



SIXTH EDITION

# Managerial Accounting

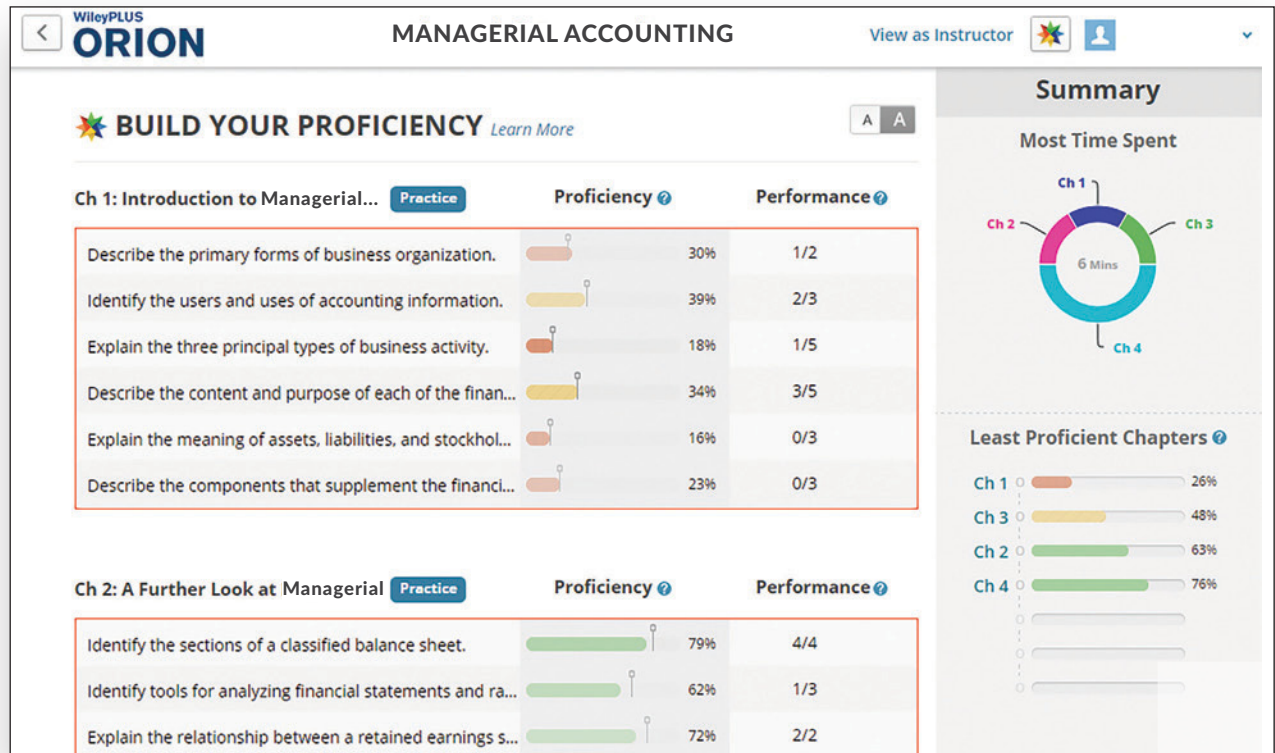
○ James Jiambalvo

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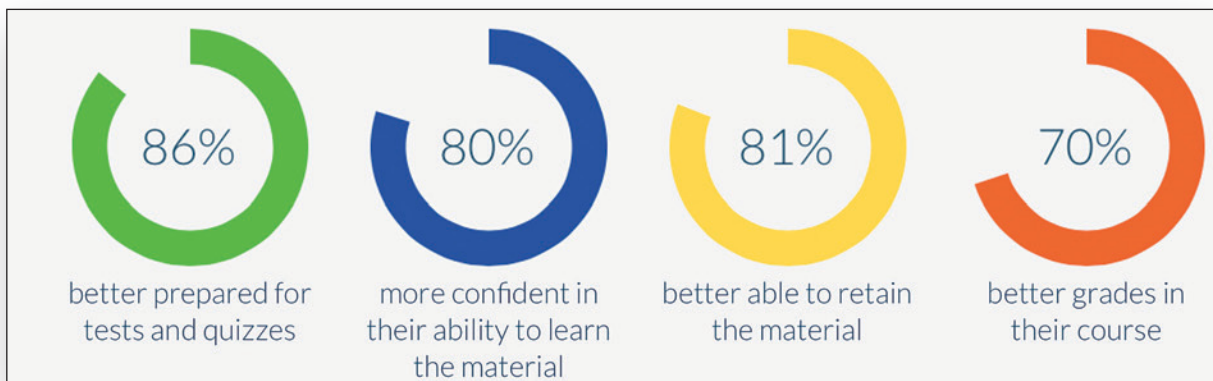
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# Managerial Accounting

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# A Note to Students... ○

Dear Students of Managerial Accounting,

Managerial Accounting is concerned with using information to effectively plan and control operations and make good business decisions. The overall objective of this book is to provide you with the concepts and tools needed in planning, control, and decision making. I've taught Managerial Accounting for many years, and my former students, many of whom are in senior executive positions, tell me that they've used these concepts and tools throughout their business careers. So, trust me. Work hard in this course, and you will reap major benefits!

In approaching the course, realize that you need to take personal responsibility for your success. Of course your instructor will help you understand the material, but you're the one who must make time to read the material before class and complete all assigned problems and cases. I recommend that you take a three-step approach to the study of each chapter in *Managerial Accounting*:

- First, skim the chapter for a quick overview.
- Second, read the chapter carefully, and pay particular attention to the illustrations. When you're finished, make sure you understand each of the learning objectives.
- Third, enhance and test your knowledge using the materials within *WileyPLUS*.

If at all possible, you should also form a study group with one or two of your classmates. You'll learn a lot from each other, and going over the homework together may actually be fun!

With my best wishes for success,



Jim Jiambalvo  
Dean and Kirby L. Cramer  
Chair in Business Administration  
Michael G. Foster School of Business  
University of Washington





Sixth Edition

# Managerial Accounting

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**James Jiambalvo**

*University of Washington*

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**WILEY**

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## To my wife, Cheryl

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# About the Author ○



**JAMES JAMBALVO**, Dean of the Michael G. Foster School of Business at the University of Washington and Kirby L. Cramer Chair in Business Administration, joined the accounting faculty at Foster after receiving a Ph.D. in accounting from The Ohio State University. A CPA, he has audit experience with the firm of Haskins and Sells (now Deloitte & Touche), and has served on the national academic advisory board of Deloitte & Touche LLP. Dean Jambalvo has served as chairman of the University of Washington Accounting Department and previously held the PricewaterhouseCoopers and Alumni Endowed Professorship.

Dean Jambalvo's research has been published in top accounting journals, including *The Accounting Review*, *Contemporary Accounting Research*, the *Journal of Accounting and Economics*, and the *Journal of Accounting Research*. He is a former associate editor of *The Accounting Review* and has served on the editorial boards of *The Accounting Review*, *Contemporary Accounting Research*, and the *Journal of Management Accounting Research*.

Dean Jambalvo has received the Notable Contribution to the Auditing Literature Award, the Burlington Northern Foundation Faculty Achievement Award, the Andrew V. Smith Faculty Development Award, and the Lex N. Gamble Award for Excellence in the Field of E-Commerce. He has also been recognized for his teaching of managerial accounting with the MBA Professor of the Year and Professor of the Quarter awards. He has taught numerous executive education courses, including courses for Alcoa, Boeing, Microsoft, Tyson, and other major firms. He currently serves on the board of Saltchuk Resources.



# WHAT'S NEW?



## **WileyPLUS with ORION**

*WileyPLUS* with ORION is an adaptive study and practice tool that helps students build proficiency in course topics. Over 3,500 new questions are available for practice and review.

## **Updated Design and Content**

A redesigned interior and new learning objective structure help students practice their understanding of concepts before they progress to different topics in other learning objectives. This provides a more organized learning experience.

## **WileyPLUS Solution Walkthrough Videos**

Newly created solution walkthrough videos are available within the eText and as homework assistance. Approximately 50 videos are newly available to the Sixth Edition. The videos serve as guides through homework problems and solutions and review chapter-level concepts.

## **Additional WileyPLUS Practice**

Students have more opportunities within *WileyPLUS* to practice questions that are similar to the end-of-chapter content before completing homework.

## **Revised Excel Templates**

New Excel templates offer “What if?” scenarios to help students apply their understanding of Excel and chapter concepts from different perspectives.

## **Links to Practice**

New Links to Practice throughout the textbook have an even stronger focus on engaging, real-world issues.

