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Noreen
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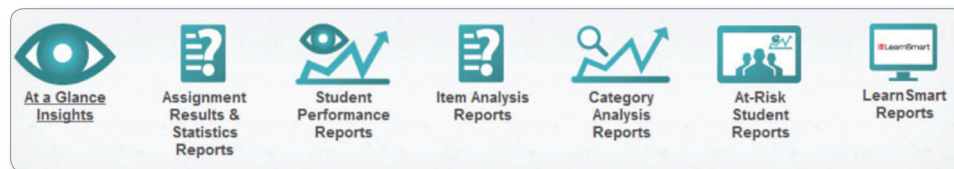
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Managerial Accounting

Fifteenth Edition

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**Mc
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Education



MANAGERIAL ACCOUNTING, FIFTEENTH EDITION

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Dedication

*To our families and to our many
colleagues who use this book.*

About the Authors



Ray H. Garrison is emeritus professor of accounting at Brigham Young University, Provo, Utah. He received his BS and MS degrees from Brigham Young University and his DBA degree from Indiana University.

As a certified public accountant, Professor Garrison has been involved in management consulting work with both national and regional accounting firms. He has published articles in *The Accounting Review*, *Management Accounting*, and other professional journals. Innovation in the classroom has earned Professor Garrison the Karl G. Maeser Distinguished Teaching Award from Brigham Young University.



Eric W. Noreen has taught at INSEAD in France and the Hong Kong Institute of Science and Technology and is emeritus professor of accounting at the University of Washington. Currently, he is the Accounting Circle Professor of Accounting, Fox School of Business, Temple University.

He received his BA degree from the University of Washington and MBA and PhD degrees from Stanford University. A Certified Management Accountant, he was awarded a Certificate of Distinguished Performance by the Institute of Certified Management Accountants.

Professor Noreen has served as associate editor of *The Accounting Review* and the *Journal of Accounting and Economics*. He has numerous articles in academic journals including: the *Journal of Accounting Research*; *The Accounting Review*; the *Journal of Accounting and Economics*; *Accounting Horizons*; *Accounting, Organizations and Society*; *Contemporary Accounting Research*; the *Journal of Management Accounting Research*; and the *Review of Accounting Studies*.

Professor Noreen has won a number of awards from students for his teaching.



Peter C. Brewer is a Lecturer in the Department of Accountancy at Wake Forest University. Prior to joining the faculty at Wake Forest, he was an accounting professor at Miami University for 19 years. He holds a BS degree in accounting from Penn State University, an MS degree in accounting from the University of Virginia, and a PhD from the University of Tennessee. He has published more than 35 articles in a variety of journals including: *Management Accounting Research*; the *Journal of Information Systems*; *Cost Management*; *Strategic Finance*; the *Journal of Accountancy*; *Issues in Accounting Education*; and the *Journal of Business Logistics*.

Accounting Research; the *Journal of Information Systems*; *Cost Management*; *Strategic Finance*; the *Journal of Accountancy*; *Issues in Accounting Education*; and the *Journal of Business Logistics*.

Professor Brewer is a member of the editorial board of the *Journal of Accounting Education* and has served on the editorial board of *Issues in Accounting Education*. His article “Putting Strategy into the Balanced Scorecard” won the 2003 International Federation of Accountants’ Articles of Merit competition, and his articles “Using Six Sigma to Improve the Finance Function” and “Lean Accounting: What’s It All About?” were awarded the Institute of Management Accountants’ Lybrand Gold and Silver Medals in 2005 and 2006. He has received Miami University’s Richard T. Farmer School of Business Teaching Excellence Award.

Prior to joining the faculty at Miami University, Professor Brewer was employed as an auditor for Touche Ross in the firm’s Philadelphia office. He also worked as an internal audit manager for the Board of Pensions of the Presbyterian Church (U.S.A.).

Let **Garrison** be Your Guide

Garrison truly is the gold standard of managerial accounting texts.

*Pamela Rouse,
Butler University*

It is the 'Bible' of Managerial Accounting.

*Mark Motluck,
Anderson University*

Garrison is clearly the best managerial accounting text available.

*'Carleton Donchess,
Bridgewater State University'*

I am a big fan of this book. I have taught this course with a few other books and this book does the best job tying all the concepts together. When asked I always refer to this book as being superior to the other books that I have used.

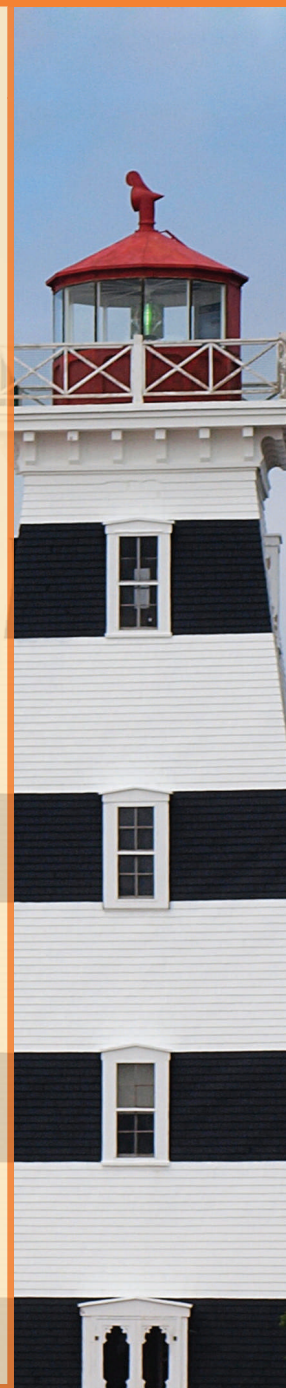
*Christopher O'Byrne,
Cuyamaca College*

For centuries, the lighthouse has provided guidance and safe passage for sailors. Similarly, Garrison/Noreen/Brewer has successfully guided millions of students through managerial accounting, helping them sail smoothly through the course.

Decades ago, lighthouses were still being operated manually. In these days of digital transformation, lighthouses are run using automatic lamp changers and other modern devices. In much the same way, Garrison/Noreen/Brewer has evolved over the years. Today, the Garrison book not only guides students—accounting majors and other business majors alike—safely through the course but is enhanced by a number of powerful new tools to augment student learning and increase student motivation. McGraw-Hill *Connect Accounting* and the LearnSmart Advantage Suite offer a number of features to facilitate student learning. **NEW** Intelligent Resource Technology interface for *Connect Accounting* includes improved answer acceptance for formatting issues, a general journal application that looks and feels more like a general ledger software package, and table entry for select problems so students can complete calculations online. Animated, narrated Interactive Presentations for each learning objective teach the core concepts of the text and animated, narrated Guided Examples connected to practice exercises provide a step-by-step walkthrough of a similar exercise, assisting students when they need it most. The student library within *Connect* gives students access to additional resources, such as forms for the Applying Excel feature, an electronic version of the textbook, and more.

The **NEW** LearnSmart Advantage Suite, powerful products fueled by the proven McGraw-Hill LearnSmart engine, include additional learning resources in LearnSmart Achieve and the first ever adaptive eBook experience in SmartBook. These products utilize data collected from over 2 million student users and advanced scientific algorithms to ensure that every minute a student spends studying is the most efficient and productive minute possible for that individual student.

