2014. Since then, the euro has fallen dramatically against the dollar (\$1.05 in March 2015). The economic change of the value of the euro relative to the dollar income on the financial statements of global companies; for example, the clothing retailer Gap Inc. reported a decline of 22% in earnings for 2013 due to a decline in the currencies of the foreign countries where the company operates. In sum, companies with a significant global component to their business must plan strategically for dealing with the effects on their business of changing exchange rates.

*The Economic and Monetary Union (EMU) of Europe has 28 member countries, 19 of which have adopted the European currency, the euro. Current and historical values for the exchange rate for the euro vs. the U.S. dollar and for exchange rates for other currencies are available on the Federal Reserve website: www.federalreserve.gov/whatsnew/whatsnew.htm.

Real-World Focus *Cost Management, 7e*, provides extensive real-world examples of how cost management systems can add value to the organization. The **Real-World Focus** boxes throughout the text take real organizations and demonstrate strategy in action and the role that cost management plays in supporting the organization’s strategy.

To augment this coverage, the Blocher team encourages students to further explore real-world companies through **Cost Management in Action** boxes that appear throughout the text. This feature poses important questions that make students think critically about the relationship between cost management and organizational strategy. At the end of each chapter, the authors then supply their comments for the **Cost Management in Action** boxes.

Cost Management in Action The Value Chain in Action: Inside the Samsung Phone

Samsung Electronics, the South Korean consumer electronics giant, includes six main components in its smartphones: (1) display and touchscreen, (2) memory chip, (3) processor, (4) camera, (5) wireless electronics, and (6) battery. Samsung manufactures a wide range of electronic products in addition to the smartphone, including televisions, monitors, tablets, cameras, and a variety of chips.

Required

1. What strategy (cost leadership or differentiation) do you think Samsung uses and why?
2. Consider the six components of Samsung’s smartphones listed above. Which do you think are manufactured by Samsung? Which components do you think are purchased from other manufacturers? That is, how much does Samsung rely on its own manufacturing in the value chain for its smartphones?
3. Apple has a very similar set of components for its smartphones. How similar do you think the two firms’ value chains are likely to be?

Problem Material The Blocher team has taken great care to develop assignment material that effectively reinforces concepts, procedures, and strategic issues presented in each chapter. In addition, each chapter has one or more end-of-chapter assignments that focus on ethical issues or that deal with an international context or a service (i.e., nonmanufacturing) setting. The authors also include exercises and problems that relate topical coverage to the general issue of sustainability. Many chapters have assignments based on readings from periodicals such as *Strategic Finance*, *Management Accounting Quarterly*, *The Wall Street Journal*, and the *Harvard Business Review (HBR)*. These assignments link topical material in the chapter to the broader, strategic issues that organizations face. End-of-chapter assignments that embrace a distinguishing focus are identified as follows:



Strategy



International



Service

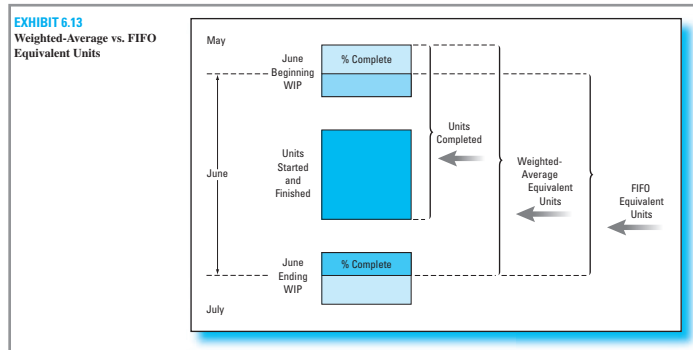


Ethics



Sustainability

Helping Students Succeed Using *Cost Management, 7e*



Text Illustrations Clear and concise exhibits help illustrate basic and complicated topics throughout the book.

Excel Solutions Manual The student version of the *Excel Solutions Manual* has been revised and updated for the seventh edition. This unique supplement consists of an Excel workbook for each chapter, as described more fully next.

The student version of the *Excel Solutions Manual* contains for every end-of-chapter exercise and problem in the text background information and data. As well, a worked-out solution is provided for half of the exercises and problems. Because all pertinent information for each exercise and problem, including background information and data, is included in each worksheet, the *Excel Solutions Manual* is self-contained and easy to use. In short, the student version of the *Excel Solutions Manual* is a unique resource designed to enhance the learning process.

Cases and Readings Supplement The *Cases and Readings Supplement*, available in electronic form, challenges students to think about and use cost-management information in a real-world setting. The longer articles provide a basis for more comprehensive and in-depth discussions about the role of *cost management* in helping an organization successfully execute its strategy. We have found the *Cases and Readings Supplement* to be particularly useful for upper-level undergraduate courses and for graduate-level offerings.

Excel Tutorials The seventh edition provides the Microsoft Word version of a set of 20 Excel tutorials (one for each chapter). These tutorials are also available in a narrated, step-by-step video animation format. The tutorials are tied to one of the main topics covered in the chapter. Thus, students can simultaneously hone their Excel-based skills using either version of the tutorials, while working to reinforce major topics covered in the text.

A Framework to Integrate Strategy: The Five Steps of Strategic Decision Making

The first edition of *Cost Management* introduced a five-step framework for decision making with a strategic emphasis. The framework shows that each decision starts and ends with a consideration of the organization's strategy. To extend and integrate the strategic emphasis, the seventh edition continues the tradition of including this five-step framework throughout the text. In all but a few chapters there is a short section that uses the five-step framework to show how a consideration of the organization's strategy plays a key role in making the decision that will address the business-related problems presented in that chapter.

The Globally Competitive Economic Environment Increases the Importance of Reviewing and Executing Strategy

The current globally competitive economic environment requires today's firms to place an even greater emphasis on the successful execution of their strategies. Moreover, increased competitive pressures may require organizations to review and modify their strategies to compete more effectively in response to the globally competitive environment.



SAS Software SAS's Activity-Based Costing (ABC) software is used worldwide for performance management functions and analysis. *Cost Management* incorporates SAS software in its ABC case material to prepare students for calculating ABC costs, creating cost-driver assignments, and organizing cost information using real-world software. Visit the *Connect Library* today to learn more about the software and the cases available for use. Both the cases and the software are available free to adopters.

How Technology Can Help



McGraw-Hill Connect

McGraw-Hill *Connect* is a digital teaching and learning environment that gives students the means to better connect with their coursework, their instructors, and the important concepts that they will need to know for success now and in the future. With *Connect*, instructors can deliver assignments, quizzes, and tests easily online. Students can review course material and practice important skills. *Connect* provides the following features:

Problem 6-25 Accounting for depreciation over multiple accounting cycles: Straight-line depreciation LO 6-3, 6-4

Zhao Company began operations when it acquired \$40,000 cash from the issue of common stock on January 1, 2014. The cash acquired was immediately used to purchase equipment for \$40,000 that had a \$4,000 salvage value and an expected useful life of four years. The equipment was used to produce the following revenue stream (assume all revenue transactions are for cash). At the beginning of the fifth year, the equipment was sold for \$4,500 cash. Zhao uses straight-line depreciation.