# ○ Preface

This book is intended to drive home the fundamental ideas of managerial accounting and motivate students to actually *want* to study the subject. As you will see, the text has a number of unique features that help accomplish these goals. Based on my teaching experience and from what we have heard from professors using the previous editions, we believe students and professors want a textbook that:

- Recognizes that most students will become managers, not accountants
- Focuses attention on decision making
- Stresses the fact that “You Get What You Measure”
- Motivates students to learn managerial accounting by connecting concepts and techniques to the real world
- Recognizes the growing importance of service businesses
- Is clear, concise (can be covered in one semester), and current
- Provides students with ample opportunities to test their knowledge.

Here’s how the sixth edition of *Managerial Accounting* reflects these desires.

## **Recognizes that most students will become managers, not accountants.**

Most students of introductory managerial accounting will pursue careers as managers, not accountants. Future managers most likely will not need to know the FIFO approach to process costing or how to calculate four overhead variances—so these and other less essential topics are not covered.

**Focuses more attention on decision making.** Instructors want their students to be able to solve the types of problems that real managers face. This requires that more emphasis be placed on decision making skills. Accordingly, three of the chapters (Chapters 7, 8, and 10) focus specifically on decision making. Additionally, decision making, and the use of incremental analysis, are discussed in the first chapter and integrated throughout the book. By the time students get to Chapter 7 (The Use of Cost Information in Management Decision Making), they will already have a good understanding of costs that are relevant in making a decision. After reading Chapter 7, working homework problems and discussing the material in class, students will have a greater understanding of decision making!

**Stresses the fact that “You Get What You Measure”** Senior managers know that performance measures greatly affect how subordinates focus their time and attention. Thus, the subject of performance measurement is of great practical importance. In this book, every chapter makes reference to the critical idea that *You get what you measure*. Chapter 12 has an extensive discussion of performance measures.

**Motivates students to learn managerial accounting by connecting concepts and techniques to the real world.** Business people often say that they wish they had known how important managerial accounting would have been to their success on the job—they would have studied the subject harder in school! Here, every effort is made to convince students that managerial accounting is of critical importance in the real world. *Link to*

*Practice* boxes relate the text material to real companies. Additionally, each chapter has cases developed with feedback from managers who attested to their realism and relevance. An often-heard comment: “We had that exact situation at my company!”

**Recognizes the growing importance of service businesses.** In the last 20 years, employment has shifted from manufacturing to the service sector. Now, more than 75% of all jobs are in the service economy. With this in mind, numerous examples of service companies are in the chapter and end-of-chapter materials.

**Clear, concise (can be covered in one semester), and current.** According to students and faculty who used the previous editions, a major and much appreciated strength of the text is the clear and concise writing style. Discussions are to the point, ideas are illustrated, and examples are presented to make the ideas concrete. The entire text can be comfortably covered in one semester. Coverage is also up-to-date, including: Theory of Constraints, Economic Value Added, The Balanced Scorecard, Strategy Maps, Activity-Based Costing and Activity-Based Management, Why Budget-Based Compensation Can Encourage Padding and Income-Shifting, etc.

**Provides students with ample opportunities to test their knowledge.** In each chapter, students are presented with a feature called *Test Your Knowledge*. At the end of each chapter, there are two comprehensive review problems as well as several multiple choice problems with solutions. These features allow students to assess their understanding of the material as they read through the chapter as well as after they have finished reading the entire chapter. The features also set students up for success in completing end-of-chapter assignments.

## **WILEYPLUS RESOURCES**

*WileyPLUS* is an innovative, research-based online environment for effective teaching and learning. *WileyPLUS* builds students’ confidence because it takes the guesswork out of studying by providing students with a clear roadmap: what to do, how to do it, if they did it right. Students will take more initiative, so you’ll have greater impact on their achievement in the classroom and beyond.

### **Instructor Resources**

#### **Solutions Manual**

The Solutions Manual provides detailed solutions for all end-of-chapter questions, exercises, problems, and cases.

#### **Test Bank**

The Test Bank consists of over 2,000 examination questions and exercises accompanied by solutions. Question types include true-false, multiple choice, completion, exercises, and short-answer.

#### **Instructor’s Manual**

The Instructor’s Manual is a comprehensive resource guide designed to assist professors in preparing lectures and assignments. The manual includes chapter reviews, lecture outlines, assignment classification tables, teaching illustrations, and quizzing exercises.

### **PowerPoint™ Presentations**

PowerPoint™ Presentations contain key concepts and images from the textbook.

### **Student Resources**

#### **Study Guide**

The Study Guide is comprised of a chapter review with true-false question, multiple-choice exercises, and problems.

#### **Excel Templates**

The Excel Templates help students to complete select end-of-chapter exercises and problems identified by an icon in the margin of the textbook.



# Acknowledgments

I am indebted to my academic colleagues and former students for enriching my understanding of managerial accounting. The team at Wiley provided expert help, guidance, and support throughout the publication process. In particular, Michael McDonald, executive editor, made a number of valuable suggestions for improving the sixth edition. Other Wiley staff who contributed to the text and media are: Rebecca Costantini, associate development editor; Allie Morris, product design manager; Greg Chaput, senior product designer; Elena Santa Maria, production editor; Maureen Eide, senior designer; Mary Anne Price, senior photo editor.

Other individuals whose input is greatly appreciated are indicated below.

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The development of this sixth edition of *Managerial Accounting* benefited greatly from the comments and suggestions of colleagues who teach managerial accounting. I would like to acknowledge the contributions made by the following individuals:

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# Contents

## 1

### MANAGERIAL ACCOUNTING IN THE INFORMATION AGE 2

GOAL OF MANAGERIAL ACCOUNTING	4	Software Systems That Impact Value	
Planning	4	Chain Management	16
Budgets for Planning, 4		Enterprise Resource Planning Systems, 16	Supply
Control	4	Chain Management Systems, 16	Customer
Performance Reports for Control, 5		Relationship Management Systems, 17	
Decision Making	6	ETHICAL CONSIDERATIONS IN MANAGERIAL	
A Comparison of Managerial and Financial Accounting	7	DECISION MAKING	18
Internal versus External Users, 7		Ethical and Unethical Behavior	18
Need to Use GAAP, 7		Sarbanes-Oxley Act, 19	
Detail of Information, 8		A Framework for Ethical Decision Making	20
Emphasis on Nonmonetary Information, 8		IMA Statement of Ethical Professional Practice	20
Emphasis on the Future, 8		THE CONTROLLER AS THE TOP MANAGEMENT	
Similarities between Financial and Managerial		ACCOUNTANT	21
Accounting	8	SUMMARY OF LEARNING OBJECTIVES	23
COST TERMS USED IN DISCUSSING PLANNING,		APPENDIX IMA STATEMENT OF ETHICAL	
CONTROL, AND DECISION MAKING	8	PROFESSIONAL PRACTICE <sup>2</sup>	24
Variable and Fixed Costs	9	Principles	24
Variable Costs, 9		Standards	24
Fixed Costs, 9		Resolution of Ethical Conflict	24
Sunk Costs	10		
Opportunity Costs	10		
Direct and Indirect Costs	10		
Controllable and Noncontrollable Costs	11		
TWO KEY IDEAS IN MANAGERIAL			
ACCOUNTING	12		
Decision Making Relies on Incremental			
Analysis, 12			
THE INFORMATION AGE AND MANAGERIAL			
ACCOUNTING	14		
Impact of Information Technology on Management			
of the Value Chain	15		
Information Flows between Milano and Customers, 16			
Information Flows between Milano and Suppliers, 16			
Using Information Technology to Gain Internal			
Efficiencies, 16			
		<b>LINK TO PRACTICE:</b>	
		Long Supply Chains Create Opportunity Costs, 10	
		Problems Related to the Wrong Performance Measures, 14	
		Casinos Manage with Data from CRM Systems, 17	
		Feds Investigating Walmart Over Bribery in Mexico, 19	
		Are the Procurement Practices of the Hershey Company Ethical?, 21	
		<b>Review Problems</b>	<b>25</b>
		<b>Key Terms</b>	<b>26</b>
		<b>Self-Assessment</b>	<b>26</b>
		<b>Questions</b>	<b>27</b>
		<b>Exercises</b>	<b>28</b>
		<b>Problems</b>	<b>31</b>
		<b>Cases</b>	<b>34</b>