Just as the lighthouse continues to provide reliable guidance to seafarers, the Garrison/Noreen/Brewer book continues its tradition of helping students sail successfully through managerial accounting by always focusing on three important qualities: **relevance, accuracy, and clarity.**



RELEVANCE. Every effort is made to help students relate the concepts in this book to the decisions made by working managers. In the fifteenth edition, the authors have added a new section to Chapter 1 titled Managerial Accounting: Beyond the Numbers, which has expanded coverage of leadership skills with the goal of helping all business students better understand why managerial accounting is relevant to their future careers. New and revised In Business boxes throughout the book link chapter concepts to pertinent real-world examples. Service industry references appear throughout the chapter narrative and end-of-chapter material to provide students with relevant context for the material they are learning. The robust *Connect Accounting* technology package and the LearnSmart Advantage Suite include new and exciting tools to help keep students engaged in the learning process. For these reasons and many more, a student reading Garrison should never have to ask “Why am I learning this?”

ACCURACY. The Garrison book continues to set the standard for accurate and reliable material in its fifteenth edition. With each revision, the authors evaluate the book and its supplements in their entirety, working diligently to ensure that the end-of-chapter material, solutions manual, and test bank are consistent, current, and accurate.

CLARITY. Generations of students have praised Garrison for the friendliness and readability of its writing, but that’s just the beginning. In the fifteenth edition, the authors have rewritten various chapters with input and guidance from instructors around the country to ensure that teaching and learning from Garrison remains as easy as it can be.

The authors’ steady focus on these three core elements has led to tremendous results. *Managerial Accounting* has consistently led the market, being used by over two million students and earning a reputation for reliability that other texts aspire to match.

Garrison does a superior job of introducing Managerial Accounting and necessary management skills. In addition, the textbook discusses the crucial topics of why managerial accounting matters to one’s career, ethics, and social responsibility.

*Ann K. Brooks,
University of New Mexico*

The authors have done a great job explaining managerial accounting concepts and providing real-world examples that students can relate to.

*Stephen Benner,
Eastern Illinois University*

It provides simple and clear explanations of the concepts with easy to follow examples. It is ideal for undergraduate and graduate level accounting students.


*Rong Huang,
Baruch College*

The Garrison [text] is clearly the best written managerial accounting book that I have reviewed. The examples throughout the chapter would enable a student to use this book and learn managerial accounting in an on-line or hybrid class.

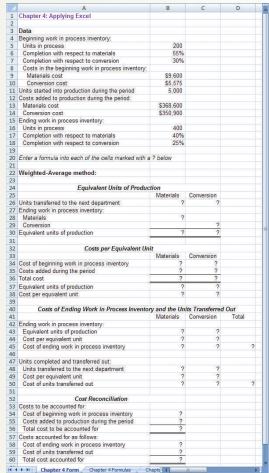
*Edna Mitchell,
Polk State College*

Garrison's

Managerial Accounting includes pedagogical elements that engage and instruct students without cluttering the pages or interrupting student learning. Garrison's key pedagogical tools enhance and support students' understanding of the concepts rather than compete with the narrative for their attention.

Applying Excel  Available with McGraw-Hill's *Connect® Accounting*.

L04-2, L04-3, L04-4, L04-5 The Excel worksheet form that appears below is to be used to recreate the extended example on pages 133–155. Download the workbook containing this form from the Online Learning Center at www.mhhe.com/garrison15e. On the website you will also receive instructions about how to use this worksheet form.



You should proceed to the requirements below only after completing your worksheet.

Required:

1. Check your worksheet by changing the beginning work in process inventory to 100 units, the units started into production during the period to 2,500 units, and the units in ending work in process inventory to 200 units, keeping all of the other data the same as in the original example. If your worksheet is operating properly, the cost per equivalent unit for materials should now be \$152.50 and the cost per equivalent unit for conversion

The Foundational 15

NEW to the fifteenth edition of Garrison!

Each chapter now contains one Foundational 15 exercise that includes 15 “building-block” questions related to one concise set of data. These exercises can be used for in-class discussion or as homework assignments. They are found before the Exercises and are available in *Connect Accounting*.

Applying Excel

This end-of-chapter feature **links the power of Excel with managerial accounting concepts** by illustrating how Excel functionality can be used to better understand accounting data. Applying Excel goes beyond plugging numbers into a template by providing students with an opportunity to build their own Excel worksheets and formulas. Students are then asked “what if” questions in which they analyze not only **how** related pieces of accounting data affect each other but **why**

they do. Applying Excel immediately precedes the Exercises in twelve of the fifteen chapters in the book and is also **integrated with McGraw-Hill's Connect® Accounting**, allowing students to practice their skills online with algorithmically generated datasets.

I like the Foundational 15 and its integration of all the chapter objectives into one problem that can be reviewed in class.

Melanie Anderson, Slippery Rock University

[Applying Excel is] an excellent way for students to programmatically develop spreadsheet skills without having to be taught spreadsheet techniques by the instructor. A significant associated benefit is that students gain more exposure to the dynamics of accounting information by working with what-if scenarios.

Earl Godfrey, Gardner-Webb University

Powerful Pedagogy

Opening Vignette

Each chapter opens with a **Business Focus** feature that provides a real-world example for students, allowing them to see how the chapter's information and insights apply to the world outside the classroom. **Learning Objectives** alert students to what they should expect as they progress through the chapter.

I like how you engage the reader with the “Business Focus” at the beginning of the chapter.

*Kathy Crusto-Way,
Tarrant County College*

An excellent text that is especially good for introductory managerial accounting classes because it is organized in a logical topic development flow.

*Elizabeth Widdison,
University of Washington, Seattle*



CHAPTER 4

Process Costing

Costing the “Quicker-Picker-Upper”



BUSINESS FOCUS

If you have ever spilled milk, there is a good chance that you used Bounty paper towels to clean up the mess. **Procter & Gamble (P&G)** manufactures Bounty in two main processing departments—Paper Making and Paper Converting. In the Paper Making Department, wood pulp is converted into paper and then spooled into 2,000 pound rolls. In the Paper Converting Department, two of the 2,000 pound rolls of paper are simultaneously unwound into a machine that creates a two-ply paper towel that is decorated, perforated, and embossed to create texture. The large sheets of paper towels that emerge from this process are wrapped

around a cylindrical cardboard core measuring eight feet in length. Once enough sheets wrap around the core, the eight foot roll is cut into individual rolls of Bounty that are sent down a conveyor to be wrapped, packed, and shipped.

In this type of manufacturing environment, costs cannot be readily traced to individual rolls of Bounty; however, given the homogeneous nature of the product, the total costs incurred in the Paper Making Department can be spread uniformly across its output of 2,000 pound rolls of paper. Similarly, the total costs incurred in the Paper Converting Department (including the cost of the 2,000 pound rolls that are transferred in from the Paper Making Department) can be spread uniformly across the number of cases of Bounty produced.

P&G uses a similar costing approach for many of its products such as Tide, Crest toothpaste, and Dawn dishwashing liquid. ■

Source: Conversation with Brad Bays, formerly a Procter & Gamble financial executive.

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LEARNING OBJECTIVES

After studying Chapter 4, you should be able to:

- L04-1** Record the flow of materials, labor, and overhead through a process costing system.
- L04-2** Compute the equivalent units of production using the weighted-average method.
- L04-3** Compute the cost per equivalent unit using the weighted-average method.
- L04-4** Assign costs to units using the weighted-average method.
- L04-5** Prepare a cost reconciliation report.
- L04-6** (Appendix 4A) Compute the equivalent units of production using the FIFO method.
- L04-7** (Appendix 4A) Compute the cost per equivalent unit using the FIFO method.
- L04-8** (Appendix 4A) Assign costs to units using the FIFO method.
- L04-9** (Appendix 4A) Prepare a cost reconciliation report using the FIFO method.
- L04-10** (Appendix 4B) Allocate service department costs to operating departments using the direct method.
- L04-11** (Appendix 4B) Allocate service department costs to operating departments using the step-down method.

Excellent coverage of the topics. Easy for students to read.

