# Cost Management

## A Strategic Emphasis

*Ninth Edition*

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COST MANAGEMENT: A STRATEGIC EMPHASIS, NINTH EDITION



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We dedicate this edition . . .

To my wife, Sandy, and our sons, Joseph and David

Ed Blocher

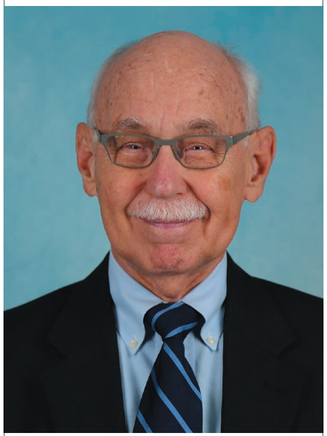
To my wife, Colleen, and my children, Stephen and Kate

Paul Juras

To my wife, Heather, and our children, Darby, Trevor, Kelli, Finneas, and Melissa

Steve Smith

# Meet the Authors



Jessica Gray Starnes/Kenan-Flagler Business School/University of North Carolina at Chapel Hill

**Edward J. Blocher** is an emeritus 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 PhD from the University of Texas at Austin. Professor Blocher has presented 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. He has supervised or participated in the direction of several doctoral students, many of whom prepared dissertations in management accounting. Professor Blocher is also the author or coauthor 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. He published a 2009 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 to 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.

Babson College

**Paul E. Juras** is the Jefferson Vander Wolk Professor of Managerial Accounting and Operational Performance and former 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 PhD 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 taught managerial accounting and strategic cost management courses in the undergraduate program, the Masters of Science in Accountancy program, and the MBA program at Wake Forest University. He teaches cost management courses in the undergraduate and various graduate programs in both face-to-face and blended-learning formats 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, including his role as the 2020–21 global chair of the organization. In addition, he has served as chair of the Institute of Certified Management Accountants, the organization responsible for the CMA certification; served a three-year term as chair of the IMA Research Foundation; and, for 10 years, was an associate editor of the *IMA Educational Case Journal.*

BYU Photo

**Steven D. Smith** is an associate professor of accountancy and the Warnick/Deloitte Fellow in the Marriott School of Business at Brigham Young University (BYU). Previously he was an assistant professor of accountancy at the University of Illinois at Urbana-Champaign. He earned BS and MACC degrees from BYU, and MS and PhD degrees from Cornell University. He is a certified management accountant (CMA). Professor Smith teaches cost and management accounting courses in the undergraduate and graduate accounting programs, as well as the executive MBA program at BYU. Professor Smith has experience working in the field of strategic cost management, including a 2016 professional development leave from BYU, during which he worked as an in-house financial planning and analysis consultant for Ortho Development Corporation, a medical device company in Salt Lake City, Utah.

Professor Smith's expertise is in the areas of management control systems, focusing on the provision of incentives and performance measurement. He has published numerous articles in prestigious academic publications such as *The Accounting Review, Review of Accounting Studies, Contemporary Accounting Research,* and *Journal of Management Accounting Research.* He has presented his research at conferences and invited presentations throughout the world, and has also published teaching cases in the *IMA Educational Case Journal* and *Strategic Finance.* Professor Smith has served in a variety of research- and teaching-focused positions in both the Management Accounting Section (MAS) of the American Accounting Association (AAA) and the Institute of Management Accountants (IMA).

**The Author Team** was selected to create a leading book in cost management based on leadership in teaching experience, research, 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/Juras/Smith

## Letter to the Students:

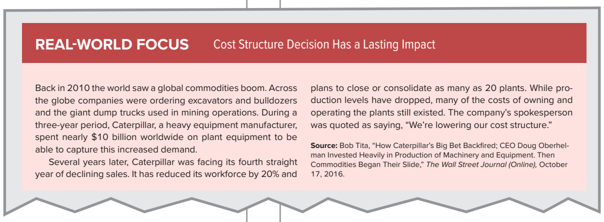
We have written this book to help you understand the role of cost management in helping an organization succeed. Unlike many books that aim to teach you *about* accounting, we aim to show you how an important area of accounting, cost management, is *used* by managers to help organizations achieve their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

An understanding of the strategic role 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.

## New Data Analytics in form of Applying Excel, Applying Tableau, and Applying Power Bi

## Key Text Features that Integrate Strategy


**REAL-WORLD FOCUS** Cost Structure Decision Has a Lasting Impact

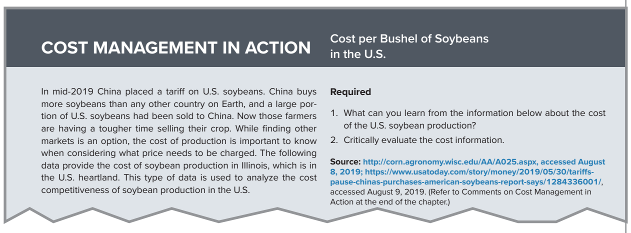
Back in 2010 the world saw a global commodities boom. Across the globe companies were ordering excavators and bulldozers and the giant dump trucks used in mining operations. During a three-year period, Caterpillar, a heavy equipment manufacturer, spent nearly $10 billion worldwide on plant equipment to be able to capture this increased demand.

Several years later, Caterpillar was facing its fourth straight year of declining sales. It has reduced its workforce by 20% and plans to close or consolidate as many as 20 plants. While production levels have dropped, many of the costs of owning and operating the plants still existed. The company's spokesperson was quoted as saying, "We're lowering our cost structure."

**Source:** Bob Tita, "How Caterpillar's Big Bet Backfired; CEO Doug Oberhelman Invested Heavily in Production of Machinery and Equipment. Then Commodities Began Their Slide," *The Wall Street Journal (Online),* October 17, 2016.

**Real-World Focus** *Cost Management* 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 in each chapter 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** Cost per Bushel of Soybeans in the U.S.

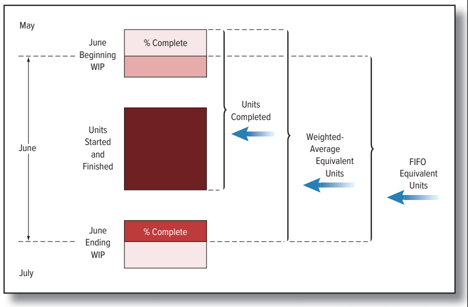
In mid-2019 China placed a tariff on U.S. soybeans. China buys more soybeans than any other country on Earth, and a large portion of U.S. soybeans had been sold to China. Now those farmers are having a tougher time selling their crop. While finding other markets is an option, the cost of production is important to know when considering what price needs to be charged. The following data provide the cost of soybean production in Illinois, which is in the U.S. heartland. This type of data is used to analyze the cost competitiveness of soybean production in the U.S.

**Required**

1. What can you learn from the information below about the cost of the U.S. soybean production?
2. Critically evaluate the cost information.

**Source:** http://corn.agronomy.wisc.edu/AA/A025.aspx, accessed August 8, 2019; https://www.usatoday.com/story/money/2019/05/30/tariffs-pause-chinas-purchases-american-soybeans-report-says/1284336001/, accessed August 9, 2019. (Refer to Comments on Cost Management in Action at the end of the chapter.)

**EXHIBIT 6.13**
**Weighted-Average vs. FIFO Equivalent Units**




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

# Helping Students Succeed Using *Cost Management, 9e*

**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. Where appropriate, the chapters have assignments based on readings from periodicals such as *Strategic Finance, Management Accounting Quarterly, The Wall Street Journal,* and *Harvard Business Review.* 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

### *A Framework for Integrating 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 ninth 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 decisions that will address the business-related problems presented in that chapter.

### *The Competitive Global Economic Environment Increases the Importance of Reviewing and Executing Strategy*

The competitive global 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 the competitive global environment. Throughout this new edition, we also cover how economic and political forces in many countries are currently opposing certain aspects of globalization—for example, tighter immigration policies and the protection of domestic workers. We first saw this in 2016, when a referendum in the United Kingdom concerning its membership in the European Union (EU) favored separation (called Brexit, or "British Exit").

### *Integration of Advanced Excel Skills Development*

Success in business requires the ability to use technology to extract information from quantitative data, and then to present that information in a way that helps others understand and make better decisions. Microsoft Excel has been and remains the dominant spreadsheet program for organizing, manipulating, and analyzing quantitative data. The authors of *Cost Management* have made a unique effort to integrate Excel training within the text as a complement to the material being presented. Excel instructions and hints are also presented in the end-of-chapter materials wherever spreadsheet application may be useful for students. These integrated Excel features are additional to the other Excel-focused resources of the book, as described in the paragraphs that follow.

## *ADDITIONAL INSTRUCTOR AND STUDENT RESOURCES*

**NEW Data Analytics and Visualization Assignments** The ninth edition introduces additional data analytics and visualization content in *Connect.* This includes video and text instruction, assignment material, and feedback using cases developed for both Tableau and Microsoft.

**Power BI** These cases and assignments provide vital training and development in one of the most important emerging aspects of management: applying technology to navigate and analyze large data sets and facilitating clear understanding of data insights using effective visualization tools.

**Excel Tutorials** The ninth edition provides brand new, updated Excel tutorial content in each of the 20 chapters. Students can simultaneously hone their Excel skills and apply those skills to managerial topics using functions such as pivot tables, Goal Seek, and regression analysis. Tutorials are offered for each chapter in both step-by-step tutorial documents and videos, as well as in "Applying Excel" content within *Connect,* enabling instructors to more easily integrate Excel into their courses and allowing students further practice using algorithmic versions.

**Excel Solution Manual** For each chapter, *Cost Management* provides a solution manual in Excel form. The Excel file provides the solution to every exercise and problem in its own spreadsheet tab, with soft-coded formulas wherever computations are needed. This resource, which is unique to *Cost Management,* provides immense flexibility for instructors to (1) help students understand challenging computations, (2) easily demonstrate sensitivity of outputs to variations in inputs, (3) efficiently deploy solutions as needed, (4) resolve pesky rounding issues, and (5) facilitate additional exposure to advanced Excel functions.

Chapter 3: Applying Excel: Excel Worksheet (Part 1 of 2)

Enter formulas in cells that contain question marks. After entering formulas in all of the cells that contain question marks, verify that the amounts match the example below.

| # of Members Attending | | Total Cost | Average Cost per Person |
|---|---|---|---|
| 260 | people (80% of members) | $4,620 | $17.77 |
| 325 | people (all members) | $4,500 | $13.85 |

| | |
|---|---|
| Party Budget | $ 7,500 |
| # of People Attending | 650 |
| Total Cost | $ 7,750 |
| Who should be invited? | Invite members only |

Check your worksheet setup and formulas by changing the Total Rental Cost in cell C14 in the Data area to $2,000, keeping all of the other data the same as in the original example. If your worksheet is operating properly, the Total Cost for 260 people attending should now be $5,120. If you do not get this answer, find the errors in your worksheet and correct them.

**reference file**

Blocher8e_Ch03_ApplyingExcel_Student.xlsx

Student upload controls will be shown to students when they take this assignment.

**Excel Simulations** Excel Simulations, assignable in Connect, allow students to practice their 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), as well as automatic feedback and grading for both students and professors. These questions differ from Applying Excel in that students work in a simulated version of Excel. *Downloading the Excel application is not required to complete Excel Simulations.*

**Cases and Readings Supplement** The *Cases and Readings Supplement,* available in the Instructor Library and Additional Student Resources, challenges students to think about and use cost management information in a real-world setting. Several of the cases are offered as auto-graded assignments in *Connect* in the ninth edition. The content provides critical thinking skills development as well as a basis for more comprehensive and in-depth discussions about the role of cost management in helping an organization successfully execute its strategy.

**Self-Study Problems** *Cost Management* provides a multifaceted self-study problem before the questions, exercises, and problems at the end of each chapter. The solution to the static version of each problem in the book is provided at the very end of the chapter. These problems are more comprehensive in nature and can be an invaluable resource for students to assess their own understanding of chapter material. The ninth edition offers algorithmic versions of the self-study problems in *Connect* in addition to the worked-through versions included in the book. Instructors can assign these now and, with the auto-grading feature, can use these as additional assessment content. Students also have access to the static book versions and tutorial videos to work on their own time and at their own pace, using the step-by-step solution to each self-study problem found in the Additional Student Resources.