# 2

## JOB-ORDER COSTING FOR MANUFACTURING AND SERVICE COMPANIES 36

<p>COST CLASSIFICATIONS FOR MANUFACTURING FIRMS 38</p> <p>Manufacturing Costs 38</p> <p style="padding-left: 20px;">Direct Material, 38 Direct Labor, 39</p> <p style="padding-left: 20px;">Manufacturing Overhead, 39</p> <p>Nonmanufacturing Costs 39</p> <p style="padding-left: 20px;">Selling Costs, 39 General and Administrative Costs, 39</p> <p>Product and Period Costs 40</p> <p style="padding-left: 20px;">Product Costs, 40 Period Costs, 40</p> <p>PRODUCT COST INFORMATION IN FINANCIAL REPORTING AND DECISION MAKING 41</p> <p>BALANCE SHEET PRESENTATION OF PRODUCT COSTS 42</p> <p>FLOW OF PRODUCT COSTS IN ACCOUNTS 43</p> <p>INCOME STATEMENT PRESENTATION OF PRODUCT COSTS 43</p> <p style="padding-left: 20px;">Cost of Goods Manufactured, 44 Cost of Goods Sold, 44</p> <p>TYPES OF COSTING SYSTEMS 46</p> <p>OVERVIEW OF JOB COSTS AND FINANCIAL STATEMENT ACCOUNTS 46</p> <p>JOB-ORDER COSTING SYSTEM 48</p> <p>Direct Material Cost 49</p> <p>Direct Labor Cost 50</p> <p style="padding-left: 20px;">Journal Entry to Record Direct Labor, 51</p> <p>Manufacturing Overhead 52</p> <p style="padding-left: 20px;">Journal Entries to Record Manufacturing Overhead, 52</p> <p>Assigning Costs to Jobs: A Summary 53</p> <p>EASTLAKE REVISITED: USING JOB COST INFORMATION 53</p>	<p>38</p> <p>38</p> <p></p> <p>39</p> <p>40</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>43</p> <p>44</p> <p>46</p> <p>46</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>53</p>	<p>RELATION BETWEEN THE COSTS OF JOBS AND THE FLOW OF COSTS IN WORK IN PROCESS, FINISHED GOODS, AND COST OF GOODS SOLD 55</p> <p>ALLOCATING OVERHEAD TO JOBS: A CLOSER LOOK 56</p> <p style="padding-left: 20px;">Overhead Allocation Rates 56</p> <p style="padding-left: 20px;">The Overhead Allocation Base 56</p> <p style="padding-left: 20px;">Activity-Based Costing (ABC) and Multiple Overhead Rates 57</p> <p>PREDETERMINED OVERHEAD RATES 58</p> <p style="padding-left: 20px;">Eliminating Overapplied or Underapplied Overhead 59</p> <p>JOB-ORDER COSTING FOR SERVICE COMPANIES 60</p> <p style="padding-left: 20px;">Comprehensive Example 61</p> <p>MODERN MANUFACTURING PRACTICES AND PRODUCT COSTING SYSTEMS 63</p> <p style="padding-left: 20px;">Just-in-Time (JIT) Production 63</p> <p style="padding-left: 40px;">Lean Manufacturing, 64</p> <p style="padding-left: 20px;">Computer-Controlled Manufacturing 64</p> <p style="padding-left: 20px;">Total Quality Management 65</p> <p>SUMMARY OF LEARNING OBJECTIVES 67</p>	<p>55</p> <p>56</p> <p>56</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>63</p> <p>63</p> <p>64</p> <p>65</p> <p>67</p>
---	---	---	---

**LINK TO PRACTICE:**

Product and Period Costs at SpaceX, 41 Examples of Companies Using Job-Order and Process Costing Systems, 46 Lean Principles Are Not Just for Manufacturing Firms, 64 Just-in-Time or Just-in-Case, 65 Can There Be Too Much Emphasis on Quality?, 66

<b>Review Problems</b>		<b>68</b>
<b>Key Terms</b>		<b>71</b>
<b>Self-Assessment</b>		<b>71</b>
<b>Questions</b>		<b>72</b>
<b>Exercises</b>		<b>72</b>
<b>Problems</b>		<b>76</b>
<b>Cases</b>		<b>83</b>

# 3

## PROCESS COSTING 86

<p>DIFFERENCE BETWEEN JOB-ORDER AND PROCESS COSTING SYSTEMS 88</p> <p>PRODUCT AND COST FLOWS 89</p> <p>Product Flows through Departments 89</p>	<p>88</p> <p>89</p> <p>89</p>	<p>Cost Flows through Accounts 90</p> <p style="padding-left: 20px;">Direct Material, 91 Direct Labor, 91 Manufacturing Overhead, 91 Transferred-in Cost, 91</p> <p>CALCULATING UNIT COST 92</p>	<p>90</p> <p>91</p> <p>92</p>
---	-------------------------------	--	-------------------------------

Equivalent Units	92	PROCESS COSTING AND INCREMENTAL ANALYSIS	100
Cost per Equivalent Unit	93	“YOU GET WHAT YOU MEASURE!” AND MANUFACTURING PROCESSES	102
CALCULATING AND APPLYING COST PER EQUIVALENT UNIT: MIXING DEPARTMENT EXAMPLE	93	SUMMARY OF LEARNING OBJECTIVES	102
Cost Transferred Out	95		
Ending Work in Process	95	<b>LINK TO PRACTICE:</b>	
PRODUCTION COST REPORT	95	What Type of Costing System Is Used by ExxonMobil Corporation for the Product Mobil 1?, 88 Virtual Plant Tour for Company Using Process Costing, 90	
Reconciliation of Units	96		
Reconciliation of Costs	97	<b>Review Problems</b>	<b>103</b>
BASIC STEPS IN PROCESS COSTING: A SUMMARY	97	<b>Key Terms</b>	<b>105</b>
KENT CHEMICAL REVISITED: ANSWERING STACY’S QUESTION	98	<b>Self-Assessment</b>	<b>106</b>
DEALING WITH TRANSFERRED-IN COST: PACKAGING DEPARTMENT EXAMPLE	98	<b>Questions</b>	<b>107</b>
		<b>Exercises</b>	<b>107</b>
		<b>Problems</b>	<b>111</b>
		<b>Cases</b>	<b>119</b>

# 4

## COST-VOLUME-PROFIT ANALYSIS 122

COMMON COST BEHAVIOR PATTERNS	124	MULTIPRODUCT ANALYSIS	141
Variable Costs	124	Contribution Margin Approach	141
Fixed Costs	125	Contribution Margin Ratio Approach	142
Discretionary versus Committed Fixed Costs, 125		ASSUMPTIONS IN CVP ANALYSIS	145
Mixed Costs	126	CODECONNECT EXAMPLE REVISITED: ANSWERING MARY’S QUESTIONS	146
Step Costs	126	Planning, 146 Control, 146 Decision Making, 47	
Relevant Range	127	OPERATING LEVERAGE	148
COST ESTIMATION METHODS	129	CONSTRAINTS	149
Account Analysis	129	SUMMARY OF LEARNING OBJECTIVES	150
Scattergraphs	131	APPENDIX USING REGRESSION IN EXCEL TO ESTIMATE FIXED AND VARIABLE COSTS	150
High-Low Method	131	Setting Up the Spreadsheet	150
Regression Analysis	134	Interpreting the Output of the Regression Program	151
The Relevant Range and Cost Estimation	135		
COST-VOLUME-PROFIT ANALYSIS	136	<b>LINK TO PRACTICE:</b>	
The Profit Equation	137	Using Less Water but Paying Higher Rates!, 125 Breaking Even on a Golf Course Is Harder than Making Par, 138 Deciding to Use the Contribution Margin per Unit or the Contribution Margin Ratio, 146 Which Firm Has the Higher Contribution Margin Ratio?, 147 Impact of Operating Leverage at Vulcan Materials, 148 Fixed Costs Too High—Make Them Variable!, 149	
Break-Even Point	137		
Margin of Safety, 138		<b>Review Problems</b>	<b>152</b>
Contribution Margin	139	<b>Key Terms</b>	<b>154</b>
Units Needed to Achieve Profit Target, 139		<b>Self-Assessment</b>	<b>154</b>
Contribution Margin Ratio	140	<b>Questions</b>	<b>155</b>
Dollar Sales Needed to Achieve Profit Target, 140		<b>Exercises</b>	<b>156</b>
“What If” Analysis	140	<b>Problems</b>	<b>161</b>
Change in Fixed and Variable Costs, 141 Change in Selling Price, 141		<b>Cases</b>	<b>170</b>