*Sharon Bell,
The University of North Carolina at Pembroke*

THE DIFFERENCE BETWEEN LABOR RATES AND LABOR COST

The emergence of China as a global competitor has increased the need for managers to understand the difference between labor rates and labor cost. Labor rates reflect the amount paid to employees per hour or month. Labor costs measure the employee compensation paid per unit of output. For example, **Tenneco** has plants in Shanghai, China, and Litchfield, Michigan, that both manufacture exhaust systems for automobiles. The monthly labor rate per employee at the Shanghai plant ranges from \$210–\$250, whereas the same figure for the Litchfield plant ranges from \$1,880–\$4,064. A naive interpretation of these labor rates would be to automatically assume that the Shanghai plant is the lower labor cost facility. A wiser comparison of the two plants' labor costs would account for the fact that the Litchfield plant produced 1.4 million exhaust systems in 2005 compared to 400,000 units at the Shanghai plant, while having only 20% more employees than the Shanghai plant.

IN BUSINESS



In-depth, clear coverage; interesting updated examples in the “In Business” boxes.

Natalie Allen,
Texas A&M University

Extremely well written with great examples, including the Managerial in Action segments.

Loisanne Kattelman,
Weber State University

In Business Boxes

These helpful boxed features offer a glimpse into how real companies use the managerial accounting concepts discussed within the chapter. Each chapter contains from three to fourteen of these current examples.

Cost-Volume-Profit Relationships 205

IN BUSINESS

COMPUTING MARGIN OF SAFETY FOR A SMALL BUSINESS

Sam Calagione owns **Dogfish Head Craft Brewery**, a microbrewery in Rehoboth Beach, Delaware. He charges distributors as much as \$100 per case for his premium beers such as World Wide Stout. The high-priced microbrews bring in \$800,000 in operating income on revenue of \$7 million. Calagione reports that his raw ingredients and labor costs for one case of World Wide Stout are \$30 and \$16, respectively. Bottling and packaging costs are \$6 per case. Gas and electric costs are about \$10 per case.

If we assume that World Wide Stout is representative of all Dogfish microbrews, then we can compute the company's margin of safety in five steps. First, variable cost as a percentage of sales is $\$29 (\$30 + \$16 + \$6 \div \$100) \div \$100 = 0.55$. Second, the contribution margin ratio is $38\% (1 - 0.55)$. Third, Dogfish's total fixed cost is $\$1,860,000 (\$7,000,000 \times 0.38) - \$800,000$. Fourth, the break-even point in dollar sales is $\$4,894,737 (\$1,860,000 \div 0.38)$. Fifth, the margin of safety is $\$2,105,263 (\$7,000,000 - \$4,894,737)$.

Source: Patricia Huang, “Château Dogfish,” *Forbes*, February 28, 2005, pp. 57–59.

Prem Narayan and Bob Luchini met to discuss the results of Bob's analysis.

Prem: Bob, everything you have shown me is pretty clear. I can see what impact the sales manager's suggestions would have on our profits. Some of those suggestions are quite good and others are not so good. I am concerned that our margin of safety is only 50 speakers. What can we do to increase this number?

Bob: Well, we have to increase total sales or decrease the break-even point or both.

Prem: And to decrease the break-even point, we have to either decrease our fixed expenses or increase our unit contribution margin?

Bob: Exactly.

Prem: And to increase our unit contribution margin, we must either increase our selling price or decrease the variable cost per unit?

Bob: Correct.

Prem: So what do you suggest?

Bob: Well, the analysis doesn't tell us which of these to do, but it does indicate we have a potential problem here.

Prem: If you don't have any immediate suggestions, I would like to call a general meeting next week to discuss ways we can work on increasing the margin of safety. I think everyone will be concerned about how vulnerable we are to even small downturns in sales.

MANAGERIAL ACCOUNTING IN ACTION THE WRAP-UP

ACOUSTIC CONCEPTS

CVP Considerations in Choosing a Cost Structure

Cost structure refers to the relative proportion of fixed and variable costs in an organization. Managers often have some latitude in trading off between these two types of costs. For example, fixed investments in automated equipment can reduce variable labor costs. In this section, we discuss the choice of a cost structure. We also introduce the concept of *operating leverage*.

Cost Structure and Profit Stability

Which cost structure is better—high variable costs and low fixed costs, or the opposite? No single answer to this question is possible; each approach has its advantages. To show what we mean, refer to the following contribution format income statements for two

Managerial Accounting in Action Vignettes

These vignettes depict cross-functional teams working together in real-life settings, working with the products and services that students recognize from their own lives. Students are shown step-by-step how accounting concepts are implemented in organizations and how

these concepts are applied to solve everyday business problems. First, “The Issue” is introduced through a dialogue; the student then walks through the implementation process; finally, “The Wrap-up” summarizes the big picture.

End-of-Chapter Material

Managerial Accounting has earned a reputation for the best end-of-chapter practice material of any text on the market. Our problem and case material continues to conform to AACSB recommendations and makes a great starting point for class discussions and group projects. When Ray Garrison first wrote *Managerial Accounting*, he started with the end-of-chapter material, then wrote the narrative in support of it. This unique approach to textbook authoring not only ensured consistency between the end-of-chapter material and text content but also underscored Garrison's fundamental belief in the importance of applying theory through practice. It is not enough for students to read, they must also understand. To this day, the guiding principle of that first edition remains, and Garrison's superior end-of-chapter material continues to provide accurate, current, and relevant practice for students.

The **NEW** Foundational 15 end-of-chapter feature provides one set of data and fifteen building-block questions relating to the quantitative topics covered in that particular chapter, allowing the student to work through and gain a practical understanding of the computational material.

The Applying Excel end-of-chapter feature integrates key course concepts and Excel—a software students will encounter in the workplace, whether they go into accounting or any other business major. With Applying Excel, students not only gain practice working with Excel software, they also learn how Excel can be used to present accounting data and how that data is interrelated. For more information on this feature, please see page x.

Applying Excel Available with McGraw-Hill's Connect® Accounting.

The Excel worksheet form that appears below is to be used to recreate the extended example on pages 153-155. Download the workbook containing this form from the Online Learning Center at www.mhhe.com/garrison15e. On the website you will also receive instructions about how to use this worksheet form.

Chapter 4 Applying Excel			
	A	B	C
Direct			
Beginning work in process inventory	200		
Costs added during the period	200		
Completion with respect to materials	10%		
Completion with respect to conversion	50%		
Costs in the beginning work in process inventory	24,000		
Materials cost	18,000		
Conversion cost	6,000		
Units started into production during the period	1,000		
Costs assigned to materials during the period	18,000		
Conversion cost	300,000		
Costs in process inventory	100		
Cost of goods sold	100		

Exercises

All applicable exercises are available with McGraw-Hill's Connect® Accounting.

EXERCISE 3-1 Compute the Predetermined Overhead Rate [LO3-1]
Harris Fabrics computes its predetermined overhead rate annually on the basis of direct labor-hours. At the beginning of the year, it estimated that 20,000 direct labor-hours would be required for the period's estimated level of production. The company also estimated \$94,000 of fixed manufacturing overhead expenses for the coming period and variable manufacturing overhead of \$2.50 per direct labor-hour. Harris's actual manufacturing overhead for the year was \$123,900 and its actual total direct labor was 21,000 hours.

Required:
Compute the company's predetermined overhead rate for the year.

EXERCISE 3-2 Apply Overhead [LO3-2]
Latham Company uses a predetermined overhead rate of \$23.40 per direct labor-hour. This predetermined rate was based on a cost formula that estimated \$257,400 of total manufacturing overhead for an estimated activity level of 11,000 direct labor-hours.
The company incurred actual total manufacturing overhead costs of \$249,000 and 10,800 total direct labor-hours during the period.

Problems All applicable problems are available with McGraw-Hill's Connect® Accounting.

