MANAGERIAL ACCOUNTING

Tenth Canadian Edition

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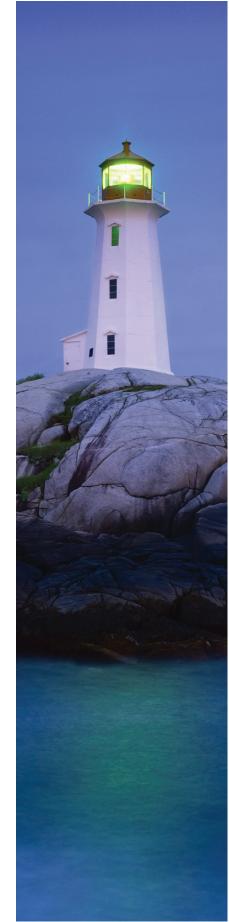
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Dedication

To our families, and the students and instructors who will use this book.

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Brief Contents

SECTION 1	Overview and Foundation 1
Chapter One	Managerial Accounting and the Business Environment 2
Chapter Two	Cost Terms, Concepts, and Classifications 26
Chapter Three	Cost Behaviour: Analysis and Use 65
Chapter Four	Cost-Volume-Profit Relationships 103
SECTION 2	Costing 152
Chapter Five	Systems Design: Job-Order Costing 153
Chapter Six	Systems Design: Process Costing 212
Chapter Seven	Activity-Based Costing: A Tool to Aid Decision Making 249
Chapter Eight	Variable Costing: A Tool for Management 306
SECTION 3	Planning and Control 342
Chapter Nine	Budgeting 343
Chapter Ten	Standard Costs and Overhead Analysis 399
Chapter Eleven	Reporting for Control 480
SECTION 4	Short-Term and Long-Term Decisions 525
Chapter Twelve	Relevant Costs for Decision Making 526
Chapter Thirteen	Capital Budgeting Decisions 583
SECTION 5	External Reporting and Analysis 645
Online Chapter Fourteen	Financial Statement Analysis 647
	Endnotes EN-1
	Photo Credits PC-1
	Company/Name Index IN-1
	Subject Index IN-3

Contents

SECTION 1 Overview and Foundation 1	ETHICS, CORPORATE GOVERNANCE, AND CORPORATE SOCIAL RESPONSIBILITY 14 Corporate Governance 16		
Chapter One Managerial Accounting and the Business Environment 2	Corporate Social Responsibility 17 Summary 19 Discussion Case 20 Questions 20 Exercises 20 Problems 21		
THE ROLE OF THE MANAGEMENT ACCOUNTANT IN VALUE CREATION 2			
THE WORK OF MANAGERS AND THEIR NEED FOR MANAGERIAL ACCOUNTING INFORMATION 3 Planning 3	Chapter Two Cost Terms, Concepts, and Classifications 26		
Directing and Motivating 4 Controlling 4 Decision Making 5 The Planning and Control Cycle 5 Strategy 6 COMPARISON OF FINANCIAL AND MANAGERIAL ACCOUNTING 7 Emphasis on the Future 7 Relevance of Data 7 Less Emphasis on Precision 7 Segments of an Organization 8 Generally Accepted Accounting Principles 9	UNDERSTANDING COSTS 26 GENERAL COST CLASSIFICATIONS 27 Manufacturing Costs 27 Direct Materials 27 Direct Labour 27 Manufacturing Overhead 28 Classification of Manufacturing Labour Costs 28 Non-manufacturing Costs 29 PRODUCT COSTS VERSUS PERIOD COSTS 30 Product Costs 30		
Managerial Accounting—Not Mandatory 9 ORGANIZATIONAL STRUCTURE 9 Decentralization 9 Line and Staff Relationships 10 The Controller 11 BUSINESS PROCESS MANAGEMENT 11 Lean Production 11	Period Costs 30 COST CLASSIFICATIONS ON FINANCIAL STATEMENTS 31 The Balance Sheet 32 The Income Statement 33 SCHEDULE OF COST OF GOODS MANUFACTURED 36		
Enterprise Systems 12 Risk Management 13 Identifying and Controlling Business Risks 13	Product Costs—A Closer Look 36 Inventoriable Costs 37 An Example of Cost Flows 38		