	2014	2015	2016	2017	2018
Revenue	\$9,500	\$10,000	\$10,500	\$8,500	\$0

Required

Prepare an income statements for each of the five years. (Loss amounts should be indicated with a minus sign.)

ZHAO COMPANY					
Income Statement					
For the Year Ended December 31					
	2014	2015	2016	2017	2018
Revenue	\$ 9,500	\$ 10,000	\$ 10,500	\$ 8,500	
Dep					
Depreciation expense	9,500	10,000	10,500	8,500	
Net income (loss)					

- SmartBook and LearnSmart.
- Auto-graded Online Homework.
- Dynamic links between the problems or questions assigned to students and the location in the eBook where that concept is covered.
- A powerful search function to pinpoint and connect key concepts for students to review.

In short, *Connect* offers students powerful tools and features that optimize their time and energy, enabling them to focus on learning.

For more information about *Connect* go to www.connect.mheducation.com, or contact your local McGraw-Hill Higher Education representative.

• SmartBook, powered by LearnSmart



LearnSmart® is the market-leading adaptive study resource that is proven to strengthen memory recall, increase class retention, and boost grades. LearnSmart allows students to study more efficiently because they are made aware of what they know and don't know.

SmartBook®, which is powered by LearnSmart, is the first and only adaptive reading experience designed to change the way students read and learn. It creates a personalized reading experience by highlighting the most impactful concepts a student needs to learn at that moment in time. As a student engages with SmartBook, the reading experience continuously adapts by highlighting content based on what the student knows and doesn't know. This ensures that the focus is on the content he or she needs to learn, while simultaneously promoting long-term retention of material.

The screenshot shows a question in the SMARTBOOK interface. The question asks: "When a company, using the perpetual inventory system, purchases inventory on account, the balance in the: (Select all that apply.)" Below the question are several checkboxes for "Cost of Goods Sold account increases," "Gross margin decreases," "Cash account decreases," "Accounts Payable account increases," and "Inventory account increases." To the right, there is a section titled "PERPETUAL INVENTORY SYSTEM" with explanatory text and a table showing the effects of 2014 events on financial statements. The table has columns for Assets, Liabilities, and Stockholders' Equity, and rows for various accounts like Inventory, Cash, Accounts Payable, and Retained Earnings.

Use SmartBook's real-time reports to quickly identify the concepts that require more attention from individual students—or the entire class. The end result? Students are more engaged with course content, can better prioritize their time, and come to class ready to participate.

Improve Student Success

- **Online assignments**


Connect helps students learn more efficiently by providing feedback and practice material when they need it, where they need it. *Connect* grades homework automatically and gives immediate feedback on any questions students may have missed.

- **Narrated self-study problems**

Free to adopters of the 7th edition is a narrated walkthrough of all end-of-chapter self-study problems. This unique feature provides the student with an opportunity to review, on their own time and at their own pace, a step-by-step solution to each Self-Study Problem.

Production Budget – in units

Desired ending inventory (July 31) (The higher of 500 or $7,000 \times 0.1$)	700
Budgeted sales for July	+ 6,000
Total units needed for July	6,700
Beginning inventory (July 1) (The higher of 500 and $6,000 \times 0.1$)	- 600
Units to manufacture in July	6,100



- **Student Resource Library**

The *Connect* Student Resources give students access to additional resources such as recorded lectures, online practice materials, an eBook, and more.

	A	B	C	D	E	F	G
1	Basic Approach						#3:Using
2	#1: 1,000 Iterations		#2: 2,500 Iterations				Cumulat
3							
4							
5	Results		Results				Results
6	0		0				1

• Excel Tutorials

Free to adopters of the 7th edition is a set of 20 Excel tutorials, one for each chapter. These tutorials are available in both Word and digital (electronic) format. This resource provides a context-based means for students to hone their Excel skills. In many cases, the Excel tutorial is linked to one or more of the Self-Study Problems included at the end of the chapter. The tutorials cover a wide variety of Excel topics, from the elementary to the intermediate level, as well as some at the advanced level. The tutorials are an easy way for students to learn more about Excel without having to ask the instructor.

McGraw-Hill Connect Features

Connect offers powerful tools, resources, and features to make managing assignments easier, so faculty can spend more time teaching.

Simple Assignment Management and Smart Grading With *Connect*, students can engage with their coursework anytime, anywhere, making the learning process more accessible and efficient.

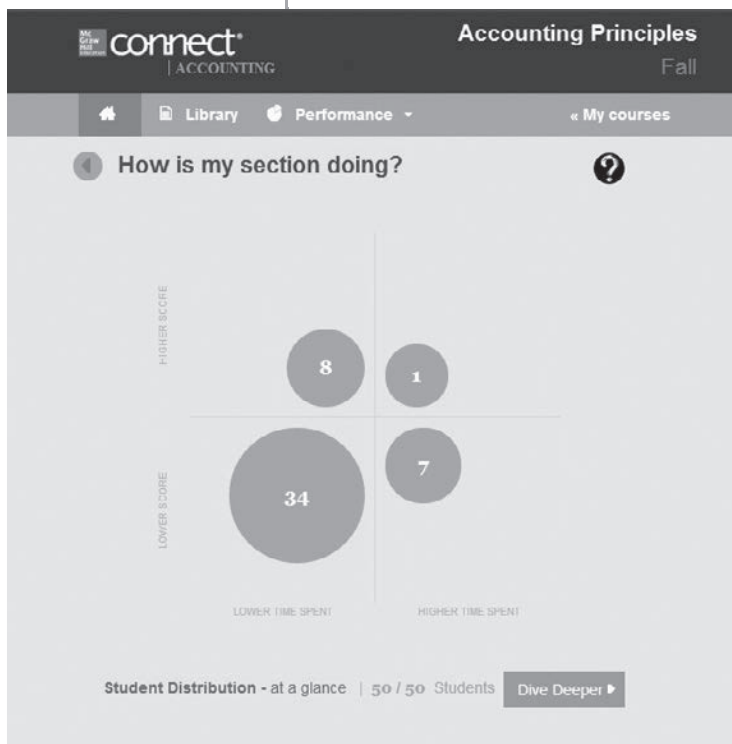
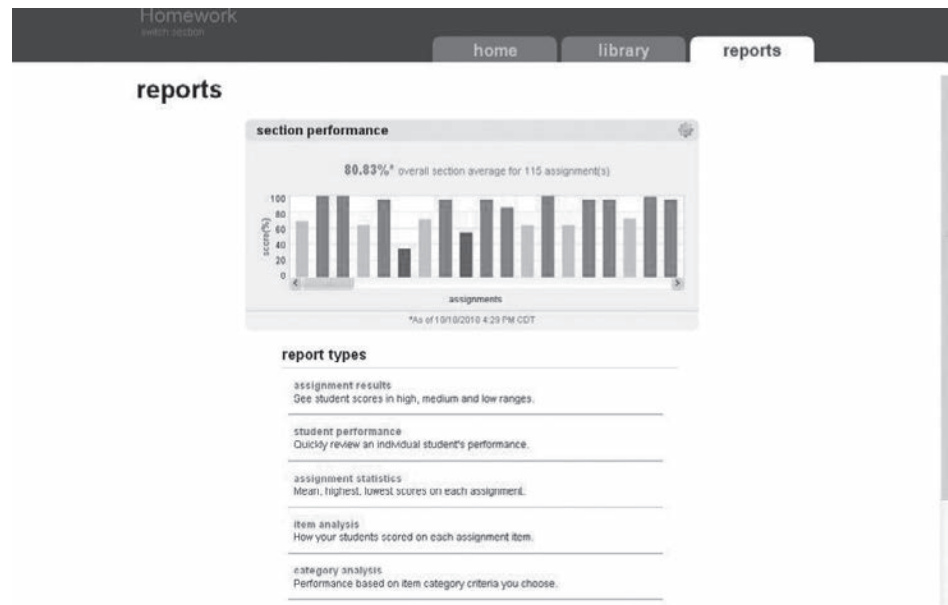
- Create and deliver assignments easily with selectable end-of-chapter questions and test bank items.
- Have assignments scored automatically, giving students immediate feedback on their work and comparisons with correct answers.
- Access and review each response; manually change grades or leave comments for students to review.
- Reinforce classroom concepts with practice assignments, instant quizzes, and exams.