PROBLEM 4-13 Comprehensive Problem; Second Production Department—Weighted-Average Method [LO4-2, LO4-3, LO4-4, LO4-5]
Old Country Links Inc. produces sausages in three production departments—Mixing, Casing and Curing, and Packaging. In the Mixing Department, meat is prepared and ground and then mixed with spices. The spiced meat mixture is then transferred to the Casing and Curing Department, where the mixture is force-fed into casings and then hung and cured in climate-controlled working chambers. In the Packaging Department, the cured sausages are sorted, packed, and labeled. The company uses the weighted-average method in its process costing system. Data for September for the Casing and Curing Department follow:

Work in process inventory, September 1	Percent Completed		
	Units	Materials	Conversion
1	40%	60%	80%

Cases All applicable cases are available with McGraw-Hill's Connect® Accounting.

CASE 4-19 Second Department—Weighted-Average Method [LO4-2, LO4-3, LO4-4]
"I think we goofed when we hired that new assistant controller," said Ruth Scripps, president of Process Industries. "Just look at this report that he prepared for last month for the Finishing Department. I can't understand it."

Finishing Department costs:	
Work in process inventory, April 1, 450 units; materials 100% complete; conversion 80% complete	\$ 8,208*
Costs transferred in during the month from the preceding department, 1,950 units	17,940
Materials cost added during the month	8,210
Conversion costs incurred during the month	13,920
Total departmental costs	\$48,278
Finishing Department costs assigned to:	
Units completed and transferred to finished goods, 1,800 units at \$25.71 per unit	\$46,278
Work in process inventory, April 30, 600 units; materials 0% complete; conversion 35% complete	0
Total departmental costs assigned	\$46,278

Strong integration between chapter content and end-of-chapter exercises/problems. Clearly written and well-organized content.

*Carleton Donchess,
Bridgewater State University*

Well written, well organized, and good problems to illustrate concepts

*Eric Typpo,
University of the Pacific*

The resources available at the online learning center and through *Connect Plus* are comprehensive, helpful, and easy to use.

Mary Scarborough,
Tyler Junior College

Clear presentation of material in the chapter with robust support materials through the text website and *Connect*.

David Krug, Johnson County
Community College

Business Ethics are of growing importance and the coverage early in the book is commendable.

Heminigild Mpundu,
University of Northern Iowa

Author-Written Supplements

Unlike other managerial accounting texts, the book's authors write all of the major supplements, ensuring a perfect fit between text and supplements. For more information on *Managerial Accounting's* supplements package, see page xxiii.

- Instructor's Manual
- Test bank
- Solutions Manual

Utilizing the Icons



To reflect our service-based economy, the text is replete with examples from service-based businesses. A helpful icon distinguishes service-related examples in the text.



The IFRS icon highlights content that may be affected by the impending change to IFRS and possible convergence between U.S. GAAP and IFRS.



Ethics assignments and examples serve as a reminder that good conduct is vital in business. Icons call out content that relates to ethical behavior for students.



The writing icon denotes problems that require students to use critical thinking as well as writing skills to explain their decisions.

New to the Fifteenth Edition

Faculty feedback helps us continue to improve *Managerial Accounting*. In response to reviewer suggestions, the authors have made the following changes to the text:

- All chapters have the NEW **Foundational 15** end-of-chapter feature.
- New **In Business boxes** have been added throughout to provide relevant and updated real-world examples for use in classroom discussion and to support student understanding of key concepts as they read through a chapter.
- The **end-of-chapter practice material** has been updated throughout.
- Several chapters (Chapters 2, 8, and 13) now better highlight the dynamic nature and power of **Excel** as a tool for managerial accounting.

Chapter 1

This chapter has a new section titled Managerial Accounting: Beyond the Numbers. It has expanded coverage of leadership skills and an expanded set of end-of-chapter exercises.

Chapter 2

The learning objective pertaining to direct and indirect costs has been moved to the front of the chapter to improve the students' ability to understand the material. Appendix 2A has been overhauled to simplify the explanation of how to use Microsoft Excel to perform least-squares regression analysis.

Chapter 3

This chapter has added Appendix 3A: Activity-Based Absorption Costing; this material was formerly Appendix 7B in the previous edition of the book. Moving this material to Chapter 3 offers instructors greater flexibility when determining how to cover activity-based costing.

Chapter 4

Updated with a new In Business box.

Chapter 5

The assumptions of CVP analysis have been moved from the end of the chapter to the beginning of the chapter. The target profit analysis and break-even analysis learning objectives have been reversed.

Chapter 6

This chapter has added a new learning objective related to calculating companywide and segment break-even points for companies with traceable fixed costs. It has also added a new appendix related to super-variable costing.

Chapter 7

This chapter has added a new exhibit and accompanying text to better explain key concepts and terminology within the chapter.

Chapter 8

This chapter has been renamed, and we have added new text and an exhibit to help students better understand how and why a master budget is created and how Microsoft Excel can be used to create a financial planning model that answers “what-if” questions. Two new end-of-chapter exercises that enable students to use Microsoft Excel to answer “what-if” questions have also been added.

Chapter 9

A discussion of the variance analysis cycle and management by exception has been inserted in the front of this chapter; this material was previously included in the standard costing chapter. In response to customer feedback, we reversed the headings in the flexible budget performance report. The actual results are shown in the far-left column and the planning budget is shown in the far-right column.

Chapter 10

In response to customer feedback, we reversed the headings in the general model for standard cost variance analysis. The actual results ($AQ \times AP$) are shown in the far-left column and the flexible budget ($SQ \times SP$) is shown in the far-right column.

Chapter 11

This chapter has a new Business Focus feature and two new In Business boxes.

Chapter 12

A section illustrating the meaning of a constraint has been added. Also, several new In Business boxes have been created.

Chapter 13

The learning objective pertaining to the payback period has been moved to the front of the chapter. A Microsoft Excel-based approach has been adopted for depicting net present value calculations. We have added a discussion of the behavioral implications of the simple rate of return method. Appendix 13C has been completely overhauled so that students can more easily grasp the impact of income taxes on net present value analysis.

Chapter 14

This chapter has been updated with new In Business boxes.

Chapter 15

This chapter’s learning objectives have all been redefined to emphasize an internal management perspective. Four new ratios have been added to the text to further enrich the students’ learning opportunities.

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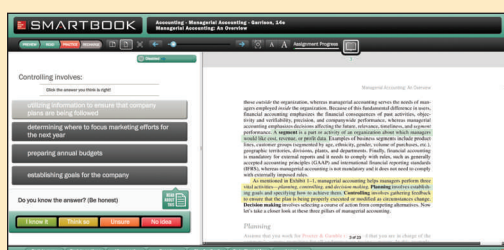


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A student begins by answering a series of questions related to core concepts and key themes from the selected chapter(s). For each question answered, a student will be asked to provide a confidence rating, acknowledging their level of knowledge. LearnSmart uses this information, in tandem with the answer itself, to improve the individual learning path by adjusting which questions to present, as well as the difficulty of these questions. Throughout the study session, students can monitor their progress by viewing a series of performance reports that reinforce the content they need to study. They can also compare their score to their classmates and other students from around the world. LearnSmart revisits the content a student is struggling with to convert knowledge to long-term memory and improve overall retention of information.