## 5

## VARIABLE COSTING 174

FULL (ABSORPTION) AND VARIABLE COSTING	176	VARIABLE COSTING LIMITS MANAGEMENT OF EARNINGS VIA PRODUCTION VOLUME	186
Variable Costing Income Statement	177	SUMMARY OF LEARNING OBJECTIVES	186
EFFECTS OF PRODUCTION ON INCOME FOR FULL VERSUS VARIABLE COSTING: THE CLAUSENTUBE EXAMPLE	178	<p><b>LINK TO PRACTICE:</b>  German Companies More Likely to Use Variable Costing, 177  Overproduction to Avoid Showing a Loss, 179  Cut in Production at John Deere Likely to Hurt Profit Margin, 184</p>	
Quantity Produced Equals Quantity Sold	179	<b>Review Problems</b>	<b>187</b>
Quantity Produced Is Greater Than Quantity Sold	181	<b>Key Terms</b>	<b>189</b>
Quantity Produced Is Less Than Quantity Sold	182	<b>Self-Assessment Questions</b>	<b>189</b>
Explaining What Happened at ClausenTube	184	<b>Exercises</b>	<b>190</b>
Impact of JIT on the Income Effects of Full versus Variable Costing	185	<b>Problems</b>	<b>193</b>
BENEFITS OF VARIABLE COSTING FOR INTERNAL REPORTING	185	<b>Cases</b>	<b>202</b>
Variable Costing Facilitates CVP Analysis	185		

## 6

## COST ALLOCATION AND ACTIVITY-BASED COSTING 204

PURPOSES OF COST ALLOCATION	206	ACTIVITY-BASED COSTING	218
To Provide Information for Decision Making	206	The Problem of Using Only Measures of Production Volume to Allocate Overhead	218
To Reduce Frivolous Use of Common Resources	207	The ABC Approach	219
To Encourage Evaluation of Services	207	Hierarchy of Activities, 220	
To Provide “Full Cost” Information	208	Relating Cost Pools to Products Using Cost Drivers	221
PROCESS OF COST ALLOCATION	209	The ABC Approach at McMaster Screen Technologies: A Comprehensive Example	221
Determining the Cost Objective	209	McMaster’s Costs under the Traditional Approach, 221	
Forming Cost Pools	209	McMaster’s Costs under the ABC Approach, 222	
Selecting an Allocation Base	210	Pros and Cons of ABC	225
ALLOCATING SERVICE DEPARTMENT COSTS	212	Benefits, 225 Limitations, 226	
Direct Method of Allocating Service Department Costs	212	ACTIVITY-BASED MANAGEMENT	226
Allocating Budgeted and Actual Service Department Costs	213	REMEMBER—YOU GET WHAT YOU MEASURE!	228
PROBLEMS WITH COST ALLOCATION	213	SUMMARY OF LEARNING OBJECTIVES	228
Responsibility Accounting and Controllable Costs	213	APPENDIX ACTIVITY-BASED MANAGEMENT	229
Arbitrary Allocations	214	Step 1: Determine Major Activities	229
Unitized Fixed Costs and Lump-Sum Allocations	215	Step 2: Identify Resources Used by Each Activity	230
The Problem of Too Few Cost Pools	217	Step 3: Evaluate the Performance of the Activities	230
Using Only Volume-Related Allocation Bases	218	Step 4: Identify Ways to Improve the Efficiency and/or Effectiveness of the Activities	231
		CONCLUSION	231

**LINK TO PRACTICE:**

Cost-plus Contracts Create Incentive to Misallocate Costs, 208 Basis for Allocating Costs to Federal Grants and Contracts, 211 Disputes over Allocations not Limited to the Private Sector, 215 Avoiding a Disastrous Decision by Using ABC, 225 Banks and Other Service Companies Use ABM, 227 ABC Points to Process Improvement and Cost Control, 227

<b>Review Problems</b>	<b>231</b>
<b>Key Terms</b>	<b>234</b>
<b>Self-Assessment</b>	<b>234</b>
<b>Questions</b>	<b>235</b>
<b>Exercises</b>	<b>236</b>
<b>Problems</b>	<b>240</b>
<b>Cases</b>	<b>251</b>

**7****THE USE OF COST INFORMATION IN MANAGEMENT DECISION MAKING 254**

INCREMENTAL ANALYSIS	256	Step 1: Identify the Binding Constraint	273
When Your Boss Asks, “What Does This Product (Service) Cost?” You Should Say, “Why Do You Want to Know?”	258	Step 2: Optimize Use of the Constraint	274
ANALYSIS OF DECISIONS FACED BY MANAGERS	259	Step 3: Subordinate Everything Else to the Constraint	275
Additional Processing Decision	259	Step 4: Break the Constraint	275
Make-or-Buy Decisions: The General Refrigeration Example	261	Step 5: Identify a New Binding Constraint	275
Dropping a Product Line	265	IMPLICATIONS OF TOC FOR INSPECTIONS, BATCH SIZES, AND ACROSS-THE-BOARD CUTS	275
Beware of the Cost Allocation Death Spiral!	267		
Summary of Incremental, Avoidable, Sunk, and Opportunity Costs	267		
DECISIONS INVOLVING JOINT COSTS	269		
Allocation of Joint Costs	269		
Additional Processing Decisions and Joint Costs	271		
QUALITATIVE CONSIDERATIONS IN DECISION ANALYSIS	271		
SUMMARY OF LEARNING OBJECTIVES	273		
APPENDIX THE THEORY OF CONSTRAINTS	273		
THE FIVE-STEP PROCESS OF TOC	273		

**LINK TO PRACTICE:**

Sell Partially Completed Superyacht?, 261 Boeing’s Global Outsourcing Strategy Blamed for 3-Year Delay in 787, 262 PACCAR Decides to Make as Well as Buy!, 264 Indian Wireless Company Outsources to U.S. and European Firms!, 264, Spike TV Drops Impact Wrestling, 266 Ronald H. Coase’s Contribution to Incremental Analysis, 268 The Sunk Cost Effect, 270 Qualitative Considerations in Outsourcing to China, 272

<b>Review Problems</b>	<b>276</b>
<b>Key Terms</b>	<b>278</b>
<b>Self-Assessment</b>	<b>278</b>
<b>Questions</b>	<b>279</b>
<b>Exercises</b>	<b>279</b>
<b>Problems</b>	<b>284</b>
<b>Cases</b>	<b>292</b>

**8****PRICING DECISIONS, CUSTOMER PROFITABILITY ANALYSIS, AND ACTIVITY-BASED PRICING 294**

THE PROFIT-MAXIMIZING PRICE	296	ANALYZING CUSTOMER PROFITABILITY: REVISITING THE PRICED RIGHT OFFICE SUPPLIES CASE	302
PRICING SPECIAL ORDERS	297		
COST-PLUS PRICING	299	CUSTOMER PROFITABILITY AND PERFORMANCE MEASURES	306
TARGET COSTING	301	ACTIVITY-BASED PRICING	306

## SUMMARY OF LEARNING OBJECTIVES 307

**LINK TO PRACTICE:**

Pricing Strategy: Apple's Approach to Pricing, 297 Pricing Power More Important Than Management, 298 Pricing Treasure Hunt Items at Costco, 300 Insull's Most Radical Innovation Wasn't Technology—It Was Pricing!, 301 Target Costing Analyst Position at Whirlpool, 302 How to Fix Unprofitable Customers, 305 Sprint Drops Customers for Excessive Use of Customer Service, 305

<b>Review Problems</b>	<b>308</b>
<b>Key Terms</b>	<b>313</b>
<b>Self-Assessment</b>	<b>313</b>
<b>Questions</b>	<b>314</b>
<b>Exercises</b>	<b>314</b>
<b>Problems</b>	<b>319</b>
<b>Cases</b>	<b>324</b>

## 9

**CAPITAL BUDGETING AND OTHER LONG-RUN DECISIONS 326**

CAPITAL BUDGETING DECISIONS	328	Payback Period Method	344
EVALUATING INVESTMENT OPPORTUNITIES:		Accounting Rate of Return	345
TIME VALUE OF MONEY APPROACHES	328	The Accounting Rate of Return Is Not a Reliable Estimate of the Internal Rate of Return, 347	
Basic Time Value of Money Calculations	329	CONFLICT BETWEEN PERFORMANCE EVALUATION AND CAPITAL BUDGETING	347
The Net Present Value Method	331	WILSON AIR EXAMPLE REVISITED	349
Steps in the NPV Method, 331 An Example of the NPV Approach, 331 Comparing Alternatives with NPV, 333		SUMMARY OF LEARNING OBJECTIVES	350
The Internal Rate of Return Method	334	APPENDIX A USING EXCEL <sup>®</sup> TO CALCULATE NPV AND IRR	350
The Internal Rate of Return with Unequal Cash Flows	336	<b>LINK TO PRACTICE:</b>	
Summary of Net Present Value and Internal Rate of Return Methods	337	Royal Caribbean International Invests \$1.4 Billion in Cruise Ship, 329 NPV of Livengood Gold Mine Depends on Estimates, 333 College Education Yields 15% Return, 336 Use of NPV and IRR by CFOs, 338 Soft Benefits Related to Investing in ERP System, 339 Cost of Capital for Various Business Sectors, 340 Depreciation Tax Shield at Delta Air Lines, 342 Payback on Home Solar Power, 345	
CONSIDERING "SOFT" BENEFITS IN INVESTMENT DECISIONS	337	<b>Review Problems</b>	<b>354</b>
Calculating the Value of Soft Benefits Required to Make an Investment Acceptable	338	<b>Key Terms</b>	<b>355</b>
ESTIMATING THE REQUIRED RATE OF RETURN	339	<b>Self-Assessment</b>	<b>355</b>
ADDITIONAL CASH FLOW CONSIDERATIONS	340	<b>Questions</b>	<b>356</b>
Cash Flows, Taxes, and the Depreciation Tax Shield	340	<b>Exercises</b>	<b>357</b>
Adjusting Cash Flows for Inflation	342	<b>Problems</b>	<b>359</b>
OTHER LONG-RUN DECISIONS	343	<b>Cases</b>	<b>366</b>
SIMPLIFIED APPROACHES TO CAPITAL BUDGETING	344		