The screenshot displays the McGraw-Hill Connect interface for a "Chapter 3 Assignment" in "Fundamental Accounting Accounting 101". The page includes navigation links for "edit assignment", "set policies", and "review & assign". The assignment title is "Chapter 3 Assignment" with a "rename" option. It shows "15 / 15 questions assigned" and "150.00 points". There are buttons for "add questions" and "organize assignment", and a "view" dropdown set to "list". The breadcrumb trail indicates the path: "Fundamental Managerial Accounting Concepts (Edmonds, Edmonds, Tsay, Olds, 7e) > Chapter 03: Analysis of Cost, Volume, and Pricing to Increase Profitability > Chapter 03 Problems - Static". A "filter results" section on the left allows filtering by "question type" (Worksheet), "Gradable" (select all, automatic), and "AACSB/AICPA/Bloom's". The main area shows "results: 9" and a list of questions with their descriptions and "Worksheet" question types.

- **Powerful Instructor and Student Reports**

Connect keeps instructors informed about how each student, section, and class is performing, allowing for more productive use of lecture and office hours. The reports tab enables you to:

- View scored work immediately and track individual or group performance with assignment and grade reports.



- Access an instant view of student or class performance relative to learning objectives.
- Collect data and generate reports required by many accreditation organizations, such as the AACSB and the AICPA.

- **Connect Insight**

The first and only analytics tool of its kind, Connect Insight™ is a series of visual data displays—each framed by an intuitive question—to provide at-a-glance information regarding how your class is doing.

Connect Insight™ provides an at-a-glance analysis on five key insights, available at a moment's notice from your tablet device:

- How are my students doing?
- How is my section doing?
- How is this student doing?
- How are my assignments doing?
- How is this assignment going?

• Instructor Library

The *Connect* Instructor Library is a repository for additional resources to improve student engagement in and out of class. You can select and use any asset that enhances your lecture. The *Connect* Instructor Library includes access to:

- Solutions Manual (Word and Excel)
- Instructor's Resource Guide
- Test Bank (with Test Bank Matrices)
- Instructor PowerPoint® slides
- Sample Syllabi
- Solutions to Cases for SAS Activity-Based Software
- Cases and Readings Supplement
- Teaching Notes for Cases and Readings Supplement

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Explore our collections of pre-made assignments. Use them as is or edit them to create your own custom assignments



pre-built assignments

These assignments have been created from the end of chapter questions in your textbook. Use them as-is or edit them to create your own custom assignments.

Tegrity Campus: Lectures 24/7



Tegrity Campus is a service that makes class time available 24/7 by automatically capturing every lecture. With a simple one-click start-and-stop process, you capture all computer screens and corresponding audio in a format that is easily searchable, frame by frame. Students can replay any part of any class with easy-to-use browser-based viewing on a PC, Mac, or other mobile device.

Help turn your students' study time into learning moments immediately supported by your lecture. With Tegrity Campus, you also increase intent listening and class participation by easing students' concerns about note-taking. Lecture Capture will make it more likely you will see students' faces, not the tops of their heads. To learn more about Tegrity, watch a 2-minute Flash demo at <http://tegritycampus.mhhe.com>.

• McGraw-Hill Campus



Campus

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• Custom Publishing through Create



create™

McGraw-Hill Create™ is a new, self-service website that allows instructors to create custom course materials by drawing upon McGraw-Hill's comprehensive, cross-disciplinary content. Instructors can add their own content

quickly and easily and tap into other rights-secured third-party sources as well, then arrange the content in a way that makes the most sense for their course. Instructors can even personalize their book with the course name and information and choose the best format for their students—color print, black-and-white print, or an eBook.

Through Create, instructors can

- Select and arrange the content in a way that makes the most sense for their course.
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Test Bank Matrices

New in the seventh edition is an Excel workbook for each chapter, which shows all of the Test Bank questions sorted by learning objective, by difficulty, and other chapter topics; this supplement will make it easier for instructors to find the questions they want from the Test Bank.

What's NEW about the 7th Edition

McGraw-Hill Connect Added for Seventh Edition

For the seventh edition we have added McGraw-Hill *Connect*[®], an online assignment solution and assessment system designed to promote faster learning, more efficient studying, and higher retention of knowledge.

Integration of Important Topics throughout the Text

Key topic areas for the course are integrated across the chapters. As previously noted, strategy is integrated throughout the text. In addition, accounting for “lean” is included in four chapters as it relates to the subject matter of that chapter. Similarly, time-driven activity-based costing (TDABC) is covered in the ABC chapter and also in the chapter on budgeting. ABC appears in most of the chapters in Part Two, as it has a key role in planning and decision making. Nonfinancial performance measures and the balanced scorecard (BSC) are introduced in Part One and then covered as part of the operational and management control chapters included in Parts Three and Four. Resource consumption accounting (RCA) is covered both in Chapter 5 and again in Chapter 15. The topic of capacity resource planning is covered in Chapters 10 and 15. These are just examples of the efforts the authors have made to integrate key topics throughout the text.

New Supplement: Test Bank Matrices

In addition, we have added a new supplement, Test Bank Matrices. These are Excel files that help the instructor identify test bank questions by learning objective, difficulty, question type (multiple choice, problem, case), and by text feature (strategy, international, ethics, sustainability, and service).

Continuing Features from Prior Editions

- Chapters have been revised to include up-to-date issues in cost management and discuss how accountants are dealing with these issues; examples include changes in sustainability reporting practices, the increased volatility of foreign exchange rates, and changes in management compensation practices, among many others.
- End-of-chapter exercises and problems have been improved, with a strong focus on providing clarity, a clear linkage to chapter learning objectives, and an appropriate level of challenge.
- Each end-of-chapter exercise and problem is tagged with the chapter learning objective(s) examined in that exercise or problem.