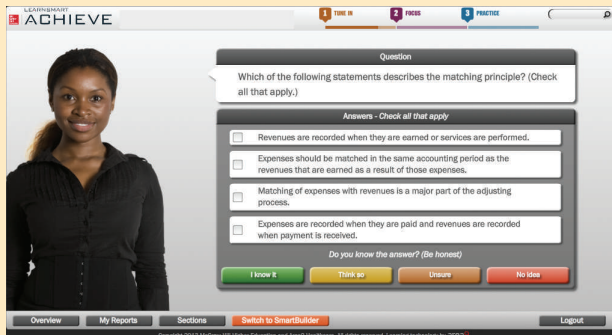


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As the first and only adaptive reading experience, SmartBook is changing the way students read and learn. SmartBook creates a personalized reading experience by highlighting the most important concepts a student needs to learn at that moment in time. The reading experience continuously adapts by highlighting content based on what each student knows and doesn't know. This ensures that he or she is focused on the content needed to close specific knowledge gaps, while simultaneously promoting long-term learning. Valuable reports provide instructors insight as to how students are progressing through textbook content, and are useful for shaping in-class time or assessment.

How Does SmartBook Work?

Each SmartBook contains four components: Preview, Read, Practice, and Recharge. Starting with an initial preview of each chapter and key learning objectives, students read the material and are guided to topics that need the most practice based on their responses to a continuously adapting diagnostic. Read and practice continue until SmartBook directs students to recharge important material they are most likely to forget to ensure concept mastery and retention.



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How Does LearnSmart Achieve Work?



LearnSmart Achieve uses a simple three-phase process to help students achieve academic success:

Tune In—Students are asked a sample series of questions related to a specific learning objective to assess their baseline understanding of the content and identify knowledge gaps.

Focus—Based on their responses to the **Tune In** questions, Achieve presents learning resources to teach the concepts that each student struggles with most.

Practice—After the **Focus** phase, Achieve asks students a more in-depth series of questions to confirm their understanding of the key objectives and adjusts accordingly, providing suggested learning resources to assist students in mastering all core concepts.

A Market-Leading Book Deserves Market-Leading Technology

McGraw-Hill **Connect**[®] Accounting  **connect**[®]


Get Connect Accounting. Get Results.

McGraw-Hill's *Connect Accounting* is a digital teaching and learning environment that gives students the means to better connect with their coursework, with their instructors, and with the important concepts that they will need to know for success now and in the future. With *Connect Accounting*, instructors can deliver assignments, quizzes, and tests easily online. Students can practice important skills at their own pace and on their own schedule.

Online Assignments

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

Intelligent Response Technology (IRT)

IRT is a redesigned student interface for our end-of-chapter assessment content. The benefits include improved answer acceptance to reduce students' frustration with formatting issues (such as rounding). Also, select questions have been redesigned to test students' knowledge more fully. They now include tables for students to work through rather than requiring that all calculations be done offline.

Student Library

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

Interactive Presentations

Interactive Presentations, assignable by individual learning objective within *Connect*, teach the core concepts of the text in an animated, narrated, and interactive multimedia format, bringing the key concepts of the course to life—particularly helpful for online courses and for those audio and visual learners who struggle reading the textbook page by page.

Guided Examples

Guided Examples, embedded within *Connect Accounting*, provide a narrated, animated, step-by-step walkthrough of select exercises similar to those assigned. These short presentations provide reinforcement when students need it most.

The three best things about Connect Accounting are LearnSmart (loved it!), Interactive Presentations, and Guided Examples (students loved them!).

Loisanne Kattelman, Weber State University

1. value: 10.00 points

Jiffy Express operates a number of espresso coffee stands in busy suburban malls. The fixed weekly expense of a coffee stand is \$1,100 and the variable cost per cup of coffee served is \$0.25.

Required:

1. Fill in the following table with your estimates of total costs and average cost per cup of coffee at the indicated levels of activity for a coffee stand. (Round the "Average cost per cup of coffee served" to 3 decimal places.)

	Cups of Coffee Served in a Week		
	1,800	1,900	2,000
Fixed cost	\$ 1,100		
Variable cost		450	
Total cost	\$ 1,550		
Average cost per cup of coffee served			

2. Does the average cost per cup of coffee served increase, decrease, or remain the same as the number of cups of coffee served in a week increases?

Increase
 Decrease
 Remain the same

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connect[®] Managerial Accounting CHAPTER 15C

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15-2 Managerial Accounting and Cost Concepts

LO1 Understand cost classifications used in making decisions: differential costs, opportunity costs, and sunk costs.

Differential Cost and Revenue



Costs are categorized into fixed and variable costs. Fixed costs are those that do not change with the level of activity, while variable costs do. Differential costs are the difference in total costs between two alternatives. Differential revenue is the difference in total revenue between two alternatives. In this example, Alternative A has a differential cost of \$45,000 and a differential revenue of \$145,000. Alternative B has a differential cost of \$100,000 and a differential revenue of \$100,000.

Guided Example

Jiffy Express operates a number of espresso coffee stands in busy suburban malls. The fixed weekly expense of a coffee stand is \$1,500 and the variable cost per cup of coffee served is \$0.19.

Required:

Estimate the total costs and average cost per cup of coffee at the indicated levels of activity for a coffee stand. Round off the cost of a cup of coffee to the nearest cent.

	Cups of Coffee Served in a Week		
	3,700	3,800	3,900
Fixed cost	\$1,500	\$1,500	\$1,500
Variable cost	703	722	741
Total cost	\$2,203	\$2,222	\$2,241
Average cost per cup of coffee served	\$ 0.60	\$ 0.58	\$ 0.57

[LO3]

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SIZE 1 OF 1 PASSED REAL TIME

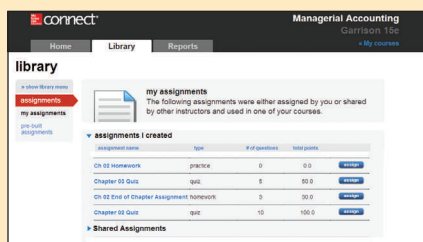
McGraw-Hill Connect Accounting Features

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

Simple Assignment Management and Smart Grading.

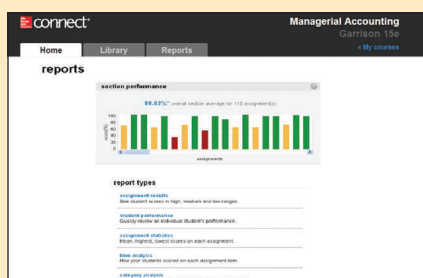
With *Connect Accounting*, creating assignments is easier than ever, so you can spend more time teaching and less time managing.

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



Instructor Library

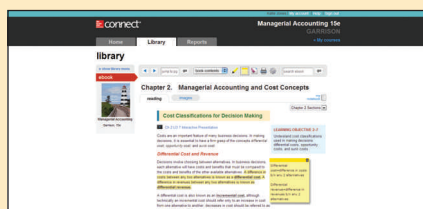
The *Connect Accounting* Instructor Library is a repository for additional resources to improve student engagement in and out of class. You can select and use any asset that enhances your lecture. The *Connect Accounting* Instructor Library includes access to the eBook version of the text, PowerPoint slides, Solutions Manual, Instructor's Manual, and Test Bank. The *Connect Accounting* Instructor Library also allows you to upload your own files.



Student Reports

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

- View scored work immediately and track individual or group performance with assignment and grade reports.
- Access an instant view of student or class performance relative to learning objectives.
- Collect data and generate reports required by many accreditation organizations, such as AACSB and AICPA.



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- A powerful search function to pinpoint and connect key concepts in a snap.

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To learn more about Tegrity, watch a 2-minute Flash demo at <http://tegritycampus.mhhe.com>.

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Instructor Supplements

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Many educational institutions today are focused on the notion of assurance of learning, an important element of some accreditation standards. *Managerial Accounting*, 15e, is designed specifically to support your assurance of learning initiatives with a simple, yet powerful, solution.