## 10

**BUDGETARY PLANNING AND CONTROL 368**

USE OF BUDGETS IN PLANNING AND CONTROL	370	DEVELOPING THE BUDGET	370
Planning	370	Budget Time Period	372
Control	370	Zero-Based Budgeting	372



THE MASTER BUDGET	373	Why Budget-Based Compensation Can Lead to Budget Padding and Income Shifting	388
Sales Budget	373	EVALUATION, MEASUREMENT, AND MANAGEMENT BEHAVIOR	389
Production Budget	375	THE PRESTON JOYSTICK CASE REVISITED	390
Direct Material Purchases Budget	376	SUMMARY OF LEARNING OBJECTIVES	390
Direct Labor Budget	376		
Manufacturing Overhead Budget	377	<b>LINK TO PRACTICE:</b>	
Selling and Administrative Expense Budget	377	Problems with Five-Year Budgets, 372 People Problems in Budgeting, 372 Budget Process in Great Britain, 374 Address Cash Flow Uncertainty with a Revolving Loan, 383 Spreadsheets for Budgeting, 383 Using Rolling Budgets to Deal with Changes in Economic Conditions, 387 Ratcheting and the Ability to Achieve Budget Targets, 389	
Budgeted Income Statement	377		
Capital Acquisitions Budget	379	<b>Review Problems</b>	<b>391</b>
Cash Budget	379	<b>Key Terms</b>	<b>395</b>
Budgeted Balance Sheet	382	<b>Self-Assessment</b>	<b>395</b>
USE OF COMPUTERS IN THE BUDGET PLANNING PROCESS	383	<b>Questions</b>	<b>396</b>
BUDGETARY CONTROL	384	<b>Exercises</b>	<b>397</b>
Budgets as a Standard for Evaluation	384	<b>Problems</b>	<b>400</b>
Static and Flexible Budgets	384	<b>Cases</b>	<b>412</b>
INVESTIGATING BUDGET VARIANCES	386		
CONFLICT IN PLANNING AND CONTROL USES OF BUDGETS	387		

# 11

## STANDARD COSTS AND VARIANCE ANALYSIS 414

STANDARD COSTS	416	TEST YOUR KNOWLEDGE: COMPREHENSIVE EXAMPLE	426
Standard Costs and Budgets	416	Material Variances	428
Development of Standard Costs	416	Labor Variances	428
Ideal versus Attainable Standards	417	Overhead Variances	429
A GENERAL APPROACH TO VARIANCE ANALYSIS	418	INVESTIGATION OF STANDARD COST VARIANCES	429
MATERIAL VARIANCES	419	Management by Exception	430
Material Price Variance	419	<i>Favorable</i> Variances May Be Unfavorable	430
Material Quantity Variance	420	Can Process Improvements Lead to <i>Unfavorable</i> Variances?	431
DIRECT LABOR VARIANCES	421	Beware: Evaluation in Terms of Variances Can Lead to Excess Production	431
Labor Rate Variance	421	RESPONSIBILITY ACCOUNTING AND VARIANCES	432
Labor Efficiency Variance	421	SUMMARY OF LEARNING OBJECTIVES	432
OVERHEAD VARIANCES	422	APPENDIX RECORDING STANDARD COSTS IN ACCOUNTS	433
Controllable Overhead Variance	422	Recording Material Costs	433
Detailed Analysis of the Controllable Overhead Variance	422	Recording Labor Cost	433
Overhead Volume Variance	424	Recording Manufacturing Overhead	434
Computing the Overhead Volume Variance, 424		Recording Finished Goods	434
Interpreting the Overhead Volume Variance, 425		Recording Cost of Goods Sold	435
Calculating the Financial Impact of Operating at More or Less than Planned Capacity	426	Closing Variance Accounts	435

**LINK TO PRACTICE:**

Starbucks Uses Standard Costs, 416 How Often Do Companies Update Standards?, 417 Standard Costing—In the Beginning, 418 You Get What You Measure!, 420

<b>Review Problems</b>	<b>435</b>
<b>Key Terms</b>	<b>438</b>

<b>Self-Assessment Questions</b>	<b>438</b>
<b>Exercises</b>	<b>439</b>
<b>Problems</b>	<b>443</b>
<b>Cases</b>	<b>449</b>

## 12

**DECENTRALIZATION AND PERFORMANCE EVALUATION 450**

WHY FIRMS DECENTRALIZE	452	Scenario 3. Customer Dimension, 470 Scenario 4. Financial Dimension, 470	
Advantages of Decentralization	452	How Balance Is Achieved in a Balanced Scorecard	470
Disadvantages of Decentralization	453	DEVELOPING A STRATEGY MAP FOR A BALANCED SCORECARD	471
WHY COMPANIES EVALUATE THE PERFORMANCE OF SUBUNITS AND SUBUNIT MANAGERS	454	KEYS TO A SUCCESSFUL BALANCED SCORECARD: TARGETS, INITIATIVES, RESPONSIBILITY, FUNDING, TOP MANAGEMENT SUPPORT	472
Evaluating Subunits	454	Targets, 472 Initiatives, 472 Responsibility, 472 Funding, 472 Top Management Support, 472	
Evaluating Subunit Managers	454	SUMMARY OF LEARNING OBJECTIVES	473
Responsibility Accounting and Performance Evaluation	454	APPENDIX TRANSFER PRICING	474
COST CENTERS, PROFIT CENTERS, AND INVESTMENT CENTERS	455	MARKET PRICE AS THE TRANSFER PRICE	474
Cost Centers	455	MARKET PRICE AND OPPORTUNITY COST	475
Profit Centers	456	VARIABLE COST AS THE TRANSFER PRICE	476
Investment Centers	456	FULL COST PLUS PROFIT AS THE TRANSFER PRICE	477
EVALUATING INVESTMENT CENTERS WITH ROI	457	NEGOTIATED TRANSFER PRICES	478
Measuring Income and Invested Capital When Calculating ROI	458	TRANSFER PRICING AND INCOME TAXES IN AN INTERNATIONAL CONTEXT	478
Problems with Using ROI	460	<b>LINK TO PRACTICE:</b>	
Problems of Overinvestment and Underinvestment: You Get What You Measure!	461	Subunits at Nordstrom, 457 The Focus on ROI and Shareholder Value Is Not the Same in France, Germany, and Japan as It Is in the United States and Great Britain, 458 Did Boeing's Focus on ROI Lead to Excessive Outsourcing?, 461 Companies That Have Used EVA, 464 Deere & Company Uses SVA Rather Than EVA, 464 Focus on EVA Affects Key Decisions across an Organization, 466 Use of EVA at Whole Foods, 468 Brigham and Women's Hospital Receives Award for Its Balanced Scorecard, 473 Transfer Pricing at Starbucks, 478	
Evaluation in Terms of Profit Can Lead to Overinvestment, 461 Evaluation in Terms of ROI Can Lead to Underinvestment, 462			
EVALUATION USING ECONOMIC VALUE ADDED (EVA)	462	<b>Review Problems</b>	<b>478</b>
Residual Income (RI)	463	<b>Key Terms</b>	<b>483</b>
Revisiting the Situation at Action Industries, 463		<b>Self-Assessment Questions</b>	<b>483</b>
Solving the Overinvestment and Underinvestment Problems	463	<b>Exercises</b>	<b>484</b>
Economic Value Added (EVA)	464	<b>Problems</b>	<b>487</b>
EVA Example, 465		<b>Cases</b>	<b>493</b>
USING A BALANCED SCORECARD TO EVALUATE PERFORMANCE	468		
Tying the Balanced Scorecard Measures to the Strategy for Success, 469 Scenario 1. Learning and Growth Dimension, 469 Scenario 2. Internal Process Dimension, 469			

