Final PDF to printer

Fifth Edition

Managerial ACCOUNTING

John Sciulli/Getty Images for GAP

i viewfinder/Shutterstock

Jeff Pachoud/AFP/Getty Images

Jill Braaten/ McGraw HIll

Kyle Oster/Shutterstock

STACEY WHITECOTTON
Arizona State University

ROBERT LIBBY
Cornell University

FRED PHILLIPS
University of Saskatchewan

McGraw Hill

whi0085x_fm_i-xxix.indd i
10/11/21 12:05 PM

Final PDF to printer

MANAGERIAL ACCOUNTING, FIFTH EDITION

Published by McGraw Hill LLC, 1325 Avenue of the Americas, New York, NY 10019. Copyright ©2023 by McGraw Hill LLC. All rights reserved. Printed in the United States of America. Previous editions ©2020, 2017, and 2013. No part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written consent of McGraw Hill LLC, including, but not limited to, in any network or other electronic storage or transmission, or broadcast for distance learning.

Some ancillaries, including electronic and print components, may not be available to customers outside the United States.

This book is printed on acid-free paper.

1 2 3 4 5 6 7 8 9 LWI 27 26 25 24 23 22

ISBN 978-1-264-10085-9 (bound edition)
MHID 1-264-10085-X (bound edition)
ISBN 978-1-264-46720-4 (loose-leaf edition)
MHID 1-264-46720-6 (loose-leaf edition)

Senior Portfolio Manager: *Noelle Bathurst*
Product Developers: *Michele Janicek/Kristina Dehlin*
Executive Marketing Manager: *Lauren Schur*
Content Project Managers: *Pat Frederickson/Brian Nacik*
Buyer: *Sandy Ludovissy*
Designer: *Matt Diamond*
Content Licensing Specialist: *Melissa Homer*
Cover Image: *(People at table) Rawpixel.com/Shutterstock; (Office Silhouette) Ferbies/Shutterstock*
Compositor: *Straive*

All credits appearing on page or at the end of the book are considered to be an extension of the copyright page.

Library of Congress Cataloging-in-Publication Data

Names: Whitecotton, Stacey, author. | Libby, Robert, author. | Phillips, Fred, author.
Title: Managerial accounting / Stacey Whitecotton, Arizona State University, Robert Libby, Cornell University, Fred Phillips, University of Saskatchewan.
Description: Fifth edition. | New York, NY : McGraw Hill LLC, [2023] | Includes index.
Identifiers: LCCN 2021045798 (print) | LCCN 2021045799 (ebook) | ISBN 9781264100859 (hardcover) | ISBN 9781264468089 (ebook)
Subjects: LCSH: Managerial accounting.
Classification: LCC HF5657.4 .W495 2023 (print) | LCC HF5657.4 (ebook) | DDC 658.15/11—dc23
LC record available at https://lccn.loc.gov/2021045798
LC ebook record available at https://lccn.loc.gov/2021045799

The Internet addresses listed in the text were accurate at the time of publication. The inclusion of a website does not indicate an endorsement by the authors or McGraw Hill LLC, and McGraw Hill LLC does not guarantee the accuracy of the information presented at these sites.

mheducation.com/highered

Final PDF to printer

Dedication

To Mark, Riley, and Carley! Thanks for your love, patience, and inspiration.
STACEY WHITECOTTON

Laura Libby and Brian Plummer, Oscar and Selma Libby.
ROBERT LIBBY

I dedicate this book to the best teachers I've ever had: my Mom and Dad, Barb, Harrison, and Daniel.
FRED PHILLIPS

whi0085x_fm_i-xxix.indd iii 10/11/21 12:05 PM

Final PDF to printer

Meet the Authors

Courtesy of Stacey Whitecotton

Stacey Whitecotton

Stacey Whitecotton is an associate professor of accounting in the W. P. Carey School of Business at Arizona State University. She received her PhD and Masters of Accounting from The University of Oklahoma and her Bachelors in Business Administration from Texas Tech University. Stacey teaches managerial accounting and has received numerous awards for outstanding teaching at the undergraduate and graduate levels.

Stacey's research interests center around the use of decision aids to improve the decision-making behavior of financial analysts, managers, and auditors. Her research has been published in *The Accounting Review, Organizational Behavior and Human Decision Processes, Behavioral Research in Accounting, Auditing: A Journal of Practice and Theory,* and *The Journal of Behavioral Decision Making.*

Stacey and her husband Mark enjoy traveling and the many outdoor activities Arizona has to offer with their two children, Riley and Carley.

Courtesy of Robert Libby

Robert Libby

Robert Libby is the David A. Thomas Professor of Accounting and Accounting Area Coordinator at Cornell University, where he teaches the introductory financial accounting course. He previously taught at the University of Illinois, Pennsylvania State University, the University of Texas at Austin, the University of Chicago, and the University of Michigan. He received his BS from Pennsylvania State University, where he was selected as the 2018 Outstanding Accounting Alumnus, and his MAS and PhD from the University of Illinois; he also completed the CPA exam (Illinois).

Bob was selected as the AAA Outstanding Educator in 2000 and received the AAA Outstanding Service Award in 2006 and the AAA Notable Contributions to the Literature Award in 1985 and 1996. He has received the Core Faculty Teaching Award multiple times at Cornell. Bob is a widely published author and researcher specializing in behavioral accounting. He has published numerous articles in *The Accounting Review; Journal of Accounting Research;*

whi0085x_fm_i-xxix.indd iv 10/11/21 12:05 PM

Final PDF to printer

Accounting, Organizations, and Society; and other accounting journals. He has held a variety of offices, including vice president, in the American Accounting Association, and he is a member of the American Institute of CPAs.

Fred Phillips

Courtesey Fred Phillips

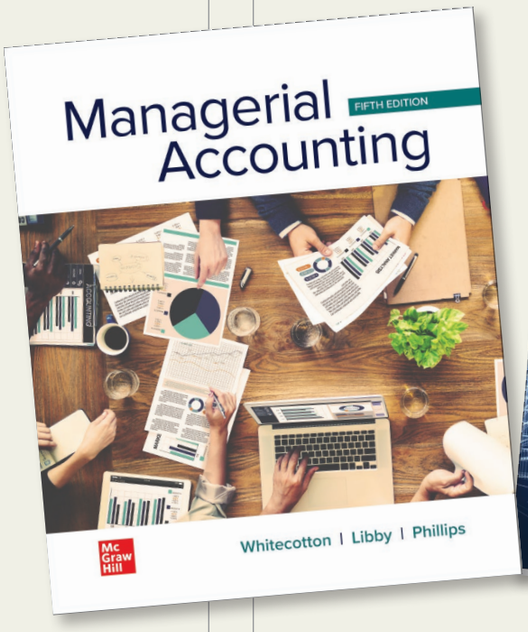
Fred Phillips is a professor at the University of Saskatchewan, where he has taught introductory financial accounting for more than 20 years. He also has taught introductory accounting at the University of Texas at Austin and the University of Manitoba. He previously worked as an audit manager at KPMG. Fred holds an undergraduate business degree in accounting and earned a PhD in accounting from the University of Texas at Austin. He is a nonpracticing CPA, CA (in Canada).

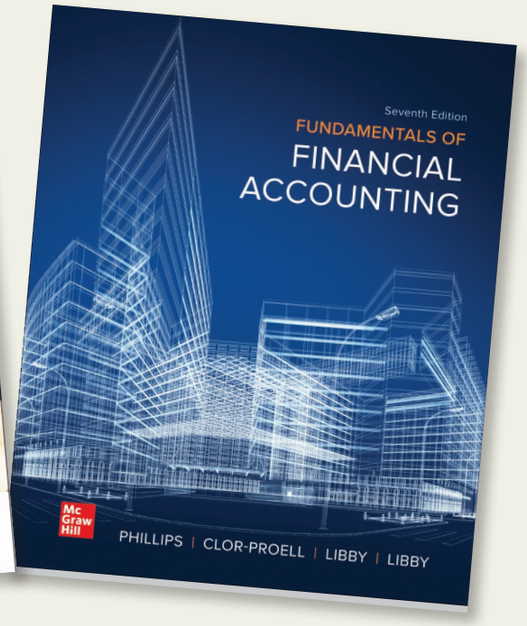
Fred's main career interest is accounting education. He has been recognized with more than 30 awards, as chosen by his students and peers. His peer-reviewed publications include education-focused research and instructional cases in *Issues in Accounting Education,* as well as professional judgment studies in the *Journal of Accounting Research* and *Organizational Behavior and Human Decision Processes,* among others. He is a current member of the Teaching, Curriculum, & Learning and Two-Year College sections of the American Accounting Association. In his spare time, Fred is a Tennis Canada official, calling lines at ATP, WTA, and ITF matches.

whi0085x_fm_i-xxix.indd v 10/11/21 12:05 PM

Final PDF to printer

Preparing Students for Success in Business





Rawpixel.com/Shutterstock

Ferbies/Shutterstock

From the award-winning, market-leading Libby/Phillips author team comes a modern, relevant, and engaging textbook for today's managerial accounting student. Whitecotton/Libby/Phillips *Managerial Accounting* brings lively and engaging coverage of managerial accounting topics and decision-making focus to the managerial accounting course. Pair *Managerial Accounting* with Phillips/ Clor-Proell/Libby/Libby *Fundamentals of Financial Accounting,* 7e, to provide a truly comprehensive solution to your students.

> *I would describe Whitecotton as the* ***best introductory managerial textbook that I have used*** *because of its writing style, its inclusion of only relevant material, its choice of focus companies that students easily relate to, and the common-sense manner in which the material is explained.*
>
> *—Laura Ilcisin, University of Nebraska at Omaha*

whi0085x_fm_i-xxix.indd vi 10/11/21 12:05 PM

Final PDF to printer

Managerial Accounting
by Whitecotton/Libby/Phillips

This text prepares students for success in business by incorporating four key components that will motivate and guide them through managerial accounting and beyond:

1 Managerial accounting builds student interest

Managerial accounting instructors face significant challenges: how to engage students in the managerial accounting course, how to keep them motivated throughout the course, and how to teach them accounting in a way that connects conceptual understanding to the real world. ***Managerial Accounting*** **engages and motivates students by presenting accounting in the context of recognizable companies such as Starbucks, Toyota, Levi Strauss & Company, and Apple,** and then integrates those companies throughout the chapter discussions.

2 Managerial accounting fosters decision making and analytical skills

Most students taking managerial accounting will not become accounting majors and accountants; instead, they will use accounting information in their professional lives to make business decisions. ***Managerial Accounting*** **shows students how managers use accounting information to make business decisions in companies they know from their everyday lives.** This approach helps students develop the analytical and critical thinking skills they will need to succeed in their future careers.

3 Managerial accounting helps students become better problem solvers

Students' problem-solving skills are put to the test through robust end-of-chapter content. Additionally, Demonstration Cases and Skills Development Cases provide students with an opportunity to practice their comprehension and understanding of the material.

4 Managerial accounting uses technology to enhance student learning

Today's students have diverse learning styles and numerous commitments. They want technology supplements that will help them study more efficiently and effectively. **McGraw Hill Connect, which includes adaptive and interactive study features such as SmartBook, Concept Overview Videos, Integrated Excel problems, and Guided Example Hint Videos, as well as a repository of additional resources tied directly to *Managerial Accounting,*** will improve students' engagement in and out of class, help them maximize their study time, and make their learning experience more enjoyable.

> *This is one of the* ***best textbooks for the introductory managerial accounting course.*** *The book covers all of the relevant topics for this course and is extremely well organized. Each chapter begins with solid learning objectives linked to the text and uses a focus company, which relates to the students, to illustrate the concepts of the chapter.*
>
> *—Ronald O. Reed, University of Northern Colorado*

whi0085x_fm_i-xxix.indd vii 10/11/21 12:05 PM

Final PDF to printer

Engaging Features and Relevant Pedagogy

Chapter Openers—Focus Companies

Each chapter of *Managerial Accounting* opens with an engaging scenario or story using a familiar company. The same focus company is used throughout the entire chapter so that students can see how the concepts and calculations apply to a real-world company they are already familiar with.

John Sciulli/Getty Images for GAP

Chapter 1 Focus Company: Bombas

Kyle Oster/Shutterstock

Chapters 8 & 9 Focus Company: Clif Bar & Company

New! Integrated Analytics Case

A new integrated case featured at the end of the book asks students to integrate concepts across chapters and throughout the course with the objectives of increasing students' appreciation for the role of managerial accounting in business and enhancing students' analytical skills. The case includes chapter-level discussion questions and activities in Connect.

INTEGRATED ANALYTICS CASE: BENE PETIT

Case Overview

This case describes an entrepreneurial venture that has both a business and social mission. The case setting is a hypothetical meal delivery service that utilizes a "one-for-one" business model in which the owner pledges to donate one meal for every meal sold. The case storyline is modeled after **Bombas**, which was featured on Shark Tank and is one of the show's biggest success stories.

The case covers the early stages of the business's life cycle, including concept/beta-testing, start-up/introduction, and expansion/growth. It is divided into five parts that can be assigned separately or as one culminating project:

- Part 1: Understanding the Business
- Part 2: Product and Service Costing
- Part 3: Managerial Decision Making
- Part 4: Planning and Control
- Part 5: Performance Evaluation and Analysis

> *One of the **greatest strengths** of Whitecotton is the **focus companies.** The utilization of these companies allows students to connect managerial accounting concepts to real-world enterprises.*
>
> *—Tal Kroll, Ozarks Technical Community College*

> *This is a freshly written managerial accounting textbook. It addresses a complete range of managerial accounting topics critical to today's business environment. The language is as easy to understand as the discussion is in depth. **I would definitely recommend [this book] to my colleagues** as a good choice for the course.*
>
> *—Ronald Zhao, Monmouth University*

whi0085x_fm_i-xxix.indd viii 10/11/21 12:05 PM

Final PDF to printer

Bring Managerial Accounting Content **to Life**

How's It Going? Self-Study Practice

Research shows that students learn best when they actively engage in the learning process. Self-Study Practice quizzes ask students to pause at critical points throughout each chapter to ensure they understand the material presented before moving ahead.

Solution to Self-Study Practice
1. e
2. c

How's it going? — Self-Study Practice

1. Which of the following would be classified as a unit-level activity by an ice cream manufacturer such as **Ben & Jerry's**?
   a. Purchasing the ingredients to make a batch of cookie dough ice cream.
   b. Performing quality checks on each batch produced to make sure the flavor is right.
   c. Conducting research and development on a new flavor of ice cream.
   d. Maintaining the equipment used to produce various flavors of ice cream.
   e. Pouring the ice cream into containers before freezing it.
2. Which of the activities in question 1 (a through e) would be classified as a product-level activity by an ice cream manufacturer?

After you have finished, check your answers against the solutions in the margin.

Coach's Tips

Every student needs encouragement, and Coach's Tips are just one of the ways *Managerial Accounting* fulfills that need. Coach's Tips appear throughout the text offering tips, advice, and suggestions about how to learn the key concepts.

COACH'S TIP

The key thing to remember is that **different cost terms are used for different purposes.** Thus, a single cost can be classified in more than one way, depending on how the information will be used.

so, we need to think about what costs are under the manager's direct control.

In this chapter, we introduce the terminology you will use to categorize or sort cost into different "buckets," including

- Direct or Indirect Costs
- Manufacturing or Nonmanufacturing Costs
- Product or Period Costs
- Variable or Fixed Costs
- Relevant or Irrelevant Costs

Each of these classifications will be based on different criteria depending on how the information will be used. In later chapters, you will learn how to use this cost information for different managerial purposes, including product costing, cost management, decision making, planning

Spotlight Features

Each chapter includes Spotlight features focusing on important concepts, such as decision making or ethics. These features are designed to further engage students and provide instructors with material for in-class discussion.

SPOTLIGHT ON Sustainability

While sustainability is most often associated with environmental initiatives, the triple bottom line should measure performance along three dimensions: economic (profit), environmental (planet), and social (people). The third pillar (people) is often overlooked, but a truly sustainable business strategy should make social issues a priority as well.

Toyota's sustainability strategy also includes measures of social impact, including the well-being of its employees and the surrounding communities in which the company operates. Toyota's people-focused sustainability initiatives include the following goals:

- Ensuring employee safety and well-being, including workplace safety and physical and mental health programs.
- Development of human resources through education, on-the-job-training, and programs to develop and promote local personnel.
- Fostering an environment of diversity and inclusion by increasing opportunities for women in the workforce and programs to help employees achieve an appropriate work/life balance.
- Creating a positive work environment, including programs to increase employee loyalty and a culture of teamwork through communication and friendly competition.

Toyota keeps track of various metrics to gauge performance toward all of these goals, just as it tracks measures of economic performance and environmental impact. These measures are reported in Toyota's annual corporate social responsibility (CSR) report and on the company website. Refer to Skills Development Case 4–5 for more details on how Toyota measures performance in all areas of sustainability (economic, environmental, and social).

www.toyota-global.com/sustainability/society/employees/#approach03

- **Spotlight on Decision Making**—Good decision making is essential in business, whether you are preparing, using, or analyzing accounting information. Spotlight on Decision Making features use real-world examples to illustrate the relevance of accounting to decision making.
- **Spotlight on Ethics**—Making ethical business decisions is more crucial than ever. Spotlight on Ethics features convey the importance of acting responsibly in business.
- **Spotlight on Service**—The majority of today's students will graduate prepared to take a job in the country's ever-growing service sector. Spotlight on Service features describe how key managerial accounting topics are applied in service settings.
- **Spotlight on Sustainability**—Sustainability is a growing area of concern for businesses. Spotlight on Sustainability features describe how and why managers in modern organizations make decisions based on more than economic results, including measures of environmental performance and societal impact.
- **Spotlight on Big Data Analytics**—A topic that is becoming increasingly important to managers and accountants is the use of big data and analytics to help managers make more informed business decisions. At opportune places throughout this text, we will highlight how managers in our focus company or other real-world organizations use big data and analytics to make managerial decisions.

whi0085x_fm_i-xxix.indd ix 10/11/21 12:05 PM

Final PDF to printer

Review and Practice Material Build a

Each chapter of *Managerial Accounting* is followed by an extensive variety of end-of-chapter material that examines and integrates concepts presented in the chapter.