1

**Self-Study Problem 4-1**

10 points

eBook

Print

References

Watkins Machinery Company uses a normal job costing system. The company has the following partial trial balance information for March, the last month of its fiscal year:

| | |
|---|---|
| Materials inventory (X, $9,000; Y, $6,000; Indirect materials, $15,000) | $ 30,000 |
| Work-in-process inventory (this is Job 101) | 15,600 |
| Finished goods inventory (this is Job 100) | 26,000 |

**Required:**

1. Prepare journal entries to record the transactions for the events from parts (a) through (g).
2. Compute the ending balance of the Work-in-process inventory account.
3. Compute the overhead variance and indicate whether it is overapplied or underapplied.
4. Close the overhead variance to the Cost of goods sold account.

**Complete this question by entering your answers in the tabs below.**

Required 1 | Required 2 | Required 3 | Required 4

Prepare journal entries to record the transactions for the events from parts (a) through (g). (If no entry is required for a transaction/event, select "No journal entry required" in the first account field.)

View transaction list

**Journal entry worksheet**

< 1 2 3 4 5 6 7 8 >

## Connect Library

The Connect Instructor Library is a repository for these additional resources to improve student engagement in and out of class. You can select and use any asset that enhances your lecture. Additional ancillary materials are prepared by the authors to ensure consistency and accuracy and are available in the Instructor Resources within the Connect Library and via the Additional Student Resources within the eBook. The Connect Instructor Library includes:

- Instructor's Guide and Solutions Manuals, both in PDF and Excel forms.
- Teaching notes for the Cases and Reading Supplements.
- PowerPoint lecture presentations.
- Test bank (including TestGen and Test Bank Matrices). TestGen is a complete, state-of-the-art test generator and editing application software that allows instructors to quickly and easily select test items from McGraw Hill's test bank content. The instructors can then organize, edit, and customize questions and answers to rapidly generate tests for paper or online administration.

The Additional Student Resources include:

- **Excel Tutorials.**
- **Data Analytics and Visualization Assignments.**
- **Check Figures.**
- **Self-Study Problems.**
- **PowerPoint Slides.**
- **Cases and Readings Supplement.**
- **Regression Analysis Supplement.**
- **Variance Investigation Supplement.**

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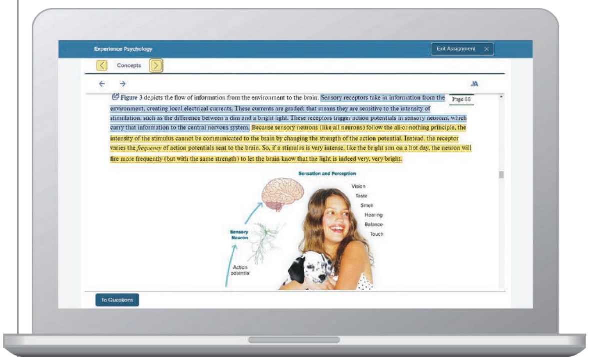

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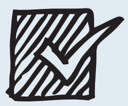

A product isn't a solution. Real solutions are affordable, reliable, and come with training and ongoing support when you need it and how you want it. Visit **www.supportateverystep.com** for videos and resources both you and your students can use throughout the semester.

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>
> - Jordan Cunningham,
> Eastern Washington University


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## Everything you need in one place

Your Connect course has everything you need—whether reading on your digital eBook or completing assignments for class, Connect makes it easy to get your work done.

## Learning for everyone

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# What's NEW about the 9th Edition

## Big Data Analytics and Visualization: Applying Tableau, Applying Power BI, and Applying Excel

The ninth edition of *Cost Management* introduces data analytics and visualization assignments using "Applying Tableau" and "Applying Power BI" in *Connect.* This includes video and text instruction, assignment material, and feedback using cases developed for both programs. These cases and assignments provide vital training and development in one of the most important emerging aspects of management: using technology to navigate and analyze large data sets and facilitating clear understanding of data insights with effective visualization tools.

## New Excel Training: Videos, Documentation, and Integration

The Excel Tutorial videos and documentation for each chapter have been fully reproduced for the ninth edition, using Excel version 16. Students can simultaneously hone their Excel skills and apply those skills to managerial topics using functions such as pivot tables, charts and graphs, Goal Seek, Solver, and regression analysis. Tutorials are offered for each chapter in both step-by-step tutorial documents and videos. In addition, the book provides "Applying Excel" content within *Connect,* enabling instructors to more easily integrate Excel into their courses and allowing students further practice using algorithmic versions. As always, *Cost Management* is unique in its integration of Excel skills into both the text of the chapters and much of the end-of-chapter content.

## Certified Management Accountant (CMA) Exam Preparation: Practice Problems and Essays

*Cost Management: A Strategic Emphasis, 9e,* also offers a large selection of recently used Certified Management Accountant (CMA) Exam problems and essay questions (with solutions) in *Connect.* These problems and essay questions are linked to the book chapters to which the topics most closely relate, and they create an even richer library of content (much of it auto-gradable) that instructors may use to build homework and other assignments. These problems also present valuable practice material for students who are interested in pursuing the CMA designation, either as students or following their formal education.

## Globalization and Anti-Globalization ("Brexit")

From the first edition, the book has addressed globalization and global issues as an important feature of cost management with a strategic emphasis. Globalization appears frequently in the text and in the exercises and problems. A section in Chapter 1, under the heading The Global Business Environment, explains the new **economic nationalism** trends that oppose globalization. An example of this trend is the 2016 referendum in the United Kingdom in favor of separation from the EU (referred to as "Brexit"). Economic nationalism attempts to protect domestic workers and industries from foreign competition. It opposes globalization, free trade, and immigration. The effect of economic nationalism on the role of cost management can be significant, and we bring this up throughout the ninth edition.

## 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 (Chapter 5) and also in the chapter on budgeting (Chapter 10). ABC appears in most of the chapters in Part Two because 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.

## Enhancing Features from Prior Editions

- Significant new material has been added to *Connect* to greatly enhance the usefulness of this teaching and learning environment.
- Chapters have been revised to include up-to-date issues in cost management and discuss how accountants are dealing with these issues; examples include the COVID recession, economic nationalism (Brexit), changes in sustainability reporting practices, data analytics, the volatility of foreign exchange rates, strategic cost management, and changes in management compensation practices, among others. Because of the strategic focus of the book, we put emphasis on providing current, real-world examples in the text and in the problem material. This material is then updated for each new edition.
- End-of-chapter exercises and problems have been improved, with a strong focus on providing clarity, a clear linkage to chapter learning objectives, with varying and appropriate levels of challenge.

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## Remote Proctoring & Browser-Locking Capabilities

New remote proctoring and browser-locking capabilities, hosted by Proctorio within *Connect,* provide control of the assessment environment by enabling security options and verifying the identity of the student.

Seamlessly integrated within *Connect,* these services allow instructors to control students' assessment experience by restricting browser activity, recording students' activity, and verifying students are doing their own work.

Instant and detailed reporting gives instructors an at-a-glance view of potential academic integrity concerns, thereby avoiding personal bias and supporting evidence-based claims.

## Test Builder in *Connect*

Available within *Connect,* Test Builder is a cloud-based tool that enables instructors to format tests that can be printed or administered within an LMS. Test Builder offers a modern, streamlined interface for easy content configuration that matches course needs, without requiring a download.

Test Builder allows you to:

- Access all test bank content from a particular title.
- Easily pinpoint the most relevant content through robust filtering options.
- Manipulate the order of questions or scramble questions and/or answers.
- Pin questions to a specific location within a test.
- Determine your preferred treatment of algorithmic questions.
- Choose the layout and spacing.
- Add instructions and configure default settings.

Test Builder provides a secure interface for better protection of content and allows for just-in-time updates to flow directly into assessments.

## Tegrity: Lectures 24/7

Tegrity in *Connect* is a tool 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 easy to search, frame by frame. Students can replay any part of any class with easy-to-use, browser-based viewing on a PC, Mac, iPod, or other mobile device. Educators know that the more students can see, hear, and experience class resources, the better they learn. In fact, studies prove it. Tegrity's unique search feature helps students efficiently find what they need, when they need it, across an entire semester of class recordings. Help turn your students' study time into learning moments immediately supported by your lecture. With Tegrity, you also increase intent listening and class participation by easing students' concerns about note-taking. Using Tegrity in *Connect* will make it more likely you will see students' faces, not the tops of their heads.

# Improving Student Success with *Connect*

**Production Budget – in units**

| | |
|---|---|
| Desired ending inventory (July 31) (The higher of 500 or 7,000 × 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 × 0.1) | - 600 |
| Units to manufacture in July | 6,100 |

## Connect *End-of-Chapter Material*

*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. The extensive assignable, gradable end-of-chapter content includes a new multitab design for easier navigation for select exercises. Significant amounts of new auto-graded *Connect* content have been added with the ninth edition, including the problem set in both static and algorithmic form, select Cases, and Applying Excel questions, along with a new algorithmic test bank.

## McGraw Hill Education Customer Experience Group Contact Information

At McGraw Hill Education, we understand that getting the most from new technology can be challenging. That's why our services don't stop after you purchase our products. You can contact our Product Specialists 24 hours a day to get product training online. Or you can search the knowledge bank of Frequently Asked Questions on our support website. For Customer Support, call 800-331-5094, or visit www.mhhe.com/support. One of our Technical Support Analysts will be able to assist you in a timely fashion.

## Assurance-of-Learning Ready

*Many educational institutions today are focused on the notion of assurance of learning,* an important element of many accreditation standards. *Cost Management: A Strategic Emphasis, 9e,* is designed specifically to support your assurance-of-learning initiatives with a simple, yet powerful, solution.

Each chapter in the book begins with a list of numbered learning objectives, which appear throughout the chapter as well as in the end-of-chapter assignments. Every Test Bank question for *Cost Management: A Strategic Emphasis* maps to a specific chapter learning objective in the textbook. Each Test Bank question also identifies topic area, level of difficulty, Bloom's Taxonomy level, and AICPA and AACSB skill area.

## AACSB Statement

McGraw Hill/Irwin is a proud corporate member of AACSB International. Understanding the importance and value of AACSB accreditation, *Cost Management: A Strategic Emphasis, 9e,* recognizes the curricular guidelines detailed in the AACSB standards for business accreditation by connecting selected questions in the text and the Test Bank to the general knowledge and skill guidelines in the revised AACSB standards.

The statements contained in *Cost Management: A Strategic Emphasis* are provided only as a guide for the users of this textbook. The AACSB leaves content coverage and assessment within the purview of individual schools, the mission of the school, and the faculty. While *Cost Management: A Strategic Emphasis, 9e,* and the teaching package make no claim of any specific AACSB qualification or evaluation, we have, within the text and test bank, labeled selected questions according to the eight general knowledge and skill areas.