## Chapters 13 & 14 Available in *WileyPLUS*

# 13

## STATEMENT OF CASH FLOWS 496

NEED FOR A STATEMENT OF CASH FLOWS	498	INTERPRETING INFORMATION IN THE STATEMENT OF CASH FLOWS: THE SITUATION AT RAVIRA RESTAURANT SUPPLY	509
TYPES OF BUSINESS ACTIVITIES AND THE CLASSIFICATION OF CASH FLOWS	498	You Get What You Measure and Incremental Analysis Linked to the Statement of Cash Flows	509
Operating Activities	500	SUMMARY OF LEARNING OBJECTIVES	510
Investing Activities	500		
Financing Activities	500		
THE STATEMENT OF CASH FLOWS PREPARED USING THE DIRECT METHOD	500	<b>LINK TO PRACTICE:</b> Spotting a Cash Cow, 508	
Current Asset and Current Liability Accounts, 501		<b>Review Problems</b>	<b>511</b>
Long-Term Asset Accounts, 503		<b>Key Terms</b>	<b>513</b>
Long-Term Liabilities and Stockholders' Equity, 504		<b>Self-Assessment Questions</b>	<b>514</b>
PREPARING THE STATEMENT OF CASH FLOWS USING THE INDIRECT METHOD	504	<b>Exercises</b>	<b>515</b>
Five-Step Approach to Calculating Cash Flows from Operating Activities under the Indirect Method	504	<b>Problems</b>	<b>519</b>
Statement of Cash Flows for Ravira Restaurant Supply—Indirect Method	506	<b>Cases</b>	<b>529</b>

# 14

## ANALYZING FINANCIAL STATEMENTS: A MANAGERIAL PERSPECTIVE 530

WHY MANAGERS ANALYZE FINANCIAL STATEMENTS	532	OTHER SOURCES OF INFORMATION ON FINANCIAL PERFORMANCE	538
Control of Operations	532	Management Discussion and Analysis	538
Assessment of Vendors, Customers, and Other Business Partners	532	Credit Reports	539
Assessment of Appearance to Investors and Creditors	533	News Articles	539
HORIZONTAL AND VERTICAL ANALYSES	533	RATIO ANALYSIS	540
Analysis of the Balance Sheet	533	Profitability Ratios	540
Analyzing the Income Statement	535	Financial Leverage, 541	
EARNINGS MANAGEMENT AND THE NEED TO COMPARE EARNINGS AND CASH-FLOW INFORMATION	537	Summary of the Profitability Ratios, 541	
		Turnover Ratios	541
		Summary of Turnover Ratios, 543	
		Debt-Related Ratios	543
		Summary of Debt-Related Ratios, 544	

A MANAGERIAL PERSPECTIVE ON THE ANALYSIS OF HGW'S FINANCIAL STATEMENTS	544
Control of Operations	544
Financial Ratios and Decision Making,	544
Financial Ratios in a Balanced Scorecard: You Get What You Measure!,	545
Stability of Vendors, Customers, and Other Business Partners	545
Appearance to Investors and Creditors	545
SUMMARY OF ANALYSES	546
SUMMARY OF LEARNING OBJECTIVES	547

---

**LINK TO PRACTICE:**

Watching Cash Flow versus Earnings, 537 Tribune Company Took on Too Much Debt, 544 Comparative Ratio Data, 545

<b>Review Problems</b>	<b>548</b>
<b>Key Terms</b>	<b>550</b>
<b>Self-Assessment</b>	<b>550</b>
<b>Questions</b>	<b>551</b>
<b>Exercises</b>	<b>552</b>
<b>Problems</b>	<b>557</b>
<b>Cases</b>	<b>567</b>

# List of Cases

Each chapter of *Managerial Accounting* includes one or more cases that:

- Promote critical thinking and decision making skills.
- Provide an opportunity for group work and/or written communication work.
- Integrate information from other business disciplines.

## CHAPTER 1

### 1-1: LOCAL 635

A union is disputing “cost of meal” charges to hotel employees.

### 1-2: BOSWELL PLUMBING PRODUCTS

A senior manager wants to know a product’s cost. But the “cost” information needed depends on the decision the senior manager is facing.

## CHAPTER 2

### 2-1: ETHICS CASE: BRIXTON SURGICAL DEVICES

To meet an aggressive earnings target, two senior executives are planning to increase production to “bury” fixed overhead costs in inventory.

### 2-2: YSL MARKETING RESEARCH

A marketing research firm is considering various costs when bidding on a job.

### 2-3: DUPAGE POWDER COATING

A company’s product costs are being distorted by its approach to overhead allocation.

## CHAPTER 3

### 3-1: TECH-TONIC SPORTS DRINK

A producer of a sports drink is considering alternative treatments for the cost of lost units.

### 3-2: JENSEN PVC

A company is considering lowering prices to increase sales and reduce unit costs by making better use of excess capacity.

## CHAPTER 4

### 4-1: ROTHMUELLER MUSEUM

A curator at a museum is trying to estimate the financial impact of a planned exhibit.

### 4-2: MAYFIELD SOFTWARE, CUSTOMER TRAINING

The customer training facility of a software company is showing a loss. The manager needs to determine the number of classes that must be offered to break even.

### 4-3: KROG’S METALFAB, INC.

A company is estimating the lost profit related to fire damage so it can submit an insurance claim.

## CHAPTER 5

### 5-1: MICROIMAGE TECHNOLOGY, INC.

A start-up company has a negative gross margin and it appears that “the more it sells, the more it loses.” Use of variable costing reveals that this is not the case.

### 5-2: RAINRULER STAINS

A variable-costing income statement is used to show the financial impact of sales related to a new customer category.

## CHAPTER 6

### 6-1: EASTSIDE MEDICAL TESTING

This case presents a service company example of ABC.

### 6-2: Quantum™

This case shows how ABC affects product costs and considers the use of ABC information in decision making.

## CHAPTER 7

### 7-1: PRIMUS CONSULTING GROUP

A consulting firm is considering a client offer of a fee that is less than standard rates.

### 7-2: FIVE STAR TOOLS

A tool manufacturer is faced with a production constraint, and needs to consider the financial impact of a plan to deal with the situation.

## CHAPTER 8

### 8-1: PRESTON CONCRETE

The company is considering moving away from its cost-plus pricing approach when an increase in interest rates reduces housing starts and the demand for concrete.

### 8-2: GALLOWAY UNIVERSITY MEDICAL CENTER PHARMACY

A university hospital pharmacy is considering the profit implications of alternative approaches to encouraging prescription renewals from “out-of-area” patients.

## CHAPTER 9

### 9-1: ETHICS CASE: JUNIPER PACKAGING SOLUTIONS

A plant manager is considering a plan to circumvent a freeze on capital expenditures.

### 9-2: SERGO GAMES

A game company is considering outsourcing manufacturing of CDs.

## CHAPTER 10

### 10-1: ETHICS CASE: COLUMBUS PARK—WASTE TREATMENT FACILITY

The manager of a waste treatment facility is planning to pad costs in her budget because the city controller is likely to cut whatever budget is submitted.

**10-2: ABRUZZI OLIVE OIL COMPANY**

A small producer of olive oil is preparing production budgets to consider the impact of various sales levels. (Note that this case is best “solved” using a spreadsheet.)

**CHAPTER 11**

**11-1: JACKSON SOUND**

Work in process inventory is building up at Jackson Sound even though the company has a JIT system.

**11-2: CHAMPION INDUSTRIES**

A purchasing manager is considering a material that has a price higher than standard, but also a number of desirable properties.

**CHAPTER 12**

**12-1: HOME VALUE STORES**

A company that operates membership warehouse stores is evaluating using EVA.

**12-2: WIN TECH MOTORS**

Owners of a sports and luxury auto dealership are faced with negative EVA and must cut their investment in inventory.

For Cases in Chapters 13 and 14 go to [www.wiley.com/college/jiambalvo](http://www.wiley.com/college/jiambalvo)

**CHAPTER 13**

**13-1: WELLCOMP COMPUTERS**

A computer company is considering the impact of a price reduction on cash flow.

**CHAPTER 14**

**14-1: JORDAN-WILLIAMS, INCORPORATED**

A publisher of college textbooks is evaluating the financial condition of a potential business partner.



# 1

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## MANAGERIAL ACCOUNTING IN THE INFORMATION AGE

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### What type of job will you hold in the future?