> ***The text is very well written and makes many of the difficult concepts accessible to students. . . . The end-of-chapter material is also written at several levels and allows the instructor to mix and match learning objectives and difficulty levels to create challenging but informative assignments.***
>
> *—Kristian Mortenson, Oregon State University*

Demonstration Case

End-of-chapter review material begins with a demonstration case that provides another self-study opportunity for students. The demonstration case is practice material that mimics what students will see in the homework. The accompanying solution allows students to check their understanding of the material before completing and submitting homework for a grade. It can also serve as a study tool for exams.

REVIEW THE CHAPTER

DEMONSTRATION CASE

Barnaby's Bicycle Company manufactures high-quality mountain bikes. The company's managerial accountant has come to you for help. She needs to classify and identify each of the following costs before she can calculate the cost to produce each mountain bike.

Classify each of the costs listed in the chart below into three categories based on the following questions:

1. Can this cost be directly and conveniently traced to each bicycle that is manufactured, or is doing so either not possible or not worth the effort?
2. Is this cost related to manufacturing the bicycles? If so, what type of cost is it? Or is it a non-manufacturing or period expense?
3. Will the total cost vary with the number of bicycles manufactured and sold, or will it remain the same regardless of how many bikes are produced and sold?

The first item in the chart is completed as an example.

Chapter Summary by Learning Objectives

Each chapter concludes with an end-of-chapter summary that revisits the learning objectives from the beginning of the chapter.

CHAPTER SUMMARY

LO 4–1 Assign indirect costs to products or services using a single volume-based cost driver. p. 159

- A traditional cost system assigns indirect (overhead) costs to products or services using a volume-based measure, such as the number of direct labor hours, machine hours, or units produced. This system, while simple, assumes that all indirect costs are driven by volume and ignores other factors, such as the complexity of the production process and other non-volume drivers of cost.
- Unlike traditional cost systems that rely strictly on volume-based allocation measures, activity-based costing (ABC) systems include measures that capture something other than the sheer volume of units produced or customers served.

LO 4–2 Classify activities as unit- , batch- , product- , or facility-level activities. p. 163

- Activity-based costing systems capture the following types of activities:
  - Unit-level activities are performed for each individual unit.
  - Batch-level activities are performed for a group of units all at once.
  - Product-level activities are performed to support a general product or service line rather than specific units or batches.

Key Terms

Each chapter includes a list of the key terms introduced in the chapter and page references for those terms. Full definitions for all key terms are found in the back of the text.

KEY TERMS

Actual Manufacturing Overhead p. 59
Allocation Base p. 53
Applied Manufacturing Overhead p. 56
Cost Driver p. 53
Cost of Goods Completed p. 60
Cost of Goods Manufactured p. 60
Finished Goods Inventory p. 56
Indirect Materials p. 56
Job Cost Sheet p. 51
Job Order Costing p. 48
Labor Time Ticket p. 53
Materials Requisition Form p. 52
Operations Costing p. 50
Overapplied Overhead p. 61
Predetermined Overhead Rate p. 53
Process Costing p. 49
Raw Materials Inventory p. 56
Source Document p. 52
Underapplied Overhead p. 61
Work in Process Inventory p. 56

whi0085x_fm_i-xxix.indd x 10/11/21 12:05 PM

Final PDF to printer

Strong Foundation for Future Success

New! Homework Helper

This new feature identifies interchangeable or common terminology, highlights key concepts and formulas, and points out common errors to avoid.

HOMEWORK HELPER

Common Terminology
Financial accounting ~ External reporting
Managerial accounting ~ Internal reporting
Manufacturing costs ~ Inventoriable costs ~ Product costs
Nonmanufacturing costs ~ Period costs ~ Period expenses

Questions

Each chapter includes 10—20 questions that ask students to explain and discuss terms and concepts from the chapter. These open-ended questions provide a great jumping-off point for class discussion.

PRACTICE MATERIAL

QUESTIONS

1. Briefly describe the differences between job order and process costing. Give an example of a type of company that would use each one.
2. Briefly explain the underlying logic of a process costing system and its assignment of costs to products.
3. Explain the differences between Raw Materials Inventory, Work in Process Inventory, and Finished Goods Inventory accounts.
4. Explain the flow of costs in a process costing system, including the type of accounts used and the respective financial statement on which the cost appears.
5. What are the five steps in preparing a weighted-average production report?
6. Why is a production report important to a company?
7. What is the difference between conversion cost and manufacturing overhead?
8. What two methods can be used to prepare a process costing production report? What is the key difference between them?
9. How is the number of physical units reconciled to prepare a production report?
10. Why must a company calculate equivalent units when using process costing?
11. How can a unit be 100 percent complete with respect to materials but only partially complete in terms of conversion effort?
12. How do the weighted-average and the FIFO methods treat beginning inventory?
13. Is the weighted-average method or FIFO method usually more accurate? Why?
14. What are the steps in preparing a FIFO production report? Are they different from the steps to prepare a weighted-average production report?
15. When are the weighted-average and FIFO methods likely to arrive at different estimates of product cost?
16. What does a credit to the Work in Process Inventory account represent?
17. What triggers the cost of manufacturing to be transferred from the balance sheet to the income statement?

MULTIPLE CHOICE

1. Which of the following is most likely to use a process costing system?
   a. A company that builds and installs custom cabinetry.
   b. A company that makes one style of office chair.
   c. A janitorial service.
   d. A paving company.
5. Masterson Company has calculated a cost per unit of $4.00 for materials and $8.50 for conversion to manufacture a specific product. Ending work in process has 1,000 units that are fully complete for materials and 70 percent complete for conversion. How much will Masterson have in its ending Work in Process Inventory?

Multiple-Choice Questions

Each chapter includes 10 multiple-choice questions that let students practice basic concepts. Solutions for all questions are provided in the back of the text.

Mini-Exercises

Mini-exercises in each chapter illustrate and ask students to apply learning objectives from the chapter to a simple scenario.

connect **Find More Learning Solutions on Connect.**

MINI-EXERCISES

M2–1 Identifying Companies That Use Job Order versus Process Costing **LO 2–1**

Indicate whether each of the following companies is likely to use job order (J) or process (P) costing.

____ 1. Golf ball manufacturer.
____ 2. Landscaping business.
____ 3. Tile manufacturer.
____ 4. Auto repair shop.
____ 5. Pet food manufacturer.
____ 6. Light bulb manufacturer.
____ 7. Water bottling company.
____ 8. Appliance repair business.
____ 9. DVD manufacturer.
____ 10. Music video production company.

EXERCISES

E2–1 Posting Direct Materials, Direct Labor, and Applied Overhead to T-Accounts, Calculating Ending Balances **LO 2–2, 2–3, 2–4**

Oak Creek Furniture Factory (OCFF), a custom furniture manufacturer, uses job order costing to track the cost of each customer order. On March 1, OCFF had two jobs in process with the following costs:

Work in Process	Balance on 3/1
Job 33	$ 7,500
Job 34	6,000
	$13,500

Exercises

Exercises illustrate and ask students to apply single and multiple learning objectives from the chapter. Animated, narrated Guided Examples that walk through a similar exercise in a step-by-step fashion are available for select exercises when enabled by instructors in Connect.

whi0085x_fm_i-xxix.indd xi 10/11/21 12:05 PM

Final PDF to printer

> ***The Whitecotton/Libby/Phillips text is a well-written book . . . The text uses companies that students are familiar with to illustrate managerial accounting concepts. It provides a variety of end-of-chapter questions as well as check-points throughout the chapters for students to use to gauge their level of understanding.***
>
> *—Holly Sudano, Florida State University*

Problems (Groups A and B)

Each chapter includes two problem sets to help students develop decision-making skills. One set can be used in class and the other can be assigned for homework.

GROUP A PROBLEMS

LO 2–3, 2–4, 2–5, 2–6 **PA2–1 Recording Manufacturing and Nonmanufacturing Costs, Preparing the Cost of Goods Manufactured Report and Income Statement**

Lamonda Corp. uses a job order cost system. On April 1, the accounts had the following balances:

Raw Materials Inventory	Work in Process Inventory	Finished Goods Inventory
Bal. 25,000	Bal. 55,000	Bal. 60,000

Manufacturing Overhead	Cost of Goods Sold

Sales Revenue	Nonmanufacturing Expenses

New! Integrated Analytics Case Questions

Each chapter includes questions that build upon the Integrated Case and bring together concepts from across the chapters.

INTEGRATED ANALYTICS CASE

This case is a continuation of the Bene Petit case you learned about in the last chapter. Case background and additional detail needed for Chapter 2 are provided on page IC-1. More specific requirements will be provided by your instructor or found on Connect.

Questions for Discussion:

- Why does Taylor need to know the cost of providing meals to customers?
- What type(s) of costing system(s) is (are) most appropriate for Bene Petit?

Level-Up Questions

LEVEL UP

In each chapter, particularly challenging questions, designated by the level-up icon, require students to combine multiple concepts to advance to the next level of accounting knowledge.

Sustainability Questions

In select chapters, questions, designated by the sustainability leaf icon, require students to apply the chapter concepts in a sustainability-related context so that they will understand how the managerial accounting system can be expanded to focus managers' attention on more than economic results, including the impact of their decisions on the environment and society.

Skills Development Cases

Select chapters offer a case that directs students to a web-based video about a real product or service. Students use the concepts they learned throughout the chapter to answer questions about the video, bringing the concepts to life. These cases help students develop critical thinking and communication skills, and allow for group discussions and projects.

whi0085x_fm_i-xxix.indd xii 10/11/21 12:05 PM

What's New in the Fifth Edition?

In response to feedback and guidance from numerous managerial accounting faculty, the authors have made many important changes to the fifth edition of *Managerial Accounting,* including the following:

- New Integrated Analytics Case designed to run throughout an entire course allows students to apply the concepts and skills they are learning across chapters through the lens of one hypothetical meal-delivery service.
- Integrated new focus companies, including Bombas (which serves as the springboard for the Integrated Analytics Case) and Clif Bar & Company.
- New Homework Helper feature guides students through each chapter's major takeaways by identifying interchangeable or common terminology, highlighting key concepts and formulas, and pointing out common errors to avoid.
- Modified Starbucks focus company examples to incorporate issues that managers have faced related to the COVID-19 pandemic.
- Modified Toyota focus company examples to incorporate three types of vehicles: conventional, hybrid, and electric.
- New to Connect in the fifth edition, Integrated Excel allows students to complete assignments in live, auto-graded Excel spreadsheets. Tableau Dashboard Activities introduce students to data visualizations using Tableau. Students learn to gather the information they need from a live embedded Tableau dashboard and answer related, auto-graded questions.

CHAPTER 1: INTRODUCTION TO MANAGERIAL ACCOUNTING

New Focus Company: **Bombas**

- Added a feature story describing how the founders of Bombas launched their socially responsible business on *Shark Tank* to highlight the importance of accounting in entrepreneurial ventures.
- Updated all examples to reflect the new focus company.
- Restructured several elements to improve flow and exposition.
- Updated statistics on the importance of service and merchandising in managerial accounting.
- Restructured the section on ethics and the accounting profession to a stand-alone supplement.
- Added a Homework Helper feature to highlight key concepts, common errors, and interchangeable terms.
- Edited chapter to improve exposition and to clarify problem areas based on reviewer and student feedback.
- Introduced the continuous analytics case that is modeled after the Bombas story.
- **New** discussion questions and assignments for the continuous analytics case.
- Reviewed and updated end-of-chapter material and solutions.

CHAPTER 2: JOB ORDER COSTING

Focus Company: **HGTV**

- Restructured several elements to improve flow and exposition.
- Expanded the discussion of operations costing.
- Simplified the exhibits showing the flow of manufacturing costs in job order costing to enhance student learning.
- Added a Homework Helper feature to highlight key concepts, common errors, and interchangeable terms.
- Edited chapter to improve exposition and to clarify problem areas based on reviewer and student feedback.
- **New** discussion questions and assignments for the continuous analytics case.
- Reviewed and updated end-of-chapter material and solutions.

CHAPTER 3: PROCESS COSTING

Focus Company: **Fetzer Vineyards**

- Restructured several elements to improve flow and exposition.
- Moved learning objectives for FIFO from the supplement to the body of the chapter.
- Added supplement describing how manufacturing costs are recorded in subsequent production departments.
- Added a Homework Helper feature to highlight key concepts, common errors, and interchangeable terms.
- Edited chapter to improve exposition and to clarify problem areas based on reviewer and student feedback.
- **New** discussion questions and assignments for the continuous analytics case.
- Reviewed and updated end-of-chapter material and solutions.

CHAPTER 4: ACTIVITY-BASED COSTING AND COST MANAGEMENT

Focus Company: **Toyota Motor Corporation**

- Updated the Toyota example that runs throughout the chapter to include three vehicle types: conventional, hybrid, and electric.

- Added a Homework Helper feature to highlight key concepts, common errors, and interchangeable terms.
- Edited chapter to improve exposition and to clarify problem areas based on reviewer and student feedback.
- **New** discussion questions and assignments for the continuous analytics case.
- Reviewed and updated end-of-chapter material and solutions.

CHAPTER 5: COST BEHAVIOR

Focus Company: **Starbucks Coffee**

- **New** feature story describing the effect of the COVID-19 pandemic on Starbucks and other service industries.
- Updated all exhibits to reflect the latest version of Excel.
- Added section on using multiple regression to incorporate additional cost drivers.
- Added conceptual discussion of adjusted r-squared for determining goodness of fit.
- Added two new problems that require students to use multiple regression.
- Added a Homework Helper feature to highlight key concepts, common errors, and interchangeable terms.
- Edited chapter to improve exposition and to clarify problem areas based on reviewer and student feedback.
- **New** discussion questions and assignments for the continuous analytics case.
- Reviewed and updated end-of-chapter material and solutions.

CHAPTER 6: COST-VOLUME-PROFIT ANALYSIS

Focus Company: **Starbucks Coffee**

- **New** feature story describing the effect of the pandemic on Starbucks and other service industries.
- Updated several of the CVP examples to incorporate the effect of the pandemic on managerial decision making.
- Added a Homework Helper feature to highlight key concepts, common errors, and interchangeable terms.
- Edited chapter to improve exposition and to clarify problem areas based on reviewer and student feedback.
- **New** discussion questions and assignments for the continuous analytics case.
- Reviewed and updated end-of-chapter material and solutions.

CHAPTER 7: INCREMENTAL ANALYSIS FOR SHORT-TERM DECISION MAKING

Focus Company: **IKEA**

- Updated Spotlight on Decision Making illustrating how incremental analysis relates to the current debate about whether the U.S. Postal Service is making or losing money by delivering products for Amazon and other high-volume sellers.
- Added a Homework Helper feature to highlight key concepts, common errors, and interchangeable terms.
- Edited chapter to improve exposition and to clarify problem areas based on reviewer and student feedback.
- **New** discussion questions and assignments for the continuous analytics case.
- Reviewed and updated end-of-chapter material and solutions.

CHAPTER 8: BUDGETARY PLANNING

New Focus Company: **Clif Bar & Company**

- Updated all chapter examples and exhibits illustrating how to prepare the master budget for Clif Bar & Company.
- Added a Homework Helper feature to highlight key concepts, common errors, and interchangeable terms.
- Edited chapter to improve exposition and to clarify problem areas based on reviewer and student feedback.
- **New** discussion questions and assignments for the continuous analytics case.
- Reviewed and updated end-of-chapter material and solutions.

CHAPTER 9: STANDARD COSTING AND VARIANCE ANALYSIS

New Focus Company: **Clif Bar & Company**

- Updated all chapter examples to compute variances for Clif Bar & Company.
- Updated all exhibits to better illustrate the variance framework and how all the variances tie together.
- Added a Homework Helper feature to highlight key concepts, common errors and interchangeable terms.
- Edited chapter to improve exposition and to clarify problem areas based on reviewer and student feedback.
- **New** discussion questions and assignments for the continuous analytics case.
- Reviewed and updated end-of-chapter material and solutions.

Final PDF to printer

CHAPTER 10: DECENTRALIZED PERFORMANCE EVALUATION

Focus Company: **Apple Inc.**

- Updated Apple data, including operating information, business strategy, and financial results.
- Added a section applying DuPont analysis to Apple and a key competitor (Microsoft).
- Updated the discussion of the balanced scorecard to reflect language used to describe the four perspectives.
- Added a Homework Helper feature to highlight key concepts, common errors, and interchangeable terms.
- Edited chapter to improve exposition and to clarify problem areas based on reviewer and student feedback.
- **New** discussion questions and assignments for the continuous analytics case.
- Reviewed and updated end-of-chapter material and solutions.

CHAPTER 11: CAPITAL BUDGETING

Focus Company: **Apple Inc.**

- Added a Homework Helper feature to highlight key concepts, common errors, and interchangeable terms.
- Edited chapter to improve exposition and to clarify problem areas based on reviewer and student feedback.
- **New** discussion questions and assignments for the continuous analytics case.
- Reviewed and updated end-of-chapter material and solutions.

CHAPTER 12: STATEMENT OF CASH FLOWS

New Focus Company: **Dave & Buster's, Inc.**

- Updated illustration of cash flow patterns in Exhibit 12.8.
- **New** Spotlight on Financial Reporting relating to Dave & Buster's free cash flow.
- **New** discussion questions and assignments for the continuous analytics case.
- Reviewed and updated all end-of-chapter material, including financial data for Colgate-Palmolive, Walt Disney Company, Zumiez, Cedar Fair, and others.

CHAPTER 13: MEASURING AND EVALUATING FINANCIAL PERFORMANCE

New Focus Company: **Lowe's**

- Updated focus company analyses.
- **New** discussion of COVID-19 impact on going-concern status in Spotlight on Financial Reporting.
- **New** discussion questions and assignments for the continuous analytics case.
- Reviewed and updated all end-of-chapter material, including financial data for Chevron, Cintas, Procter & Gamble, Dollar General, Kohl's, and others.

whi0085x_fm_i-xxix.indd xv 10/11/21 12:05 PM

Final PDF to printer

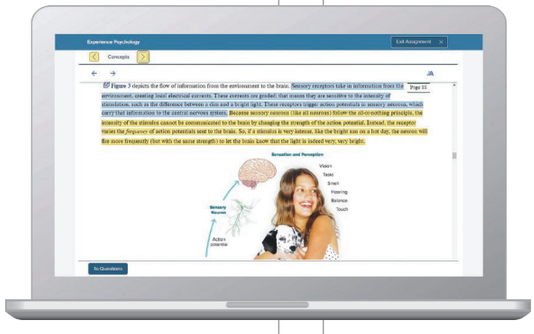
Mc Graw Hill connect®

Instructors: Student Success Starts with You

Tools to enhance your unique voice

Want to build your own course? No problem. Prefer to use an OLC-aligned, prebuilt course? Easy. Want to make changes throughout the semester? Sure. And you'll save time with Connect's auto-grading too.