Enhancements for this Edition

Important Changes in Each Chapter of the Seventh Edition

Part One: Introduction to Strategy, Cost Management, and Cost Systems

Chapter 1: Cost Management and Strategy

- All Real-World Focus items updated; one new Real-World Focus item; updated Cost Management in Action item; updated surveys on strategy and ethics; updated content on real-world information used throughout the chapter
- Replaced Sara Lee Corporation example with Tyson Foods (Sara Lee North American Foodservice Company became Hillshire Brands, Company in 2012 and Hillshire Brands became a subsidiary of Tyson Foods on August 29, 2014)
- Twelve new exercises; several revised problems and five all-new problems with a focus on strategy and ethics

Chapter 2: Implementing Strategy: The Value Chain, the Balanced Scorecard, and the Strategy Map

- All Real-World Focus items revised and updated, particularly the item on currency fluctuation; one new Real-World Focus item on execution; real-world information throughout the chapter revised and updated
- New Cost Management in Action item on strategy in consumer electronics—Apple vs. Samsung
- Section on Execution updated and enhanced
- Twelve new brief exercises, three new problems, and several revised exercises and problems

Chapter 3: Basic Cost Management Concepts

- All Real-World Focus items revised and updated; one new Real-World Focus item on cost structure
- Three revised problems

Chapter 4: Job Costing

- One new Real-World Focus item on job shops
- Several revised exercises and problems

Chapter 5: Activity-Based Costing and Customer Profitability Analysis

- Tightened coverage of ABC, significantly shortening the length of the chapter
- Real-World Focus items revised and updated; new Real-World Focus items focusing on corporate sustainability and time-driven ABC in the service sector
- Several revised exercises and problems

Chapter 6: Process Costing

- Cost Management in Action element revised and updated
- Large text exhibits revised to fit on single pages
- Ten revised exercises and problems

Chapter 7: Cost Allocation: Departments, Joint Products, and By-Products

- Real-World Focus items updated to include new cost allocation issues
- Revised chapter introduction
- Revised exhibit on the use of Solver in Excel

- New section on the decision to sell before or after additional processing
- New section and new exhibit on the constant gross margin percentage method for joint product cost allocation
- Thirteen new or revised exercises and problems with a focus on strategy, ethics, and sustainability

Part Two: Planning and Decision Making

Chapter 8: Cost Estimation

- One new Real-World Focus item on predictive analytics and learning curves; completely revised and updated Real-World Focus item on application of predictive analytics and regression analysis; updated coverage of surveys of cost estimation practice
- Additional coverage to explain the relative advantages of the high-low method and the regression method
- Three new problems; 9 exercises and problems revised to include a focus on the application of regression analysis to practical current business issues

Chapter 9: Short-Term Profit Planning: Cost-Volume-Profit (CVP) Analysis

- Inclusion of a new reference (Zivney & Goebel, 2013) for expanding the basic CVP model to include fixed financing costs and for deriving an alternative specification for degree of operating leverage (DOL), as $Q \div (Q - B/E)$, where B/E equals the breakeven point defined in terms of volume, Q
- New discussion of using the **Data Table** option in Excel to present results of simple “What-If” analyses
- Newly added reference (McKee & McKee, 2014) for using Excel to perform basic Monte Carlo simulation (MCS) analysis

- Two updated Real-World Focus items plus two new Real-World Focus items (one dealing with cost-structure analysis, the other dealing with operating leverage)
- Graphical analysis of alternative cost-structure choice (including sensitivity analysis)
- Increased use of Excel's **Goal Seek** function throughout assignment material
- Six revised end-of-chapter problems

Chapter 10: Strategy and the Master Budget

- One updated Real-World Focus item dealing with refinements to traditional budgeting practices
- Four new Real-World Focus items regarding the importance of budgeting and planning; budgeting and sensitivity analysis; negative behavioral consequences of traditional budgeting; and rolling financial forecasts
- Reduction in length of the chapter, with shorter, crisper explanations of the budgeting process
- Three revised end-of-chapter problems

Chapter 11: Decision Making with a Strategic Emphasis

- One updated Real-World Focus item, dealing with distortions and deceptions in decision making
- Three new Real-World Focus items dealing with sustainability and the decision to insource
- Shorter, crisper discussion of predatory pricing practices
- Increased use of Excel's **Goal Seek** function for end-of-chapter exercises and problems

Chapter 12: Strategy and the Analysis of Capital Investments

- All new beginning-of-chapter examples of capital expenditure decisions undertaken by a variety of real-world organizations
- Tightened coverage of material throughout the chapter
- Newly added material: the mechanics of the discounting process application of Monte Carlo simulation to the problem of estimating an entity's weighted-average cost of capital; the proper interpretation of the internal rate of return (IRR); and the structuring of an asset-replacement capital investment analysis
- Revision of two new Real-World Focus items: dealing with retirement planning/sensitivity analysis, and the application of real options analysis
- Revision of three end-of-chapter problems

Chapter 13: Cost Planning for the Product Life Cycle: Target Costing, Theory of Constraints, and Strategic Pricing

- Two new and one updated Real-World Focus items related to target costing
- Four new or revised end-of-chapter problems

Part Three: Operational-Level Control

Chapter 14: Operational Performance Measurement: Sales, Direct-Cost Variances, and the Role of Nonfinancial Performance Measures

- Revision/updating of two Real-World Focus items (Demystifying a Consumer Gas Utility Bill, and Controlling Labor Costs through the Use of "Workforce-Management Systems")

- Four new Real-World Focus items focusing on the management of health care costs through use of standard cost information; managing supply-chain costs; using technology to manage energy and water consumption; and the promotion of sustainability and environmental responsibility
- Revision of four end-of-chapter problems

Chapter 15: Operational Performance Measurement: Indirect-Cost Variances and Resource Capacity Management

- Continued emphasis on exercises and problems dealing with capacity-resource planning and the financial reporting requirements of FASB ASC 330-10-30
- Two new Real-World Focus items dealing with the management of capacity-related costs in the auto industry and the evaluation of sustainability performance using flexible budgets
- Explicit consideration of the value of perfect information in the appendix
- Revision of four end-of-chapter problems

Chapter 16: Operational Performance Measurement: Further Analysis of Productivity and Sales

- Two New Real-World Focus items related to productivity
- Revision of seven end-of-chapter problems

Chapter 17: The Management and Control of Quality

- Expanded discussion of "net promoter score" as a nonfinancial performance indicator
- One updated Real-World Focus item plus 8 new Real-World Focus items covering creating a culture of quality; lowering health care costs and

improving quality; quality ratings for colleges; the cost of poor quality; reducing new-product development time and customer response time; U.S. environmental quality ratings for building construction; creating a lean management structure; and the application of root-cause analysis to the airline industry

- Two new end-of-chapter problems and three updated/revised end-of-chapter problems

Part Four: Management-Level Control

Chapter 18: Strategic Performance Measurement: Cost Centers, Profit Centers, and the Balanced Scorecard