ix Contents

COST CLASSIFICATIONS FOR PREDICTING COST Fixed Costs and the Relevant Range 73 BEHAVIOUR 39 Mixed Costs 74 Variable Cost 39 ANALYZING MIXED COSTS 75 Fixed Cost 40 Diagnosing Cost Behaviour with a Scattergram Plot 76 COST CLASSIFICATIONS FOR ASSIGNING COSTS *The High-Low Method* 79 TO COST OBJECTS 42 THE CONTRIBUTION FORMAT 81 Direct Cost 42 Why a New Income Statement Format? Indirect Cost 42 The Contribution Approach 81 COST CLASSIFICATIONS FOR DECISION Knowledge in Action 82 MAKING 42 Summary 82 Differential Cost and Revenue Review Problem 1: Cost Behaviour 83 Review Problem 2: High-Low Method 84 Opportunity Cost Discussion Case 85 Sunk Cost 44 Questions 85 Knowledge in Action Exercises 85 Summary 45 Problems 88 Review Problem 1: Cost Terms 45 Cases 93 Review Problem 2: Schedule of Cost of Goods Manufactured Instant Quiz Solutions 95 and Income Statement 47 Discussion Case APPENDIX 3A: LEAST-SQUARES REGRESSION 49 Questions CALCULATIONS 96 Exercises 49 Economic Plausibility 97 Problems 54 Multiple Regression Analysis 98 Cases 62 Instant Quiz Solutions **Chapter Four Cost-Volume-Profit Relationships Chapter Three** Cost Behaviour: Analysis and Use LOFTY ANALYSIS 103 THE BASICS OF COST-VOLUME-PROFIT COSTLY BEHAVIOUR REQUIRED 65 ANALYSIS 104 TYPES OF COST BEHAVIOUR PATTERNS 66 Contribution Margin 105 Variable Costs 66 COST-VOLUME-PROFIT RELATIONSHIPS The Activity Base 67 IN GRAPHIC FORM 107 Extent of Variable Costs 68 Preparing the Cost-Volume-Profit Graph *True Variable versus Step-Variable Costs* True Variable Costs 68 CONTRIBUTION MARGIN RATIO 109 Step-Variable Costs 69 SOME APPLICATIONS OF COST-VOLUME-PROFIT The Linearity Assumption and the CONCEPTS 110 Relevant Range 70 Change in Fixed Cost and Sales Volume 111 Fixed Costs 71 Change in Variable Costs and Sales Volume 112 Types of Fixed Costs 71 Change in Fixed Costs, Selling Price, and Sales Committed Fixed Costs 71 Volume 112 Discretionary Fixed Costs 72 Change in Variable Cost, Fixed Cost, and Sales The Trend toward Fixed Costs 73

Volume 113

X Contents

Change in Regular Selling Price 114
Importance of the Contribution Margin 114

BREAK-EVEN ANALYSIS 115

Break-Even Computations 115
The Equation Method 115
The Formula Method 116

TARGET OPERATING PROFIT ANALYSIS 117

The Equation Method 117
The Formula Method 117
After-Tax Analysis 118

THE MARGIN OF SAFETY 119

COST-VOLUME-PROFIT CONSIDER ATIONS IN CHOOSING A COST STRUCTURE 119

Cost Structure and Profit Stability 119
Operating Leverage 121
Indifference Analysis 123