65%
Less Time Grading



Laptop: McGraw Hill; Woman/dog: George Doyle/Getty Images

Study made personal

Incorporate adaptive study resources like SmartBook® 2.0 into your course and help your students be better prepared in less time. Learn more about the powerful personalized learning experience available in SmartBook 2.0 at **www.mheducation.com/highered/connect/smartbook**

Affordable solutions, added value

Make technology work for you with LMS integration for single sign-on access, mobile access to the digital textbook, and reports to quickly show you how each of your students is doing. And with our Inclusive Access program you can provide all these tools at a discount to your students. Ask your McGraw Hill representative for more information.

Padlock: Jobalou/Getty Images

Solutions for your challenges

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.

Checkmark: Jobalou/Getty Images

whi0085x_fm_i-xxix.indd xvi 10/11/21 12:05 PM

SUPPORT AT every step

Students: Get Learning that Fits You

Effective tools for efficient studying

Connect is designed to help you be more productive with simple, flexible, intuitive tools that maximize your study time and meet your individual learning needs. Get learning that works for you with Connect.

Study anytime, anywhere

Download the free ReadAnywhere app and access your online eBook, SmartBook 2.0, or Adaptive Learning Assignments when it's convenient, even if you're offline. And since the app automatically syncs with your Connect account, all of your work is available every time you open it. Find out more at **www.mheducation.com/readanywhere**

"I really liked this app—it made it easy to study when you don't have your textbook in front of you."

- Jordan Cunningham, Eastern Washington University

Calendar: owattaphotos/Getty Images

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

McGraw Hill works directly with Accessibility Services Departments and faculty to meet the learning needs of all students. Please contact your Accessibility Services Office and ask them to email accessibility@mheducation.com, or visit **www.mheducation.com/about/accessibility** for more information.

Top: Jenner Images/Getty Images, Left: Hero Images/Getty Images, Right: Hero Images/Getty Images

Final PDF to printer

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.

End-of-chapter questions in Connect include:

- Mini-Exercises
- Exercises
- Group A and B Problems

Oasis Company adds all materials at the beginning of its manufacturing process. Production information for selected months of the year follows:

Required:
1. Reconcile the number of physical units worked on during the period.

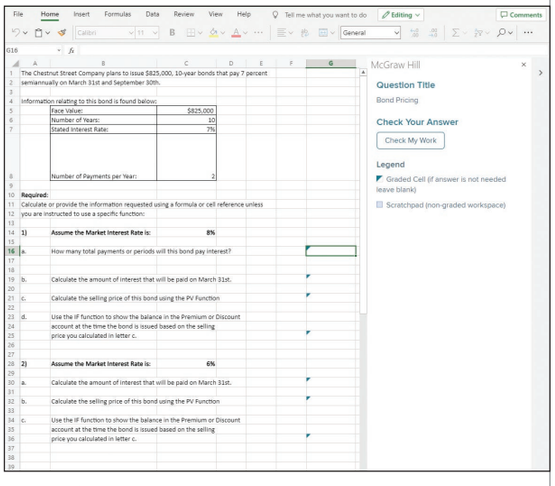
	Beginning Work in Process				Ending Work in Process	
Month	Units	Conversion Complete (percent)	Units Started	Units Transferred Out	Units	Conversion Complete (percent)
February	3,000	50		38,000	13,000	30
June	8,400	75	46,600		8,000	45
September	1,800	20	52,800	50,000	4,600	60
December	5,800	30	44,000	42,800		70

Concept Overview Videos

The Concept Overview Videos cover each learning objective through narrated, animated presentations. Formerly Interactive Presentation, each Concept Overview Video has been enhanced for improved accessibility, and includes both the visual animations and transcript to accommodate all types of learners. The Concept Overview Videos also pause frequently to check for comprehension with assignable, auto-graded Knowledge Check questions.

Integrated Excel

Integrated Excel assignments pair the power of Microsoft Excel with the power of Connect. A seamless integration of Excel within Connect, Integrated Excel questions allow students to work in live, auto-graded Excel spreadsheets—no additional logins, no need to upload or download files. Instructors can choose to grade by formula or solution value, and students receive instant cell-level feedback via integrated Check My Work functionality.



Microsoft

Guided Example Hint Videos

The Guided Example Hint Videos in Connect provide a narrated, animated, step-by-step walkthrough of select exercises similar to those assigned. These short presentations can be turned on or off by instructors and provide reinforcement when students need it most.

MCGRAW HILL 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.

whi0085x_fm_i-xxix.indd xviii 10/11/21 12:05 PM

Final PDF to printer

Remote Proctoring & Browser-Locking Capabilities

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.

ReadAnywhere

Read or study when it's convenient for you with McGraw Hill's free ReadAnywhere app. Available for iOS or Android smartphones or tablets, ReadAnywhere gives users access to McGraw Hill tools including the eBook and SmartBook 2.0 or Adaptive Learning Assignments in Connect. Take notes, highlight, and complete assignments offline—all of your work will sync when you open the app with WiFi access. Log in with your McGraw Hill Connect username and password to start learning—anytime, anywhere!

OLC-Aligned Courses Implementing High-Quality Online Instruction and Assessment through Preconfigured Courseware

In consultation with the Online Learning Consortium (OLC) and our certified Faculty Consultants, McGraw Hill has created pre-configured courseware using OLC's quality scorecard to align with best practices in online course delivery. This turnkey courseware contains a combination of formative assessments, summative assessments, homework, and application activities, and can easily be customized to meet an individual's needs and course outcomes. For more information, visit **www.mheducation.com/highered/olc**.

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.

Test Builder in Connect

Available within Connect, Test Builder is a cloud-based tool that enables instructors to format tests that can be printed, administered within a Learning Management System, or exported as a Word document of the test bank. 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.

Writing Assignment

Available within Connect, the Writing Assignment tool delivers a learning experience to help students improve their written communication skills and conceptual understanding. As an instructor you can assign, monitor, grade, and provide feedback on writing more efficiently and effectively.

whi0085x_fm_i-xxix.indd xix 10/11/21 12:05 PM

Final PDF to printer

McGraw Hill create®

Your Book, Your Way

McGraw Hill's Content Collections Powered by Create® is a self-service website that enables instructors to create custom course materials—print and eBooks—by drawing upon McGraw Hill's comprehensive, cross-disciplinary content. Choose what you want from our high-quality textbooks, articles, and cases. Combine it with your own content quickly and easily, and tap into other rights-secured, third-party content such as readings, cases, and articles. Content can be arranged in a way that makes the most sense for your course and you can include the course name and information as well. Choose the best format for your course: color print, black-and-white print, or eBook. The eBook can be included in your Connect course and is available on the free ReadAnywhere app for smartphone or tablet access as well. When you are finished customizing, you will receive a free digital copy to review in just minutes! Visit **www.mcgrawhillcreate.com** today and begin building!

whi0085x_fm_i-xxix.indd xx 10/11/21 12:05 PM

Final PDF to printer

Acknowledgments

Many dedicated instructors have devoted their time and effort to help us develop this text. We would like to acknowledge and thank all of our colleagues who helped guide our decisions. This text would not be what it is without the help of our contributors:

Editorial Review Panel

Daneen Adams, *Santa Fe College*
Janice Akao, *Butler Community College*
Gay Lynn Brown, *Northwest Florida State College*
Stacy Conrad, *University of Texas at San Antonio*
June F. Panter Geppert, *Austin Community College*
Young-Won Her, *California State University–Northridge*
Carolyn Johnson, *Northern Oklahoma College*
Daniel Kelly, *Illinois Central College*
Robert Lin, *California State University–East Bay*
Linda Miller, *Northeast Community College*
Steve Nath, *University of Nebraska–Omaha*
Joseph Nketia, *St. Edward's University*
Suren Sahakyan, *California State University–Los Angeles*
Jagjit Saini, *Western Michigan University*
Olin Scott Stovall, *Abilene Christian University*
Jeffrey Wong, *University of Nevada–Reno*

Reviewers of Previous Editions

Dawn Addington, *Central New Mexico Community College*
Gilda Agacer, *Monmouth University*
Markus Ahrens, *Saint Louis Community College*
Thomas Arcuri, *Florida State College*
Kwadwo Asare, *Bryant University*
Jane Austin, *Oklahoma City University*
Vidya Awasthi, *Seattle University*
Jon Backman, *Spartanburg Community College*
Bala Balachandran, *New York University*
Scott Bartley, *Trident Technical College*
William Belski, *Samford University*
Amy Bentley, *Tallahassee Community College*
Phillip Blanchard, *University of Arizona*
Patrick Borja, *Citrus College*
Benoit Boyer, *Sacred Heart University*
Jeff Brennan, *Austin Community College*
Ann Brooks, *University of New Mexico*
Amy Browning, *Ivy Tech Community College*
Myra Bruegger, *Southeastern Community College*
Esther Bunn, *Stephen F. Austin State University*
Laurie Burney, *Mississippi State University*
Kevin Cabe, *Indiana Wesleyan University*
Charlie Caliendo, *University of Minnesota–Minneapolis*
Dana Carpenter, *Madison Area Technical College*
Karin Caruso, *Southern New Hampshire University*
Nancy Cassidy, *Arizona State University*
Chiaho Chang, *Montclair State University*
Chak-Tong Chau, *University of Houston–Downtown*
Darlene Coarts, *University of Northern Iowa*
Debora Constable, *Georgia Perimeter College–Dunwoody*
Susan Convery, *Michigan State University*
Robert Conway, *University of Wisconsin at Platteville*
Debra Cosgrove, *University of Nebraska*
Nancy Coulmas, *Bloomsburg University of Pennsylvania*
Cheryl Crespi, *Central Connecticut State University*
Kathy Crusto-Way, *Tarrant County College*
David Deeds, *University of Northern Iowa*
Elizabeth Devos, *University of Texas at El Paso*
Edward Douthett, *George Mason University*
Jan Duffy, *Iowa State University*
Dennis Elam, *Texas A&M–San Antonio*
Robert Ellison, *Texas State University–San Marcos*
Gene Elrod, *University of North Texas*
Emmanuel Emenyonu, *Southern Connecticut State University*
Diane Eure, *Texas State University–San Marcos*
Amanda Farmer, *University of Georgia*
Xiujun (Sue June) Farrier, *Tarrant County College*
Christos Fatouros, *Curry College*
Patti Fedje, *Minot State University*
Jerry Ferry, *University of Northern Alabama*
John Gabelman, *Columbus State Community College*
Mohamed Gaber, *State University of New York at Plattsburgh*
MaryElla Gainor, *Bryant University*
Deborah Garvin, *University of Florida at Gainesville*
Karen Geiger, *Arizona State University*
Thomas Grant, *Kutztown University of Pennsylvania*

whi0085x_fm_i-xxix.indd xxi 10/11/21 12:05 PM

Final PDF to printer

Olen Greer, *Missouri State University*
Andrew Griffith, *Iona College*
Cindy Gruber, *Marquette University*
Meng Guo, *University of Texas–San Antonio*
Theresa Hammond, *San Francisco State University*
Heidi Hansel, *Kirkwood Community College*
Judith Harris, *Nova Southeastern University*
Candy Heino, *Anoka-Ramsey Community College*
David Henderson, *College of Charleston*
Donna Hetzel, *Western Michigan University*
Margaret Hicks, *Howard University*
Rob Hochschild, *Ivy Tech Community College*
Mahmud Hossain, *University of Memphis*
Maggie Houston, *Wright State University*
Peggy Hughes, *Montclair State University*
Susan Hughes, *University of Vermont*
Audrey Hunter, *Broward College*
Kathy Hurley, *Boise State University*
Laura Ilcisin, *University of Nebraska–Omaha*
John Illig, *State College of Florida*
Pamela Jackson, *Augusta State University*
Robyn Jarnagin, *Montana State University–Bozeman*
Iris Jenkel, *Saint Norbert College*
Shondra Johnson, *Bradley University*
Jeffery Jones, *College of Southern Nevada*
Sandra Jordan, *Florida State College*
Celina Jozsi, *University of South Florida*
Jai Kang, *San Francisco State University*
Ed Kaplan, *University of West Florida*
Cindi Khanlarian, *University of North Carolina at Greensboro*
Stacy Kline, *Drexel University*
Mehmet Kocakulah, *University of Southern Indiana*
William Koprowski, *College of Charleston*
Tal Kroll, *Ozarks Technical Community College*
Cynthia Krom, *Marist College*
Wikil Kwak, *University of Nebraska–Omaha*
Scott Lane, *Quinnipiac University*
Luke Lammer, *Loras College*
David E. Laurel, *South Texas College*
Ron Lazer, *University of Houston*
Chuo-Hsuan (Jason) Lee, *State University of New York at Plattsburgh*
Christy LeFevers, *Catawba Valley Community College*
Catherine Lubaski, *Southern Illinois University*
Joan Luft, *Michigan State University*
Catherine Lumbattis, *Southern Illinois University at Carbondale*
Jeanette Maier-Lytle, *University of Southern Indiana*
Diane Marker, *University of Toledo*
Linda Marquis, *Northern Kentucky University*
Scott Martens, *University of Minnesota*
Angie Martin, *Tarrant County College*
Josephine Mathias, *Mercer County Community College*
Suzanne McCaffrey, *University of Mississippi*
Florence McGovern, *Bergen Community College*
Brian McGuire, *University of Southern Indiana*
Shaen McMutrie, *Northern Oklahoma College*
Pam Meyer, *University of Louisiana at Lafayette*
Earl Mitchell, *Santa Ana College*
Cathileen Montesarchio, *Broward Community College*
Arabian Morgan, *Orange Coast College*
Kristian Mortenson, *Oregon State University*
Matt Muller, *Adirondack Community College*
Gerald Myers, *Pacific Lutheran University*
Penelope Nall, *Limestone College*
Michael Newman, *University of Houston*
Chris O'Byrne, *Cuyamaca College*
Emeka Ofobike, *University of Akron*
Angela Pannell, *Mississippi State University*
Susanna Pendergast, *Western Illinois University*
Jo Ann Pinto, *Montclair State University*
Ronald Premuroso, *University of Montana*
Jessica Rakow, *Louisiana State University*
Vasant Raval, *Creighton University*
Ronald Reed, *University of Northern Colorado*
Gayle Richardson, *Bakersfield College*
Patti Roshto, *University of Louisiana at Monroe*
Luther Ross, *Central Piedmont Community College*
Martin Rudnick, *William Paterson University*
Angela Sandberg, *Jacksonville State University*
Michael Schusler, *Portland State University*
Randall Serrett, *University of Houston*
Christine Solomon, *Trident Technical College*
Charlene Spiceland, *University of Memphis*
Patrick Stegman, *College of Lake County*
Dean Steria, *State University of New York at Plattsburgh*
Jane Stoneback, *Central Connecticut State University*
Arlene Strawn, *Tallahassee Community College*
Scott Stroher, *Glendale Community College*

whi0085x_fm_i-xxix.indd xxii 10/11/21 12:05 PM

Final PDF to printer

Karen Sturm, *Loras College*
Holly Sudano, *Florida State University*
James Sugden, *Orange Coast College*
Barbara Sumi, *Northwood University*
Ellen Sweatt, *Georgia Perimeter College*
Pavani Tallapally, *Slippery Rock University of Pennsylvania*
Diane Tanner, *University of North Florida*
Michael Tydlaska, *Mountain View College*
Linda Vaello, *University of Texas—San Antonio*
Joan Van Hise, *Fairfield University*
Jeff Varblow, *College of Lake County*
Kiran Verma, *University of Massachusetts—Boston*
Sharon Walters, *Morehead State University*
Mary Ann Welden, *Wayne State University*
Anne Wessely, *Saint Louis Community College*
Jane Wiese, *Valencia Community College*
Blair A. William, *Slippery Rock University*
George Williams, *Bergen Community College*
Neil Wilner, *University of North Texas*
Joseph Winter, *Niagara University*
Pete Woodlock, *Youngstown State University*
Jan Woods, *Appalachian State University*
Janet Woods, *Macon State College*
John Woodward, *Polk State College*
Christian Wurst, *Temple University*
Myung Yoon, *Northeastern Illinois University*
Jeffrey Yost, *College of Charleston*
Ronald Zhao, *Monmouth University*

We are grateful to the following individuals who helped develop, critique, and shape the extensive ancillary package: Tony Cardinalli, June F. Panter Geppert, Savannah Guo, Daniel Kelly, Patti Lopez, Mark Sears, and Jacob Shortt.

Last, we thank the extraordinary efforts of a talented group of individuals at McGraw Hill Education who made all of this come together. We would especially like to thank our product developer, Kristin Dehlin; Noelle Bathurst, our portfolio manager; Kevin Moran, our director of digital content; Xin Lin, our digital product analyst; Lauren Schur, our marketing manager; Pat Frederickson and Brian Nacik, our lead content project managers; Matt Diamond, our senior designer; and Melissa Homer, our content licensing specialist.