# Enhancements for This Edition

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

### Chapter 1: Cost Management and Strategy

- Updates to the chapter opener, all Real-World Focus items, Cost Management in Action discussion, and text references with current information
- Revision of text with updated information on economic nationalism and Brexit, business analytics, and professional certification details
- Three new problems based on current real-world trends, with clarifications and updates throughout the end-of-chapter materials and solutions

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

- Updates to the chapter opener and all Real-World Focus items with current information
- Revision of SWOT analysis with discussion of the impact of economic nationalism on opportunities and threats
- Clarification of text on value chain and supply chain, sustainability assurance and reporting, and the Balanced Scorecard
- Three new end-of-chapter problems addressing sustainability, economic nationalism, and the Balanced Scorecard

### Chapter 3: Basic Cost Management Concepts

- New Real-World Focus item discussing the impact of a cost structure decision at Caterpillar
- Updates to the Cost Management in Accounting item and the chapter's Five Steps of Strategic Decision Making section
- Clarification of language on cost behavior and cost classifications

### Chapter 4: Job Costing

- Change of Thomasville Furniture example to Tomlinson Furniture, with numerous text and numerical revisions throughout the chapter
- Two new Real-World Focus items (replacing one that was dated) about the strategic relationship between price and cost
- Updates to sections on cost flows, discussing technology and the proration method for disposition of over/underapplied overhead
- Additions and revisions to end-of-chapter content for adaptability in *Connect* and to add new requirements regarding the disposition of over/underapplied overhead

### Chapter 5: Activity-Based Costing and Customer Profitability Analysis

- Four new and one updated Real-World Focus items (replacing two that were dated), addressing service departments, patient profitability, and activity-based costing
- Minor revisions to end-of-chapter problems for clarity and adaptability in *Connect*

### Chapter 6: Process Costing

- Revised language to improve clarity throughout the chapter
- New Real-World Focus item about spoilage in jellybean production
- Updates and minor edits throughout the end-of-chapter problems material

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

- One new Real-World Focus item (about overhead costs and funding of the National Institutes of Health) with updates to two others
- Clarifying language and footnote/exhibit revisions throughout
- Revisions to end-of-chapter materials and solution manual for minor errors and formatting

## Part Two: Planning and Decision Making

### Chapter 8: Cost Estimation

- Updated chapter opener with connection to Big Data and analytics
- Five new Real-World Focus items, addressing the importance of understanding cost structure, cost estimation challenges, the role of predictive analytics, and forecasting tools in professional football
- Minor updates and revisions to end-of-chapter materials and the solution manual

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

- Updated chapter opener about iHeartRadio and CVP analysis
- Two new Real-World Focus items (discussing CVP analysis for airlines and sales mix at Apple) with updates to four others
- New exhibit (9.7) with a table of expected values to help improve the discussion of dealing with uncertainty
- Minor revisions to end-of-chapter material, including a new exercise on profit planning and point of indifference

### Chapter 10: Strategy and the Master Budget

- Updated chapter opener with current information about Johnson & Johnson
- Two new Real-World Focus items (discussing labor budgeting in the

video game production industry and budgeting in the nonprofit sector) with updates to three others

## Chapter 11: Decision Making with a Strategic Emphasis

- Move of the appendix (about linear programming and the product mix decision) to online-only content in *Connect*
- Two new Real-World Focus items, addressing the make-or-buy decision at Apple and the keep-or-drop decision at Merck
- Minor revisions to end-of-chapter material, including replacing one problem (11-43) with a new *Connect*-adaptable problem with advanced Excel content

## Chapter 12: Strategy and the Analysis of Capital Investments

- New chapter opener about Intel and capital budgeting
- Revisions to the Mendoza capital investment example to reflect MACRS 3-year depreciation, with numerous text and numerical revisions (including updated Excel screenshots) throughout
- Updates and revisions to four Real-World Focus items
- Two new problems, both available in *Connect*

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

- Two new Real-World Focus items (discussing designing for the market and pricing with artificial intelligence) with updates to three others
- Appendix and associated end-of-chapter content removed

# Part Three: Operational-Level Control

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

- Two new Real-World Focus items (discussing artificial intelligence in health care and outsourcing computing services) with removal of outdated items
- New Cost Management in Action item, discussing the limitations of (and alternatives to) standard costing systems)
- New problem about computing total price and usage variances with multiple material inputs

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

- Minor revisions throughout for consistency, such as replacing "absorption costing" with "full costing" and "CGS" with "COGS" throughout the chapter (and the book)
- Two new Real-World Focus items (discussing employee engagement at Ameritech and nonprofit investments in technology) with updates to one other

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

- Revisions to two Real-World Focus items and the chapter opener based on current information
- Minor updates and revisions to end-of-chapter material

## Chapter 17: The Management and Control of Quality

- Revisions and streamlining of chapter opener about quality in the health care sector
- Updates to two Real-World Focus items (discussing the cost of poor quality and airline quality ratings) and the Cost Management in Action item based on current information and examples
- Updates to information about the Baldrige Award and the Shingo Prize with current information

# Part Four: Management-Level Control

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

- Language revisions throughout the text, including replacing "uncertainty" with "controllability" and "lack of observability" with "information asymmetry" in discussion of agency theory
- New Real-World Focus item (addressing the effects of outsourcing on median pay levels at Hasbro and Mattel)
- Numerous revisions to end-of-chapter materials, including converting a number of problems to single answer format, better suited for algorithmic conversion in *Connect*

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

- Minor revisions of text for clarity, efficiency, and accuracy, including removal of outdated financial reporting information about leases
- Updates to two Real-World Focus items with current information/ examples
- Revisions to some end-of-chapter materials to improve adaptability to algorithmic conversion in *Connect*

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

- New chapter opener about CEO compensation at Bank of America
- Updates to three Real-World Focus items with current information (about SEC disclosure and say on pay, employee stock ownership at Comcast, and the S&P 500 PE ratio over time)
- Updates to end-of-chapter problems based on real-world data (e.g., Yum! Brands financials, CEO compensation), along with other adjustment from multiple-choice to single answer to better facilitate algorithmic conversion in *Connect*

# Acknowledgments

## Our Sincerest Thanks . . .

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PD: OK as comma, then ;?

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*Paul Juras*

*Steve Smith*

# Brief Contents

# Contents

PART ONE

# 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 organizations plan for success through strategy, and the management accountant's role in implementing strategy. The chapter includes 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 among service, manufacturing, and merchandising companies.

**Chapters 4**, **5**, **6**, **and 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. These types of firms generally compete using a cost-leadership strategy.

**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.

CHAPTER ONE

# 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.


deanpictures/123RF

Talk about a success story! Walmart has grown from its first discount store in 1962 to become the world's largest company, with more than $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.

**cost management information**
The information 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.

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.

**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.*

## Management Accounting and the Role of Cost Management

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 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.

**cost management**
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.*[1]

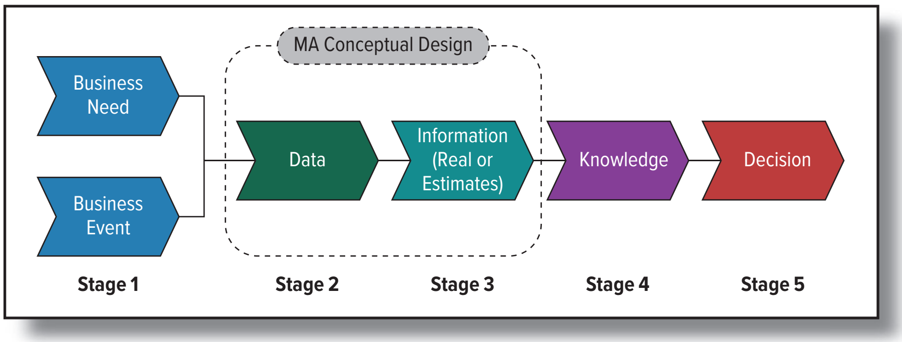
> **Management accounting** is a profession that involves partnering in management decision making, devising planning and performance management systems, and providing expertise in financial reporting and control to assist management in the formulation and implementation of an organization's strategy.

**management accounting**
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

[1] https://www.imanet.org/insights-and-trends/statements-on-management-accounting?ssopc=1

information is developed and used within the organization's information value chain, from stage 1 through stage 5, as shown below:

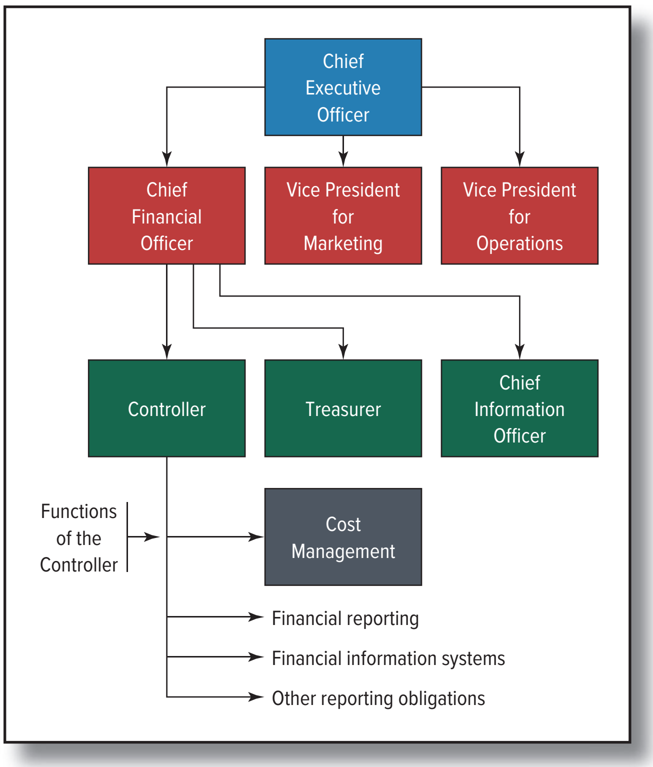



At lower stages of the value chain, management accountants gather and summarize data (stage 2) from business events (stage 1) and then transform the data to cost management information (stage 3) through analysis and use of the management accountants' expertise. At stage 4, cost management information 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 of 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.

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



## REAL-WORLD FOCUS Why Strategy? Managers Tell Us Why

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 1,500 controllers and other financial executives found that 91% of all organizations expect the controllership function to be more involved in the organization's strategy. Also, a 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 Accenture, a consulting firm, found results that confirmed the IMA/ACCA findings.

The Society of 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:** Daniel Butcher, "The Changing Role of the CFO," *Strategic Finance,* December 2019, pp. 21–23; Elizabeth Kennedy, "Controllers: Get Strategic!," *Strategic Finance,* May 2017, p. 13; Raef Lawson, "Become Business Partners," *Strategic Finance,* July 2016, pp. 25–31; 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, April 2014 (www.accaglobal.com/content/dam/acca/global/PDF-technical/finance-transformation/cfo-career-paths.pdf); "Building a Better Business Together: Welcome to Finance Business Partnering," The Association of International Certified Professional Accountants, 2018 (www.cgma.org/content/dam/cgma/resources/reports/downloadabledocuments/cgma-finance-business-partnering.pdf); "Competency Map of the CMA Profession," The Chartered Professional Accountants of Canada (www.cpacanada.ca/).

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 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

**strategic management**
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 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.

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 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.

**planning and decision making**
Budgeting and profit planning, cash flow management, and other decisions related to operations.

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).

**operational control**
The monitoring of short-term operating performance; takes place when mid-level managers monitor the activities of operating-level managers and employees.

**management control**
The system used by upper-level managers to evaluate the performance of mid-level managers.

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 (e.g., 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). 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.[2]

**preparation of financial statements**
Requires management to comply with the financial reporting requirements of regulatory agencies.

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.

A comprehensive coverage of financial reporting is covered in courses on financial accounting, the field concerned with reporting the financial statements to investors, regulators, and other interested parties.

## 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 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—are 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.

[2] 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.

## 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.

Manufacturing firms use materials, labor, and manufacturing facilities and equipment to produce products. They sell these products to merchandising firms or to other manufacturers as 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 who 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) continuing growth in global competition along with the emergence of forces opposed to globalization; (2) lean manufacturing; (3) advances in information technologies, the internet, and enterprise resource management; (4) continued focus on the customer, though influenced by the growth in economic nationalism ; (5) new forms of management organization; and (6) changes in the social, political, and cultural environment of business, including the impact of climate change. The current global economic challenges (high public debt, tariffs, and concerns about immigration, 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 in some countries. 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. Here are some examples of global interdependence. The United States, Mexico, Canada Agreement (USMCA; ratified March 12, 2020) revises and replaces the North American Free Trade Agreement (NAFTA) between these three countries, 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.