SALES MIX 124

The Definition of Sales Mix 124
Sales Mix and Break-Even Analysis 125

ASSUMPTIONS OF CVP ANALYSIS 128

Knowledge in Action 129 Summary 129

Review Problem: Cost-Volume-Profit Relationships 129

Discussion Case 132
Questions 132
Exercises 133
Problems 138
Cases 147

Instant Quiz Solutions 150

ONLINE APPENDIX 4A: COST-VOLUME-PROFIT ANALYSIS WITH UNCERTAINTY

SECTION 2

Costing 152

Chapter Five

Systems Design: Job-Order Costing 153

CUSTOM DESIGN AT ICEJERSEYS.COM 153

JOB-ORDER AND PROCESS COSTING 154

Process Costing 154
Job-Order Costing 154

JOB-ORDER COSTING—AN OVERVIEW 155

Measuring Direct Materials Cost 156 Job Cost Sheet 156 Measuring Direct Labour Cost 157

COMPUTING PREDETERMINED OVERHEAD RATES 159

Using the Predetermined Overhead Rate 159
The Need for a Predetermined Rate 161
Choice of an Allocation Base for Overhead Cost 161
Computation of Unit Costs 162
Summary of Document Flows 162

JOB-ORDER COSTING—THE FLOW OF COSTS 163

The Purchase and Issue of Materials 163

Issue of Direct and Indirect Materials 163

Issue of Direct Materials Only 163

Labour Cost 164

Manufacturing Overhead Costs 164

THE APPLICATION OF MANUFACTURING OVERHEAD 165

The Concept of a Clearing Account 166 Non-manufacturing Costs 167

COST OF GOODS MANUFACTURED 168

Cost of Goods Sold 169 Summary of Cost Flows 169

COMPLICATIONS OF OVERHEAD APPLICATION 172

Underapplied and Overapplied Overhead 172

Disposition of Underapplied or Overapplied Overhead

Balances 174

Close Out Underapplied Overhead to Cost of Goods

Sold 174

Allocate Overapplied Overhead among Accounts 174

A General Model of Product Cost Flows 176

Variations from the General Model of Product Cost

Flow 176

Multiple Predetermined Overhead Rates 177

Contents **xi**

JOB-ORDER COSTING IN SERVICE COMPANIES 178

USE OF INFORMATION TECHNOLOGY 179

Knowledge in Action 180

Summary 180

Review Problem: Job-Order Costing 180

Discussion Case 184

Questions 184

Exercises 185

Problems 191

Cases 202

Instant Quiz Solutions 205

APPENDIX 5A: THE PREDETERMINED OVERHEAD RATE AND CAPACITY 206

Chapter Six

Systems Design: Process Costing 212

COSTING THE "QUICKER-PICKER-UPPER" 212

COMPARISON OF JOB-ORDER AND PROCESS COSTING 213

PROCESS COST FLOWS 214

Processing Departments 214

The Flow of Materials, Labour, and Overhead Costs 215

Materials, Labour, and Overhead Cost Entries 216

Materials Costs 216

Labour Costs 217

Overhead Costs 217

Completing the Cost Flows 217

EQUIVALENT UNITS OF PRODUCTION 218

Weighted-Average Method 218

COMPUTE AND APPLY COSTS 220

Cost per Equivalent Unit—Weighted-Average Method 220

APPLYING COSTS—WEIGHTED-AVERAGE METHOD 221

Summary of Tropic Breeze Fans Costing 222

OPERATION COSTING 224

FLEXIBLE MANUFACTURING SYSTEMS 225

Knowledge in Action 225 Summary 225 Review Problem 1: Process Cost Flows and Reports 226 Review Problem 2: Units and Cost Assignment 228

Discussion Case 229

Questions 229

Exercises 230

Problems 233

Cases 237

Instant Quiz Solutions 239

APPENDIX 6A: FIFO METHOD 240

Equivalent Units-FIFO Method 240

Comparison of Equivalent Units of Production under the Weighted-Average

and FIFO Methods 241

PRODUCTION REPORT-FIFO METHOD 242

A Comparison of Costing Methods 244

ONLINE APPENDIX 6B: SHRINKAGE AND LOST UNITS

Chapter Seven

Activity-Based Costing: A Tool to Aid Decision Making 249

MEASURING THE COST OF PRODUCT COMPLEXITY 249

THE TREATMENT OF COSTS UNDER THE ACTIVITY-BASED COSTING MODEL 250

Non-manufacturing Costs and Activity-Based Costing 250

Manufacturing Costs Excluded under Activity-Based
Costing 251

Overhead Cost Pools, Allocation Bases, and Activity-Based Costing 251

Activity Rates Based on Capacity, Not Budget 254

DESIGNING AN ACTIVITY-BASED COSTING SYSTEM 254

Step 1: Identify and Define Activities, Activity Cost Pools, and Activity Measures 256