Stacey Whitecotton
Robert Libby
Fred Phillips

whi0085x_fm_i-xxix.indd xxiii 10/11/21 12:05 PM

Final PDF to printer

BRIEF CONTENTS

CHAPTER 1 2
Introduction to Managerial Accounting

CHAPTER 2 46
Job Order Costing

CHAPTER 3 106
Process Costing

CHAPTER 4 156
Activity-Based Costing and Cost Management

CHAPTER 5 208
Cost Behavior

CHAPTER 6 258
Cost-Volume-Profit Analysis

CHAPTER 7 304
Incremental Analysis for Short-Term Decision Making

CHAPTER 8 352
Budgetary Planning

CHAPTER 9 394
Standard Costing and Variance Analysis

CHAPTER 10 440
Decentralized Performance Evaluation

CHAPTER 11 486
Capital Budgeting

CHAPTER 12 534
Statement of Cash Flows

CHAPTER 13 588
Measuring and Evaluating Financial Performance

INTEGRATED ANALYTICS CASE IC

GLOSSARY GL

CHECK FIGURES CF-1

SOLUTIONS TO MULTIPLE-CHOICE QUESTIONS S-1

BUSINESS INDEX BI

SUBJECT INDEX SI

whi0085x_fm_i-xxix.indd xxiv 10/11/21 12:05 PM

Final PDF to printer

CONTENTS

CHAPTER 1

Introduction to Managerial Accounting 2

FOCUS COMPANY: BOMBAS 3

Organization of the Chapter 5

Role of Managerial Accounting in Organizations 6
- Comparison of Financial and Managerial Accounting 6
- Types of Organizations 8
- Functions of Management 9
- Sustainability and Corporate Social Responsibility 11
- Decision Analytics 13

Role of Cost in Managerial Accounting 14
- Direct versus Indirect Costs 14
- Manufacturing versus Nonmanufacturing Costs 15
- Product versus Period Costs 16
- Variable versus Fixed Costs 16
- Relevant versus Irrelevant Costs 18

Supplement 1A: Ethics and the Accounting Profession 20

Review the Chapter 23
- Demonstration Case 23
- Chapter Summary 24
- Key Terms 25

Homework Helper 26

Practice Material 26
- Questions 26
- Multiple Choice 27
- Mini-Exercises 28
- Exercises 33
- Group A Problems 39
- Group B Problems 41
- Skills Development Cases 43
- Integrated Analytics Case 45

CHAPTER 2

Job Order Costing 46

FOCUS COMPANY: HGTV 47

Organization of the Chapter 48

Fundamentals of Job Order Costing 48
- Job Order versus Process Costing 48
- Manufacturing Cost Categories 50
- Source Documents in Job Order Costing 51
- Applying Manufacturing Overhead to Jobs 53

Flow of Manufacturing Costs in Job Order Costing 56
- Direct and Indirect Materials 57
- Direct and Indirect Labor 58
- Applied Manufacturing Overhead 59
- Actual Manufacturing Overhead 59
- Transfer Costs to Finished Goods Inventory and Cost of Goods Sold 60
- Record Nonmanufacturing Costs 61

Reporting in Job Order Costing 61
- Overapplied or Underapplied Manufacturing Overhead 61
- Cost of Goods Manufactured Report 63
- Job Order Costing in a Service Firm 65

Supplement 2A: Journal Entries for Job Order Costing 66

Review the Chapter 69
- Demonstration Case 69
- Chapter Summary 71
- Key Terms 72

Homework Helper 73

Practice Material 73
- Questions 73
- Multiple Choice 74
- Mini-Exercises 75
- Exercises 81
- Group A Problems 92
- Group B Problems 96
- Skills Development Cases 101
- Integrated Analytics Case 104

CHAPTER 3

Process Costing 106

FOCUS COMPANY: FETZER VINEYARDS 107

Organization of the Chapter 108

Basic Concepts in Process Costing 108
- Flow of Costs in Process Costing 109
- Process Costing Production Report 111
- Weighted Average vs. FIFO 111
- Steps in Process Costing 112

Prepare the Production Report (Weighted-Average Method) 113
- Step 1: Reconcile the Number of Physical Units 113
- Step 2: Convert Physical Units Into Equivalent Units 114
- Step 3: Calculate Cost per Equivalent Unit 117

whi0085x_fm_i-xxix.indd xxv 10/11/21 12:05 PM

Final PDF to printer

Step 4: Reconcile the Total Cost of Work in Process Inventory 117
Step 5: Prepare a Production Report 119
Prepare the Production Report (FIFO Method) 119
Step 1: Reconcile the Number of Physical Units 120
Step 2: Convert Physical Units into Equivalent Units 121
Step 3: Calculate Cost per Equivalent Unit 124
Step 4: Reconcile the Total Cost of Work in Process Inventory 124
Step 5: Prepare a Production Report 125
Supplement 3A: Subsequent Departments and Journal Entries in Process Costing 127
Review the Chapter 131
Demonstration Cases 131
Chapter Summary 134
Key Terms 136
Homework Helper 136
Practice Material 137
Questions 137
Multiple Choice 137
Mini-Exercises 138
Exercises 142
Group A Problems 150
Group B Problems 152
Skills Development Cases 154
Integrated Analytics Case 155

CHAPTER 4
Activity-Based Costing and Cost Management 156
FOCUS COMPANY: TOYOTA MOTOR CORPORATION 157

Organization of the Chapter 158
Review of Volume-Based Cost Systems 159
Step 1: Determine the Cost Driver 159
Step 2: Calculate the Predetermined Overhead Rate 160
Step 3: Assign Indirect Costs to Individual Products or Services 160
Activity-Based Costing (ABC) 162
Step 1: Identify and Classify Activities 163
Step 2: Form Activity Pools and Assign Indirect Costs to Each Pool 164
Step 3: Select a Cost Driver for Each Activity Pool 165
Step 4: Assign Indirect Costs to Products or Services Based on the Cost Drivers 166
Activity-Based Costing in Service Industries 172
Cost Management Methods 174
Activity-Based Management (ABM) 174
ABM and Sustainability 175
Just-in-Time (JIT) 176
Total Quality Management (TQM) 177
Target Costing and Life Cycle Cost Management 178
Summary of ABC and ABM 180
Review the Chapter 180
Demonstration Case 180
Chapter Summary 182
Key Terms 183
Homework Helper 184
Practice Material 184
Questions 184
Multiple Choice 185
Mini-Exercises 186
Exercises 190
Group A Problems 197
Group B Problems 200
Skills Development Cases 202
Integrated Analytics Case 207

CHAPTER 5
Cost Behavior 208
FOCUS COMPANY: STARBUCKS COFFEE 209

Organization of the Chapter 210
Cost Behavior Patterns 210
Relevant Range 211
Variable Costs 211
Fixed Costs 211
Step Costs 212
Mixed Costs 213
Estimate Cost Behavior 214
Linear Assumption 215
Scattergraph 216
High-Low Method 217
Least-Squares Regression Method 220
Summary of Linear Methods 223
Contribution Margin Approach 224
Unit Contribution Margin 224
Contribution Margin Ratio 225
Supplement 5A: Variable versus Full Absorption Costing 226
Review the Chapter 230
Demonstration Case 230
Chapter Summary 233
Key Terms 234
Homework Helper 234
Practice Material 235
Questions 235
Multiple Choice 235
Mini-Exercises 236
Exercises 240

Final PDF to printer

Group A Problems 249
Group B Problems 252
Skills Development Cases 256
Integrated Analytics Case 257

CHAPTER 6

Cost-Volume-Profit Analysis 258

FOCUS COMPANY: STARBUCKS COFFEE 259

Organization of the Chapter 260
Cost-Volume-Profit Analysis 261
Assumptions of Cost-Volume-Profit Analysis 261
CVP Graph 262
Basic CVP Analysis 262
Profit Equation Method 263
Unit Contribution Margin Method 264
Contribution Margin Ratio Method 265
Apply Cost-Volume-Profit Analysis 267
Margin of Safety 267
CVP for Decision Making 268
Changes in Cost Structure 271
Degree of Operating Leverage 273
Multiproduct Cost-Volume-Profit Analysis 276
Weighted-Average Contribution Margin 276
Weighted-Average Contribution Margin Ratio 278
Review the Chapter 280
Demonstration Cases 280
Chapter Summary 282
Key Terms 283
Homework Helper 283
Practice Material 284
Questions 284
Multiple Choice 285
Mini-Exercises 286
Exercises 289
Group A Problems 295
Group B Problems 298
Skills Development Cases 301
Integrated Analytics Case 303

CHAPTER 7

Incremental Analysis for Short-Term Decision Making 304

FOCUS COMPANY: IKEA 305

Organization of the Chapter 306
Managerial Decision-Making Framework 306
Steps in the Decision-Making Process 306
Relevant versus Irrelevant Costs and Benefits 309
Opportunity Costs and Capacity Considerations 309
Incremental Analysis 310
Special-Order Decisions 310
Make-or-Buy Decisions 314
Keep-or-Drop Decisions 317
Sell-or-Process-Further Decisions 320
Constrained-Resource Decisions 321
Summary of Incremental Analysis 323
Review the Chapter 324
Demonstration Case 324
Chapter Summary 326
Key Terms 327
Homework Helper 327
Practice Material 328
Questions 328
Multiple Choice 328
Mini-Exercises 329
Exercises 332
Group A Problems 340
Group B Problems 344
Skills Development Cases 348
Integrated Analytics Case 350

CHAPTER 8

Budgetary Planning 352

FOCUS COMPANY: CLIF BAR & COMPANY 353

Organization of the Chapter 354
Role of Budgets in Organizations 354
Planning and Control Cycle 354
Benefits of Budgeting 355
Behavioral Effects of Budgets 356
Components of the Master Budget 357
Prepare the Operating Budgets 359
Sales Budget 359
Production Budget 360
Direct Materials Purchases Budget 361
Direct Labor Budget 363
Manufacturing Overhead Budget 363
Budgeted Cost of Goods Sold 363
Selling and Administrative Expense Budget 365
Budgeted Income Statement 365
Prepare the Financial Budgets 366
Budgeted Cash Receipts 366
Budgeted Cash Payments 367
Cash Budget 368
Budgeted Balance Sheet 370
Budgeting in Nonmanufacturing Firms 372

Final PDF to printer

Review the Chapter 374
Demonstration Cases 374
Chapter Summary 377
Key Terms 378
Homework Helper 378
Practice Material 379
Questions 379
Multiple Choice 379
Mini-Exercises 380
Exercises 382
Group A Problems 388
Group B Problems 390
Skills Development Cases 393
Integrated Analytics Case 393

CHAPTER 9

Standard Costing and Variance Analysis 394
FOCUS COMPANY: CLIF BAR & COMPANY 395

Organization of the Chapter 396
Standard Cost Systems 396
Ideal versus Attainable Standards 397
Types of Standards 397
Standard Cost Card 398
Favorable or Unfavorable Variances 399
Total Budget Variance 399
The Flexible Budget 400
Spending Variances 402
Framework for Analyzing Spending Variances 403
Direct Materials Variances 404
Direct Labor Variances 406
Variable Manufacturing Overhead Variances 408
Summary of Variances 409
Supplement 9A: Fixed Manufacturing Overhead Variances 411
Supplement 9B: Recording Direct Materials and Direct Labor in a Standard Cost System 415
Review the Chapter 417
Demonstration Case 417
Chapter Summary 419
Key Terms 421
Homework Helper 421
Practice Material 422
Questions 422
Multiple Choice 423
Mini-Exercises 423
Exercises 426
Group A Problems 432
Group B Problems 434
Skills Development Cases 437
Integrated Analytics Case 438

CHAPTER 10

Decentralized Performance Evaluation 440
FOCUS COMPANY: APPLE INC. 441

Organization of the Chapter 442
Decentralization of Responsibility 442
Advantages and Disadvantages of Decentralization 443
Types of Responsibility Centers 445
Designing a Performance Evaluation System 449
Balanced Scorecard 449
Financial Performance Measures 453
Limitations of Financial Performance Measures 460
Transfer Pricing 460
Market-Price Method 463
Cost-Based Method 463
Negotiation 463
Review the Chapter 464
Demonstration Case 464
Chapter Summary 465
Key Terms 467
Homework Helper 467
Practice Material 468
Questions 468
Multiple Choice 468
Mini-Exercises 469
Exercises 471
Group A Problems 477
Group B Problems 480
Skills Development Cases 483
Integrated Analytics Case 484

CHAPTER 11

Capital Budgeting 486
FOCUS COMPANY: APPLE INC. 487

Organization of the Chapter 488
Capital Budgeting Process 488
Capital Investment Decisions 489
Accounting Rate of Return 490
Net Cash Flow versus Net Income 491
Payback Period 492
Discounted Cash Flow Methods 494
Time Value of Money 494
Net Present Value 496
Internal Rate of Return 499
Profitability Index 501
Summary of Capital Budgeting Methods 501
Applying NPV and Sensitivity Analysis 503
Evaluating Mutually Exclusive Projects 503
Prioritizing Independent Projects 506

Final PDF to printer

Supplement 11A: Time Value of Money 508
Review the Chapter 515
Demonstration Case 515
Chapter Summary 515
Key Terms 517
Homework Helper 517
Practice Material 518
Questions 518
Multiple Choice 518
Mini-Exercises 519
Exercises 521
Group A Problems 525
Group B Problems 528
Skills Development Cases 531
Integrated Analytics Case 531

CHAPTER 12
Statement of Cash Flows 534
FOCUS COMPANY: DAVE & BUSTER'S ENTERTAINMENT, INC. 535

Organization of the Chapter 536
Understand the Business 536
Business Activities and Cash Flows 536
Classifying Cash Flows 537
Study the Accounting Methods 540
Relationship to Other Financial Statements 540
Preparing the Statement of Cash Flows 541
Evaluate the Results 550
Evaluating Cash Flows 551
Operating Cash Flows Revisited (Direct Method) 553
Supplement 12A: Reporting Disposals of Property, Plant, and Equipment (Indirect Method) 557
Supplement 12B: T-Account Approach (Indirect Method) 558
Review the Chapter 560
Demonstration Cases 560
Chapter Summary 562
Key Terms 563
Homework Helper 563
Practice Material 564
Questions 564
Multiple Choice 565
Mini-Exercises 566
Exercises 569
Group A Problems 578
Group B Problems 581
Skills Development Cases 583
Integrated Analytics Case 586

CHAPTER 13
Measuring and Evaluating Financial Performance 588
FOCUS COMPANY: LOWE'S 589

Organization of the Chapter 590
Understand the Business 590
Horizontal, Vertical, and Ratio Analyses 590
Study the Accounting Methods 591
Horizontal (Trend) Computations 591
Vertical (Common Size) Computations 591
Ratio Computations 594
Evaluate the Results 594
Interpreting Horizontal and Vertical Analyses 594
Interpreting Ratio Analyses 596
Underlying Accounting Decisions and Concepts 601
Review the Chapter 602
Demonstration Case 602
Chapter Summary 604
Key Terms 604
Homework Helper 605
Practice Material 605
Questions 605
Multiple Choice 605
Mini-Exercises 606
Exercises 608
Group A Problems 613
Group B Problems 617
Skills Development Cases 621
Integrated Analytics Case 622

INTEGRATED ANALYTICS CASE IC

GLOSSARY GL

CHECK FIGURES CF-1

SOLUTIONS TO MULTIPLE-CHOICE QUESTIONS S-1

BUSINESS INDEX BI

SUBJECT INDEX SI

whi0085x_fm_i-xxix.indd xxix 10/11/21 12:05 PM

Final PDF to printer

1

CHAPTER ONE

Introduction to Managerial Accounting

At the beginning of each chapter, you'll see a list of learning objectives that identify the key topics you need to master. You can also use the list as an outline for taking notes as you read through the chapter.

YOUR LEARNING OBJECTIVES

LO 1–1 Describe the key differences between financial accounting and managerial accounting.

LO 1–2 Describe how managerial accounting is used in different types of organizations to support the key functions of management.

LO 1–3 Describe the importance of sustainability and decision analytics in managerial accounting.

LO 1–4 Define and give examples of different types of costs:

- Out-of-pocket or opportunity costs
- Direct or indirect costs
- Manufacturing or nonmanufacturing costs
- Product or period costs
- Variable or fixed costs
- Relevant or irrelevant costs

LO 1–S1 Describe the Sarbanes-Oxley Act and the importance of ethics in the accounting profession.

whi0085x_ch01_002-045.indd 2 07/21/21 09:00 PM

Final PDF to printer

John Sciulli/Getty Images for GAP

FOCUS COMPANY: BOMBAS

As you start what is probably your second accounting course, you may be wondering why you need to take yet another accounting class. Wasn't one course enough? Which of the following best describes your motivation for learning about managerial accounting?

Reasons to Take a Managerial Accounting Course

10. I dream of debits and credits in my sleep.
9. I always wanted to be an accountant when I grow up.
8. It will fulfill my foreign language requirement. (It's Greek to me.)
7. My advisor said I had to take it.
6. Accountants get good-paying jobs, even in the worst economy.
5. The accountant is always the hero in action movies.
4. I want to get rich and stay that way.
3. I want to start my own business and need to create a business plan.
2. Accounting is the language of business.
1. What?? I'm enrolled in an accounting course?

Whatever your reason for taking this course, it will come in handy at some point in your future. This is true regardless of your intended career path, whether it is to start your own business, work for a large corporation, go into politics, work in health care, become a fashion designer, teach high school, work on a farm, or start a charitable foundation. Accounting is the language of business, and understanding it will help you make better business and personal decisions.

Throughout this book, you will see how managerial accounting is applied in several real-world companies. Most of these companies sell a product or service you encounter in your everyday life, like the cup of coffee you grabbed on your way to class (**Starbucks**), the phone in your pocket (**Apple**), the car you've been dreaming of purchasing (**Toyota**), or something as forgettable as the socks you put on this morning.

whi0085x_ch01_002-045.indd 3 07/21/21 09:00 PM

David Heath and Randy Goldberg, co-founders of **Bombas**, never thought much about socks either, until they learned that socks are the most frequently requested clothing item in homeless shelters. David and Randy had been dreaming of starting their own business and were looking for just the right opportunity. Who could have imagined they could take a product as ancient as socks and turn it into one of the most successful entrepreneurial stories of the decade?

Bombas's success is due to three factors. First, building on the "one-for-one" business model pioneered by **Tom's** shoes and **Warby Parker** eyeglasses, Bombas promised to donate one pair of socks for every pair purchased. This altruistic approach to business appealed to socially conscious consumers, allowing Bombas to donate more than 40 million pairs of socks as of December 2020. Second, David and Randy took two years to design a sock so comfortable that consumers would be willing to pay a premium price for what is normally considered a commodity product. In addition to using the highest quality materials, they found a way to eliminate the irritating toe-seam and added unique features like a honeycomb arch support. And finally, after pitching their product idea on *Shark Tank*, Randy and David struck a deal with fashion entrepreneur Daymond John, which allowed them to expand their marketing efforts and capitalize on the publicity they received from the popular show.