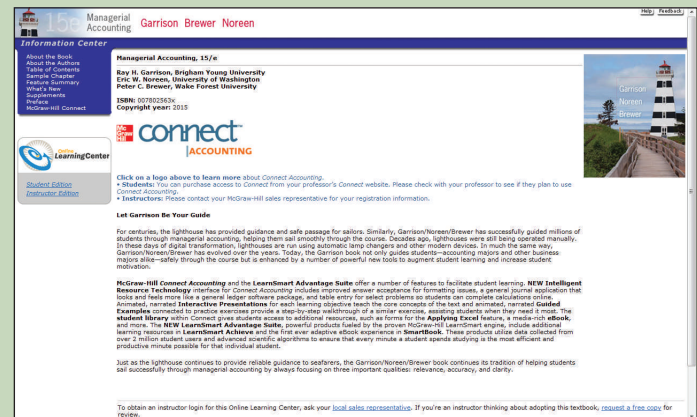
Each test bank question for *Managerial Accounting*, 15e, maps to a specific chapter learning outcome/objective listed in the text. You can use our test bank software, EZ Test, to easily query for learning outcomes/objectives that directly relate to the learning objectives for your course. You can then use the reporting features of EZ Test to aggregate student results in similar fashion, making the collection and presentation of assurance of learning data simple and easy.

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The McGraw-Hill Companies, Inc., is a proud corporate member of AACSB International. Recognizing the importance and value of AACSB accreditation, we have sought to recognize the curricula guidelines detailed in AACSB standards for business accreditation by connecting selected questions in *Managerial Accounting*, 15e, to the general knowledge and skill guidelines found in the AACSB standards. The statements contained in *Managerial Accounting*, 15e, are provided only as a guide for the users of this text. The AACSB leaves content coverage and assessment clearly within the realm and control of individual schools, the mission of the school, and the faculty. The AACSB does also charge schools with the obligation of doing assessment against their own content and learning goals. While *Managerial Accounting*, 15e, and its teaching package make no claim of any specific AACSB qualification or evaluation, we have, within *Managerial Accounting*, 15e, labeled selected questions according to the six general knowledge and skills areas. The labels or tags within *Managerial Accounting*, 15e, are as indicated. There are, of course, many more within the test bank, the text, and the teaching package which might be used as a “standard” for your course. However, the labeled questions are suggested for your consideration.

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Online Learning Center (www.mhhe.com/garrison15e)

The password protected instructor side of the book's Online Learning Center (OLC) houses all the instructor resources you need to administer your course, including:

- Solutions Manual
- Instructor's Manual
- Test bank
- Instructor PowerPoint slides

If you choose to use *Connect Accounting* with Garrison, you will have access to these same resources via the Instructor Library.

EZ Test Online

Available on the Instructor's OLC and within the *Connect* Instructor Library.

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Instructor's Manual

Available on the Instructor's OLC and within the *Connect* Instructor Library.

Extensive chapter-by-chapter lecture notes help with classroom presentations and contain useful suggestions for presenting key concepts and ideas. This manual is coordinated with the PowerPoint slides, making lesson planning even easier.

Solutions Manual


Available on the Instructor's OLC and within the *Connect* Instructor Library.

This supplement contains completely worked-out solutions to all assignment material. In addition, the manual contains suggested course outlines and a listing of exercises, problems,

and cases scaled according to difficulty and estimated time for completion. Solutions to the Applying Excel feature are housed in the same location as the Solutions Manual and include the completed Excel forms.

Student Supplements

McGraw-Hill *Connect Accounting*

 McGraw-Hill *Connect Accounting* helps prepare you for your future by enabling faster learning, more efficient studying, and higher retention of knowledge. See pages xvii and for more details.

Online Learning Center

www.mhhe.com/garrison15e

The Online Learning Center (OLC) follows *Managerial Accounting* chapter by chapter, offering all kinds of supplementary help for you as you read.

The OLC includes the following resources to help you study more efficiently:

- Applying Excel Forms
- Online Quizzes

- Check Figures
- Student PowerPoint slides

If your instructor chooses to use *Connect Accounting* in this course, you will have access to these same resources via the Student Library.

Applying Excel

Forms available on the OLC and in the *Connect* Student Library. See page xx for more details.

Check Figures

Available on the OLC and in the *Connect* Student Library. These provide key answers for selected problems and cases.

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Suggestions have been received from many of our colleagues throughout the world. Each of those who have offered comments and suggestions has our thanks.

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Ray H. Garrison • Eric Noreen • Peter Brewer

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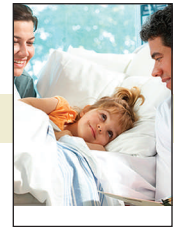
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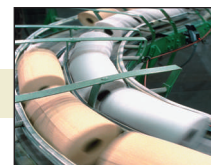
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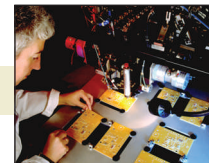
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Managerial Accounting: An Overview

Managerial Accounting: It's More Than Just Crunching Numbers

BUSINESS FOCUS



“Creating value through values” is the credo of today’s management accountant. It means that management accountants should maintain an unwavering commitment to ethical values while using their knowledge and skills to influence decisions that create value for organizational stakeholders. These skills include managing risks and implementing strategy through planning, budgeting and forecasting, and decision support. Management accountants are strategic business partners who understand the financial and operational sides of the business. They not only report and analyze financial measures, but also nonfinancial measures of process performance and corporate social performance. Think of these responsibilities as profits (financial statements), process (customer focus and satisfaction), people (employee learning and satisfaction), and planet (environmental stewardship). ■

Source: Conversation with Jeff Thomson, president and CEO of the Institute of Management Accountants.

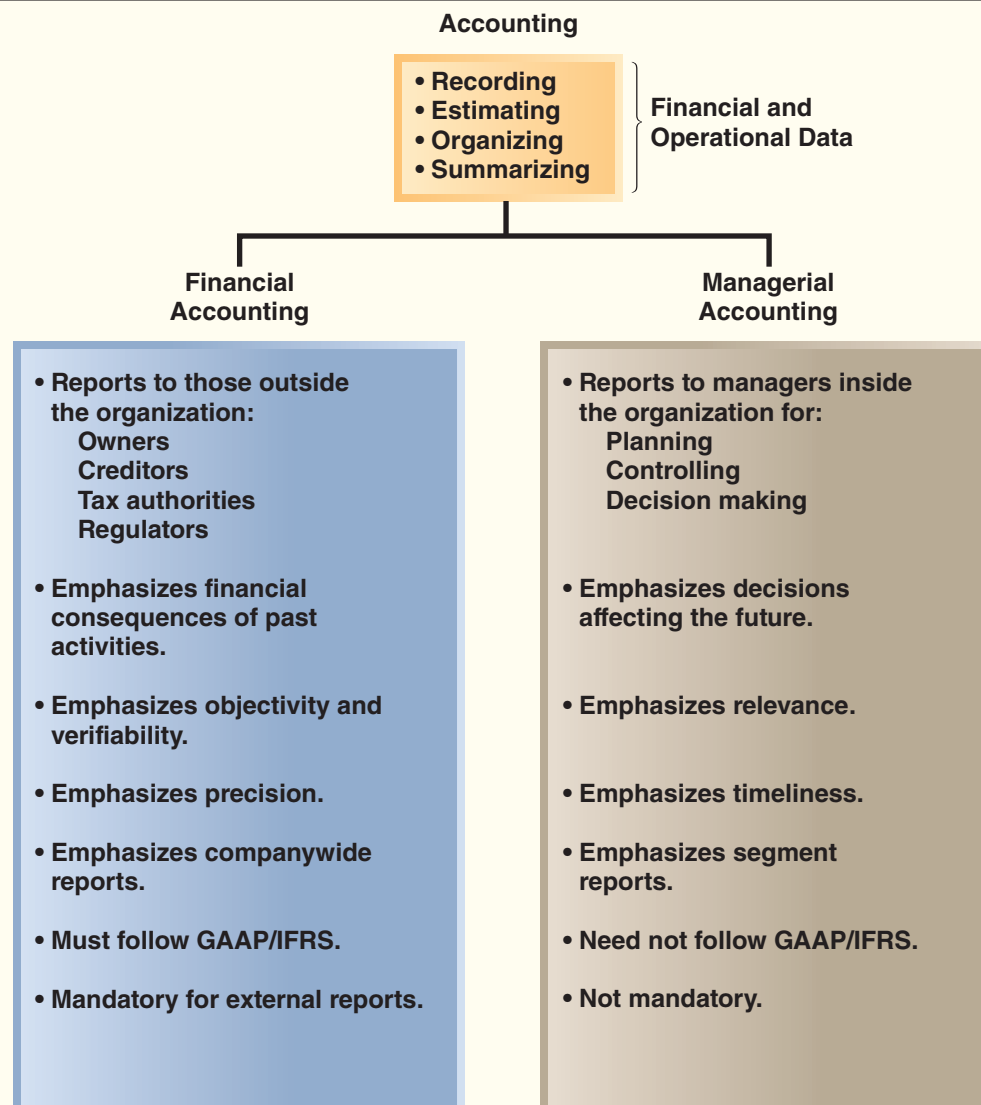
This chapter explains why managerial accounting is important to the future careers of all business students. It begins by answering two questions: (1) What is managerial accounting? and (2) Why does managerial accounting matter to your career? It concludes by discussing six topics—ethics, strategic management, enterprise risk management, corporate social responsibility, process management, and leadership—that define the business context for applying the quantitative aspects of managerial accounting.