#### *A Force against Globalization: Economic Nationalism*

The expansion of globalization has faced a strong counter-force in a number of ways since June 2016. For example, a referendum on membership in the European Union (EU) held in the United Kingdom (UK) in June 2016 resulted in a vote in favor of separating the UK from the EU (this separation is called Brexit, or "British Exit"). On January 31, 2020, the issue was resolved when the UK parliament voted to end the country's 47 years in the EU. There is an 11-month transition period (ending December 31, 2020) in which the EU and UK will determine the details of the relationships between the UK and the EU going forward. Key matters to be resolved include trading relationships between the two parties, whether there will be tariffs, quotas, or other trade limitations. Other matters to be resolved include travel between the UK and EU, customs and immigration, product safety standards, among others.

Also, there is a continuing strong worldwide growth of interest in protecting domestic workers and industries from foreign competition. Many have called this trend **economic nationalism,** which is the ideology that promotes domestic economic growth and opposes globalization, free trade, and immigration.

**economic nationalism**
The ideology that promotes domestic economic growth and opposes globalization, free trade, and immigration.

#### *Economic Nationalism: Tariffs*

An important element of economic nationalism is the intent to protect domestic workers and industries through tariffs. A tariff is an additional cost that importers must pay, thus increasing the cost to consumers of the imported product and making domestic products more attractive

## REAL-WORLD FOCUS Going Global: The Growing Importance of Worldwide Markets

The following table indicates the percentage of sales coming from outside the domestic market for the listed companies. Global sales have been crucial for these and many other companies. For example, while in 1970 the value of global trade was less than 30% of global gross domestic product (GDP), in 2019 that percentage had grown to 60%. (Source: World Bank)

| | 1993 | 2007 | 2019 |
|---|---|---|---|
| General Electric | 17% | 50% | 62% |
| Walmart | 0.0 | 22 | 24 |
| McDonald's | 47 | 65 | 64 |

**Sources:** Company annual reports.

### THE OUTLOOK FOR GLOBALIZATION AND ECONOMIC NATIONALISM

In the recent couple of years, we have seen economic nationalism strengthen in the U.S., the UK, Eastern Europe, and elsewhere in the world. Leaders of these countries have pushed for tariffs, for limiting immigration, and for ending established free trade policies. In their place, however, we have seen the growth of trading relationships in other areas of the world. For example, in 2018, Japan, Australia, Brunei, Canada, Vietnam, Singapore, Mexico, Chile, Peru, Malaysia, and New Zealand formed the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (TPP), which links these 11 countries in a trading partnership. Also, in May 2019, 55 African countries joined the African Free Trade Treaty.

**Sources:** Michael Schuman, "Globalization Isn't Going Away," *Bloomberg Businessweek,* March 19, 2018, pp. 14–15; David Brooks, "The Revolt Against Populism," *The New York Times,* November 21, 2019.

to consumers. Tariffs have their basis in the concept of *mercantilism,* common in the 17th and 18th centuries, which measured the strength of an economy by the maximization of exports and the minimization of imports. When two or more countries adopt tariffs against each other, it is often called a "trade war."

### *Tariffs: Economic Uncertainty and Volatility*

A typical consequence of tariffs and trade wars is increased economic uncertainty, as manufacturers and other companies try to forecast the changes in costs and prices that the trade war will cause. This uncertainty generally leads to lower or delayed investment by companies as they wait to see how the trade war develops. The uncertainty is also often associated with volatility in costs and prices that are important to the company. A good reference on the impact of uncertainty and volatility on the finance function of the company can be found in the joint publication by the Institute of Management Accountants (IMA) and the Association of Chartered Certified Accountants (ACCA): *Tomorrow's Finance Enterprise* (**www.accaglobal.com/us/en/technical-activities/technical-resources-search/2014/april/tomorrows-finance-enterprise.html**).[3] The conclusion of the report states: "Economic uncertainty, volatility, risk, and ambiguity are the critical challenges facing business today. This research is further evidence of the CFO's strategic business role and the need for greater alignment between business strategy and the role of the finance team, particularly the establishment of processes, systems or metrics for tracking success."

Another element of economic uncertainty that has created volatility in costs, prices, and stock values is the corona virus pandemic that started in China in late 2019 and is now (July 2020) world-wide. In addition to the human cost, the pandemic has caused severe disruption in some global supply chains as governments adopt regulations to minimize the flow of people and goods from country to country in order to halt the spread of the virus. The ultimate economic damage of the virus is difficult to estimate at this time but is expected to be very significant.

Apart from Brexit and the emergence of economic nationalism in countries around the world, it is clear that the increasing competitiveness and complexity of the global business environment means that firms 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 international icon is shown in the margin opposite this paragraph.

[3] See also Michael Regan, "The Chaos Cycle," *Bloomberg Businessweek,* August 12, 2019, pp. 24–26; and Shawn Donnan, "Weaponizing Uncertainty," *Bloomberg Businessweek,* December 17, 2018, pp 34–35.

## REAL-WORLD FOCUS Manufacturing Jobs: Free Trade and Economic Nationalism

Proponents of economic nationalism want to improve the job prospects of middle- and lower-income families by reducing free trade and immigration. However, proponents of global trade say that in recent decades, trade has provided access by consumers to higher-quality and lower-price products from countries around the world. It has also sparked the growth in manufacturing in Asian countries, especially India and China. Trade agreements and reductions in tariffs have helped achieve this growth. In addition to the trade agreements and reductions in tariffs, other factors such as automation, fluctuating foreign exchange rates, and the weakening of labor unions have had an impact on manufacturing employment. Automation in manufacturing industries has caused the loss of many manufacturing jobs. The strong dollar has meant that foreign goods are less expensive in the U.S. and U.S. products are more expensive abroad (in late 2019, the dollar had appreciated by more than 20% over the euro and the UK pound since 2014). Also, the decline in labor unions in the U.S. has meant U.S. manufacturing workers have less leverage in negotiating labor contracts.

The economic impact of Brexit on the UK is expected to be approximately 40 billion pounds per year. Because the break with the European Union (EU) will mean that trade with EU countries will be more complicated, costly, and time consuming, companies such as Sony, Airbus, Citigroup, JP Morgan Chase, and Morgan Stanley are planning to move their operations out of the UK. Some UK firms have already suffered; the travel firm Thomas Cook declared bankruptcy in September 2019 and British Steel Ltd. declared bankruptcy in May 2019.

The effects in the U.S. from the economic nationalism are less clear. Tariffs have created some uncertainty but have had no clear effect as yet (July 2020) on manufacturing employment. Many experts note that the impediment to growth in manufacturing jobs is not globalization but instead is automation and the lack of a manufacturing infrastructure in the U.S. In contrast, the tariffs have created losses in certain nonmanufacturing industries, such as agriculture. Companies in the pharmaceutical, electronic manufacturing, and automobile manufacturing industries (among others) have complex global supply chains, and tariffs will alter those supply chains, perhaps moving manufacturing to other foreign countries. Note that overall the percentage of U.S. workers in manufacturing has fallen steadily since the 1940s: from a high of 40% in the 1940s to well under 10% today.

**Sources:** Andrew Taylor and Lisa Mascaro, "Trump, Dems in Tentative Deal on North American Trade Pact," Associated Press News, December 9, 2019 (**https://newsradiowrva.radio.com/articles/national/trump-dems-in-tentative-deal-on-north-american-trade-pact**); Joe Mayes, "A Costly Farewell," *Bloomberg Businessweek,* May 20, 2019, pp. 34–36; Richard Partington, "Cost of Brexit to UK Economy Running at 40 Billion Pounds per Year," *The Guardian,* February 15, 2019; Joe Mayes, "The Business Cheering Exit," *Bloomberg Businessweek,* December 9, 2019, p. 19; Ben Casselman, "Trade War Starts Changing Manufacturers in Hard-to-Reverse Ways," *The New York Times,* May 31, 2019, p. A1; Ruben Munsterman and Ellen Proper, "The Unbearable Bounty of Brexit," *Bloomberg Businessweek,* April 1, 2019, pp 34–35; Shawn Donnan and Jenny Leonard, "'Trade Wars Are Good and Easy to Win,'" *Bloomberg Businessweek,* November 18, 2019, pp. 322–36; "Blame Automation, Not Immigration," *Bloomberg Businessweek,* March 12, 2017; Dexter Roberts and Rachel Chang, "China's Robotic Revolution," *Bloomberg Businessweek,* May 1, 2017, pp. 32–34; Matt Townsend, "Can Sneaker Makers Come Home Again?," *Bloomberg Businessweek,* February 7, 2017, pp. 17–19; Michael Schuman, "Smiles Aren't Factory-Made," *Bloomberg Businessweek,* June 12, 2017, pp. 8–9.

## 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 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 has been the increasing use of information technology, the internet, and other technologies such as blockchain (**www.fool.com/investing/2018/01/10/the-basics-of-blockchain-technology-explained-in-p.aspx**) and artificial intelligence (**www.forbes.com/sites/cognitiveworld/2019/02/25/artificial-intelligence-hype-is-real/#27c54e2625fa**). This *new economy* is reflected in the rapid growth of internet-based firms; 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 element in the business environment is the need to meet high *consumer expectation* for product functionality and quality. To meet this expectation, companies have adopted shorter product life cycles, 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.*

In the coming years, with the emergence of economic nationalism, the focus will move somewhat from the customer to the producer, as nations use tariffs and other means to protect local producers. Globalization offers the customer the best choice of price, quality, and functionality for products made anywhere in the world. Economic nationalism limits those choices.

## 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 Climate Change 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.

An example of an important political and social consideration is the emergence in the U.S. and in the EU countries of economic nationalism. Economic nationalism has fostered anti-trade and anti-immigration measures in some countries. Companies and organizations around the world are adapting to these changes.

Additionally, a worldwide concern for the effects of climate change has changed the way many manufacturers and retailers operate. A common focus now is to change to new operating methods to use less fossil fuels and to reduce the companies' impact on the environment. The topic of sustainability is covered in Chapter 2.

**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 |

## The Strategic Focus of Cost Management

The competitive firm incorporates the emerging and anticipated changes in the contemporary environment of business into its business planning and practices. The competitive firm is customer driven; uses advanced manufacturing and information technologies when appropriate; anticipates the effect of changes in regulatory requirements and customer tastes; and recognizes its complex social, political, and cultural environment. Guided by strategic thinking, the management accountant focuses on the factors that make the company successful rather than relying only on costs and other financial measures. We are reminded of the story of the Scottish farmer who had prize sheep to take to market. When asked why his sheep were always superior to those of his neighbors, the farmer responded, "While they're weighing their sheep, I'm fattening mine." Similarly, cost management focuses not on the measurement per se but on the *identification of measures that are critical* to the organization's success. Robert Kaplan's classification of the stages of the development of cost management systems describes this shift in focus:

**Stage 1.** Cost management systems are basic transaction reporting systems.

**Stage 2.** As they develop into the second stage, cost management systems focus on external financial reporting. The objective is reliable financial reports; accordingly, the usefulness for cost management is limited.

**Stage 3.** Cost management systems track key operating data and develop more accurate and relevant cost information for decision making; cost management information is developed.

**Stage 4.** Strategically relevant cost management information is an integral part of the system.

Rev. Confirming Pages



The first two stages of cost system development focus on the management accountant's measurement and reporting role, and the third stage shifts to operational control. In the fourth stage, the ultimate goal, the management accountant is an integral part of management, not a reporter but a full business partner, working on management teams to implement the firm's strategy. This requires the identification of the firm's critical success factors and the use of analytical, forward-looking decision support. **Critical success factors (CSFs)** are measures of those aspects of the firm's performance essential to its competitive advantage and, therefore, to its success. Many of these critical success factors are financial, but many are nonfinancial. The CSFs for any given firm depend on the nature of the competition it faces. The development and use of CSFs are taken up in Chapter 2.

**critical success factors (CSFs)**
Measures of those aspects of the firm's performance that are essential to its competitive advantage and therefore to its success.