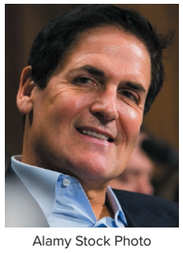
Bombas is a classic story of entrepreneurship, innovation, and marketing. However, its founders had to know a lot about accounting to make their business a success. In fact, some of the most challenging questions Randy and David faced on *Shark Tank* were about accounting, including the following:

Jim Spellman/WireImage/Getty Images

Kevin O'Leary (aka Mr. Wonderful) didn't believe their business was worth the $4,000,000 valuation reflected in their initial business pitch. David and Randy initially asked for $200,000 in exchange for a 5 percent share of the business ($200,000/5% = $4,000,000).

Frederick M. Brown/Getty Images

Robert Herjavec wanted a lot more detail about their sales revenue and how they planned to achieve their growth targets.



Alamy Stock Photo

Mark Cuban said, "I'm out," because a product that sells for $9.00 doesn't provide enough "margin dollars" to make it worth his investment of time and money.

Frederick M. Brown/Getty Images

When Lori Greiner asked about their product's margin, David and Randy claimed that the "average margin is 54% . . . shipped to the customer . . . including the give-away."

Final PDF to printer

Jim Spellman/WireImage/Getty Images

In the end, David and Randy made a deal with Daymond John, who agreed to invest $200,000 in exchange for a 17.5 percent equity stake in the business, plus guaranteed financing of the inventory. This translates into a valuation of $1,142,857 ($200,000/17.5%), far below the $4,000,000 they had initially hoped for.

Accounting terms like margin, valuation, inventory, equity, and sales revenue should sound familiar from your previous accounting course. Financial reports such as the income statement, balance sheet, and statement of stockholders' equity provide valuable information to outside parties, including potential investors or venture capitalists.

This course will focus on the more detailed information that business owners and managers need to run the business. For example, how did David and Randy decide that $9.00 was the right starting price for their product? Was it based on competitor prices, customer value, or how much it costs to make the product? What suppliers did they use to source the high-quality cotton, wool, and other materials? Who manufactures the socks, and how much does it cost? How do they drive down costs to increase margins and cover the cost of the give-away? What other additional marketing, distribution, and technology costs will be incurred? How do they create a business plan to attract investors and lenders so they can expand and grow the business?

Throughout this book, you will learn how managerial accounting can help managers answer these and many other questions. We will begin to lay the foundation in the current chapter by introducing some key concepts and terminology that are important in managerial accounting. You will also have an opportunity to apply what you are learning to a hypothetical meal-delivery business that uses a "one-for-one" business model like Bombas, Tom's, and Warby Parker. We will return to this business case throughout future chapters to apply the concepts and techniques you are learning, so you can see how managers use accounting information to make business decisions.

ORGANIZATION OF THE CHAPTER

Role of managerial accounting in organizations

- Comparison of financial and managerial accounting
- Types of organizations
- Functions of management
- Sustainability and corporate social responsibility
- Decision analytics

Role of cost in managerial accounting

- Direct versus indirect costs
- Manufacturing versus nonmanufacturing costs
- Product versus period costs
- Variable versus fixed costs
- Relevant versus irrelevant costs

At the start of each chapter, you'll find an organizational graphic that provides a visual framework to show how the chapter concepts fit together.

Final PDF to printer

Role of Managerial Accounting in Organizations

Learning Objective 1–1
Describe the key differences between financial accounting and managerial accounting.

COMPARISON OF FINANCIAL AND MANAGERIAL ACCOUNTING

The primary goal of any accounting system is to capture, summarize, and report useful information to users so that they can make informed decisions. The key difference between financial accounting and managerial accounting is the intended user of the information. **Financial accounting** information is aimed at **external users**, or those outside the organization, such as investors, creditors, and regulators. **Managerial accounting** information is aimed at **internal users**, or those working inside the organization, such as business owners, managers, and employees.

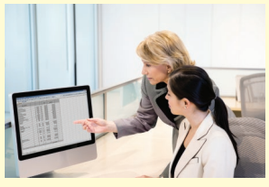
Because the intended users of the information are different, there are several other differences between financial and managerial accounting. Accountants prepare external financial statements according to generally accepted accounting principles (GAAP), which provide external users certain advantages in terms of their comparability and objectivity. However, internal managers often need more detailed information than those financial reports can capture. Managers need information that is timely and relevant to the specific decision at hand. Rather than knowing what happened last year or last quarter, managers need to know what is happening today and be able to predict what will happen tomorrow. See Exhibit 1–1 for a summary of the key differences between financial accounting and managerial accounting.

COACH'S TIP

Financial accounting is sometimes referred to as **external** reporting while managerial accounting is referred to as **internal** reporting. The difference is whether the intended users are inside or outside the company.

Throughout this text, we will provide you with tips to highlight explanations of selected topics. Please read them carefully.

EXHIBIT 1–1 Differences between Financial and Managerial Accounting



	Financial Accounting	Managerial Accounting
User perspective	Used by external parties, such as investors, creditors, and regulators	Used by internal parties, such as managers and employees
Types of reports	Classified financial statements prepared according to GAAP	Various internal reports, such as budgets, performance evaluations, and cost reports
Nature of information	Objective, reliable, historical	Subjective, relevant, future oriented
Frequency of reporting	Prepared periodically (monthly, quarterly, annually)	Prepared as needed, perhaps day-to-day or even in real time
Level of detail	Information reported for the company as a whole	Information reported at the decision-making level (by product, region, customer, or other business segment)

Left: Andersen Ross/Getty Images; Right: Robert Nicholas/Getty Images

Final PDF to printer

To illustrate these differences, let's think about **Bombas's** financial and managerial accounting systems. Bombas is a privately held company, owned by its founders and a few key investors. Because it is not publicly traded, Bombas is not required to file its financial reports with the Securities and Exchange Commission (SEC). However, the company is likely to provide its financial statements privately to its owners, as well as any other investors or significant creditors who request them. Although private companies are not *required* to have their financial statements audited to ensure that they comply with generally accepted accounting principles (GAAP), many private companies do so because an audit enhances the credibility of the financial statements. If Bombas's owners were to take the company public through an initial public offering (IPO), they would be required to meet the reporting requirements of the SEC, including filing quarterly financial statements, having the annual financial statements audited by a certified public accounting (CPA) firm, and complying with other regulatory requirements such as Sarbanes-Oxley Act (SOX).

Unlike financial accounting, managerial accounting information is not mandated by the SEC or other regulatory agencies. Instead, the managerial accounting system must provide managers with the detailed information they need to make both operational and strategic decisions. This internally oriented information is not publicly available and is considered proprietary in nature. To gain insight into how managerial accounting information is used at Bombas, consider the following story that David Heath, co-founder and CEO, shared with *Forbes*.

At the end of 2018, Bombas was overwhelmed with holiday orders because managers had underestimated revenue growth by about 50 percent. The warehouse was running about a week behind, and customers started complaining. According to David Heath, customers began posting online saying, "*Bombas is stealing our money. They're out of business. They're not responding to us. They haven't shipped my order*." "It was a nightmare," says Heath. Bombas responded by sending a blanket email telling customers they were going to refund the order and giving them a gift card for the same amount, hoping they would come back. This planning error cost Bombas about $3.5 million in lost revenue. But the good news was that the customers who received the refund turned out to be good *future* customers. David Heath said that "customers who received that refund had almost two times higher lifetime value than [customers] who had a normal experience in Q4 that year."[1]

This story illustrates several important functions of managerial accounting. The first function is to help managers plan or budget for the future. If the accounting system had provided more accurate forecasting information, managers would have been able to anticipate demand for the product and adjust their production and shipping schedules accordingly. Managers might also decide to hold a higher stock of inventory during the holiday season to provide a buffer against unexpected shocks in demand.

Second, the managerial accounting system should provide managers with timely and relevant information needed to make decisions. For an online retailer such as Bombas, the information system will collect a vast amount of data about customers who visit the website, including how they got there, how they interact with the site, whether they have visited before, what they search for, as well as customer satisfaction and product rating information. This information is key to helping managers market the product to consumers.

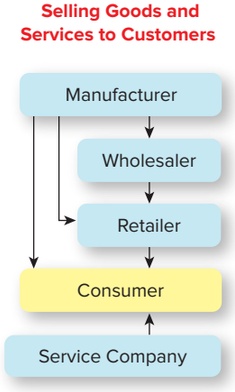
Finally, a management accounting system must provide a way to measure the costs and profitability of specific products and customers. By tracking the "lifetime value" of customers, managers can find ways to enhance customer loyalty to improve profitability. For example, managers might decide to send gift cards to previous customers around the holidays to enhance their loyalty. The managerial accounting system is key to measuring customer and product profitability, as you will see in future chapters.

[1] Simon Mainwaring, "Purpose at Work: How Bombas Gains Competitive Advantage with Purpose and Product," *Forbes*, September 30, 2020, www.forbes.com/sites/simonmainwaring/2020/09/30/purpose-at-work-how-bombas-gains-competitive-advantage-with-purpose-and-product/?sh=12658ced3a8e.

whi0085x_ch01_002-045.indd 7 07/21/21 09:00 PM

Final PDF to printer

Learning Objective 1–2
Describe how managerial accounting is used in different types of organizations to support the key functions of management.



COACH'S TIP

When you graduate, you are about four times more likely to go to work in a service or merchandising setting than a manufacturing company. Even so, you need to have a basic understanding of how managerial accounting works in manufacturing firms because you will most likely still work with manufacturing firms, perhaps as a buyer or other business partner. To make the manufacturing process more tangible, we will use examples of products that you encounter every day, so that you can more easily visualize how the products are made.

TYPES OF ORGANIZATIONS

Managerial accounting information is used by managers in all types of organizations: large and small, public and private, profit and nonprofit. Traditionally, businesses are classified into one of three categories:

- **Manufacturing firms** purchase raw materials from suppliers and convert them into finished products, such as **Apple** iPads, **Harley-Davidson** motorcycles, **Levi Strauss** jeans, and **Ford** cars and trucks.
- **Merchandising companies** sell the goods that manufacturers produce. Merchandisers that sell exclusively to other businesses are called **wholesalers**. Merchandisers that sell to the general public are called **retailers**. For example, **Sam's Club** started out as a wholesaler and then expanded into the retail market. Other well-known retailers include **Urban Outfitters**, **Amazon**, **Best Buy**, and **Kroger Foods**.
- **Service companies** provide a service to customers or clients. A few well-known service providers are **Hilton Hotels**, **Southwest Airlines**, **Netflix**, and **Federal Express**. Many small businesses provide services to consumers and other businesses, including hair salons, law firms, architects, and home repair specialists.

Increasingly, the lines between manufacturing, merchandising, and service companies are becoming less clear. For example, **Bombas** is an online merchandiser that sells directly to consumers. Eliminating wholesalers from the channel reduces costs and makes it easier for Bombas to cover the cost of the donated socks. The company partners with manufacturers around the globe, with factories in the U.S., Taiwan, China, and Peru. Later in the chapter, we will turn our attention to these manufacturing facilities to consider what manufacturing costs are incurred in the production of socks. Although Bombas is not a service company, services are becoming increasingly important in all businesses, even those that produce physical products. For example, Bombas prides itself on exceptional customer service, which is a critical part of its value proposition.

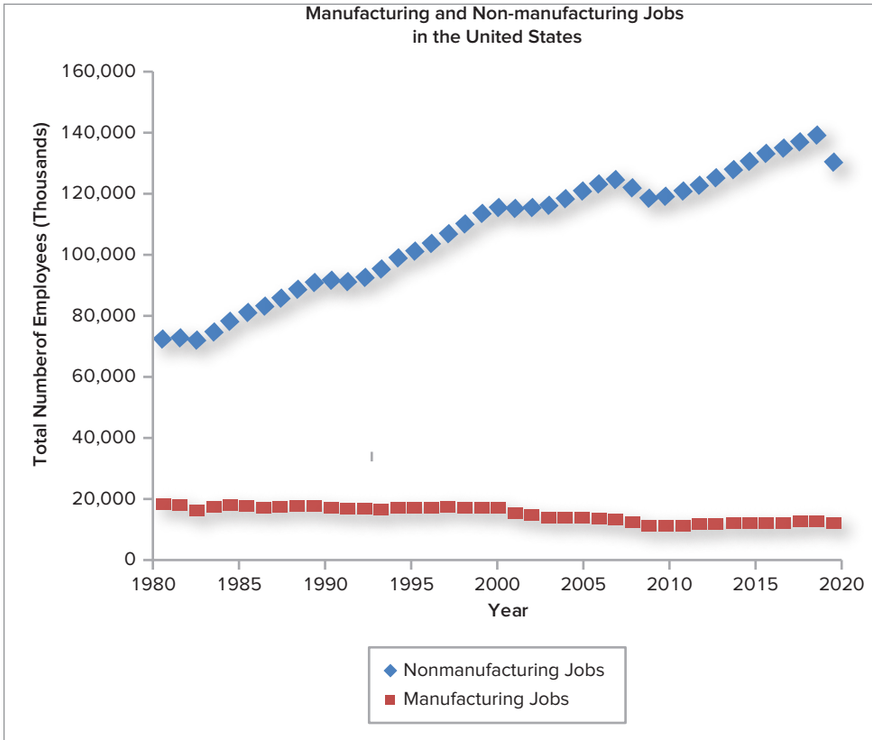
As we will see in later chapters, the focus of managerial accounting is somewhat different in manufacturing firms than in merchandising and service firms. In the past, managerial accountants focused much of their efforts on preparing reports to keep track of the costs of raw materials, labor, and other costs incurred to produce a physical product. Today, nonmanufacturing firms make up an increasingly large proportion of the marketplace. In 2017, the U.S. government estimated that 80.2 percent of the nation's gross domestic product (GDP) stemmed from service and merchandising activities.[2] The following chart shows the trend in manufacturing and nonmanufacturing jobs over the past 40 years. As you can see, the number of U.S. employees working in nonmanufacturing jobs has increased steadily, while the number of employees working in manufacturing jobs has remained relatively constant. Today, about 90 percent of the people employed in the United States work in nonmanufacturing fields such as health care, education, and retail, and the trend toward service industries is expected to continue.

Although nonmanufacturing firms make up an increasingly large percentage of our economy and workforce, many of our examples will be applied to companies that make a physical product, such as a pair of socks, an automobile, or an Apple watch. There are a few reasons why managerial accounting is often applied in a manufacturing setting:

1. It is easier for students to visualize a physical product and think about the various costs and activities that are required to make it. We intentionally chose products and companies that most students are familiar with so that you can immediately apply the concepts to something you understand and encounter on a daily basis.
2. Accounting in manufacturing firms is more complex than in nonmanufacturing firms because the product goes through several stages of completion (raw materials, work-in-process, and finished goods) before it is finally sold. Some of the terminology that you will learn in the first few chapters of this book, such as the difference between manufacturing and nonmanufacturing costs, is only relevant to manufacturing firms.

[2] CIA, *The World Factbook*, www.cia.gov/the-world-factbook/field/gdp-composition-by-sector-of-origin.

Final PDF to printer



Data from U.S. Department of Labor, Bureau of Labor Statistics, Employment Database. www.bls.gov/data/#employment, accessed January 19, 2021.

While we start out discussing managerial accounting in manufacturing settings, virtually all of the concepts and tools can be applied in nonmanufacturing settings as well. Once you've mastered the manufacturing example, extending it to a service or merchandising setting should be relatively simple. Throughout the book, we will provide examples of how the concepts and techniques can be applied in service settings as well.

Finally, it is important to note that managerial accounting information is vital to nonprofit organizations, including hospitals, universities, and charitable organizations. Although these organizations do not exist strictly to earn profit for shareholders, their managers still need timely and relevant information to prepare budgets, manage resources, and make strategic and operational decisions.

FUNCTIONS OF MANAGEMENT

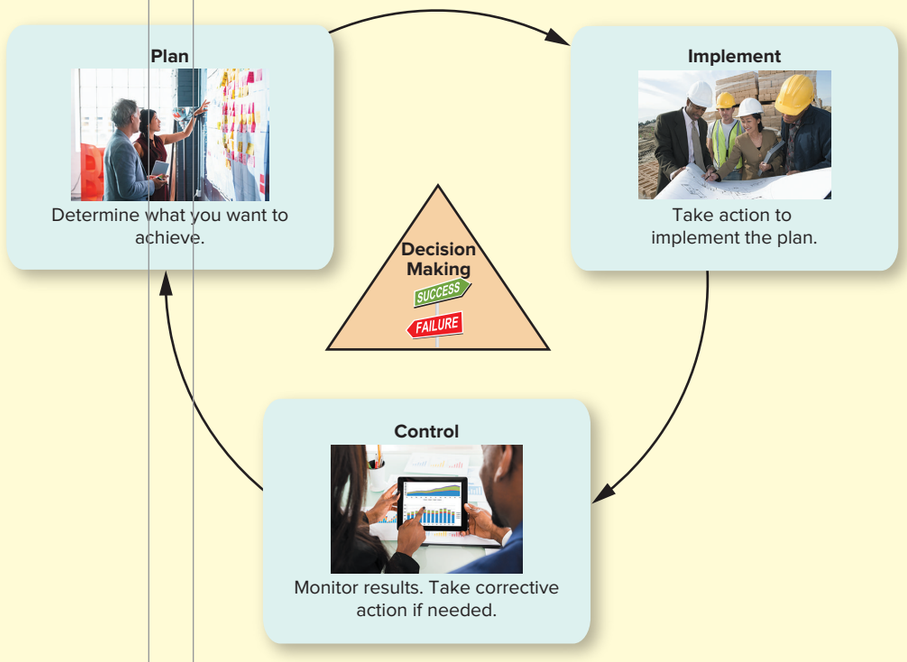
Regardless of the type and size of the organization they manage, a manager's job can be broken down into three basic functions: Planning, Implementing, and Controlling. These functions are part of a continuous or ongoing cycle, called the Plan-Implement-Control cycle, as illustrated in Exhibit 1–2. Throughout this cycle, managers must make a variety of decisions, and the managerial accounting system must provide information to help them make those decisions.