Step 2: Assign Overhead Costs to Activity Cost Pools 257

Step 3: Calculate Activity Rates 261

SECOND-STAGE ALLOCATION OF OVERHEAD COSTS 262

Step 4: Assign Overhead Costs to Cost Objects Using the Activity Rates and Activity Measures 262

PRODUCT AND CUSTOMER MARGINS 264

Step 5: Prepare Management Reports 265

xii Contents

COMPARISON OF TRADITIONAL AND ACTIVITY-BASED COSTING PRODUCT COSTS 266

Product Margins Computed Using the Traditional Costing System 267

The Differences between Activity-Based Costs and Traditional Product Costs 268

Targeting Process Improvements 271

Activity-Based Costing and External Reports 272

THE LIMITATIONS OF ACTIVITY-BASED COSTING 273

Knowledge in Action 274

Summary 274

Review Problem 1: Activity-Based Costing 274

Review Problem 2: Comparison of Traditional Costing and

Activity-Based Costing 276

Discussion Case 279

Questions 279

Exercises 279

Problems 289

Cases 293
Instant Quiz Solutions 297

APPENDIX 7A: USING A MODIFIED FORM OF ACTIVITY-BASED COSTING TO DETERMINE PRODUCT COSTS FOR EXTERNAL REPORTS 298

Chapter Eight

Variable Costing: A Tool for Management 306

BIG 3 AUTOMAKERS BUILD INVENTORY BEFORE BAILOUT 306

OVERVIEW OF ABSORPTION AND VARIABLE COSTING 307

Absorption Costing 307 Variable Costing 307

Selling and Administrative Expense 307

Unit Cost Computations 308

INCOME COMPARISON OF ABSORPTION AND VARIABLE COSTING 309

EXTENDED COMPARISON OF INCOME DATA 311

Effect of Changes in Production on Operating Income 315

Variable Costing 315

Absorption Costing 316

CHOOSING A COSTING METHOD 318

The Impact on the Manager 318

Cost-Volume-Profit Analysis and Absorption Costing 319

Decision Making 319

External Reporting, Income Taxes, and Management

Performance Evaluation 320

Advantages of Variable Costing and the Contribution

Approach 320

IMPACT OF LEAN PRODUCTION 322

Knowledge in Action 323

Summary 323

Review Problem: Contrasting Variable and Absorption

Costing 323

Discussion Case 325

Questions 326

Exercises 326

Problems 330

Cases 336

Instant Quiz Solutions 341

SECTION 3

Planning and Control 342

Chapter Nine

Budgeting 343

BUDGETING BENEFITS 343

THE BASIC FRAMEWORK OF BUDGETING 344

Definition of Budgeting 344

Budgets' Dual Role: Planning and Control 344

Advantages of Budgeting 344

Responsibility Accounting 345

Choosing a Budget Period 345

The Participative Budget 345

Behavioural Factors in Budgeting 347

Zero-Base Budgeting 348

THE MASTER BUDGET: AN OVERVIEW 349

The Sales Budget 349

The Cash Budget 349

Sales Forecasting—A Critical Step 350

Preparing the Master Budget 350

The Sales Budget 351

The Production Budget 352

Inventory Purchases—Merchandising Firm 353

Contents **xiii**

The Direct Materials Purchases Budget 353

The Direct Labour Budget 354

The Manufacturing Overhead Budget 355

The Ending Finished Goods Inventory Budget 356

The Selling and Administrative Expense
Budget 357

The Cash Budget 358

The Budgeted Income Statement 361

The Budgeted Balance Sheet 361

FLEXIBLE BUDGET 363

How a Flexible Budget Works 363

USING THE FLEXIBLE BUDGETING CONCEPT IN PERFORMANCE EVALUATION 365

BUDGETING FOR NOT-FOR-PROFIT ENTITIES 368

Knowledge in Action 369
Summary 369
Review Problem: Completing a Master Budget 370
Discussion Case 375
Questions 375
Exercises 375
Problems 379
Cases 391
Instant Quiz Solutions 397