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You may be a marketing manager for a consumer electronics firm, you may be the director of human resources for a biotech firm, or you may be the president of your own company. In these and other managerial positions you will have to plan operations, evaluate subordinates, and make a variety of decisions using accounting information. In some cases, you will find information from your firm's balance sheet, income statement, statement of retained earnings, and statement of cash flows to be useful. However, much of the information in these statements is more relevant to *external* users of accounting information, such as stockholders and creditors. In addition, you will need information prepared specifically for firm managers, the *internal* users of accounting information. This type of information is referred to as managerial accounting information.

If you are like most users of this book, you have already studied financial accounting. Financial accounting stresses accounting concepts and procedures that relate to preparing reports for external users of accounting information. In comparison, **managerial accounting** stresses accounting concepts and procedures that are relevant to preparing reports for internal users of accounting information. This book is devoted to the subject of managerial accounting, and this first chapter provides an overview of the role of managerial accounting in planning, control, and decision making. The chapter also defines important cost concepts and introduces key ideas that will be emphasized throughout the text. The chapter ends with a discussion of the information age and the impact of information technology on business, a framework for ethical decision making, and the role of the controller as the top management accountant. Note that you can enhance and test your knowledge of the chapter using Wiley's online resources and the self-assessment quiz at the end of the chapter. The end-of-chapter material also includes two solved review problems.





Monkey Business Images/Shutterstock

## LEARNING OBJECTIVES

- 1** Explain the primary goal of managerial accounting and distinguish between financial and managerial accounting.
- 2** Define cost terms used in planning, control, and decision making.
- 3** Explain the two key ideas in managerial accounting.
- 4** Discuss the impact of information technology on business processes and the interactions companies have with suppliers and customers.
- 5** Describe a framework for ethical decision making and discuss the duties of the controller.

**LEARNING OBJECTIVE 1**

Explain the primary goal of managerial accounting and distinguish between financial and managerial accounting.

**GOAL OF MANAGERIAL ACCOUNTING**

Virtually all managers need to plan and control their operations and make a variety of decisions. The goal of managerial accounting is to provide the information they need for **planning**, **control**, and **decision making**. If *your* goal is to be an effective manager, a thorough understanding of managerial accounting is essential.

**Planning**

Planning is a key activity for all companies. A plan communicates a company's goals to employees aiding coordination of various functions, such as sales and production. A plan also specifies the resources needed to achieve company goals.

**Budgets for Planning.** The financial plans prepared by managerial accountants are referred to as **budgets**. A wide variety of budgets may be prepared. For example, a *profit budget* indicates planned income, a *cash-flow budget* indicates planned cash inflows and outflows, and a *production budget* indicates the planned quantity of production and the expected costs.

Consider the production cost budget for the Surge Performance Beverage Company. In the coming year, the company plans to produce 5,000,000 12-ounce bottles of beverage. This amount is based on forecasted sales. To produce this volume, the company estimates it will spend \$1,500,000 on bottles, \$400,000 on ingredients, \$150,000 on water, and pay workers at its bottling plant \$300,000. It also expects to pay \$60,000 for rent, incur \$80,000 of depreciation of equipment, and pay \$100,000 for other miscellaneous costs. The production cost budget presented in Illustration 1-1 summarizes this information. This budget informs the managers of Surge about how many bottles the company intends to produce and what the necessary resources will cost.

**Control**

Control of organizations is achieved by evaluating the performance of *managers* and the *operations* for which they are responsible. The distinction between evaluating managers and evaluating the operations they control is important. Managers are evaluated to determine how their performance should be rewarded or punished, which in turn motivates them to perform at a high level. Based on an evaluation indicating good performance, a manager might receive a substantial bonus. An evaluation indicating a manager performed poorly might lead to the manager being fired. In part because evaluations of managers are typically tied to compensation and promotion opportunities, managers work hard to ensure that they will receive favorable evaluations. (Of course, managers

**ILLUSTRATION 1-1**  
Production cost budget

<b>BUDGETED PRODUCTION COSTS</b>	
<b>For the Year Ended December 31, 2017</b>	
<b>Budgeted Production</b>	<b>5,000,000 Bottles</b>
Cost of bottles	\$1,500,000
Ingredient cost	400,000
Water	150,000
Labor cost	300,000
Rent	60,000
Depreciation	80,000
Other	100,000
Total budgeted production cost	<u><u>\$2,590,000</u></u>

may also work hard because they love their jobs, receive respect from coworkers, or value the sense of accomplishment from a job well done!)

Operations are evaluated to provide information as to whether they should be changed or not (i.e., expanded, contracted, or modified in some way). An evaluation of an operation can be negative even when the evaluation of the manager responsible for the operation is basically positive. For example, the manager of one of the two bottling plants at Surge Performance Beverage Company may do a good job of controlling costs and meeting deadlines, given that the plant is old and out-of-date. Still, senior management may decide to close the plant because, given the outdated equipment in the plant, it is not an efficient operation. In this scenario, the manager receives a positive evaluation whereas the operation receives a negative evaluation.

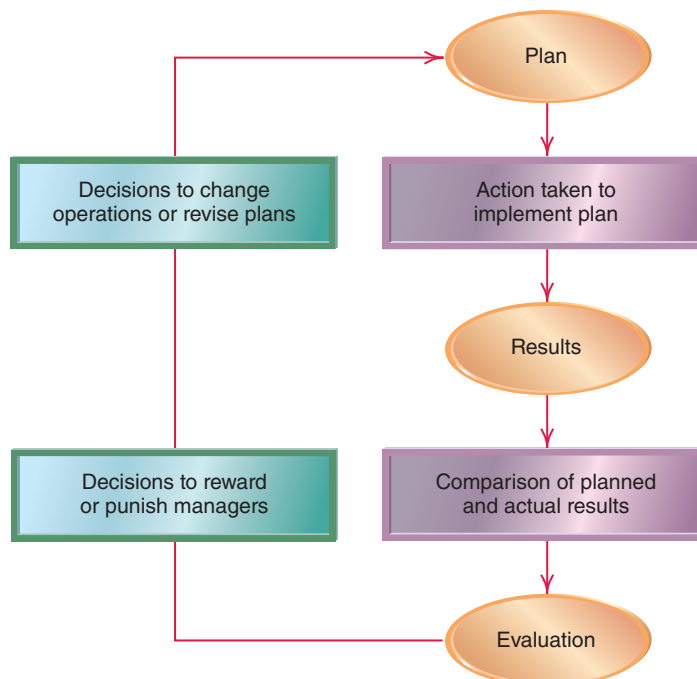
Company plans often play an important role in the control process. Managers can compare actual results with planned results and decide whether corrective action is necessary. If actual results differ from the plan, the plan may not have been followed properly; the plan may have not been well thought out; or changing circumstances may have made the plan out-of-date.

Illustration 1-2 presents the major steps in the planning and control process. Once a plan has been made, actions are taken to implement it. These actions lead to results that are compared with the original plan. Based on this evaluation, managers are rewarded (e.g., given substantial bonuses or promoted if performance is judged to be good) or punished (e.g., given only a small bonus, given no bonus, or even fired if performance is judged to be poor). Also, based on the evaluation process, operations may be changed. Changes may consist of expanding (e.g., adding a second shift), contracting (e.g., closing a production plant), or improving operations (e.g., training employees to do a better job answering customer product inquiries). Changes may also consist of revising an unrealistic plan.

**Performance Reports for Control.** The reports used to evaluate the performance of managers and the operations they control are referred to as **performance reports**. Although there is no generally accepted method of preparing a performance report, such reports frequently involve a comparison of current-period performance with performance in a prior period or with planned (budgeted) performance.

#### ILLUSTRATION 1-2

Planning and control process



Suppose, for example, that during 2017, Surge Performance Beverage Company actually produced 5,000,000 bottles and incurred these costs:

Cost of bottles	\$1,650,000
Ingredient cost	450,000
Water	152,000
Labor cost	295,000
Rent	60,000
Depreciation	80,000
Other	101,000
Total actual production cost	<u>\$2,788,000</u>

A performance report comparing these actual costs to the budgeted costs is presented in Illustration 1-3.

Typically, performance reports only suggest areas that should be investigated; they do not provide definitive information on performance. For example, the performance report presented in Illustration 1-3 indicates that something may be amiss in the control of bottle and ingredient cost. Actual costs are \$150,000 more than planned for bottles and \$50,000 more than planned for ingredients. There are many possible reasons why these costs are greater than the amounts budgeted. Perhaps the price of bottles or key ingredients increased, or perhaps bottles were damaged in the production process. Management must investigate these possibilities before taking appropriate corrective action.