## Contemporary Management Techniques: The Management Accountant's Response to the Contemporary Business Environment

**LO 1-3**
*Explain the contemporary management techniques and how they are used in cost management to respond to the contemporary business environment.*

Management accountants, guided by a strategic focus, have responded to the six changes in the contemporary business environment with 13 methods that are useful in implementing strategy in these dynamic times. The first 6 methods focus directly on strategy implementation: the balanced scorecard and strategy map, value chain, activity-based costing and management, business analytics, target costing, and life-cycle costing. The next 7 methods help to achieve strategy implementation through a focus on process improvement: benchmarking, business process improvement, total quality management, lean accounting, the theory of constraints, sustainability, and enterprise risk management. Each of these methods is covered in one or more of the chapters of the text.

### The Balanced Scorecard (BSC) and Strategy Map

Strategic information using critical success factors provides a road map for the firm to use to chart its competitive course and serves as a benchmark for competitive success. Financial measures such as profitability reflect only a partial, and frequently only a short-term, measure of the firm's progress. Without strategic information, the firm is likely to stray from its competitive course and to make strategically wrong product decisions—for example, choosing the wrong products or the wrong marketing and distribution methods.

To emphasize the importance of using strategic information, *both financial and nonfinancial,* accounting reports of a firm's performance are now often based on critical success factors in four different perspectives. One perspective is financial; the other three are nonfinancial:

1. **Financial performance.** Measures of profitability and market value, among others, as indicators of how well the firm satisfies its owners and shareholders.
2. **Customer satisfaction.** Measures of quality, service, and low cost, among others, as indicators of how well the firm satisfies its customers.
3. **Internal processes.** Measures of the efficiency and effectiveness with which the firm produces the product or service.
4. **Learning and growth.** Measures of the firm's ability to develop and utilize human resources to meet its strategic goals now and into the future.

An accounting report based on the four perspectives is called a **balanced scorecard (BSC).** The concept of balance captures the intent of broad coverage, financial and nonfinancial, of all factors that contribute to the firm's success in achieving its strategic goals. The balanced scorecard provides a basis for a more complete analysis than is possible with financial data alone. The use of the balanced scorecard is thus a critical ingredient of the overall approach that firms take to become and remain competitive. An example of a balanced scorecard is shown in Exhibit 1.4.

**balanced scorecard (BSC)**
An accounting report that includes the firm's critical success factors in four areas: (1) financial performance, (2) customer satisfaction, (3) internal processes, and (4) learning and growth.

The **strategy map** is a diagram that links the various perspectives in a balanced scorecard. For many companies, high achievement in the learning and growth perspective contributes directly to higher achievement in the internal process perspective, which in turn causes greater achievement in the customer satisfaction perspective, which then produces the desired

**strategy map**
A graphical representation of the organization's value proposition; used to depict the series of causes and effects embodied in the various perspectives of an organization's balanced scorecard.

**EXHIBIT 1.4**
**The Balanced Scorecard: Financial and Nonfinancial Measures of Success**

| Financial Measures of Success | Nonfinancial Measures of Success |
|---|---|
| Sales growth | **Customer Satisfaction** |
| Earnings growth | Market share and growth in market share |
| Dividend growth | Customer service (e.g., based on number of complaints) |
| Bond and credit ratings | On-time delivery |
| Cash flow | Customer satisfaction (customer survey) |
| Increase in stock price | Brand recognition (growth in market share) |
| | **Internal Processes** |
| | Product quality |
| | Manufacturing productivity |
| | Cycle time (the time from receipt of a customer's order to delivery) |
| | Product yield and reduction in waste |
| | **Learning and Growth** |
| | Competence of managers (education attained) |
| | Morale and firmwide culture (employee survey) |
| | Education and training (training hours) |
| | Innovation (number of new products) |

financial performance. The strategy map is therefore a useful means in understanding how improvement in certain critical success factors contributes to other goals and to the ultimate financial results. We cover the balanced scorecard and strategy map throughout the text, particularly in Chapters 2, 12, 18, and 20.

## The Value Chain

**value chain**
An analytic tool firms use to identify the specific steps required to provide a product or service to the customer.

The **value chain** is an analysis tool organizations use to identify the specific steps required to provide a competitive product or service to the customer. In particular, an analysis of the firm's value chain helps management discover which steps or activities are not competitive, where costs can be reduced, or which activity should be outsourced. Also, management can use the analysis to find ways to increase value for the customer at one or more steps of the value chain. For example, companies such as General Electric, IBM, U-Haul, and Harley-Davidson have found greater overall profits by moving downstream in the value chain to place a greater emphasis on high-value services and less emphasis on lower-margin manufactured products. A key idea of value-chain analysis is that the firm should carefully study each step in its operations to determine how each step contributes to the firm's profits and competitiveness. The value chain is covered in Chapters 2, 13, and 17.

## Activity-Based Costing and Management

**activity analysis**
The development of a detailed description of the specific activities performed in the firm's operations.

Many firms have found that they can improve planning, product costing, operational control, and management control by using **activity analysis** to develop a detailed description of the specific activities performed in the firm's operations. The activity analysis provides the basis for activity-based costing and activity-based management. Activity-based costing (ABC) is used to improve the accuracy of cost analysis by improving the tracing of costs to products or to individual customers. Activity-based management (ABM) uses activity analysis and activity-based costing to help managers improve the value of products and services and increase the organization's competitiveness. ABC and ABM are key strategic tools for many firms, especially those with complex operations or diverse products and services. ABC and ABM are explained in Chapter 5 and then applied in several of the chapters that follow.

## Business Analytics

**business analytics (BA)**
An approach to strategy implementation in which the management accountant uses data to understand and analyze business performance.

**Business analytics (BA)** (also called *predictive analytics*) is an approach to strategy implementation in which the management accountant uses data to understand and analyze business performance. Business analytics often uses statistical methods such as regression or correlation analysis to predict consumer behavior, measure customer satisfaction, or develop models for setting prices, among other uses. BA is best suited for companies that have a distinctive capability that can be derived from measurable critical success factors. BA is similar to the BSC because it focuses on critical success factors; the difference is that BA uses analytical tools to develop predictive models of core business processes.

Emerging key types of BA include blockchain and artificial intelligence. Blockchain is a technology that allows all parties to a transaction to know with certainty what happened in that transaction (**www.fool.com/investing/2018/01/10/the-basics-of-blockchain-technology-explained-in-p.aspx**). Artificial intelligence seeks to build machines and software that act intelligently (**www.forbes.com/sites/cognitiveworld/2019/02/25/artificial-intelligence-hype-is-real/#52ce2b9525fa**). BA is covered in Chapter 8.

## Target Costing

**target costing**
The desired cost for a product as determined on the basis of a given competitive price, so the product will earn a desired profit.

Target costing is a method that has resulted directly from the intensely competitive markets in many industries. **Target costing** determines the desired cost for a product on the basis of a given competitive price, such that the product will earn a desired profit. Cost is thus determined by price. The firm using target costing must often adopt strict cost reduction measures or redesign the product or manufacturing process to meet the market price and remain profitable.

Target costing forces the firm to become more competitive, and, like benchmarking, it is a common strategic form of analysis in intensely competitive industries where even small price differences attract consumers to the lower-priced product. The camera manufacturing industry is a good example of an industry where target costing is used. Camera manufacturers such as Canon know the market price for each line of camera they manufacture, so they redesign the product (add/delete features, use less expensive parts and materials) and redesign the production process to get the manufacturing cost down to the predetermined target cost. The automobile industry also uses target costing. Target costing is covered in Chapter 13.

## Life-Cycle Costing

**life-cycle costing**
A method used to identify and monitor the costs of a product throughout its life cycle.

**Life-cycle costing** is a method used to identify and monitor the costs of a product throughout its life cycle. The life cycle consists of all steps from product design and purchase of materials to delivery and service of the finished product. The steps typically include (1) research and development; (2) product design, including prototyping, target costing, and testing; (3) manufacturing, inspecting, packaging, and warehousing; (4) marketing, promotion, and distribution; and (5) sales and service. Cost management has traditionally focused only on costs incurred at the third step, manufacturing. Thinking strategically, management accountants now manage the product's full life cycle of costs, including upstream (research and development, design) and downstream (marketing, sales and service) costs as well as manufacturing costs. This expanded focus means careful attention to product design because design decisions lock in most subsequent life-cycle costs. See Chapter 13 for coverage of life-cycle costing.

## Benchmarking

**benchmarking**
A process by which a firm identifies its critical success factors, studies the best practices of other firms (or other business units within a firm) for achieving these critical success factors, and then implements improvements in the firm's processes to match or beat the performance of those competitors.

**Benchmarking** is a process by which a firm identifies its critical success factors, studies the best practices of other firms (or other business units within a firm) for achieving these critical success factors, and then implements improvements in the firm's processes to match or beat the performance of those competitors. Benchmarking was first implemented by Xerox Corporation in the late 1970s. Today, many firms use benchmarking. Some firms are recognized as leaders, and are therefore benchmarks, in selected areas—for example, Nordstrom in retailing, Ritz-Carlton in service, the 3M Company in manufacturing, and Apple in innovation, among others.

Benchmarking efforts are facilitated today by cooperative networks of noncompeting firms that exchange benchmarking information. For example, the International Benchmarking Clearinghouse (**www.apqc.org**) and the International Organization for Standardization (ISO) (**www.iso.org**) assist firms in strategic benchmarking.

## Business Process Improvement

> "Whether you think you can or whether you think you can't—you're right."
>
> Henry Ford

Henry Ford realized that the right attitude is important to success. That belief is what continuous improvement is all about. **Business process improvement (BPI)** is a management method by which managers and workers commit to a program of continuous improvement in quality and other critical success factors. Continuous improvement is very often associated with benchmarking and total quality management as firms seek to identify other firms as models to learn how to improve their critical success factors. While BPI is an incremental method, business process reengineering (BPR) is more radical. BPR is a method for creating competitive advantage in which a firm reorganizes its operating and management functions, often with the result that positions are modified, combined, or eliminated.

**business process improvement (BPI)**
A management method by which managers and workers commit to a program of continuous improvement in quality and other critical success factors.

## Total Quality Management

**Total quality management (TQM)** is a method by which management develops policies and practices to ensure that the firm's products and services exceed customers' expectations. This approach includes increased product functionality, reliability, durability, and serviceability. Cost management is used to analyze the cost consequences of different design choices and to measure and report the many aspects of quality, including, for example, production breakdowns and production defects, wasted labor or materials, the number of service calls, and the nature of complaints, warranty costs, and product recalls.

**total quality management (TQM)**
A method by which management develops policies and practices to ensure that the firm's products and services exceed customers' expectations.

## Lean Accounting

Firms that have adopted lean manufacturing, which is one of the six key aspects of the contemporary business environment, will also typically use lean accounting. **Lean accounting** uses value streams to measure the financial benefits of a firm's progress in implementing lean manufacturing. Lean accounting places the firm's products and services into value streams, each of which is a group of related products or services. For example, a company manufacturing consumer electronics might have two groups of products (and two value streams)—digital cameras and video cameras—with several models in each group. Accounting for value streams can help the firm to better understand the impact on profitability of its lean manufacturing improvements. TQM and lean accounting are covered in Chapter 17.

**lean accounting**
The accounting technique that uses value streams to measure the financial benefits of a firm's progress in implementing lean manufacturing.

## The Theory of Constraints

The **theory of constraints (TOC)** is a methodology that improves profitability and cycle time by identifying the bottleneck in the operation and determining the most profitable product mix given the bottleneck. TOC helps to eliminate bottlenecks—places where partially completed products tend to accumulate as they wait to be processed in the production process. In the competitive global marketplace common to most industries, the ability to be faster than competitors is often a critical success factor. Many managers argue that the focus on speed in the TOC approach is crucial. They consider speed in product development, product delivery, and manufacturing to be paramount as global competitors find ever-higher customer expectations for rapid product development and prompt delivery. TOC is covered in Chapter 13.

**theory of constraints (TOC)**
An analysis of operations that improves profitability and cycle time by identifying the bottleneck in the operation and determining the most profitable product mix given the bottleneck.