- Three new Real-World Focus items that touch upon profit centers, separate business units, and the use of the balanced scorecard to evaluate strategy

- Eight new or revised exercises or problems with a focus on strategic business units, absorption costing, and the contribution income statement

Chapter 19: Strategic Performance Measurement: Investment Centers and Transfer Pricing

- Eight new Real-World Focus items dealing with ROI for sustainability projects; estimating the ROI for a college diploma; strategic application of ROI (business segment) analysis; estimating the (short-term) ROI for an MBA degree; sustainability; linking incentive compensation to levels of economic profit; Apple Computer and transfer pricing; international transfer pricing applied to SG&A costs; and multinational transfer pricing
- Expanded discussion of the transfer-pricing decision in an international context
- Addition of pedagogical reference (Baker et al., 2009) regarding

concerns associated with the use of EVA®

- Revision of five end-of-chapter problems

Chapter 20: Management Compensation, Business Analysis, and Business Valuation

- One revised Real-World Focus item
- Four new Real-World Focus items regarding pay for performance; different uses for bonuses; retention plans; and a commentary on valuations
- Eleven new or revised brief exercises, exercises, or problems that focus primarily on ratio analysis and executive compensation

Acknowledgments

Our Sincerest Thanks . . .

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Introduction to Strategy, Cost Management, and Cost Systems

The objective of the first seven chapters is to introduce the strategic approach to cost management and to cover the basic concepts of cost management systems.

Chapter 1 is an introduction to cost management—how companies plan for success and the management accountant’s role in implementing strategy. The chapter includes coverage of the Institute of Management Accountants’s recently revised definition of management accounting. It is also an introduction to the current environment of business, including contemporary management techniques and professional responsibilities.

Chapter 2 focuses on some of the principal means that organizations use to implement strategy. The chapter introduces a strategic management system known as the balanced scorecard (BSC), the strategy map, and the value chain and shows how these tools can be used to help the organization implement its strategy. These tools are foundational tools that appear throughout the text; this is why they are covered in this early chapter.

Chapter 3 defines the key terms that management accountants use to describe product cost systems and cost information for planning, decision making, and control. This terminology is important for both accountants and managers alike. The chapter also introduces the differences in management accounting between service, manufacturing, and merchandising companies.

Chapters 4–7 cover costing systems and their role in strategy implementation.

Chapter 4 provides an introduction to costing systems by defining the elements of cost and how these elements are combined to determine the cost of a product or service. There are a number of variations on this basic cost system, each of which is designed to fit a particular manufacturing or service environment. These variations are explained in Chapters 5, 6, and 7.

Chapter 5 covers a strategically important advance in product costing called activity-based costing (ABC). Rather than using the volume-based approach (explained in Chapter 4), the ABC approach incorporates the details of all the activities that are needed to provide the product or service. The result is much more accurate, and therefore more strategically useful, cost information regarding the resource demands of an organization’s outputs.

Chapter 6 introduces process costing, a costing system that is applicable for firms that have relatively homogeneous products passing through similar processing steps, often in a continuous flow. Commodity-based industries are of this nature: food processing, chemical, and consumer products firms.

Chapter 7 covers cost-allocation issues associated with costing systems—departmental cost allocation and joint cost allocation. The chapter begins with an overview of the objectives and strategic role of cost allocation and then shows how departmental costs and joint costs are allocated to products.

Cost Management and Strategy

After studying this chapter, you should be able to . . .

- LO 1-1 Explain the use of cost management information in each of the four functions of management and in different types of organizations, with emphasis on the strategic management function.
- LO 1-2 Explain the contemporary business environment and how it has influenced cost management.
- LO 1-3 Explain the contemporary management techniques and how they are used in cost management to respond to the contemporary business environment.
- LO 1-4 Explain the different types of competitive strategies.
- LO 1-5 Describe the professional environment of the management accountant, including professional organizations and professional certifications.
- LO 1-6 Understand the principles and rules of professional ethics and explain how to apply them.

Talk about a success story! Walmart has grown from its first discount store in 1962 to become the world's largest company, with almost \$500 billion in sales. It has achieved this through clear day-to-day attention to accomplishing its business strategy and to living up to its motto of "Save Money, Live Better." Walmart achieves success through extensive use of technology and aggressive efforts to grow the business globally. And the environment is very competitive! A key competitor, Target, with a different strategy and a different motto ("Expect More, Pay Less[®]") has challenged Walmart with aggressive advertising campaigns and new stores. During the 2004–2007 period, Target was outpacing Walmart in sales growth and stock price growth. This reversed in 2008, as the global economic outlook weakened for many consumers and the low-cost strategy of Walmart proved to be more successful. Since 2009, both Walmart and Target have been facing the heat of increased competition from both Amazon.com and Costco, as well as other retailers such as Dollar General. The stakes are high and the competition is fierce. Imagine yourself as a manager for one of these companies. How would you help your company be more competitive?

This book is about how managers use cost management to build a successful company, as those at Walmart and Target have done. Everyone wants to be a winner, and so it is in business and accounting. We are interested in how the management accountant can play a key role in making a firm or organization successful. Now you might be asking, Don't we have to know what you mean by *success*? Absolutely! A firm must define clearly what it means by success in its mission statement. Then it must develop a road map to accomplish that mission, which we call *strategy*. Briefly, strategy is a plan to achieve competitive success. In Walmart's case, the mission is to achieve customer value, and the strategy involves the extensive use of technology to reduce cost, a management structure that welcomes change, and a constant focus on customer service. For Target, the competitive focus is the promise of value through brand recognition, customer service, store location, differentiated offerings, quality, fashion, and price.

Because we are interested in how the management accountant can help a company be successful, we take a strategic approach throughout the book, beginning with an introduction to strategy

in this chapter. The key idea is that success comes from developing and implementing an effective strategy aided by management accounting methods. These management accounting methods are covered in this text chapter by chapter; we include them in the text because we know they have helped companies succeed.

Management Accounting and the Role of Cost Management

LO 1-1

Explain the use of cost management information in each of the four functions of management and in different types of organizations, with emphasis on the strategic management function.

Cost management information

is developed and used to implement the organization's strategy. It consists of financial information about costs and revenues and nonfinancial information about customer retention, productivity, quality, and other key success factors for the organization.

Cost management

is the development and use of cost management information.

Management accounting

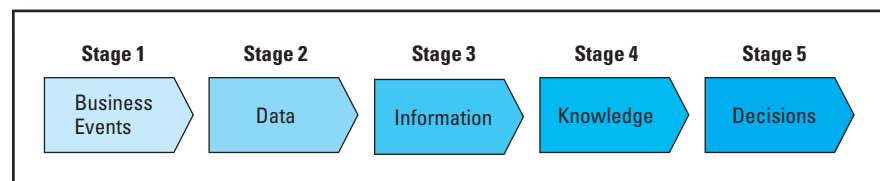
is a profession that involves partnering in management decision making, devising planning and performance management systems, and providing expertise in financial reporting and control to assist management in the formulation and implementation of an organization's strategy.