Although performance reports may not provide definitive answers, they are still extremely useful. Managers can use them to flag areas that need closer attention and to avoid areas that are under control. It would not seem necessary, for example, to investigate labor, rent, depreciation, or other costs, because these costs are either equal to or relatively close to the planned level of cost. Typically, managers follow the principle of **management by exception** when using performance reports. This means that managers investigate departures from the plan that appear to be exceptional; they do not investigate minor departures from the plan.

## Decision Making

As indicated in Illustration 1-2, decision making is an integral part of the planning and control process—decisions are made to reward or punish managers, and decisions are

**ILLUSTRATION 1-3**  
Performance report

<b>SURGE PERFORMANCE BEVERAGE COMPANY</b>			
<b>Performance Report, Production Costs</b>			
<b>For the Year December 31, 2017</b>			
	<b>Actual</b>	<b>Budget</b>	<b>Difference (Actual Minus Budget)</b>
Production (number of bottles)	5,000,000	5,000,000	-0-
Cost of bottles	\$1,650,000	\$1,500,000	\$150,000*
Ingredient cost	450,000	400,000	50,000*
Water	152,000	150,000	2,000
Labor cost	295,000	300,000	(5,000)
Rent	60,000	60,000	-0-
Depreciation	80,000	80,000	-0-
Other	101,000	100,000	1,000
Total production cost	<u>\$2,788,000</u>	<u>\$2,590,000</u>	<u>\$ 198,000</u>

\*Red numbers indicate differences deemed deserving of investigation.

made to change operations or revise plans. Should a firm add a new product? Should it drop an existing product? Should it manufacture a component used in assembling its major product or contract with another company to produce the component? What price should a firm charge for a new product? These questions indicate just a few of the key decisions that confront companies. How well they make these decisions will determine future profitability and, possibly, the survival of the company. Recognizing the importance of making good decisions, we devote all of Chapters 7, 8, and 9 to the topic. Below you'll see that one of the two key ideas of managerial accounting relates to decision making and its focus on so-called incremental analysis. Finally, at the end of each chapter, there is a feature called Making Business Decisions. This feature will remind you of how the chapter material is linked to decision making, and it will summarize the knowledge and skills presented in the chapter that will help you make good decisions as a manager.

## TEST YOUR KNOWLEDGE

With respect to managerial accounting, which of the following statements are valid?

- a. Budgets are used for planning.
- b. Performance reports are used for control.
- c. A goal of managerial accounting is to provide information useful in decision making.
- d. All of the above are valid statements.

Correct answer is d.

## A Comparison of Managerial and Financial Accounting

As suggested in the opening of this chapter, there are important differences between managerial and financial accounting:

1. Managerial accounting is directed at internal rather than external users of accounting information.
2. Managerial accounting may deviate from generally accepted accounting principles (GAAP).
3. Managerial accounting may present more detailed information.
4. Managerial accounting may present more nonmonetary information.
5. Managerial accounting places more emphasis on the future.

**Internal versus External Users.** Financial accounting is aimed primarily at external users of accounting information, whereas managerial accounting is aimed primarily at internal users (i.e., company managers). External users include investors, creditors, and government agencies, which need information to make investment, lending, and regulatory decisions. Their information needs differ from those of internal users, who need information for planning, control, and decision making.

**Need to Use GAAP.** Much of financial accounting information is required. The Securities and Exchange Commission (SEC) requires large, publicly traded companies to prepare reports in accordance with generally accepted accounting principles (GAAP). Even companies that are not under the jurisdiction of the SEC prepare financial accounting information in accordance with GAAP to satisfy creditors. Managerial accounting, however, is completely optional. It stresses information that is *useful* to internal managers for planning, control, and decision making. If a company believes that deviating from GAAP will provide more useful information to managers, GAAP need not be followed.

**Detail of Information.** Financial accounting presents information in a highly summarized form. Net income, for example, is presented for the company as a whole. To run a company, however, managers need more detailed information; for example, information about the cost of operating individual departments versus the cost of operating the company as a whole or sales broken out by product versus total company sales.

**Emphasis on Nonmonetary Information.** Both managerial and financial accounting reports generally contain monetary information (information expressed in dollars, such as revenue and expense). But managerial accounting reports often contain a substantial amount of additional nonmonetary information. The quantity of material consumed in production, the average time taken to process a customer service call, and the number of product defects are examples of important nonmonetary data that appear in managerial accounting reports.

**Emphasis on the Future.** Financial accounting is primarily concerned with presenting the results of past transactions. Managerial accounting, however, places considerable emphasis on the future. As indicated previously, one of the primary purposes of managerial accounting is planning. Thus, managerial accounting information often involves estimates of the costs and benefits of future transactions.

## Similarities between Financial and Managerial Accounting

We should not overstate the differences between financial accounting and managerial accounting in terms of their respective user groups. Financial accounting reports are aimed *primarily* at external users, and managerial accounting reports are aimed *primarily* at internal users. However, managers also make significant use of financial accounting reports, and external users occasionally request financial information that is generally considered appropriate for internal users. For example, creditors may ask management to provide them with detailed cash-flow projections.

## TEST YOUR KNOWLEDGE

Which of the following is **false**?

- a. Compared to financial accounting, managerial accounting places more emphasis on generally accepted accounting principles (GAAP).
- b. Compared to financial accounting, managerial accounting may present more nonmonetary information.
- c. Compared to financial accounting, managerial accounting places more emphasis on the future.
- d. Compared to financial accounting, managerial accounting may present more detailed information.

Correct answer is a.

### LEARNING OBJECTIVE 2

Define cost terms used in planning, control, and decision making.

## COST TERMS USED IN DISCUSSING PLANNING, CONTROL, AND DECISION MAKING

When managers discuss planning, control, and decision making, they frequently use the word *cost*. Unfortunately, what they mean by this word is often ambiguous. This section defines key cost terms so that you will have the accounting vocabulary necessary to begin discussing issues related to planning, control, and decision making. The treatment will

be brief because we will return to these cost terms and examine them in detail in later chapters.

### Variable and Fixed Costs

The classification of a cost as variable or fixed depends on how the cost changes in relation to changes in the level of business activity.

**Variable Costs.** Costs that increase or decrease in proportion to increases or decreases in the level of business activity are **variable costs**. Material and direct labor are generally considered to be variable costs because in many situations they fluctuate in proportion to changes in production (business activity). Suppose that for Surge Performance Beverage Company, the cost of bottles, ingredients, water, and labor are variable costs and in the prior month, when production was 400,000 bottles, costs were \$120,000 for bottles, \$32,000 for ingredients, \$12,000 for water, and \$24,000 for labor. How much variable cost should the company plan on for the current month if production is expected to increase by 20 percent, to 480,000 bottles? Since the variable costs change in proportion to changes in activity, if production increases by 20 percent, these costs should also increase by 20 percent. Thus, the cost of bottles should increase to \$144,000, the cost of ingredients should increase to \$38,400, the cost of water to \$14,400, and the cost of labor to \$28,800.

	PRIOR MONTH		CURRENT MONTH	
	400,000 Bottles	Per Unit	480,000 Bottles	Per Unit
Production				
Variable costs:				
Cost of bottles	\$120,000	\$0.30	\$144,000	\$0.30
Ingredient cost	32,000	0.08	38,400	0.08
Water	12,000	0.03	14,400	0.03
Labor cost	24,000	0.06	28,800	0.06
Total variable cost	<u>\$188,000</u>	<u>\$0.47</u>	<u>\$225,600</u>	<u>\$0.47</u>

Note that although the *total variable cost* increases from \$188,000 to \$225,600 when production changes from 400,000 to 480,000 units, the *variable cost per unit* does not change. It remains \$0.47 per bottle. With variable cost of \$0.47 per bottle, variable cost increases by \$37,600 (i.e.,  $0.47 \times 80,000$ ) when production increases by 80,000 bottles.

**Fixed Costs.** Costs that remain constant when there are changes in the level of business activity are **fixed costs**. Depreciation and rent are costs that typically do not change with changes in business activity. Suppose that in the prior month, Surge Performance Beverage Company incurred \$20,000 of fixed costs including \$5,000 of rent, \$6,667 of depreciation, and \$8,333 of other miscellaneous fixed costs. If the company increases production to 480,000 bottles in the current month, the levels of rent, depreciation, and other fixed costs incurred should remain the same as when production was only 400,000 bottles. However, with fixed costs, the cost per unit does change when there are changes in production. When production increases, the constant amount of fixed cost is spread over a larger number of units. This drives down the fixed cost per unit. With an increase in production from 400,000 to 480,000 units, *total fixed costs* remains at \$20,000. Note, however, that *fixed cost per unit* decreases from \$0.0500 per unit to \$0.0417 per unit.