## Sustainability

**Sustainability** means the balancing of the organization's short- and long-term goals in all three dimensions of performance—social, environmental, and financial. We view it in the broad sense to include identifying and implementing ways to reduce cost and increase revenue as well as to maintain compliance with social and environmental regulations and expectations. This can be accomplished through technological innovation and new product development as well as commonsense measures to improve the social and environmental impacts of the company's operations. Ford Motor Company saves money through improvements in its stormwater draining system at its River Rouge, Michigan, plant; other leaders in sustainability include Toyota, Honda, McDonald's, and Walmart, among many others. The Dow Jones Sustainability Indices (**www.sustainability-indices.com/**) identify and rank companies according to their sustainability performance. Sustainability is a key topic and is covered in each chapter; a special focus on sustainability is shown in Chapter 2 in connection with the balanced scorecard. Look for the sustainability icon next to problems involving this management technique.

**sustainability**
The balancing of the company's short- and long-term goals in all three dimensions of performance—social, environmental, and financial.

## Enterprise Risk Management

**enterprise risk management (ERM)**
A framework and process that firms use to manage the risks that could negatively or positively affect the company's competitiveness and success.

**Enterprise risk management (ERM)** is a framework and process that organizations use to manage the risks that could negatively or positively affect the company's competitiveness and success. Risk is considered broadly to include (1) hazards such as fire or flood; (2) financial risks due to foreign currency fluctuations, commodity price fluctuations, and changes in interest rates; (3) operating risk related to customers, products, or employees; and (4) strategic risk related to top management decisions about the firm's strategy and implementation thereof. For financial service firms particularly, ERM has become a much more important topic since the passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010), which requires new regulations for these firms. To indicate how widely used ERM has become, a survey of more than 1,000 risk management professionals by the Risk Management Society (RIMS) found that 73% of the organizations surveyed (**https://www.rims.org/about-us/newsroom/rims-2017-enterprise-risk-management-benchmark-survey**) either had an ERM program in place or were currently implementing one. A recent survey of 100 senior finance executives by the American Productivity and Quality Center (APQC) indicates that only one in five of the executives was satisfied with their company's corporate risk management systems. So while there has been progress in risk management, there is apparently continuing room for improvement (**www.apqc.org**). The text explains the role of ERM in Chapters 10, 11, and 12.

## How a Firm Succeeds: The Competitive Strategy

**strategy**
A plan for using resources to achieve sustainable goals within a competitive environment.

An organization succeeds by implementing a **strategy,** that is, a plan for using resources to achieve sustainable goals within a competitive environment. Finding a strategy begins with determining the purpose and long-range direction, and therefore the mission, of the company. Exhibit 1.5 lists excerpts from the mission statements of selected companies. The mission is developed into specific performance objectives, which are then implemented by specific corporate strategies, that is, specific actions to achieve the objectives that will fulfill the mission.

> "You've got to be very careful if you don't know where you are going, because you might not get there."
>
> Yogi Berra

See the Tyson Foods corporate strategy in Exhibit 1.6. Note that in Exhibit 1.5, Tyson Foods's broad mission statement is explained in terms of more specific objectives, which are in turn operationalized through specific corporate strategies.

**EXHIBIT 1.5**
**Mission Statements of Selected Companies**

**Procter & Gamble** (pg.com)
We believe in finding small but meaningful ways to improve lives—now and for generations to come.
**Google** (google.com)
To organize the world's information and make it universally accessible and useful.
**Merck** (merck.com)
To discover, develop and provide innovative products and services that save and improve lives around the world.
**Tyson Foods** (tysonfoods.com)
Sustainably feed the world with the fastest growing protein brands.

**EXHIBIT 1.6**
**Tyson Foods Corporate Strategy**
**Source:** Tyson Foods (tysonfoods.com).

In its Corporate Strategy Tyson will Sustainably Feed the World With the Fastest Growing Protein Brands, through the following:
- **Grow** Our business through differentiated capabilities
- **Deliver** Ongoing financial fitness through continuous improvement
- **Sustain** Our company and our world for future generations

**EXHIBIT 1.7**
**Cost Management Focus in Prior and Contemporary Business Environments**

| | Prior Business Environment | Contemporary Business Environment |
|---|---|---|
| Cost management focus | Financial reporting and cost analysis; common emphasis on standardization and standard costs; the accountant as financial accounting expert and financial scorekeeper | Cost management as a tool for the development and implementation of business strategy; the accountant as business partner |

**EXHIBIT 1.8**
**Consequences of Lack of Strategic Information**

- Decision making based on intuition instead of accurate and timely information
- Lack of clarity about direction and goals
- Lack of a clear and favorable perception of the firm by customers and suppliers
- Incorrect investment decisions; choosing products, markets, or manufacturing processes inconsistent with strategic goals
- Inability to effectively benchmark competitors, resulting in lack of knowledge about more effective competitive strategies
- Failure to identify most profitable products, customers, and markets

Organizations also are using cost management to support their strategic goals. Cost management has shifted away from a focus on the stewardship role—that is, product costing and financial reporting. The new focus is on a management-facilitating role: developing cost and other information to support the management of the firm and the achievement of its strategic goals (Exhibit 1.7).

Without strategic information, the firm is likely to stray from its competitive course, to make strategically wrong manufacturing and marketing decisions or to choose the wrong products or the wrong customers. Some of the consequences of a lack of strategic information are shown in Exhibit 1.8.

## Developing a Competitive Strategy

**LO 1-4**
*Explain the different types of competitive strategies.*

In developing a sustainable competitive position, each firm purposefully or as a result of market forces arrives at one of the two competitive strategies: cost leadership or differentiation.[4]

### Cost Leadership

**cost leadership**
A competitive strategy in which a firm outperforms competitors in producing products or services at the lowest cost.

**Cost leadership** is a competitive strategy in which a firm outperforms competitors in producing products or services at the lowest cost. The cost leader makes sustainable profits at lower prices, thereby limiting the growth of competition in the industry through its success at reducing price and undermining the profitability of competitors, which must meet the firm's low price. The cost leader normally has a relatively large market share and tends to avoid niche or segment markets by using the price advantage to attract a large portion of the broad market. While most firms make strong efforts to reduce costs, the cost leader may focus almost exclusively on cost reduction, thereby ensuring a significant cost and price advantage in the market.

Cost advantages usually result from productivity in the manufacturing process, in distribution, or in overall administration. For example, technological innovation in the manufacturing process and labor savings from overseas production are common routes to competitive productivity. Firms known to be successful at cost leadership are typically very

[4] This section is adapted from Michael Porter, *Competitive Advantage*(The Free Press, 1985). The Porter concept of strategy is widely used. See, for example, Michael E. Porter, "The Five Forces That Shape Strategy," *Harvard Business Review,* January 2008, pp. 79–93. See also Joan Margretta, *Understanding Michael Porter* (Harvard Business Review Press, 2011).

large manufacturers, service firms, and retailers, such as Texas Instruments, Walmart, JetBlue, and Southwest Airlines.

A potential weakness of the cost-leadership strategy is the tendency to cut costs in a way that undermines demand for the product or service, for example, by deleting key features. The cost leader remains competitive only so long as the consumer sees that the product or service is (at least nearly) equivalent to competing products that cost somewhat more.

## Differentiation

**differentiation**
A competitive strategy in which a firm succeeds by developing and maintaining a unique value for the product (or service) as perceived by consumers.

The **differentiation** strategy is implemented by creating a product or service that is unique in some important way, usually in regard to higher quality, better customer service, improved product features, or some type of innovation. Sometimes a differentiation strategy is called *product leadership* to refer to the innovation and features in the product. In other cases, the strategy might be called a *customer-focused* or *customer-solution* strategy, to indicate that the organization succeeds on some dimension(s) of customer service. This perception allows the firm to charge higher prices and outperform the competition in profits without reducing costs significantly. Many industries, including consumer electronics and clothing, have differentiated firms. The appeal of differentiation is especially strong for product lines for which the perception of quality and image is important, as in cosmetics, jewelry, and automobiles. Tiffany, Bentley, Rolex, Whirlpool, and BMW are good examples of firms that have a differentiation strategy.

A weakness of the differentiation strategy is the firm's tendency to undermine its strength by attempting to lower costs or by ignoring the necessity of having a continual and aggressive marketing plan to reinforce the differentiation. If the consumer begins to believe that the difference is not significant, then lower-cost rival products will appear more attractive.

## Other Strategic Issues

A firm succeeds, then, by adopting and effectively implementing one of the two strategies explained earlier (and summarized in Exhibit 1.9). Recognize that although one strategy is generally dominant, a firm is most likely to work hard at process improvement throughout the firm, whether cost leader or differentiator, and on occasion to employ both of the strategies at the same time. However, a firm following both strategies is likely to succeed only if it achieves one of the strategies very well. This situation is what Michael Porter calls "getting stuck in the middle." A firm that is stuck in the middle is not able to sustain a competitive advantage. For example, giant retailer Sears has been stuck in the middle between trying to compete with Walmart on cost and price and with style-conscious Target on differentiation. The 2005 merger of Sears and Kmart has added to the confusion over the firm's direction. As evidence of the failed strategy, since the merger with Kmart, Sears has been steadily closing stores, including 142 store closures in 2018 and 20 more in 2019.

Developing a competitive strategy is the first step for a successful business. The critical next step is to implement that strategy, and this is where the management accountant comes in. The management accountant works to implement strategy as a part of the management team, by contributing the management accountant's specific expertise (cost management

**EXHIBIT 1.9 Distinctive Aspects of the Two Competitive Strategies**

| Aspect | Cost Leadership | Differentiation |
|---|---|---|
| Strategic target | Broad cross section of the market | Focused section of the market |
| Basis of competitive advantage | Lowest cost in the industry | Unique product or service |
| Product line | Limited selection | Wide variety, differentiating features |
| Production emphasis | Lowest possible cost with high quality and essential product features | Innovation in differentiating products |
| Marketing emphasis | Low price | Premium price and innovative, differentiating features |

## REAL-WORLD FOCUS Commodities, Globalization, and Cost Leadership

A commodity is a product or service that is difficult to differentiate and, as a result, becomes a natural for cost-leadership competition. Examples include building materials, some consumer electronics products, and many of the things we buy in supermarkets. Thomas L. Friedman, award-winning columnist and author, has addressed the issue of commodities in the current business environment in his book *The World Is Flat*. One reason the "world is flat" is because any product or service that is a commodity will find its low-cost supply anywhere in the world—wherever there is the lowest cost.

Your smartphone. Is it a commodity? While dozens of companies compete in this "brutally competitive" market, Apple's iPhone carries a premium price. Despite the high price, the Apple iPhone has captured the bulk of industry profit.

What about a possible slowdown in globalization? Views on trade and employment are changing, as noted earlier in this chapter. While in 2002, 55% of Americans were positive about foreign trade, that number had shrunk to 40% in 2008 but has increased to 75% in 2019. Some argue that the turnaround is due to an expectation of more "favorable" trade in the future.

**Sources:** Gallup (**https://www.gallup.com/home.aspx**) for trade data. Thomas L. Friedman, *The World Is Flat: A Brief History of the Twenty-First Century*(New York: Farrar, Straus and Giroux, 2005).

methods). We cover these methods in each of the chapters as we go through the text. Our focus in each chapter, then, will be to show how the method we are covering in that chapter is used in implementing strategy. We will use the following five-step framework to show how the method demonstrated in the chapter can be used to help the organization achieve its strategy by solving a particular problem.

## The Five Steps of Strategic Decision Making

The five steps for decision making with a strategic emphasis are listed next, together with a short illustration of how the steps could be used by Walmart to help the company deal with the problem of rising fuel prices that affect the cost of the firm's use of trucks to deliver products from Walmart's warehouses to its retail stores.

The first step is to determine the strategic issues surrounding the problem because the solution to any problem must fit the organization's strategy. A good decision is one that makes the organization more competitive and successful. By starting with the strategic issues, we ensure that the decision fits the organization's strategic goals.