What Is Managerial Accounting?

Many students enrolled in this course will have recently completed an introductory *financial accounting* course. **Financial accounting** is concerned with reporting financial information to external parties, such as stockholders, creditors, and regulators. **Managerial accounting** is concerned with providing information to managers for use within the organization. Exhibit 1–1 summarizes seven key differences between financial and managerial accounting. It recognizes that the fundamental difference between

EXHIBIT 1–1

Comparison of Financial and Managerial Accounting



financial and managerial accounting is that financial accounting serves the needs of those *outside* the organization, whereas managerial accounting serves the needs of managers employed *inside* the organization. Because of this fundamental difference in users, financial accounting emphasizes the financial consequences of past activities, objectivity and verifiability, precision, and companywide performance, whereas managerial accounting emphasizes decisions affecting the future, relevance, timeliness, and *segment* performance. A **segment** is a part or activity of an organization about which managers would like cost, revenue, or profit data. Examples of business segments include product lines, customer groups (segmented by age, ethnicity, gender, volume of purchases, etc.), geographic territories, divisions, plants, and departments. Finally, financial accounting is mandatory for external reports and it needs to comply with rules, such as generally accepted accounting principles (GAAP) and international financial reporting standards (IFRS), whereas managerial accounting is not mandatory and it does not need to comply with externally imposed rules.

As mentioned in Exhibit 1–1, managerial accounting helps managers perform three vital activities—*planning*, *controlling*, and *decision making*. **Planning** involves establishing goals and specifying how to achieve them. **Controlling** involves gathering feedback to ensure that the plan is being properly executed or modified as circumstances change. **Decision making** involves selecting a course of action from competing alternatives. Now let's take a closer look at these three pillars of managerial accounting.

Planning

Assume that you work for **Procter & Gamble (P&G)** and that you are in charge of the company's campus recruiting for all undergraduate business majors. In this example, your planning process would begin by establishing a goal such as: our goal is to recruit the "best and brightest" college graduates. The next stage of the planning process would require specifying how to achieve this goal by answering numerous questions such as:

- How many students do we need to hire in total and from each major?
- What schools do we plan to include in our recruiting efforts?
- Which of our employees will be involved in each school's recruiting activities?
- When will we conduct our interviews?
- How will we compare students to one another to decide who will be extended job offers?
- What salary will we offer our new hires? Will the salaries differ by major?
- How much money can we spend on our recruiting efforts?

As you can see, there are many questions that need to be answered as part of the planning process. Plans are often accompanied by a *budget*. A **budget** is a detailed plan for the future that is usually expressed in formal quantitative terms. As the head of recruiting at P&G, your budget would include two key components. First, you would have to work with other senior managers inside the company to establish a budgeted amount of total salaries that can be offered to all new hires. Second, you would have to create a budget that quantifies how much you intend to spend on your campus recruiting activities.

Controlling

Once you established and started implementing P&G's recruiting plan, you would transition to the control process. This process would involve gathering, evaluating, and responding to feedback to ensure that this year's recruiting process meets expectations. It would also include evaluating the feedback in search of ways to run a more effective recruiting campaign next year. The control process would involve answering questions such as:

- Did we succeed in hiring the planned number of students within each major and at each school?
- Did we lose too many exceptional candidates to competitors?

- Did each of our employees involved in the recruiting process perform satisfactorily?
- Is our method of comparing students to one another working?
- Did the on-campus and office interviews run smoothly?
- Did we stay within our budget in terms of total salary commitments to new hires?
- Did we stay within our budget regarding spending on recruiting activities?

As you can see, there are many questions that need to be answered as part of the control process. When answering these questions your goal would be to go beyond simple yes or no answers in search of the underlying reasons why performance exceeded or failed to meet expectations. Part of the control process includes preparing *performance reports*. A **performance report** compares budgeted data to actual data in an effort to identify and learn from excellent performance and to identify and eliminate sources of unsatisfactory performance. Performance reports can also be used as one of many inputs to help evaluate and reward employees.

Although this example focused on P&G's campus recruiting efforts, we could have described how planning enables **FedEx** to deliver packages across the globe overnight, or how it helped **Apple** develop and market the iPad. We could have discussed how the control process helps **Pfizer**, **Eli Lilly**, and **Abbott Laboratories** ensure that their pharmaceutical drugs are produced in conformance with rigorous quality standards, or how **Kroger** relies on the control process to keep its grocery shelves stocked. We also could have looked at planning and control failures such as **BP**'s massive oil spill in the Gulf of Mexico. In short, all managers (and that probably includes you someday) perform planning and controlling activities.

Decision Making

Perhaps the most basic managerial skill is the ability to make intelligent, data-driven decisions. Broadly speaking, many of those decisions revolve around the following three questions. *What* should we be selling? *Who* should we be serving? *How* should we execute? Exhibit 1–2 provides examples of decisions pertaining to each of these three categories.

The left-hand column of Exhibit 1–2 suggests that every company must make decisions related to the products and services that it sells. For example, each year **Procter & Gamble** must decide how to allocate its marketing budget across 25 brands that each generates over \$1 billion in sales as well as other brands that have promising growth potential. **Mattel** must decide what new toys to introduce to the market. **Southwest Airlines** must decide what ticket prices to establish for each of its

EXHIBIT 1–2

Examples of Decisions

What should we be selling?	Who should we be serving?	How should we execute?
What products and services should be the focus of our marketing efforts?	Who should be the focus of our marketing efforts?	How should we supply our parts and services?
What new products and services should we offer?	Who should we start serving?	How should we expand our capacity?
What prices should we charge for our products and services?	Who should pay price premiums or receive price discounts?	How should we reduce our capacity?
What products and services should we discontinue?	Who should we stop serving?	How should we improve our efficiency and effectiveness?

thousands of flights per day. **General Motors** must decide whether to discontinue certain models of automobiles.