- **Planning** is the future-oriented part of the management cycle. The first step in planning is to establish goals or objectives, along with the tactics that will be used to achieve those goals. Managers have to make a variety of "who, what, when, where, and how" decisions as they plan. For example: Who is my target customer? What product or service do they need, and how much will they pay for it? Where and when will I provide the product and service? What resources will I need? Once managers know the answers to these questions, the next step is to create a **budget** that lays out the plan in monetary or financial terms. The budget helps managers organize their plan and ensure that they have the necessary resources to carry it out.

whi0085x_ch01_002-045.indd 9 07/21/21 09:00 PM

Final PDF to printer

EXHIBIT 1–2 Plan-Implement-Control Cycle



Top Left: 10'000 Hours/Getty Images; Top Right: bikeriderlondon/Shutterstock; Bottom: Andriy Popov/123RF

- **Implementing** means putting the plan into action. During the implementation phase, managers must lead, direct, and motivate others to achieve the objectives set in the planning stage. The decisions made during the implementation phase are sometimes called operational decisions. For example: Who should I purchase supplies from? When do I need them? How many employees should I hire? How much should I pay them? How do I train them? Again, the managerial accounting system should provide useful information to help managers answer these and other questions.
- **Controlling** is the final step in the management process. During the control phase, managers keep track of how they are doing and whether any actions must be taken to adjust the plan. The managerial accounting system plays a key role in helping managers measure and monitor the company's performance to see whether the planned objectives are being met. If not, managers may need to take corrective action to get back on track.

An easy way to think about the Plan-Implement-Control cycle is in terms of an air traffic control system. Before the flight, the pilot must file a flight **plan** that details when and where the plane will be flying. **Implementing** includes all of the actions the pilot takes to fly the plane. The **control** system includes the cockpit instruments the pilot uses to guide the plane, as well as the monitoring systems used by air traffic control. The goal of these control mechanisms is to make sure the plane does not deviate too far from the flight plan. When that happens, the system should provide a signal that the pilot needs to take corrective action.

To extend this analogy to the business world, managers are like pilots flying a plane and the managerial accounting system is the set of tools and information that help managers get the organization to its intended destination. The tools can be as simple as a report on a piece of paper or as sophisticated as an information system that provides real-time data to managers on their handheld devices. These tools must provide timely, relevant, and accurate information to help managers do their jobs.

whi0085x_ch01_002-045.indd 10 07/21/21 09:00 PM

Final PDF to printer

At **Bombas**, everyone from the CEO to a manager in the warehouse needs information to plan, implement, and control within their area of responsibility. Because the warehouse manager will be making very different decisions than the CEO, the managerial accounting system must provide information for both day-to-day operational decisions and long-term strategic decisions.

As you can see, the managerial functions of planning, implementing, and controlling are interconnected. One function leads to another, and managers use feedback from the process to improve future decision making. Throughout, managers must make a variety of decisions and they need relevant, up-to-date information, including cost estimates, competitor pricing, market demand, and consumer preferences. Much of this information comes from the managerial accounting system.

Before we move on, try the Self-Study Practice to make sure you understand the major differences between financial and managerial accounting and the key functions of management.

The best way to know whether you are reading the chapter carefully enough is to see how well you do on a short exercise. Therefore, at important points throughout each chapter, you will find an exercise that will reinforce the concepts you have just learned and provide feedback on how well you learned them. We urge you not to skip these practices. When you are finished, check your answers against the solution below in the margin.

How's it going? Self-Study Practice

1. Which of the following statements best describes the difference between financial accounting and managerial accounting?
   a. Managerial accounting targets external stakeholders while financial accounting targets individuals within the company.
   b. Financial accounting relies more on subjective, future-oriented information than managerial accounting does.
   c. A major focus of managerial accounting is the preparation of the income statement, while a major focus of financial accounting is the preparation of the budget.
   d. Managerial accounting tends to focus on relevant, subjective, and future-oriented information while financial accounting relies primarily on objective, reliable, and historical information.
2. Indicate whether the following organizations are (A) manufacturers, (B) merchandisers, or (C) service providers:

   Tesla
   Twitter
   Macy's
   A university
3. Which of the following statement(s) regarding the key management functions is true?
   a. Planning involves setting long-term objectives and the short-term tactics necessary to achieve those objectives.
   b. Implementing involves comparing actual results to planned objectives and making adjustments as necessary.
   c. Controlling includes all of the operational decisions made to implement the plan.
   d. All of the statements are true.

After you have finished, check your answers against the solutions in the margin.

Solution to Self-Study Practice
1. d
2. Tesla (A), Twitter (C), Macy's (B), University (C)
3. a

SUSTAINABILITY AND CORPORATE SOCIAL RESPONSIBILITY

Learning Objective 1–3
Describe the importance of sustainability and decision analytics in managerial accounting.

As discussed in the previous section, the managerial accounting system should provide managers with the information they need to meet the organization's objectives. Managerial accounting has traditionally focused on helping managers create economic value or profit for shareholders. In today's changing world, managers are responsible for more than achieving financial results and are accountable to many groups other than shareholders. Modern managers must balance the priorities and needs of many stakeholders, including employees,

Final PDF to printer

COACH'S TIP

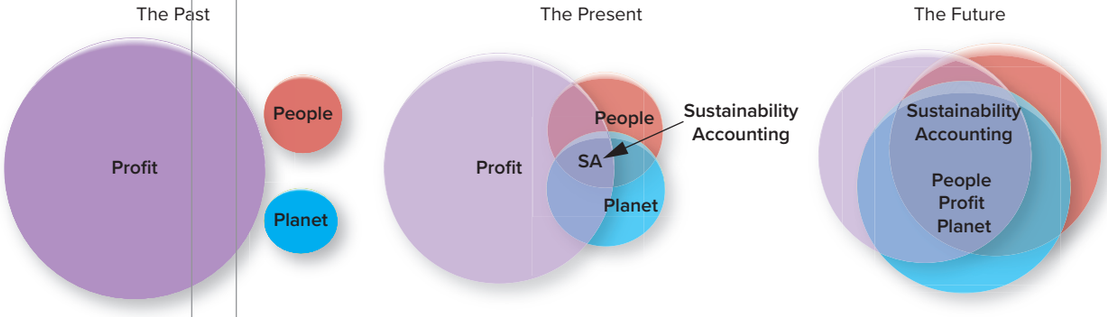
Although some people equate sustainability with being environmentally friendly or "green," it is a much broader concept than that. A truly sustainable business strategy is one that simultaneously achieves economic results while creating benefits for society (e.g., reduce poverty, respect human rights, prevent disease) and the environment (e.g., limit climate change, reduce greenhouse gas emissions).

customers, suppliers, regulators, and society. **Sustainability accounting** is an emerging area of accounting that is aimed at providing managers with a broader set of information to meet the needs of multiple stakeholders, with the goal of ensuring the company's long-term survival in an uncertain and resource-constrained world.

Sustainability typically is defined as the ability to meet the needs of today without sacrificing the ability of future generations to meet their own needs. When applied to business, it is the ability of an organization to meet the needs of its most immediate stakeholders (typically owners or **stockholders**) without sacrificing or ignoring the impact on other **stakeholders**. Thus, a sustainable approach to business requires managers to broaden their decision making to include three perspectives: economic issues, social issues, and environmental issues. These three perspectives are often referred to as the **triple bottom line** and are represented by **3 Ps: People, Profit, and Planet**.

Accountants can play a key role in helping organizations achieve their sustainability goals by measuring and managing triple bottom line performance. While traditional accounting systems focused almost exclusively on economic results (e.g., profit), sustainability accounting expands the focus to measure the impact of business decisions on social issues (people) and the environment (planet). Just as accountants have always measured and managed a firm's economic performance, today's accountants must measure and manage a firm's social impact and environmental performance as well.

The following diagram provides a historical perspective on the relative importance of the three factors that make up the triple bottom line.



In the past, accounting focused primarily on profitability measures such as net income (revenue − expenses), return on equity, and other measures of economic success. Social and environmental factors were not usually at the forefront of managers' decision making, and in many cases financial results were achieved at the expense of social issues (people) and the environment (planet).

Today, managers are beginning to recognize that a business strategy focused solely on achieving economic or financial results is not sustainable. In the long run, a business cannot survive without people (e.g., customers, employees, and suppliers) and natural resources (e.g., water, clean air, and fuel). As a result, modern organizations are building sustainable business practices into their business strategies and including sustainability metrics into their performance management systems. For example, most public companies now issue **corporate social responsibility (CSR)** reports that provide sustainability-related information, including measures of social and environmental impact.

While sustainability accounting is a rapidly emerging field, the reality is that most of today's businesses are still driven *primarily* by economic results. For sustainability initiatives to really take shape and change the way a company does business, they must be linked to the company's corporate strategy and embedded in the day-to-day operations and culture of the company.

Bombas is an excellent example of a company that has built a culture based on the social-responsibility dimension of sustainability. The founders chose the name Bombas (derived from the Latin word for bumblebee) because bees live in a hive and must work together for the common good. The company's mantra "Bee Better" is instilled into the culture of the organization and stitched onto every pair of socks sold. While some might argue that it is great

whi0085x_ch01_002-045.indd 12 07/21/21 09:00 PM

Final PDF to printer

marketing (and it is), it goes beyond hype or window dressing. For example, Bombas requires all new hires to take 10 pairs of socks and give them to homeless people within the first two weeks on the job. According to CEO David Heath, "It helps them feel motivated and personally connected to the mission." This strategy, along with employee perks such as unlimited vacation, unlimited sick time, and unlimited remote work (even before the 2020 pandemic), has resulted in an extremely low employee turnover rate. This strategy has positive social benefits (people) and creates economic benefits (profits) through reduced training costs, satisfying two elements of the triple bottom line.

DECISION ANALYTICS

A topic that is becoming increasingly important to managers and accountants is the use of big data and analytics to help managers make more informed business decisions. **Big data analytics** involves the use of analytical techniques to gain valuable insights from data that are so large or complex that they cannot be analyzed using traditional databases and spreadsheets. So what makes data "BIG"?

- *Volume:* The sheer amount or volume of data can be overwhelming and exceed the capacity of many companies' servers. For example, it is estimated that **Walmart** collects more than 2.5 petabytes (2.5 quadrillion bytes) of customer data per hour.[3]
- *Velocity:* The data arrive with great velocity or speed, including not just data on past events but also those created in real time, as events are occurring.
- *Variety:* The data come in a variety of formats (e.g., text, numerics, images, audio, and video) and are generated from a variety of sources, devices, and sensors, including geographic, financial, and social media data.

If "BIG" data relate to the volume, velocity, and variety of data, what is analytics? **Analytics** is the process of discovering and communicating meaningful patterns and insights from data to find more intelligent ways of operating a business, managing resources, enhancing customer service, reducing operating costs, or pursuing other business opportunities. Although differences exist at a technical level, the terms *data analytics*, *business analytics*, and *business intelligence* are often used interchangeably to refer to the extraction of meaningful and actionable insights from data so that managers can make more intelligent business decisions.

Three types of analytics are common:

- Descriptive analytics (describing what has happened). For example, **UPS** *describes* the operating efficiency of its delivery trucks by monitoring gas mileage.
- Predictive analytics (predicting what will happen). For example, UPS *predicts* future repairs and maintenance work by analyzing idling time and miles driven.
- Prescriptive analytics (recommending a course of action). For example, UPS uses customer location and real-time GPS data to *prescribe* the most efficient routes for delivering its packages.

Amazon is now experimenting with something it calls "anticipatory shipping," where it uses past purchases, website traffic, and geographic data to ship a product to a region before a customer even places the order. By shipping in advance, and later specifying the exact delivery location when an actual purchase occurs, Amazon hopes to be able to reduce both shipping time and shipping costs.

In addition to these business examples, data analytics is useful in other fields such as health care and law enforcement. For example, by tracking search terms entered into **Google** by people in various regions of the United States, analysts can predict flu outbreaks faster than by monitoring hospital admission records. As another example, data analysts cross-referenced

[3] Andrew McAfee and Erik Brynjolfsson, "Big Data: The Management Revolution," *Harvard Business Review*, October 2012.

Final PDF to printer

public crime records with data from ride-sharing apps to discover that DUI arrests fell by 10 percent after Uber entered a major metropolitan market.

At opportune places throughout this book, we will highlight how managers in our focus company or other real-world organizations are incorporating sustainability and decision analytics into their business strategies. You will also have an opportunity to apply these concepts and tools to an integrated analytics case that is discussed at the end of each chapter and can be found at the back of this book. The case is modeled after the Bombas story and describes a "one-for-one" meal delivery service that promises to donate one meal for every meal purchased.

Role of Cost in Managerial Accounting

Learning Objective 1–4
Define and give examples of different types of costs.

As described earlier in this chapter, the goal of managerial accounting is to provide managers with the information they need to plan, implement, and control within their area of responsibility. Much of the information that managers need to make decisions is based on cost data. For example, a product manager at **Bombas** might need to know how much a new type of sock costs to decide how much to charge for it. A purchasing manager might need to know how much it costs to store items in inventory to decide how frequently to order. A technology manager might need to know how much it costs to host the website on company servers as opposed to utilizing a third party platform such as **GoDaddy**. Managers also need cost information to prepare daily, weekly, and monthly operating budgets. These budgets help managers ensure that they have the necessary resources to run the business and to control spending. Although accountants and managers should consider things other than cost when making decisions, cost control remains a critical concern for most organizations, particularly in a tough economy or when profit margins are declining due to increased competition.

Throughout this textbook, we will use a lot of different terminology to describe cost. It can be confusing at times because there are many different types of cost systems and ways to categorize cost. The most important thing to remember is that we will treat costs differently depending on how the information will be used. Will the cost information be used for financial reporting purposes? If so, we have to follow the rules of GAAP. Will it be used to determine the profitability of a product or service? If so, we need to understand the nature of the product or service to decide what costing method is appropriate. Will the cost data be used for decision making? If so, we need to consider how costs will behave or change depending on what decision alternatives the manager is considering. Will the data be used to evaluate the performance of a manager? If so, we need to think about what costs are under the manager's direct control.

COACH'S TIP

The key thing to remember is that **different cost terms are used for different purposes.** Thus, a single cost can be classified in more than one way, depending on how the information will be used.

In this chapter, we introduce the terminology you will use to categorize or sort cost into different "buckets," including

- Direct or Indirect Costs
- Manufacturing or Nonmanufacturing Costs
- Product or Period Costs
- Variable or Fixed Costs
- Relevant or Irrelevant Costs

Each of these classifications will be based on different criteria depending on how the information will be used. In later chapters, you will learn how to use this cost information for different managerial purposes, including product costing, cost management, decision making, planning and control, and performance evaluation. For now, you just need to recognize and define the terms.

DIRECT VERSUS INDIRECT COSTS

When managers use cost information, they typically want to know the cost of something specific. It could be a product (e.g., women's tri-color running socks), a particular process (e.g., the knitting process or packaging process), an activity (e.g., quality control), or a specific function

Final PDF to printer

(e.g., customer support). We call these specific things *cost objects.* A **cost object** is any item we want to know the cost of. In your own personal life, you might want to know the cost of attending school for a semester, the cost to buy and operate a car, or the cost of a vacation you would like to take over spring break. Each of these items would be considered a cost object.

As an example, assume you want to know how much it is costing you to take this accounting course. In that case, the course (managerial accounting) is the cost object. How would you go about determining the cost of this course? You would probably start with the costs that are easily attributed to a specific course, such as the cost of tuition and books. Costs that **can be directly and easily traced** to the cost object are called **direct costs**. But there are other costs associated with your education that aren't directly related to one course. Examples include the cost of driving to and from campus, the cost of your computer, and the cost of the supplies you use in class. These costs are difficult to trace to a specific class if you are taking more than one class at a time. Even if you could keep track of the cost of the pencils and paper you use in a specific class, it probably isn't worth the effort to do so. Costs that **cannot be traced** to the cost object, or that are **not worth the effort** of tracing, are called **indirect costs**. When classifying a cost as direct or indirect, the question to ask is whether the cost can be directly and conveniently traced to the cost object. If the answer is yes, it is a direct cost. If not, it is an indirect cost.

To illustrate the difference between direct and indirect costs, think about the high-quality cotton and wool used to make a pair of **Bombas** socks. Because these are the major materials that are used to make socks, they would most likely be considered a direct cost. But what if these same materials were used as thread to sew pieces of leather together in the production of handbags? While the leather would be considered a direct cost, the cost of thread would probably be considered an indirect cost. Even though it is *possible* to trace these minor materials to a specific handbag, it is probably not worth the effort to do so. For a cost to be treated as a direct cost, it must be both possible and practical to trace the cost to the specific cost object. Costs that cannot be traced or are not worth the effort of tracing are treated as indirect costs. This distinction is important because direct and indirect costs are treated differently by the accounting system.

COACH'S TIP

Whether a cost is direct or indirect depends on whether it is both **possible** and **practical** to trace the cost to a cost object. Costs that *could* be traced but are not worth the effort to trace are classified as **indirect costs.**

MANUFACTURING VERSUS NONMANUFACTURING COSTS

For financial reporting purposes, costs must be classified based on whether they relate to manufacturing or nonmanufacturing activities. This distinction applies only to companies that make a physical product, such as **Dell** (computers), **Honda** (cars and trucks), **Harley-Davidson** (motorcycles), and **Maytag** (appliances). It does not apply to merchandisers or service companies that do not make a physical product.

Manufacturing costs represent all of the costs associated with producing or manufacturing a physical product. They are generally classified into one of three categories:

- **Direct materials** include the major material inputs that can be directly and conveniently traced to each unit of product (the cost object). Examples include the cotton and wool used to make socks, the leather used to make handbags, the steel used to manufacture automobiles, and the wood used to make a table. Indirect materials, or those that are not worth the effort of tracing to specific units, would be categorized as manufacturing overhead.
- **Direct labor** refers to the "hands on" labor that can be directly and conveniently traced to the product, such as the wages of employees in the sewing and packaging departments. It does not include employees who rarely touch the product as it is being produced, such as production supervisors, maintenance workers, and factory engineers. These indirect labor costs are treated as manufacturing overhead.
- **Manufacturing overhead** includes all costs **other than direct materials and direct labor** incurred during the manufacturing process. It includes all of the costs associated with *making* the product that cannot be traced to a specific unit, such as indirect materials, indirect labor, factory rent, factory insurance, and factory utilities. Manufacturing overhead does *not* include costs that happen outside of the factory walls (e.g., marketing, distribution, or sales), only those indirect costs that are related to manufacturing the product.