1. **Determine the strategic issues surrounding the problem**. Fuel costs are critical to Walmart because it competes on low cost and low prices. The Walmart strategy is cost leadership. So this problem will get close management attention.
2. **Identify the alternative actions.** In one alternative, Walmart considers the use of smaller and more fuel-efficient trucks, together with a relocation of its warehouses, to reduce travel time and fuel usage. Another option would be to outsource all of Walmart's delivery needs to other trucking firms.
3. **Obtain information and conduct analyses of the alternatives.** Walmart collects relevant cost information and calculates the expected cost of each alternative and finds that the use of other truckers would provide significantly lower total fuel cost. Considering the problem strategically, Walmart projects on the one hand that it can more effectively compete with Target by providing more rapid delivery of fast-moving items to its stores, and that this could be accomplished with the use of smaller trucks. On the other hand, Walmart also knows that it competes on cost and that lower cost is critical to its success.
4. **Based on strategy and analysis, choose and implement the desired alternative.** After considering the options, Walmart chooses to develop a fleet of large, high-efficiency trucks that employ improved aerodynamics, an advanced turbine-powered hybrid engine, and electric power components (**www.walmart.com**).
5. **Provide an ongoing evaluation of the effectiveness of implementation in step 4.** To provide an ongoing review of delivery costs, Walmart top management instructs operational managers in the firm to present an updated review of the decision to top management once every quarter. In this way, changes in costs or strategic objectives will be reviewed on a regular basis.

**REAL-WORLD FOCUS** Highly Cost-Competitive Industries: Surviving through Differentiation

Macy's Department Stores is an admired name in retailing. But the store is struggling with what the new CEO claims is a "sea of sameness." Macy's is now moving to higher-priced, trendier clothing to bolster the Macy's brand and to boost sales. In effect, Macy's is moving to a more differentiated strategy.

Much of furniture manufacturing is a very cost-competitive business. And in recent decades, furniture companies have moved manufacturing overseas in search of lower costs. Hardly any place has been affected as much as High Point, North Carolina, which in the 1940s was the location of 60% of furniture manufacturing in the U.S. Because of movement overseas, there is little left of that manufacturing dominance in High Point. To adjust to the demand for cost savings, some furniture companies in High Point have moved to more of a differentiation strategy, focusing on smaller batches of very-high-quality product. Tomlinson Company, a furniture manufacturer in High Point, is an example of this trend; the company is featured in Chapter 4.

The food industry (for foods in supermarkets) is generally regarded as largely a cost-leadership business, and recently two large companies, Kraft and Heinz, were purchased by a large investment firm. The investment firm immediately reduced costs at the combined company, resulting in significant savings. However, the Kraft Heinz brands are now suffering as a result, and a smaller competitor, General Mills, is succeeding through innovation and a focus on building brand value and sales growth. As the General Mills CEO said, "The biggest driver for long-term sustainability of a food company is organic sales growth." (Here the term *organic* does not mean organic food but growth in sales of existing brands through reinvesting in these brands, rather than by purchasing new brands.)

**Sources:** Suzanne Kapner, "Can This Man Save Macy's?," *The Wall Street Journal,* March 24, 2017; Kristina Leigh Painter, "As Mega-takeovers Fade in Food Industry, General Mills Strategy Emerges as Winner," *Star Tribune,* July 4, 2019 (www.startribune.com/as-mega-takeovers-fade-in-food-industry-general-mills-strategy-emerges-as-winner/512239362/); Jane Margolis, "A Town in Need of a Do-Over," *The New York Times,* July 3, 2019, p. B5.

Look for these five steps for the topics in the chapters ahead and look for the strategy icon next to problems involving strategy.

**LO 1-5**

*Describe the professional environment of the management accountant, including professional organizations and professional certifications.*

## The Professional Environment of Cost Management

"Personally, I'm always ready to learn, although I do not always like being taught."

*Winston Churchill*

"If I had eight hours to chop down a tree, I would spend six sharpening my axe."

*Abraham Lincoln*

"Once you stop learning, you start dying."

*Albert Einstein*

Winston Churchill, the former prime minister of the United Kingdom; Abraham Lincoln, the 16th president of the United States; and Albert Einstein, theoretical physicist, understood the importance of continuous learning. Their words apply equally well to the management accountant. Management accountants must continuously improve their technical and other skills and maintain a constant high level of professionalism, integrity, and objectivity about their work. Many professional organizations, such as the Institute of Management Accountants (IMA) and the American Institute of Certified Public Accountants (AICPA), encourage their members to earn relevant professional certifications, participate in professional development programs, and continually reflect on the professional ethics they bring to their work.

### Professional Organizations

The professional environment of the management accountant is influenced by two types of organizations: one that sets guidelines and regulations regarding management accounting practices and one that promotes the professionalism and competence of management accountants.

The first group of organizations includes a number of federal agencies, such as the Internal Revenue Service, which sets product costing guidelines for tax purposes, and the Federal

## REAL-WORLD FOCUS Where to Look for Information on Professional Organizations

American Institute of Certified Public Accountants (AICPA): **www.aicpa.org/**
Federal Trade Commission (FTC): **www.ftc.gov/**
Financial Executives International (FEI): **www.financialexecutives.org**
Institute of Internal Auditors (IIA): **https://na.theiia.org/**
Institute of Management Accountants (IMA): **www.imanet.org**
Securities and Exchange Commission (SEC): **www.sec.gov/**
Chartered Professional Accountants of Canada (CPA Canada) **www.cpacanada.ca** (Note: The Society of Management Accountants Canada and the Canadian Institute of Chartered Accountants merged in 2014 to create the Chartered Professional Accountants of Canada.)
Association of Chartered Certified Accountants (ACCA): **www.accaglobal.com**
The Chartered Institute of Management Accountants (CIMA, UK): **www.cimaglobal.com**
Consumer Financial Protection Bureau (CFPB): **www.consumerfinance.gov**
Federal Accounting Standards Advisory Board: **www.fasab.gov**
Financial Accounting Standards Board: **www.fasb.org**
Public Company Accounting Oversight Board: **www.pcaobus.org**

Trade Commission (FTC), which, to foster competitive practices and protect trade, restricts pricing practices and requires that prices in most circumstances be justified on the basis of cost. In addition, the Securities and Exchange Commission (SEC) provides guidance, rules, and regulations regarding financial reporting.

The role of the SEC has been strengthened by the Sarbanes–Oxley Act of 2002, which created the Public Company Accounting Oversight Board (PCAOB) to establish rules for "auditing, quality control, ethics, independence, and other professional standards relating to the preparation of audit reports for issuers." Of particular importance to management accountants is that the SEC, in implementing the act, now requires each public company to disclose in its annual report whether it has a code of ethics covering its chief financial executives, including high-level management accountants such as the controller.

The Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) includes a variety of new regulations for the financial services industry. The act also created the Consumer Financial Protection Bureau (CFPB), the goal of which is to detect and prevent unfair lending practices. Under this act, management accountants in the financial services industry now have increased responsibilities. In May 2018, Congress acted to remove some of the Dodd-Frank rules on small and medium-sized banks, leaving only a small number of large banks subject to these rules.

In the private sector, the Financial Accounting Standards Board (FASB), an independent organization, and the AICPA supply additional guidance regarding financial reporting practices. The AICPA also provides educational opportunities in the form of newsletters, magazines, professional development seminars, and technical meetings for management accountants.

Congress established the Cost Accounting Standards Board (CASB) in 1970 (Public Law 91-379), which operates under the Office of Federal Procurement Policy "to make, promulgate, amend and rescind cost accounting standards and interpretations thereof designed to achieve uniformity and consistency in the cost accounting standards governing measurement, assignment, and allocation of cost to contracts with the United States federal government." The CASB's objective is to achieve uniformity and consistency in the cost accounting standards used by government suppliers to reduce the incidence of fraud and abuse. Twenty standards cover a broad range of issues in cost accounting.

In addition, to enhance cost accounting standards and financial reporting by federal governmental entities, Congress established in 1990 the Federal Accounting Standards Advisory Board. The FASAB publishes reports and documents on cost accounting concepts and standards that are comparable to those used in business firms.

Another group of organizations supports the growth and professionalism of management accounting practice. The Institute of Management Accountants (IMA) is the principal organization devoted primarily to management accountants in the United States. The IMA provides

## COST MANAGEMENT IN ACTION

### A Case in Competitive Strategy: Walmart and Target

Walmart and Target are two of the most successful retailers in the United States. Walmart bears the slogan "Save Money, Live Better," while Target stores say "Expect More, Pay Less." If you have shopped at either of these stores, you will likely have formed an opinion about the stores and how they compete.

**Required**

1. Based on your experience, explain what you think are the competitive strategies of these retailers. Are they key competitors, targeting the same customers? Do you think each firm has adopted the most effective strategy? Why or why not?
2. While customers are pleased with Walmart's low prices, there is ongoing controversy about the firm's employment practices, including alleged discrimination against women in promotion and pay policies. What are your thoughts on the controversy? Are the ethical principles and standards of the management accountant relevant in this context?

journals, newsletters, research reports, management accounting practice reports, professional development seminars, and technical meetings that serve the broad purpose of providing continuing education opportunities for management accountants. An especially important service of the IMA is its Statements on Management Accounting and research reports, which cover a broad range of practice issues for the management accountant: management control, governance, leadership, external reporting, cost management systems, and global business. In the UK, the Chartered Institute of Management Accountants (CIMA) and the Association of Chartered Certified Accountants (ACCA) perform a similar role, as does the Chartered Professional Accountants of Canada (CPA Canada), the Spanish Management Accounting Association, the French Accounting Association, and the Institutes of Chartered Accountants in Ireland, Australia, Scotland, and India. Similar organizations are present in most other countries around the world.

In areas related to the management accounting function, Financial Executives International (FEI) provides services much like those provided by the IMA for financial managers, including controllers and treasurers.

Because one of the management control responsibilities of the management accountant is to develop effective systems to detect and prevent errors and fraud in the accounting records, the management accountant commonly has strong ties to control-oriented organizations such as the Institute of Internal Auditors (IIA). Participation in professional organizations and their professional development programs are an important way for management accountants to update their skills to meet the changing needs of their organizations.

> "Even if you're on the right track, you'll get run over if you just sit there."
>
> *Will Rogers*
>
> "It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change."
>
> *Charles Darwin*

## Professional Certifications

The role of professional certification programs is to provide a distinct measure of experience, training, and performance capability for the management accountant. Certification is one way in which the management accountant shows professional achievement and stature. Two types of certification are relevant for management accountants. The first is the Certificate in Management Accounting (CMA) designation administered by the Institute of Management Accountants, which is achieved by passing a qualifying exam and satisfying certain background and experience requirements. The exam has two parts: (1) financial planning, performance, and control and (2) financial decision making. Three of the six topics of part (1) [representing 55% of part (1) of the exam] are covered in this text: (a) planning, budgeting, and forecasting; (b) performance management; and (c) cost management. Three of the five topics of part (2) [representing about 50% of the content in that part of the exam] are covered in this text: (a) decision analysis, (b) investment decisions, and (c) professional ethics.[5]

The second certification is the Certified Public Accountant (CPA) designation. The CPA was updated in May 2017 to have a greater focus on the higher-order cognitive skills of analysis and evaluation, fewer multiple-choice questions but more task-based simulations. The new exam is better linked to what CPAs must do in practice, and better linked to their previous education.

Like the CMA, the CPA is earned by passing a qualifying exam and by satisfying certain background, education, and experience requirements. Unlike the CMA, which is an international designation, the CPA certificate is a professional license monitored in the United States by each state and territorial jurisdiction that has its own set of criteria. While the CPA license is critical for those accountants who practice auditing, the CMA designation is widely viewed as the most relevant for those dealing with cost management issues. In 2017 the IMA developed a new credential to supplement the CMA. The new credential, Certified in Strategy and Competitive Analysis (CSCA), will help the management accountant to achieve the career success envisioned in the definition of management accounting by focusing on the strategic role of the management accountant. The CSCA exam has three parts: (1) Strategic Analysis (25%), (2) Creating Competitive Advantage (40%), and (3) Strategy Implementation and Performance Evaluation (35%). One must be a CMA to be able to sit for the CSCA exam.