Management accountants are the accounting and finance professionals who develop and use cost management information to assist in implementing the organization's strategy. **Cost management information** consists of financial information about costs and revenues and non-financial information about customer retention, productivity, quality, and other key success factors for the organization. **Cost management** is the development and use of cost management information.

The strategic role of the management accountant in an organization is explained in the definition of management accounting provided by the Institute of Management Accountants (IMA). Relevant additional information on the definition can be found in the IMA's Statement on Management Accounting: *Definition of Management Accounting*.

Management accounting is a profession that involves partnering in management decision making, devising planning and performance management systems, and providing expertise in financial reporting and control to assist management in the formulation and implementation of an organization's strategy.

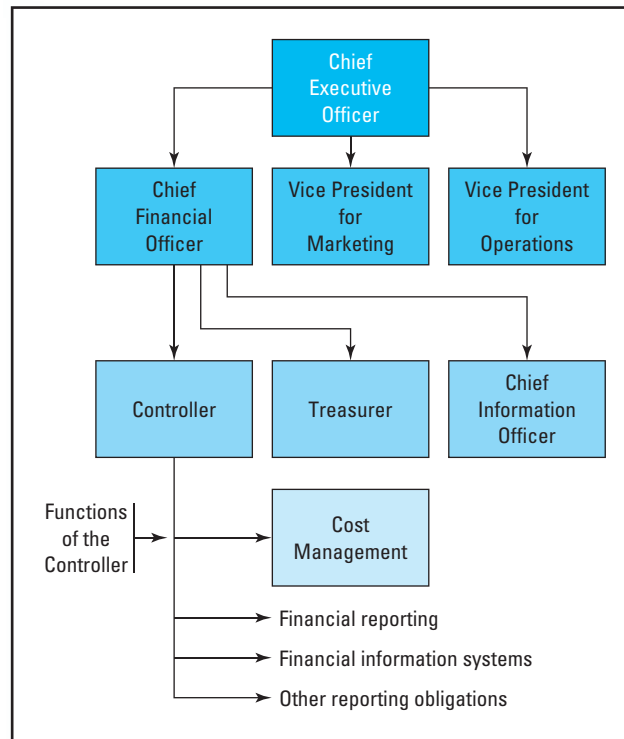
Management accountants use their unique expertise (decision making, planning, performance management, and more), working with the organization's managers, to help the organization succeed in formulating and implementing its strategy. Cost management information is developed and used within the organization's information value chain, from stage 1 through stage 5, as shown below:



At lower stages of the value chain, management accountants gather and summarize data (stage 2) from business events (stage 1) and then transform the data to cost management information (stage 3) through analysis and use of the management accountant's expertise. At stage 4, cost management information is combined with other information about the organization's strategy and competitive environment to produce actionable knowledge. At stage 5, management accountants use this knowledge to participate with management teams in making decisions that advance the organization's strategy.

In a typical organization (illustrated in Exhibit 1.1) management accountants report to the controller, a key accounting professional in the firm. The controller, assisted by management accountants, has a wide range of responsibilities, including cost management, financial reporting, maintaining financial information systems, and other reporting functions. The chief financial officer (CFO) has the overall responsibility for the financial function, the treasurer manages investor and creditor relationships, and the chief information officer (CIO) manages the firm's use of information technology, including computer systems and communications.

In contrast to the cost management function, the financial reporting function involves preparing financial statements for *external users* such as investors and government regulators. These financial accounting reports require compliance with certain external requirements. Cost management information is developed for use *within* the firm to facilitate management and is not needed to meet those requirements. The main focus of cost management information therefore must be *usefulness* and *timeliness*; the focus of financial reports must be *accuracy* and *compliance* with reporting

EXHIBIT 1.1**A Typical Organization Chart Showing the Functions of the Controller**

requirements. However, strict adherence to accuracy can compromise the usefulness and timeliness of the information. The function of the financial information systems department is to develop and maintain the financial reporting system and related systems such as payroll, financial security systems, and tax preparation. The challenge for the controller is to reconcile these different and potentially conflicting roles.

The Four Functions of Management

The management accountant develops cost management information for the CFO, other managers, and employee teams to use to manage the firm and make the firm more competitive and successful. Cost management information is provided for each of the four major management functions: (1) strategic management, (2) planning and decision making, (3) management and operational control, and (4) preparation of financial statements. (See Exhibit 1.2.) The most important function is **strategic management**, which is the development and implementation of a sustainable competitive position in which the firm's competitive advantage provides continued success. A strategy is a set of goals and specific action plans that, if achieved, provide the desired competitive advantage. Strategic management involves identifying and implementing these goals and action plans. Next, management is

Strategic management

is the development and implementation of a sustainable competitive position.

EXHIBIT 1.2**Cost Management Information Is Needed for Each of the Four Management Functions**

- 1. Strategic Management.** Cost management information is needed to make sound strategic decisions regarding choice of products, manufacturing methods, marketing techniques and distribution channels, customer profitability, and other long-term issues.
- 2. Planning and Decision Making.** Cost management information is needed to support recurring decisions regarding replacing equipment, managing cash flow, budgeting raw materials purchases, scheduling production, and pricing.
- 3. Management and Operational Control.** Cost management information is needed to provide a fair and effective basis for identifying inefficient operations and to reward and motivate the most effective managers.
- 4. Preparation of Financial Statements.** Cost management information is needed to provide accurate accounting for inventory and other assets, in compliance with reporting requirements, for the preparation of financial reports and for use in the three other management functions.

Our unique approach in this book is to demonstrate cost management from a strategic emphasis. Every cost management method we cover is linked to the firm's strategy, that is, how the method helps the firm to be successful. Why emphasize the strategic approach? Managers tell us why . . .

A recent survey of 750 chief financial officers (CFOs) conducted jointly by the Institute of Management Accountants (IMA) and the Association of Chartered Certified Accountants (ACCA) found that "the future CFO role in supporting strategic growth will be increasingly valued. Strategy formulation and execution was identified by current CFOs as the most important area in which to have experience for future CFOs." A 2014 survey of 600 financial executives by the consulting firm, Accenture, found results that confirmed the IMA/ACCA findings. Also, a 2012 survey of the CFOs of Fortune 100 firms by the executive recruiting firm Russell Reynolds Associates reported that 49% of the CFOs previously held roles in corporate strategy, up from 22% in 2009. In 2013, the independent U.K. research firm Loudhouse surveyed more than 300 finance professionals worldwide and found that 74% had experienced an increase in responsibility for strategic decision making and analysis.

The Society of the Management Accountants of Canada has developed a competency framework for certified management accountants in Canada, which has the following introduction:

Certified Management Accountants (CMAs) do more than just measure value—they create it. As the leaders in management accounting, CMAs apply a unique mix of financial expertise, strategic insight, innovative thinking and a collaborative approach to help grow successful businesses.