The middle column of Exhibit 1–2 indicates that all companies must make decisions related to the customers that they serve. For example, **Sears** must decide how to allocate its marketing budget between products that tend to appeal to male versus female customers. **FedEx** must decide whether to expand its services into new markets across the globe. **Hewlett-Packard** must decide what price discounts to offer corporate clients that purchase large volumes of its products. A bank must decide whether to discontinue customers that may be unprofitable.

The right-hand column of Exhibit 1–2 shows that companies also make decisions related to how they execute. For example, **Boeing** must decide whether to rely on outside vendors such as **Goodrich**, **Saab**, and **Rolls-Royce** to manufacture many of the parts used to make its airplanes. **Cintas** must decide whether to expand its laundering and cleaning capacity in a given geographic region by adding square footage to an existing facility or by constructing an entirely new facility. In an economic downturn, a manufacturer might have to decide whether to eliminate one 8-hour shift at three plants or to close one plant. Finally, all companies have to decide among competing improvement opportunities. For example, a company may have to decide whether to implement a new software system, to upgrade a piece of equipment, or to provide extra training to its employees.

This portion of the chapter has explained that the three pillars of managerial accounting are planning, controlling, and decision making. This book helps prepare you to become an effective manager by explaining how to make intelligent data-driven decisions, how to create financial plans for the future, and how to continually make progress toward achieving goals by obtaining, evaluating, and responding to feedback.

Why Does Managerial Accounting Matter to Your Career?

Many students feel anxious about choosing a major because they are unsure if it will provide a fulfilling career. To reduce these anxieties, we recommend deemphasizing what you cannot control about the future; instead focusing on what you can control right now. More specifically, concentrate on answering the following question: What can you do now to prepare for success in an unknown future career? The best answer is to learn skills that will make it easier for you to adapt to an uncertain future. You need to become adaptable!

Whether you end up working in the United States or abroad, for a large corporation, a small entrepreneurial company, a nonprofit organization, or a governmental entity, you'll need to know how to plan for the future, how to make progress toward achieving goals, and how to make intelligent decisions. In other words, managerial accounting skills are useful in just about any career, organization, and industry. If you commit energy to this course, you'll be making a smart investment in your future—even though you cannot clearly envision it. Next, we will elaborate on this point by explaining how managerial accounting relates to the future careers of business majors and accounting majors.

Business Majors

Exhibit 1–3 provides examples of how planning, controlling, and decision making affect three majors other than accounting—marketing, supply chain management, and human resource management.

The left-hand column of Exhibit 1–3 describes some planning, controlling, and decision-making applications in the marketing profession. For example, marketing managers make planning decisions related to allocating advertising dollars across various communication mediums and to staffing new sales territories. From a control standpoint, they may closely track sales data to see if a budgeted price cut is generating an

EXHIBIT 1-3

Relating Managerial Accounting
to Three Business Majors

	Marketing	Supply Chain Management	Human Resource Management
Planning	How much should we budget for TV, print, and Internet advertising?	How many units should we plan to produce next period?	How much should we plan to spend for occupational safety training?
	How many salespeople should we plan to hire to serve a new territory?	How much should we budget for next period's utility expense?	How much should we plan to spend on employee recruitment advertising?
Controlling	Is the budgeted price cut increasing unit sales as expected?	Did we spend more or less than expected for the units we actually produced?	Is our employee retention rate exceeding our goals?
	Are we accumulating too much inventory during the holiday shopping season?	Are we achieving our goal of reducing the number of defective units produced?	Are we meeting our goal of completing timely performance appraisals?
Decision Making	Should we sell our services as one bundle or sell them separately?	Should we transfer production of a component part to an overseas supplier?	Should we hire an on-site medical staff to lower our health care costs?
	Should we sell directly to customers or use a distributor?	Should we redesign our manufacturing process to lower inventory levels?	Should we hire temporary workers or full-time employees?

anticipated increase in unit sales, or they may study inventory levels during the holiday shopping season so that they can adjust prices as needed to optimize sales. Marketing managers also make many important decisions such as whether to bundle services together and sell them for one price or to sell each service separately. They may also decide whether to sell products directly to the customer or to sell to a distributor, who then sells to the end consumer.

The middle column of Exhibit 1-3 states that supply chain managers have to plan how many units to produce to satisfy anticipated customer demand. They also need to budget for operating expenses such as utilities, supplies, and labor costs. In terms of control, they monitor actual spending relative to the budget, and closely watch operational measures such as the number of defects produced relative to the plan. Supply chain managers make numerous decisions, such as deciding whether to transfer production of a component part to an overseas supplier. They also decide whether to invest in redesigning a manufacturing process to reduce inventory levels.

The right-hand column of Exhibit 1-3 explains how human resource managers make a variety of planning decisions, such as budgeting how much to spend on occupational safety training and employee recruitment advertising. They monitor feedback related to numerous management concerns, such as employee retention rates and the timely completion of employee performance appraisals. They also help make many important decisions such as whether to hire on-site medical staff in an effort to lower health care costs, and whether to hire temporary workers or full-time employees in an uncertain economy.

For brevity, Exhibit 1–3 does not include all business majors, such as finance, management information systems, and economics. Can you explain how planning, controlling, and decision-making activities would relate to these majors?

Accounting Majors

Many accounting graduates begin their careers working for public accounting firms that provide a variety of valuable services for their clients. Some of these graduates will build successful and fulfilling careers in the public accounting industry; however, most will leave public accounting at some point to work in other organizations. In fact, the **Institute of Management Accountants** (IMA) estimates that more than 80% of professional accountants in the United States work in nonpublic accounting environments (www.imanet.org/about_ima/our_mission.aspx).

The public accounting profession has a strong financial accounting orientation. Its most important function is to protect investors and other external parties by assuring them that companies are reporting historical financial results that comply with applicable accounting rules. Managerial accountants also have strong financial accounting skills. For example, they play an important role in helping their organizations design and maintain financial reporting systems that generate reliable financial disclosures. However, the primary role of managerial accountants is to partner with their co-workers within the organization to improve performance.

Given the 80% figure mentioned above, if you are an accounting major there is a very high likelihood that your future will involve working for a nonpublic accounting employer. Your employer will expect you to have strong financial accounting skills, but more importantly, it will expect you to help improve organizational performance by applying the planning, controlling, and decision-making skills that are the foundation of managerial accounting.

IN BUSINESS

A NETWORKING OPPORTUNITY

The **Institute of Management Accountants** (IMA) is a network of more than 60,000 accounting and finance professionals from over 120 countries. Every year the IMA hosts a student leadership conference that attracts 300 students from over 50 colleges and universities. Guest speakers at past conferences have discussed topics such as leadership, advice for a successful career, how to market yourself in a difficult economy, and excelling in today's multigenerational workforce. One student who attended the conference said, "I liked that I was able to interact with professionals who are in fields that could be potential career paths for me." For more information on this worthwhile networking opportunity, contact the IMA at the phone number and website shown below.

Source: Conversation with Jodi Ryan, the Institute of Management Accountants' Director, Education/Corporate Partnerships. (201) 474-1556 or visit its website at www.imanet.org.

Professional Certification—A Smart Investment If you plan to become an accounting major, the Certified Management Accountant (CMA) designation is a globally respected credential (sponsored by the IMA) that will increase your credibility, upward mobility, and compensation. Exhibit 1–4 summarizes the topics covered in the two-part CMA exam. For brevity, we are not going to define all the terms included in this exhibit. Its purpose is simply to emphasize that the CMA exam focuses on the planning, controlling, and decision-making skills that are critically important to nonpublic accounting employers. The CMA's internal management orientation is a complement to the highly respected Certified Public Accountant (CPA) exam that focuses on rule-based compliance—assurance standards, financial accounting standards, business law, and the tax code. Information about becoming a CMA is available on the IMA's website (www.imanet.org) or by calling 1-800-638-4427.