Many countries have certificates that are similar to the CPA and CMA, and many management accountants have both the CMA and the CPA certifications. In addition, the AICPA and CIMA have recently partnered to offer a credential for professional accountants called the Chartered Global Management Accountant (CGMA).

## Professional Ethics

**LO 1-6**
*Understand the principles and rules of professional ethics and explain how to apply them.*

Ethics is an important aspect of the management accountant's work and profession. Professional ethics can be summed up as the commitment of the management accountant to provide a useful service for management. This commitment means that the management accountant has the competence, confidentiality, integrity, and credibility to serve management effectively. Because of its importance, ethics is covered in each chapter; look for the ethics icon next to problems involving ethics.

### *The IMA Statement of Ethical Professional Practice*

The ethical behavior of the management accountant is guided by the Statement of Ethical Professional Practice of the Institute of Management Accountants (updated July 2017; **www.imanet.org/-/media/b6fbeeb74d964e6c9fe654c48456e61f.ashx**). The IMA Statement of Ethical Professional Practice specifies *minimum* standards of behavior that are intended to guide the management accountant and to inspire a very high overall level of professionalism. By complying with these standards, management accountants enhance their profession and facilitate the development of a trusting relationship in which managers and others can confidently rely on their work.

The IMA Statement of Ethical Professional Practice contains four main standards: (1) competence, (2) confidentiality, (3) integrity, and (4) credibility (see Exhibit 1.10). The standard of competence requires management accountants to develop and maintain the skills necessary for their area of practice and to continually reassess the adequacy of those skills as their firm grows and becomes more complex. The standard of confidentiality requires adherence to the firm's policies regarding communication of data to protect its trade secrets and other confidential information. Integrity refers to behaving in a professional manner (e.g., refraining from activities that would discredit the profession, such as unfair hiring practices) and avoiding conflicts of interest (e.g., not accepting a gift from a supplier or customer). Finally, credibility refers to the need to maintain impartial judgment (e.g., not developing

[5] The IMA has also introduced a new (2017) certification program, Certified in Strategy and Competitive Analysis (CSCA). This certificate will help the management accountant to achieve the career success envisioned in the definition of management accounting by focusing on the strategic role of the management accountant. The CSCA exam has three parts: (1) Strategic Analysis (25%), (2) Creating Competitive Advantage (40%), and (3) Strategy Implementation and Performance Evaluation (35%). One must be a CMA to be able to sit for the CSCA exam.

## REAL-WORLD FOCUS The Costs and Rewards of Unethical Behavior

### THE COST OF UNETHICAL BEHAVIOR

According to the Association of Certified Fraud Examiners (www.acfe.com), the typical organization loses 5% of its annual revenue to fraud. When projected on a global basis, this translates to a potential fraud of approximately $3.5 trillion worldwide.

### THE REWARDS FOR DETECTING UNETHICAL BEHAVIOR

A controversial feature of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) is a "whistleblower" provision, which provides financial rewards (up to 30% of the proceeds from a litigation settlement) for employees who report securities and other financial fraud to the SEC—a real reward for detecting fraud. This provision is in conflict with that of the Sarbanes-Oxley Act (SOX, 2002), which emphasizes internal controls and company-based "hotlines" for detecting fraud. A particular problem for management accountants is that the IMA's Statement of Ethical Professional Practice requires the management accountant, upon discovering an ethical conflict, to resolve that conflict first with the immediate supervisor, if possible, and that "communication of such problems to authorities or individuals not employed or engaged by the organization is not considered appropriate, unless you believe there is a clear violation of the law." Further complicating matters, until recently the policies of the SEC have not consistently supported this provision of the Dodd-Frank Act. However, in September 2016, the SEC brought a case against a plaintiff for retaliating against a whistleblower; the SEC now strongly supports the anti-retaliation protections in the act. Similarly, the Commodity Futures Trading Commission (CFTC) recently approved changes in its rules that strengthen anti-retaliation protections for whistleblowers.

**Sources:** Jason Zukerman and Matthew Stock, "CFTC Strengthens Anti-Retaliation Protections for Whistleblowers and Improves CFTC Whistleblower Award Program," *The National Law Review,* May 21, 2017; 2019 Annual Report of Dodd-Frank Whistle Blower Program. (www.sec.gov/files/sec-2019-annual%20report-whistleblower%20program.pdf).

**EXHIBIT 1.10**
**Institute of Management Accountants Statement of Ethical Professional Practice**

**1. Competence**

Each member has a responsibility to:

1. Maintain an appropriate level of professional leadership and expertise by enhancing knowledge and skills.
2. Perform professional duties in accordance with relevant laws, regulations, and technical standards.
3. Provide decision support information and recommendations that are accurate, clear, concise, and timely. Recognize and help manage risk.

**2. Confidentiality**

Each member has a responsibility to:

1. Keep information confidential except when disclosure is authorized or legally required.
2. Inform all relevant parties regarding appropriate use of confidential information. Monitor to ensure compliance.
3. Refrain from using confidential information for unethical or illegal advantage.

**3. Integrity**

Each member has a responsibility to:

1. Mitigate actual conflicts of interest. Regularly communicate with business associates to avoid apparent conflicts of interest. Advise all parties of any potential conflicts.
2. Refrain from engaging in any conduct that would prejudice carrying out duties ethically.
3. Abstain from engaging in or supporting any activity that might discredit the profession.
4. Contribute to a positive ethical culture and place integrity of the profession above personal interests.

**4. Credibility**

Each member has a responsibility to:

1. Communicate information fairly and objectively.
2. Provide all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, analyses, or recommendations.
3. Report any delays or deficiencies in information, timeliness, processing, or internal controls in conformance with organization policy and/or applicable law.
4. Communicate professional limitations or other constraints that would preclude responsible judgement or successful performance of an entity.

analyses to support a decision that the management accountant knows is not correct). The guiding principles behind these standards are honesty, fairness, objectivity, and responsibility. IMA members are expected to behave in accordance with these principles and standards. The following section outlines the IMA's recommendations about how management accountants should approach ethical dilemmas.

### How to Apply the Statement of Ethical Professional Practice

Handling situations in which an ethical issue arises can be very challenging and frustrating. To effectively resolve an ethical issue, it is crucial to understand the firm's business and strategy. Determining whether a particular action is ethical requires an understanding of the business context to understand the intent of the act—is it for a business purpose or is it intended to mislead or disguise fraud? An example is Sherron Watkins, an Enron Corporation employee, who is credited with bringing that firm's accounting fraud to light. She wrote a letter to the CEO that financial accounting practices at Enron did not appear to fit the firm's business or strategy.

To assist management accountants in the application of ethical practices, the IMA offers the following guidance regarding resolving ethical issues (**www.imanet.org**):

> When faced with an ethical issue, the management accountant should follow the organization's established policies on the resolution of such conflict. If these policies do not resolve the ethical conflict, consider the following courses of action:
>
> 1. The resolution process could include a discussion with the member's immediate supervisor. If the supervisor appears to be involved, the issue could be presented to the next level of management.
> 2. IMA offers an anonymous helpline that the member may call to request how key elements of the *IMA Statement of Ethical Professional Practice* could be applied to the ethical issue.
> 3. The member should consider consulting his or her own attorney to learn of any legal obligations, rights, and risks concerning the issue.
>
> Source: IMA's Statement of Ethical Professional Practice. Copyright 2017 IMA (Institute of Management Accountants). Reprinted with permission. All Rights Reserved.

## Summary

The central theme of this book is that cost management information includes all the information that managers need to manage effectively to lead their firms to competitive success. Cost management information includes both financial and nonfinancial information critical to the firm's success. The specific role of cost management in the firm differs depending on the firm's competitive strategy, its type of industry and organization (manufacturing firm, service firm, merchandising firm, not-for-profit organization, or governmental organization), and the management function to which cost management is applied (the functions are strategic management, planning and decision making, management and operational control, and preparation of financial statements).

Changes in the business environment have altered the nature of competition and the types of techniques managers use to succeed in their businesses. These changes include (1) an increase in global competition (partly offset by recent developments with economic nationalism and COVID-19); (2) lean manufacturing; (3) advances in information technologies, the internet, and enterprise resource management; (4) a greater focus on the customer; (5) new forms of management organization; and (6) changes in the social, political, and cultural environment of business.

Management accountants have responded to the above six changes in the contemporary business environment with 13 methods that are useful in implementing strategy in these dynamic times. The first 6 methods focus directly on strategy implementation—the balanced scorecard and strategy map, value chain, activity-based costing and management, business analytics, target costing, and life-cycle costing. The next 7 methods focus on strategy implementation through a focus on process improvement—benchmarking, business process improvement, total quality management, lean accounting, the theory of constraints, sustainability, and enterprise risk management.

To apply new management methods effectively, it is crucial that the management accountant understand the firm's strategy. Strategy is the set of plans and policies that a firm employs to develop a sustainable competitive advantage. Using Michael Porter's framework, a firm can compete effectively either as a cost leader or through differentiation.

A variety of professional organizations support management accounting, including the Institute of Management Accountants (IMA), the American Institute of Certified Public Accountants (AICPA), and Financial Executives International (FEI), among others. Several relevant certification programs recognize competence and experience in management accounting; they include the Certified Management Accountant (CMA), the Chartered Global Management Accountant (CGMA), and the Certified Public Accountant (CPA).

The management accountant is responsible to the employer and to the public for maintaining a high standard of performance and ethical responsibility, as set forth in the IMA Statement of Ethical Professional Practice. The professional ethics standards of the management accountant include competence, confidentiality, integrity, and credibility.

## Key Terms

activity analysis, *14*
balanced scorecard (BSC), *13*
benchmarking, *15*
business analytics (BA), *14*
business process improvement (BPI), *16*
cost leadership, *18*
cost management, *3*
cost management information, *3*
critical success factors (CSFs), *13*
differentiation, *19*
economic nationalism, *8*
enterprise risk management (ERM), *17*
lean accounting, *16*
life-cycle costing, *15*
management accounting, *3*
management control, *6*
operational control, *6*
planning and decision making, *6*
preparation of financial statements, *6*
strategic management, *5*
strategy, *17*
strategy map, *13*
sustainability, *16*
target costing, *15*
theory of constraints (TOC), *16*
total quality management (TQM), *16*
value chain, *14*

## Comments on Cost Management in Action

### A Case in Competitive Strategy: Walmart and Target

These questions are intended for open discussion and expression of differences of opinion. Here we have an outline of some thoughts on these competitive issues, combined with some of the most recent news reports.

1. Most would argue that Walmart is a cost leader because of its focus on low prices. Its operating efficiencies and persistent pursuit of low costs from its suppliers help Walmart to achieve these low prices; the slogan says it all about that firm, "Save Money, Live Better."

   Target also values low prices but competes somewhat differently. As the company website states, "our mission is . . . delivering outstanding value, continuous innovation and exceptional guest experiences by consistently fulfilling our Expect More, Pay Less® brand promise." Moreover, the Target financial report states that, for Target, the competitive focus is to offer customers "both everyday essentials and fashionable, differentiated merchandise at discounted prices." These statements point to a differentiated firm, even though low price is an element of the competition. In the recent couple of years, the two firms have adopted similar strategies regarding online sales and grocery sales, which have become very important for sales and profits at both firms. Both firms have enjoyed a strong increase in sales, profits, and stock values in recent years.
2. The controversy over Walmart's competitive and labor practices has drawn a lot of comment in the press, and opinions are divided. One line of argument would say that, as for any large business, Walmart must compete in an increasingly competitive global economy, while others might say that its values are in conflict with this type of competition. The role of the management accountant in this context is to help the firm succeed, and to do so in an ethical manner as set out in the IMA Statement of Ethical Professional Practice.

**Sources:** Michael A. Sainato, "Walmart Facing Gender Discrimination Lawsuits from Female Employees," *The Guardian*, February 18, 2019. See also the firms' websites: Walmart at (www.walmart.com) and Target at (www.target.com).