COACH'S TIP

To help you visualize the manufacturing costs, take a virtual tour of a sock factory by searching "how socks are made" in **Google** or **YouTube**. Watch the video and try to identify the direct materials, direct labor, and manufacturing overhead costs.

Final PDF to printer

Prime Cost =

Direct Materials
+
Direct Labor

Conversion Cost =
Direct Labor
+
Manufacturing
Overhead

When added together, direct materials and direct labor are referred to as **prime costs**. For manual production processes, the direct materials and direct labor often represent the *primary* costs incurred to make the product. As manufacturing has become more automated and labor has shifted from direct labor (i.e., line-worker wages) to indirect labor (i.e., engineers and supervisors), manufacturing overhead has become a much larger percentage of total manufacturing cost.

Direct labor and manufacturing overhead are referred to collectively as **conversion costs**. These are the costs needed to *convert* direct materials into a finished product.

Notice that direct labor is included in both prime costs (direct materials + direct labor) and conversion costs (direct labor + manufacturing overhead). As such, you cannot add prime costs to conversion costs to determine the total manufacturing cost because direct labor is included in both components. The sum of the three manufacturing costs (direct materials + direct labor + manufacturing overhead) gives us the total manufacturing cost. Alternatively, you could add prime cost to conversion costs and then subtract the direct labor to prevent it from being counted twice.

Nonmanufacturing costs are the costs associated with running the business and selling the product, as opposed to manufacturing the product. They are generally classified into one of two groups:

- **Marketing or selling expenses** are incurred to get the final product to the customer. This includes shipping, sales salaries or commissions, online advertising, and any other sales-related expenses.
- **General and administrative expenses** are associated with running the overall business. They include general management salaries, rent and utilities for corporate headquarters, and corporate service functions such as the accounting, payroll, and legal departments.

COACH'S TIP

The distinction between period and product costs is a matter of **when** the cost is matched against revenue on the income statement. Period costs are expensed as soon as they are incurred. Product costs are recorded initially as inventory and do not appear on the income statement until the product is sold.

PRODUCT VERSUS PERIOD COSTS

The difference between product costs and period costs determines **how and when** the cost will be matched up against revenue on the income statement. This distinction really has more to do with financial accounting (external reporting) than managerial accounting. However, it is important for manufacturing firms that hold significant amounts of inventory because it determines whether a cost is counted as inventory (an asset on the balance sheet) or as an expense on the income statement. Classifying a cost as product or period can affect the reported profitability of the company's products, customers, and divisions.

For external reporting purposes, GAAP requires that all manufacturing costs be treated as **product costs**, or costs that are assigned to the product as it is being manufactured. Product costs are also called **inventoriable costs** because they are counted as inventory (an asset) until the product is sold. Remember that manufacturing costs include direct materials, direct labor, and manufacturing overhead. These manufacturing costs follow the product as it is being produced and are recorded in one of the following inventory accounts: Raw Materials Inventory, Work in Process Inventory, or Finished Goods Inventory. Once the product is finally sold, product costs are reported as Cost of Goods Sold and matched up against sales revenue on the income statement.

Nonmanufacturing costs are called **period costs** or period expenses because they are expensed during the period incurred. Unlike product costs that flow through several inventory accounts before being reported as Cost of Goods Sold, nonmanufacturing costs are expensed as soon as they are incurred. Examples of nonmanufacturing or period expenses include advertising, sales commissions, distribution expenses, and general and administrative salaries. Refer to Exhibit 1–3 for an illustration of the different treatment of product and period costs under GAAP.

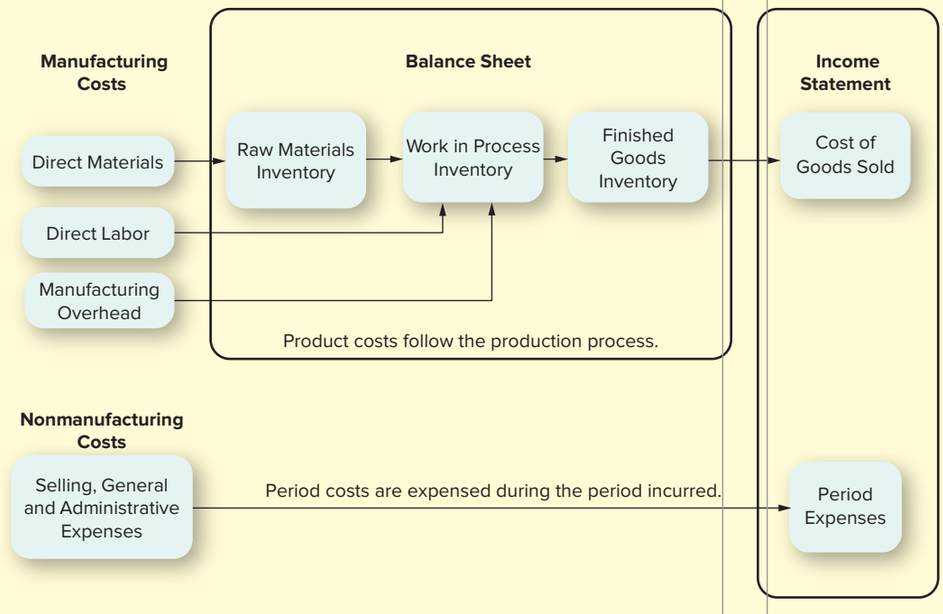
Later chapters demonstrate how to account for the flow of manufacturing costs through the various inventory accounts before being reported as Cost of Goods Sold. For now, you simply need to recognize that manufacturing costs (product costs) will be treated differently than nonmanufacturing costs (period costs) for financial reporting purposes.

VARIABLE VERSUS FIXED COSTS

The distinction between manufacturing (product) and nonmanufacturing (period) costs is based on financial accounting rules required for external reporting (GAAP). For internal decision making, managers often are more concerned with how costs will change if something else

Final PDF to printer

EXHIBIT 1–3 Product and Period Cost Flows



changes, such as the number of units produced or the number of units sold. **Variable costs** are those that change, in total, in direct proportion to changes in some measure of activity.

For **Bombas**, what costs are likely to change if the company produces and sells more socks? The manufacturing process will require more direct materials, more direct labor, and some additional manufacturing overhead costs (e.g., power to operate machines). There would also be additional shipping expenses and possibly more marketing expenses, such as "pay-per-click" advertising or fees paid to product promoters or "influencers." Notice that variable costs can be related to manufacturing or nonmanufacturing activities.

It is also important to note that variable costs can vary with more than one measure. Direct materials, direct labor, and variable manufacturing overhead costs tend to vary with the number of units produced. Shipping costs can vary with many things, including the number of shipments, the weight of the shipment, the method of shipping, or distance traveled. Pay-per-click advertising varies with the number of clicks from a search engine such as **Google** or **Yahoo**. Influencer fees may vary with the number of Instagram followers. We will discuss these various "cost drivers" in future chapters. For now, we will focus on costs that vary with the number of units produced or sold, as shown in the following graphs.

When we say that a cost is variable, it means that the total cost varies with some measure of activity, such as the number of units produced or sold. However, the average or per-unit cost should remain constant. For example, the average cost of direct materials should be the same

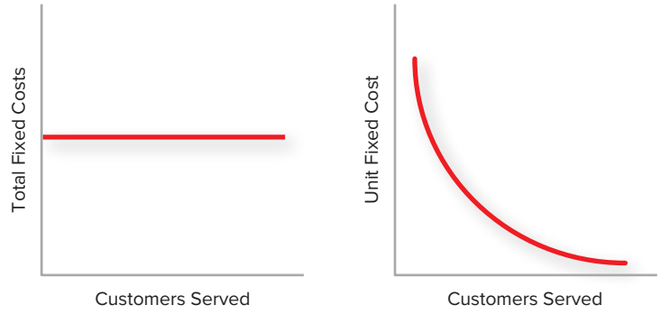
Final PDF to printer

regardless of the number of units produced. This ignores other factors that can drive down variable costs, such as quantity discounts and employee learning curves. **Fixed costs** are those that stay the same, in total, regardless of activity level. Examples of fixed costs for Bombas include supervisor salaries, depreciation on machinery, factory rent, and most general and administrative expenses. When we say that a cost is fixed, that doesn't mean it will never change; it simply means that the total cost won't change because we produce or sell more units.

Although **total** fixed costs are constant, **average** or **per-unit** fixed costs vary inversely with the number of units produced or sold. That is because spreading a constant amount over more units or customers drives down the average cost, as shown in the following graphs.

COACH'S TIP

In deciding whether a cost is variable or fixed, be sure to think about whether the **total cost** will change. Looking at average or unit cost will reveal an entirely different pattern, which we examine more closely in Chapter 5.



In most real-world businesses, costs do not behave in the perfectly predictable patterns described above. Some costs, such as utilities, may have some variable elements and some fixed elements. Other costs, such as salaries or equipment, may be fixed over a certain range of activity, and then increase when a capacity limit is reached. These more complex cost behavior patterns are discussed in more detail in Chapter 5.

SPOTLIGHT ON Decision Making

Predicting Fixed and Variable Costs

Assume you are the treasurer of a student club at your university and you are on the planning committee for the end-of-year social event. The committee is in charge of finding a location; renting tables and chairs; and hiring a DJ, photographer, and caterer for the event. Your responsibility as treasurer is to set the budget for the event and make sure the committee stays within that budget.

Which costs would you expect to vary with the number of people attending? Which costs will be the same regardless of how many people attend the event? Why is it important for you to know the answers to these questions? When planning a social event, the cost of the venue, DJ, and photographer will be incurred regardless of how many people attend the event. The cost of catering (food and drinks), tables, and chairs will vary with the number of people expected to attend. You need to understand these relationships to prepare a budget for the event because the total cost will depend on the number of guests.

Managers must answer similar questions when making business decisions. They need to understand which costs will vary with the number of units produced or the number of customers served and which will be incurred regardless of these factors.

Most chapters include Spotlight features focusing on decision making, ethics, and sustainability. These features are designed to illustrate the relevance of accounting in real-world decision making.

RELEVANT VERSUS IRRELEVANT COSTS

For managerial accounting information to be useful for decision making, it must be **relevant** to the specific decision that managers are trying to make. In today's information age, managers have access to a tremendous amount of data, much of which is irrelevant to the decision at hand. In addition, managers sometimes fail to incorporate relevant information into their

Final PDF to printer

decisions because it is not easily captured by the accounting system. Determining what information is relevant to managerial decisions is one of the most important skills that you will learn in this course. A **relevant cost** has the potential to influence a decision; an **irrelevant cost** will not influence a decision. For a cost to be relevant, it must occur **in the future** and **differ** between the decision alternatives the manager is considering. Costs that differ between decision alternatives are sometimes called incremental or **differential costs**. Costs that have already been incurred are called **sunk costs**. Although **sunk costs are irrelevant** for decision making, it is often very difficult for managers to ignore what happened in the past and focus only on the future.

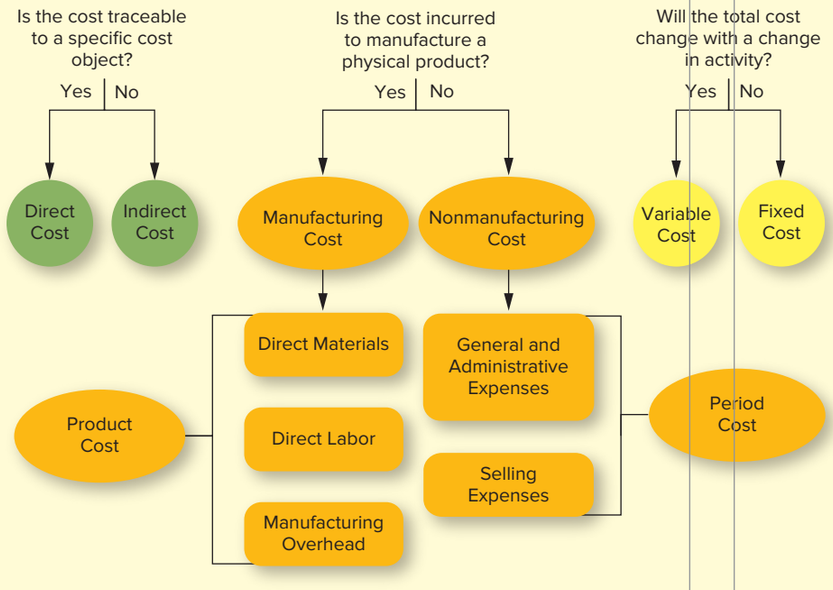
Another important distinction is the difference between an out-of-pocket cost and an opportunity cost. **Out-of-pocket costs** involve an actual cash payment. In your personal life, these are costs you pay "out of your pocket" for things such as food, clothing, and entertainment.

Unlike an out-of-pocket cost that involves an outlay of cash, an **opportunity cost** is the cost of **not** doing something. In other words, it is the forgone benefit (lost opportunity) of the path not taken. Anytime you choose to do one thing instead of another because of limited time or money, you incur an opportunity cost. For example, if you are going to school full time, you are giving up the opportunity to earn money by working full time. The salary you could be making if you were not in school is an opportunity cost of pursuing your education.

Opportunity costs occur in business any time resources are constrained and managers must choose to do one thing at the expense of another. As an example, **Bombas** recently decided to expand its product offerings to include t-shirts and underwear. If the company has limited manufacturing facilities, limited employee time, or limited capital for expansion, the introduction of new product lines may take away other opportunities, such as expanding an existing product line. The forgone or lost benefit of expanding an existing product line is an opportunity cost of introducing new product lines. If there are no foreseeable benefits to expanding an existing product line, the opportunity cost is zero. But if there are benefits, managers should attempt to estimate this opportunity cost and factor it into their decision-making process. This is often easier said than done because it is difficult to quantify the benefits of an action that is NOT taken.

Exhibit 1–4 provides a summary of the various ways to categorize or classify costs. Each classification requires you to ask a different question to determine how the information will

EXHIBIT 1–4 Cost Classification System: Different Costs for Different Purposes



Final PDF to printer

be used in managerial accounting. We will reference this terminology throughout the book as we consider how managers use cost and other managerial accounting information to make decisions for their organization.

Before continuing, complete the following Self-Study Practice to see how well you understand the cost terminology.

How's it going? Self-Study Practice

Match the appropriate description on the right to the terms on the left.

_____ 1. Product costs
_____ 2. Period costs
_____ 3. Manufacturing costs
_____ 4. Nonmanufacturing costs
_____ 5. Variable costs
_____ 6. Fixed costs
_____ 7. Direct costs
_____ 8. Indirect costs
_____ 9. Out-of-pocket costs
_____ 10. Opportunity cost
_____ 11. Sunk costs

A. Costs that remain the same in total regardless of activity level.
B. Costs that involve an outlay of cash for items such as rent, utilities, and salaries.
C. The benefit that you forgo when you select one alternative over another.
D. Costs that can be directly and conveniently traced to a specific cost object.
E. Costs that have already been incurred and thus are not relevant to future decisions.
F. Costs that are expensed in the period they are incurred.
G. Costs that are incurred while making a physical product, such as direct materials, direct labor, and manufacturing overhead.
H. Costs that cannot be directly or conveniently traced to a specific cost object.
I. Costs that change in total in direct proportion to a change in activity level.
J. Costs that are attached to the product as it is produced and included in inventory until the product is sold.
K. Costs that are not related to producing a product, such as selling and administrative costs.

After you have finished, check your answers against the solutions in the margin.

Solution to Self-Study Practice

1. J
2. F
3. G
4. K
5. I
6. A
7. D
8. H
9. B
10. C
11. E

SUPPLEMENT 1A ETHICS AND THE ACCOUNTING PROFESSION

Learning Objective 1–S1
Describe the Sarbanes-Oxley Act and the importance of ethics in the accounting profession.

Accounting knowledge can make the difference in your ability to land a dream job, whether you hope to work in production and operations management, human resources, finance, marketing, or another field. Exhibit 1S–1 displays nonaccounting jobs that could be available to you at the world's leading companies and explains how accounting knowledge can be vital to these positions.

Regardless of your future career path, you will be responsible for creating and maintaining an ethical work environment. **Ethics** refers to the standards of conduct for judging right from wrong, honest from dishonest, and fair from unfair. Although some accounting and business problems have clear right or wrong answers, many situations require accountants and managers to weigh the pros and cons of alternatives before making final decisions.

Often, there is no one right answer to ethical dilemmas, and hard choices will need to be made. Do not tolerate acts of fraud, such as employees making up false expenses for reimbursement, punching in a time card belonging to a fellow employee who will be late for work, or copying someone's ideas and claiming them as your own. Also, be aware that not all ethical dilemmas are clear-cut. Some situations will require you to weigh one moral principle (e.g., honesty) against another (e.g., loyalty).

whi0085x_ch01_002-045.indd 20 07/21/21 09:00 PM

Final PDF to printer

EXHIBIT 1S–1 Accounting Knowledge Can Benefit All Majors

Production and Operations Management

Production Manager, Nintendo: Figure out how to make a $300 Switch for $257.

Outsourcing Specialist, Apple: Coordinate more than 20 suppliers of parts for the next iPad, at the same total cost as legacy iPads.

Human Resources

Compensation Analyst, Google: Develop affordable, attractive global pay programs.

Labor Relations Manager, NBA Players' Union: Assist in salary renegotiations involving the $133 million salary cap.

Accounting

Finance

Investment Analyst, Goldman Sachs: Assess value of investing $50 million in Quirky Incorporated.

Financial Analyst, Amazon Web Services: Build financial models to forecast revenue and other key performance metrics.

Marketing

Brand Manager, Kraft Heinz Company: Set prices to achieve 5 percent annual sales growth.

Customer Business Developer, Procter & Gamble: Collaborate with accounting to enhance customer profits and cash flows.