Sources: "The CFO as Architect of Business Value," Accenture, 2014; Benjamin Kang, "Managing the Strategic Finance Gap," *Strategic Finance*, February 2014, pp. 43–48; "Future Pathways to Finance Leadership," Institute of Management Accountants and the Association of Chartered Certified Accountants, September 2013, www.accaglobal.com/content/dam/acca/global/PDF-technical/finance-transformation/cfo-career-paths.pdf; "CFO Route to the Top Becomes More Strategic," *The Wall Street Journal*, March 6, 2012; Robert A. Howell, "CFOs: Not Just for Finance Anymore," *The Wall Street Journal*, February 27, 2012, p. R7; Dana Mattioli, "Finance Chiefs Expand Roles," *The Wall Street Journal*, January 31, 2011, p. B7; "Competency Map of the CMA Profession," The Society of Management Accountants of Canada, www.cma-canada.org; Gary Siegel, James E. Sorensen, and Sandra Richtermeier, "Are You a Business Partner? Parts 1 and 2," *Strategic Finance*, September and October 2003.

Planning and decision making involve budgeting and profit planning, cash flow management, and other decisions related to operations.

Operational control takes place when mid-level managers monitor the activities of operating-level managers and employees.

Management control is the evaluation of mid-level managers by upper-level managers.

Preparation of financial statements requires management to comply with the financial reporting requirements of regulatory agencies.

responsible for **planning and decision making**, which involve budgeting and profit planning, cash flow management, and other decisions related to the firm's operations, such as deciding when to lease or buy a facility, when to repair or replace a piece of equipment, when to change a marketing plan, and when to begin development of a new product.

The third area of responsibility, control, consists of two functions, operational control and management control. **Operational control** takes place when mid-level managers (e.g., site managers, product managers, regional managers) monitor the activities of operating-level managers and employees (e.g., production supervisors and various department heads). In contrast, **management control** is the evaluation of mid-level managers by upper-level managers (the controller or the CFO).

In the fourth function, **preparation of financial statements**, management complies with the reporting requirements of relevant groups (such as the Financial Accounting Standards Board) and relevant federal government authorities (for example, the Internal Revenue Service and the Securities and Exchange Commission). The financial statement preparation role has recently received a renewed focus as countries throughout the world have adopted International Financial Reporting Standards (IFRS), and the United States is expected to adopt these standards in the coming years. The financial statement information also serves the other three management functions, because this information is often an important part of planning and decision making, control, and strategic management.¹

The first three management functions are covered in this text. Strategic management and the design of the costs systems upon which strategic decisions rely are covered in Part One. Part Two covers planning and decision making, Part Three covers operational control, and Part Four covers management control. Financial reporting for inventory and cost of sales is covered in Part One.

Strategic Management and the Strategic Emphasis in Cost Management

Effective strategic management is critical to the success of the firm or organization and is thus a pervasive theme of this book. The growing pressures of economic recession, global competition, technological innovation, and changes in business processes have made cost

¹ The professional and regulatory organizations such as the Financial Accounting Standards Board and the Securities and Exchange Commission are identified and explained at the end of this chapter.

management much more critical and dynamic than ever before. Managers must think *competitively*; doing so requires a strategy.

Strategic thinking involves anticipating changes; products, services, and operating processes are designed to accommodate expected changes in customer demands. Flexibility is important. The ability to make fast changes is critical as a result of the demands of the new management concepts of e-commerce, speed-to-market, and flexible manufacturing. Product life cycles—the time from the introduction of a new product to its removal from the market—is expected to become shorter and shorter. Success in the recent past days or months is no longer a measure of ultimate success; the manager must be “driving” the firm by using the windshield, not the rear-view mirror.

The strategic emphasis also requires creative and integrative thinking, that is, the ability to identify and solve problems from a cross-functional view. The business functions are often identified as marketing, production, finance, and accounting/controllership. Instead of viewing a problem as a production problem, a marketing problem, or a finance and accounting problem, cross-functional teams view it from an integrative approach that combines skills from all functions simultaneously. The integrative approach is necessary in a dynamic and competitive environment. The firm’s attention is focused on satisfying the customers’ needs; all of the firm’s resources, *from all functions*, are directed to that goal.

Types of Organizations

Cost management information is useful in all organizations: business firms, governmental units, and not-for-profit organizations. Business firms are usually categorized by industry, the main categories being merchandising, manufacturing, and service. Merchandising firms purchase goods for resale. Merchandisers that sell to other merchandisers are called *wholesalers*; those selling directly to consumers are called *retailers*. Examples of merchandising firms are the large retailers, such as Walmart, Target, and Amazon.com.

Manufacturing firms use raw materials, labor, and manufacturing facilities and equipment to produce products. They sell these products to merchandising firms or to other manufacturers as raw materials to make other products. Examples of manufacturers are Ford, General Electric, and Cisco Systems.

Service firms provide a service to customers that offers convenience, freedom, safety, or comfort. Common services include transportation, health care, financial services (banking, insurance, accounting), personal services (physical training, hair styling), and legal services. In the United States, service industries are growing at a much faster rate than manufacturing or merchandising, in part because of the increased demand for leisure and convenience and society’s increased complexity and need for information.

Governmental and not-for-profit organizations provide services, much like the firms in service industries. However, these organizations provide the services for which no direct relationship exists between the amount paid and the services provided. Instead, both the nature of these services and the customers that receive them are determined by government or philanthropic organizations. The resources are provided by governmental units and/or charities. The services provided by these organizations are often called *public goods* to indicate that no typical market exists for them. Public goods have a number of unique characteristics, such as the impracticality of limiting consumption to a single customer (clean water and police and fire protection are provided for *all* residents).

Most firms and organizations use cost management information. For example, manufacturing firms use it to manage production costs. Similarly, retail firms such as Walmart use cost management information to manage stocking, distribution, and customer service. Firms in the service industries, such as those providing financial services or other professional services, use cost management information to identify the most profitable services and to manage the costs of providing those services.

Cost management information is used in a wide variety of ways. Whatever the business, a firm must know the cost of new products or services, the cost of making improvements in existing products or services, and the cost of finding a new way to produce the products or provide the services. Cost management information is used to determine prices, to change product or service offerings to improve profitability, to update manufacturing facilities in a timely fashion, and to determine new marketing methods or distribution channels.

For example, manufacturers such as Toyota study the cost implications of design options for each new product. The design study includes analysis of projected manufacturing costs as well as costs to be incurred after the product is completed, which include service and warranty costs. Service and warranty costs are often called *downstream costs* because they occur after manufacturing. By analyzing both manufacturing and downstream costs, a company is able to determine whether product enhancements might cause manufacturing and downstream costs to be out of line with expected increases in customer value and revenue for that feature.

Both large and small firms in all types of industries use cost management information. A firm's degree of reliance on cost management depends on the nature of its competitive strategy. Many firms compete on the basis of being the low-cost provider of the industry's goods or services; for these firms, cost management is critical. Other firms, such as cosmetics, fashion, and pharmaceutical firms, compete on the basis of product leadership, in which the unusual or innovative features of the product make the firm successful. For these firms, the critical management concern is maintaining product leadership through product development and marketing. The role of cost management is to support the firm's strategy by providing the information managers need to succeed in their product development and marketing efforts, such as the expected cost of adding a new product feature, the defect rate of a new part, or the reliability of a new manufacturing process.