Sources: http://techland.time.com/2011/03/29/the-incredibly-cheap-100-nintendo-3ds; http://blogs.forbes.com/johnray/2011/03/11/isuppli-teardown-of-the-ipad-2-investor-edition/; www.isuppli.com/Teardowns/News/Pages/iPad-2-Carries-Bill-of-Materials-of-$326-60-IHS-iSuppli-Teardown-Analysis-Shows.aspx; www.nytimes.com/2011/05/25/sports/basketball/players-accuse-nba-of-failing-to-bargain-in-good-faith.html?_r=1&ref=nationallaborrelationsboard.
Photo: Rubberball/Getty Images

When faced with an ethical dilemma, you should apply the following three-step process:

1. Identify who will be affected by the situation—both those who will appear to benefit (often the manager or employee) and those who will be harmed (other employees, the company's reputation, owners, creditors, and the public in general).
2. Identify and evaluate the alternative courses of action.
3. Choose the alternative that is the most ethical—and that you would be proud to have reported in the news.

Unfortunately, not everyone abides by these general guidelines. For example, the reputation of business managers and accountants was tarnished in the late 1990s and early 2000s due to high-profile scandals at companies like at **Enron** and **WorldCom**. In response to these scandals, Congress enacted the **Sarbanes-Oxley (SOX) Act of 2002**. Although SOX was primarily aimed at renewing investor confidence in the external financial reporting system, it has many implications for managers as well.

The Sarbanes-Oxley Act focuses on three factors that affect the accounting reporting environment: opportunity, incentives, and character.

Opportunities for Error and Fraud SOX attempts to reduce the **opportunity** for error and fraud. A requirement under SOX is that management must conduct a review of the company's internal control system and issue a report that indicates whether the controls are effective at preventing errors and fraud. This requirement places more responsibility on all managers (not just accountants) for the accuracy of the reporting system. For example,

Final PDF to printer

marketing managers are now responsible for making sure their staff members submit accurate sales and expense reports. SOX also places additional responsibilities on the boards of directors and external auditors to reduce the opportunity for errors and fraud.

Incentives for Committing Fraud SOX attempts to counteract the **incentive** to commit fraud by providing stiff penalties, such as monetary fines and jail time. For example, violators must repay any money obtained via fraud and can be assessed additional fines of up to $5 million. Executives cannot avoid these penalties by declaring personal bankruptcy, which explains why a former sales director at **Computer Associates** will be giving 15 percent of every paycheck he earns for the rest of his life to a fraud restitution fund. SOX also increased the maximum jail sentence for fraudulent reporting to 20 years. Total jail time can add up to even more than that because federal sentencing guidelines allow judges to declare consecutive jail terms for each violation.

Character of Managers and Employees Finally, SOX emphasizes the importance of the **character** of managers and employees. Admittedly, it is difficult for a law to make people act appropriately, but SOX introduces new rules that should help employees of good character make the right decision when confronted with ethical dilemmas. For example, audit committees are now required to create anonymous hotlines that allow employees to submit concerns they may have about suspicious accounting or auditing practices. These whistle-blower tips are the most common means for detecting fraud, according to a 2018 report by the Association of Certified Fraud Examiners. SOX also gives federal employees whistle-blower protection to prevent retaliation by those charged with fraud.

Finally, to reinforce good character, public companies must adopt a code of ethics for senior financial officers. **Google** ends its code of ethics by simply saying, "Don't be evil." Unfortunately, adopting a code of ethics does not ensure that managers will act ethically. Most experts agree that ethics must be embedded in the organizational culture and that top managers who lead by example will drive ethical behavior in the organization.

According to a recent Statement on Management Accounting (SMA) released by the Institute of Management Accountants (IMA), companies with strong ethical cultures are rewarded with higher productivity, improved team dynamics, lower risks of fraud, streamlined processes, improved product quality, and higher customer satisfaction. But to achieve these rewards, companies must move beyond simply complying with laws such as SOX and create a culture that embeds ethics throughout the organization.

Before we move on, take a moment to complete the following Self-Study Practice to make sure you can identify factors that influence ethical behavior.

How's it going? Self-Study Practice

Identify whether each of the following actions is most likely to increase (+) or decrease (–) the risk of error or fraud arising from opportunities (O), incentives (I), or an individual's character (C).

	+/–	I/O/C
1. **Enron** was notorious for its "rank-and-yank" practice that involved ranking the financial performance of each business unit and then firing managers in the lowest 20%.	_____	_____
2. **Nintendo of America** conducts preemployment screening before hiring anyone.	_____	_____
3. The **Walt Disney Company** has a strong board of directors, according to *Corporate Responsibility Magazine*.	_____	_____

After you have finished, check your answers against the solutions in the margin.

Solution to Self-Study Practice

1. +/I (increased pressure to report stronger financial results)
2. –/C (less likely to hire employees of poor character).
3. –/O (strong oversight by directors)

Final PDF to printer

REVIEW THE CHAPTER

DEMONSTRATION CASE

Barnaby's Bicycle Company manufactures high-quality mountain bikes. The company's managerial accountant has come to you for help. She needs to classify and identify each of the following costs before she can calculate the cost to produce each mountain bike.

Classify each of the costs listed in the chart below into three categories based on the following questions:

1. Can this cost be directly and conveniently traced to each bicycle that is manufactured, or is doing so either not possible or not worth the effort?
2. Is this cost related to manufacturing the bicycles? If so, what type of cost is it? Or is it a nonmanufacturing or period expense?
3. Will the total cost vary with the number of bicycles manufactured and sold, or will it remain the same regardless of how many bikes are produced and sold?

The first item in the chart is completed as an example.

	QUESTION 1		QUESTION 2				QUESTION 3	
			PRODUCT COSTS			PERIOD COSTS	COST BEHAVIOR	
	Direct Cost	Indirect Cost	Direct Materials	Direct Labor	Mfg. Overhead	Nonmfg. Expenses	Variable Cost	Fixed Cost
Alloy tubing used to make the bicycle frames	X		X				X	
Hourly wages paid to employees who cut and weld the alloy tubing								
Factory rent								
Bicycle wheels and tires								
Miscellaneous bicycle components								
Insurance on the factory								
Insurance on the president's company car								

Suggested Solution

	QUESTION 1		QUESTION 2				QUESTION 3	
			PRODUCT COSTS			PERIOD COSTS	COST BEHAVIOR	
	Direct Cost	Indirect Cost	Direct Materials	Direct Labor	Mfg. Overhead	Nonmfg. Expenses	Variable Cost	Fixed Cost
Alloy tubing used to make the bicycle frames	X		X				X	
Hourly wages paid to employees who cut and weld the alloy tubing	X			X			X	
Factory rent		X			X			X
Bicycle wheels and tires	X		X				X	
Miscellaneous bicycle components		X			X		X	
Insurance on the factory		X			X			X
Insurance on the president's company car		X				X		X

whi0085x_ch01_002-045.indd 23 07/21/21 09:00 PM

Final PDF to printer

CHAPTER SUMMARY

LO 1–1 **Describe the key differences between financial accounting and managerial accounting. p. 6**

- Financial accounting information is used by external stakeholders, such as investors, creditors, and bankers.
- Managerial accounting information is used by managers inside the organization.
- Financial accounting information tends to be reliable, objective, and historical in nature.
- Managerial accounting information tends to be relevant, timely, and future oriented.
- Financial accounting is reported through the income statement, balance sheet, statement of stockholders' equity, and cash flow statement.
- Managerial accounting relies on a variety of reports targeted at specific decisions, including budgets, cost reports, and performance evaluations.
- Financial accounting reports are prepared on a monthly, quarterly, or annual basis.
- Managerial accounting reports are prepared as needed.
- Financial accounting reports are prepared at the company level.
- Managerial accounting reports are prepared at the divisional or departmental level appropriate to the decision being made.

LO 1–2 **Describe how managerial accounting is used in different types of organizations to support the key functions of management. p. 8**

- Managerial accounting is used in all types of organizations, including manufacturing, merchandising, and service firms.
- Although managerial accounting often focuses on manufacturing firms, it is becoming increasingly important for service companies and merchandisers, which are gaining importance in today's economy. It is also useful for nonprofit organizations such as universities, charities, and hospitals.
- Regardless of the type of organization, all managers perform the same basic functions:
  - Planning, or setting long-term objectives along with the short-term tactics needed to achieve them.
  - Implementing, or putting the plan into action.
  - Controlling, or monitoring actual results against the plan and making any necessary adjustments.

LO 1–3 **Describe the importance of sustainability and decision analytics in managerial accounting. p. 11**

- Sustainability is an emerging field that allows organizations to achieve economic results while fulfilling their obligations to society and protecting the environment for future generations. The triple bottom line measures a company's performance toward its sustainability goals by including measures of economic success (profit), social impact (people), and environmental impact (planet).
- Decision analytics involves the use of analytical tools and techniques to provide valuable and actionable insights from data so that managers can make more intelligent business decisions. It is referred to as "big data" when the data set is so large or complex that it cannot be analyzed using traditional spreadsheets and databases. Managers can use decision analytics for descriptive, predictive, or prescriptive purposes.

LO 1–4 **Define and give examples of different types of costs. p. 14**

- Costs can be classified in a variety of ways, depending on how the information will be used:
  - Direct costs can be directly and conveniently traced to a specific cost object.
  - Indirect costs either cannot be traced to a specific cost object or are not worth the effort of tracing.
  - Variable costs change, in total, in direct proportion to changes in activity.

Final PDF to printer

- Fixed costs remain the same, in total, regardless of activity.
- Manufacturing costs are associated with making a physical product. They can be classified as direct materials, direct labor, or manufacturing overhead.
- Nonmanufacturing costs are associated with selling a product or service or running the overall business.
- GAAP requires manufacturing costs to be treated as product costs and nonmanufacturing costs to be treated as period costs.
- Product costs are assigned to a product as it is being produced; they accumulate in inventory accounts until the product is sold.
- Period costs are reported as expenses as they are incurred.
- Relevant costs are future-oriented costs that differ between decision alternatives.
- Irrelevant costs are those that remain the same regardless of the alternatives and thus will not affect the decision.

Describe the Sarbanes-Oxley Act and the importance of ethics in the accounting profession. p. 20

LO 1–S1

- Ethics refers to the standards for judging right from wrong, honest from dishonest, and fair from unfair. Managers confront ethical dilemmas that do not have clear-cut answers. They must apply their own personal judgment and values to weigh the pros and cons of alternative courses of action.
- The Sarbanes-Oxley (SOX) Act of 2002 increases managers' responsibility for creating and maintaining an ethical business and reporting environment. It attempts to reduce fraudulent reporting in three key ways:
  - **Opportunity.** SOX requires managers to issue a report that indicates whether the company's internal controls are effective in preventing fraud and inaccurate reporting. The act also places increased responsibility on the board of directors, audit committee, and external auditor.
  - **Incentives.** SOX imposes stiffer penalties, including jail time and monetary fines, for those who commit fraud.
  - **Character.** SOX emphasizes the importance of individual character in preventing fraudulent reporting and requires public companies to implement anonymous tip lines, whistleblower protection, and codes of ethics.

KEY TERMS

Budget p. 9
Controlling p. 10
Conversion Costs p. 16
Corporate Social Responsibility (CSR) p. 12
Cost Object p. 15
Differential Costs p. 19
Direct Costs p. 15
Direct Labor p. 15
Direct Materials p. 15
Ethics p. 20
Financial Accounting p. 6
Fixed Costs p. 18
General and Administrative Expenses p. 16
Implementing p. 10
Indirect Costs p. 15
Inventoriable Costs p. 16
Irrelevant Cost p. 19
Managerial Accounting p. 6
Manufacturing Costs p. 15
Manufacturing Firms p. 8
Manufacturing Overhead p. 15
Marketing or Selling Expenses p. 16
Merchandising Companies p. 8
Nonmanufacturing Costs p. 16
Opportunity Cost p. 19
Out-of-Pocket Cost p. 19
Period Costs p. 16
Planning p. 9
Prime Costs p. 16
Product Costs p. 16
Relevant Cost p. 19
Sarbanes-Oxley (SOX) Act of 2002 p. 21
Service Companies p. 8
Sunk Costs p. 19
Sustainability p. 12
Sustainability Accounting p. 12
3 Ps: People, Profit, and Planet p. 12
Triple Bottom Line p. 12
Variable Costs p. 17

whi0085x_ch01_002-045.indd 25 07/21/21 09:00 PM

Final PDF to printer

HOMEWORK HELPER

Common Terminology

Financial accounting ~ External reporting
Managerial accounting ~ Internal reporting
Manufacturing costs ~ Inventoriable costs ~ Product costs
Nonmanufacturing costs ~ Period costs ~ Period expenses

Key Formulas

Direct Materials + Direct Labor = Prime Costs
Direct Labor + Manufacturing Overhead = Conversion Costs

Helpful Reminders

- Triple Bottom Line = People, Profit, Planet
- Big Data = Volume, Variety, Velocity
- Different costs terms are used for different purposes.
- The word "factory" means it is a manufacturing cost.
- Selling and administrative costs are not part of manufacturing overhead.

PRACTICE MATERIAL

QUESTIONS

1. What is the primary difference between financial accounting and managerial accounting?
2. Explain how the primary difference between financial and managerial accounting results in other differences between the two.
3. Why are traditional, GAAP-based financial statements not necessarily useful to managers and other internal parties?
4. Explain the difference between service companies, merchandising companies, and manufacturing companies.
5. Consider the area within a 3-mile radius of your campus. What service companies, merchandising companies, and manufacturing firms are located within that area?
6. What are the three basic functions of management?
7. How are the three basic management functions interrelated?
8. Why are businesses starting to incorporate sustainability into their business model?
9. What factors does sustainability accounting include that traditional accounting systems do not?
10. What three factors make "big data" difficult to analyze using traditional tools such as spreadsheets and databases.
11. Describe the three types of analytics. Give an example of how a manager at **Bombas** might use each type of analytics.
12. Think about all of the choices you make on a day-to-day basis: everything from driving versus riding a bike to school or deciding where to have lunch. Pick three decisions you have made today. Identify an out-of-pocket and opportunity cost for each decision.
13. Why is it important for managers to be able to determine the cost of a particular item? Name one decision that a company might make using cost information.
14. Explain the difference between a direct cost and an indirect cost. Take a look at your wallet. Name two direct costs of making it and two indirect costs of making it.
15. Explain the difference between fixed and variable costs. Give an example of a cost that varies with the number of miles you drive your car each week and an example of a cost that is fixed regardless of how many miles you drive your car each week.
16. Explain the difference between relevant and irrelevant costs. What are the two criteria used to determine whether a cost is relevant?
17. Suppose you and your friends are planning a trip for spring break. You have narrowed the destination choices to Panama City, Florida, and Galveston Bay, Texas. List two costs that are relevant to this decision and two costs that are irrelevant to this decision.
18. What are prime costs? Why have they decreased in importance over time?
19. What types of costs are included in manufacturing overhead? Other than direct materials and direct labor, what costs would *not* be included in manufacturing overhead?
20. Why can't prime cost and conversion cost be added together to arrive at total manufacturing cost?
21. What is the difference between product and period costs in terms of how and when they are treated in the financial statements (balance sheet and income statement)?

Final PDF to printer

22. Explain why product costs are also called *inventoriable costs* and how those costs move through a company's financial statements.

23. What triggers the movement of product costs from an asset on the balance sheet to an expense on the income statement?

24. If you wanted to know the total amount of period costs for a company, which financial statement(s) would you consult?

25. Suppose a company accountant incorrectly classified advertising costs as a product cost. What impact would this have on the company's financial statements?

26. What are ethics, and why is ethical behavior important to managers?

27. What events or factors led to the creation and enactment of the Sarbanes-Oxley Act of 2002?

28. How did the Sarbanes-Oxley Act affect managers' responsibility for creating and maintaining an ethical business and reporting environment?

29. How did the Sarbanes-Oxley Act attempt to reduce fraudulent reporting by addressing opportunity, incentives, and character?

30. According to a recent Statement on Management Accounting (SMA), what are some of the potential benefits of a strong ethical business climate?

MULTIPLE CHOICE

1. The **primary** difference between financial accounting and managerial accounting is that

   a. Financial accounting is used by internal parties while managerial accounting is used by external parties.
   b. Financial accounting is future oriented while managerial accounting is historical in nature.
   c. Financial accounting is used by external parties while managerial accounting is used by internal parties.
   d. Financial accounting is prepared as needed (perhaps even daily), but managerial accounting is prepared periodically (monthly, quarterly, annually).

2. Which of the following companies is most likely to be considered a manufacturing company?

   a. Burger King.
   b. Abercrombie and Fitch.
   c. Supercuts.
   d. Maytag.

3. Which of the functions of management involves monitoring actual results to see whether the objectives set in the planning stage are being met and, if necessary, taking corrective action to adjust the objectives or implementation of the plan?

   a. Implementing.
   b. Controlling.
   c. Planning.
   d. Selling.

4. Suppose you have decided that you would like to purchase a new home in five years. To do this, you will need a down payment of approximately $20,000, which means that you need to save $350 each month for the next five years. This is an example of

   a. Directing/Leading.
   b. Controlling.
   c. Planning/Organizing.
   d. Selling.

5. If the number of units produced increases, then

   a. Unit variable costs will increase.
   b. Unit fixed costs will decrease.
   c. Total variable costs will remain the same.
   d. Total fixed costs will increase.

Use the following information regarding Garcia Company for questions 6–8.

Factory rent	$5,000
Direct labor	8,000
Indirect materials	1,000
Direct materials used	3,500
Sales commissions	2,500
Factory manager's salary	4,000
Advertising	1,500

6. What is Garcia's total manufacturing cost?

   a. $25,500.
   b. $24,000.
   c. $21,500.
   d. $10,000.

7. What is Garcia's prime cost?

   a. $11,500.
   b. $12,500.
   c. $15,500.
   d. $21,000.

8. What is Garcia's manufacturing overhead?

   a. $24,000.
   b. $12,500.
   c. $14,000.
   d. $10,000.

9. Suppose you are trying to decide whether to sell your accounting book at the end of the semester or keep it as a reference book for future courses. If you decide to keep the book, the money you would have received from selling it is a(n)

   a. Sunk cost.
   b. Opportunity cost.
   c. Out-of-pocket cost.
   d. Indirect cost.

10. Which of the following would *not* be treated as a product cost under GAAP?

   a. Direct materials.
   b. Manufacturing supervisor's salary.
   c. Sales commissions.
   d. All of the above are product costs.