Not-for-profit and governmental organizations also must have a strategy to accomplish their mission and satisfy their constituents. Historically, governmental units and not-for-profit agencies have tended to focus on their responsibility to spend in approved ways rather than to spend in efficient and effective ways. Increasingly, however, these types of organizations are using cost management for efficient and effective use of their financial resources.

The Contemporary Business Environment

LO 1-2

Explain the contemporary business environment and how it has influenced cost management.

Many changes in the business environment in recent years have caused significant modifications in cost management practices. The primary changes are (1) increased global competition; (2) lean manufacturing; (3) advances in information technologies, the Internet, and enterprise resource management; (4) greater focus on the customer; (5) new forms of management organization; and (6) changes in the social, political, and cultural environment of business. The current global economic challenges (high public debt, high unemployment rates, and slow economic growth, among others) will surely have a significant effect on each of these six changes. It is likely there will be an even greater rate of change in each of these six areas as firms search for new ways to compete and governmental regulations adapt to the difficult economic times.

The Global Business Environment

A key development that drives the extensive changes in the contemporary business environment is the growth of international markets and trade due to the rise of economies throughout the world and the decline of trade barriers. Businesses and not-for-profit organizations, as well as consumers and regulators, are all significantly affected by the rapid growth of economic interdependence and increased competition from other countries. The North American Free Trade Agreement (NAFTA), the Central America Free Trade Agreement (CAFTA), the World Trade Organization (WTO), the European Union (EU), and the growing number of alliances among large multinational firms clearly indicate that the opportunities for growth and profitability lie in global markets. Most consumers benefit as low-cost, high-quality goods are traded worldwide. Managers and business owners know the importance of pursuing sales and operating activities in foreign countries, and investors benefit from the increased opportunities for investment in foreign firms.

The increasing competitiveness of the global business environment means that firms increasingly need financial and nonfinancial information about competing effectively in other countries. Global business is covered in each chapter; look for the international icon next to problems involving global business.



The following table indicates the percentage of sales coming from outside the domestic market for the listed companies.

	1993	2007	2013
General Electric	17%	50%	54%
Walmart	0.0	22	33
McDonald's	47	65	69

Source: Company annual reports.

The winning companies in the global competition will be those companies that can put together the best of research, engineering, design, manufacturing, distribution—wherever they can get it, anywhere in the world—and the best of each of these will not come from one country or from one continent.

Jack Welch, former CEO of General Electric

Lean Manufacturing

To remain competitive in the face of the increased global competition, firms around the world are adopting new manufacturing technologies. These include just-in-time inventory methods to reduce the cost and waste of maintaining large levels of raw materials and unfinished product. Also, many firms are adopting the lean methods applied in Japanese manufacturing that have produced significant cost and quality improvements through the use of quality teams and statistical quality control. Other manufacturing changes include flexible manufacturing techniques developed to reduce setup times and allow fast turnaround of customer orders. A key competitive edge in what is called *speed-to-market* is the ability to deliver the product or service faster than the competition.

Use of Information Technology, the Internet, and Enterprise Resource Management

Perhaps the most fundamental of all business changes in recent years has been the increasing use of information technology, the Internet, and performance management systems. This *new economy* is reflected in the rapid growth of Internet-based firms (companies such as Amazon, eBay, and Google); the increased use of the Internet for communications, sales, and business data processing; and the use of enterprise management systems. These technologies have fostered the growing strategic focus in cost management by reducing the time required for processing transactions and by expanding the individual manager's access to information within the firm, the industry, and the business environment around the world.

Focus on the Customer

A key change in the business environment is increased *consumer expectation* for product functionality and quality. The result has been a shorter product life cycle, as firms seek to add new features and new products as quickly as possible, thereby increasing the overall intensity of competition.

In past years, a business typically succeeded by focusing on only a relatively small number of products with limited features and by organizing production into long, low-cost, and high-volume production runs aided by assembly-line automation. The new business process focuses instead on customer satisfaction. Producing value for the customer changes the orientation of managers from low-cost production of large quantities to *quality, service, timeliness of delivery, and the ability to respond to the customer's desire for specific features*. Today, many of the

critical success factors (see next page) are customer oriented. Cost management practices are also changing; cost management reports now include specific measures of customer preferences and customer satisfaction.

Management Organization

Management organization is changing in response to the changes in technology, marketing, and manufacturing processes. Because of the focus on customer satisfaction and value, the emphasis has shifted from financial and profit-based measures of performance to customer-related, nonfinancial performance measures such as quality, time to delivery, and service. Similarly, the hierarchical command-and-control type of organization is being replaced by a more flexible organizational form that encourages teamwork and coordination among business functions. In response to these changes, cost management practices are also changing to include reports that are useful to cross-functional teams of managers; the reports reflect the multifunctional roles of these teams and include a variety of operating and financial information: product quality, unit cost, customer satisfaction, and production bottlenecks, for example. The changes in manufacturing, marketing, and management in organizations are summarized in Exhibit 1.3.

Social, Political, and Cultural Considerations

In addition to changes in the business environment, significant changes have taken place in the social, political, and cultural environments that affect business. Although the nature and extent of these changes vary a great deal from country to country, they include a more ethnically and racially diverse workforce, changes in regulatory requirements, and a renewed sense of ethical responsibility among managers and employees.

The new business environment requires firms to be flexible and adaptable and to place greater responsibility in the hands of a more highly skilled workforce. Additionally, the changes tend to focus the firm on factors *outside* the production of its product or provision of its service to the ultimate consumer and the global society in which the consumer lives.

EXHIBIT 1.3 Comparison of Prior and Contemporary Business Environments

	Prior Business Environment	Contemporary Business Environment
Manufacturing		
Basis of competition	Economies of scale, standardization	Quality, functionality, customer satisfaction
Manufacturing process	High volume, long production runs, significant levels of in-process and finished inventory; this is called the “push” approach	Low volume, short production runs, focus on reducing inventory levels and other non-value-added activities and costs; this is called the “pull” approach
Manufacturing technology	Assembly line automation, isolated technology applications	Robotics, flexible manufacturing systems, integrated technology applications connected by networks
Required labor skills	Machine-paced, low-level skills	Individually and team-paced, high-level skills
Emphasis on quality	Acceptance of a normal or usual amount of waste	Goal of zero defects
Marketing		
Products	Relatively few variations, long product life cycles	Large number of variations, short product life cycles
Markets	Largely domestic	Global
Management Organization		
Type of information recorded and reported	Almost exclusively financial data	Financial and operating data, the firm’s strategic success factors
Management organizational structure	Hierarchical, command and control	Network-based organization forms, teamwork focus—employee has more responsibility and control, coaching rather than command and control
Management focus	Emphasis on the short term, short-term performance measures and compensation, concern for sustaining the current stock price, short tenure and high mobility of top managers	Increased emphasis on the long term, focus on critical success factors, commitment to the long-term success of the firm, including shareholder value