ONLINE APPENDIX 9A: INVENTORY DECISIONS

Chapter Ten

Standard Costs and Overhead Analysis 399

MANAGING DISTRIBUTION COSTS 399 STANDARD COSTS—MANAGEMENT BY EXCEPTION 401

SETTING STANDARD COSTS 402

Who Uses Standard Costs? 402
Ideal versus Practical Standards 403
Setting Direct Materials Standards 403
Setting Direct Labour Standards 405
Setting Variable Manufacturing Overhead Standards 406
Are Standards the Same as Budgets? 407
A General Model for Variance
Analysis 407

USING STANDARD COSTS—DIRECT MATERIALS VARIANCES 408

Materials Price Variance—A Closer Look 410
Isolation of Variances 411
Responsibility for the Variance 411
Materials Quantity Variance—A Closer Look 412

USING STANDARD COSTS—DIRECT LABOUR VARIANCES 413

Labour Rate Variance—A Closer Look 413 Labour Efficiency Variance—A Closer Look 414

USING STANDARD COSTS-VARIABLE MANUFACTURING OVERHEAD VARIANCES 415

Variable Manufacturing Overhead Variances—A Closer
Look 416
Interpreting the Spending Variance 417
Interpreting the Efficiency Variance 417
Control of the Efficiency Variance 418
Standard Costs and Variance in the Service Industry 419

OVERHEAD RATES AND FIXED OVERHEAD ANALYSIS 420

Flexible Budgets and Overhead Rates 420
Denominator Activity 420
Computing the Overhead Rate 421

OVERHEAD APPLICATION AND FIXED OVERHEAD VARIANCES 422

Overhead Application in a Standard Costing System 422
Budget Variance 424
Volume Variance 424
Graphic Analysis of Fixed Overhead Variances 425
Cautions in Fixed Overhead Analysis 426
Overhead Variances and Under- or Overapplied
Overhead Cost 426

OVERHEAD REPORTING, VARIANCE INVESTIGA-TIONS, AND CAPACITY ANALYSIS 427

Variance Investigation Decisions 429 Capacity Analysis 431

INTERNATIONAL USES OF STANDARD COSTS 432

EVALUATION OF CONTROLS BASED ON STANDARD COSTS 432

Advantages of Standard Costs 432
Potential Problems with the Use of Standard Costs 433

xiv Contents

Knowledge in Action 434
Summary 435
Review Problem: Standard Costs 435
Discussion Case 438
Questions 438
Exercises 438
Problems 444
Cases 457
Instant Quiz Solutions 462

APPENDIX 10A: FURTHER ANALYSIS OF MATERIALS VARIANCES 463

APPENDIX 10B: GENERAL LEDGER ENTRIES TO RECORD VARIANCES 468

Direct Materials Variances 468

Direct Labour Variances 469

Variable and Fixed Manufacturing Overhead Variances 469

Cost Flows in a Standard Costing System 470

APPENDIX 10C: SALES VARIANCE ANALYSIS 474
Sales Variance Analysis 474

ONLINE APPENDIX 10D: PREDICTION OF LABOUR TIME—LEARNING CURVE

Chapter Eleven

Reporting for Control 480

MANAGING PERFORMANCE: HOW WELL ARE WE DOING? 480

DECENTRALIZATION IN ORGANIZATIONS 481

Decentralization and Segment Reporting 481

SEGMENT REPORTING 482

Different Levels of Segmented Statements 482
Assigning Costs to Segments 484
Sales and Contribution Margin 484
The Importance of Fixed Costs 484
Traceable and Common Fixed Costs 485
Identifying Traceable Fixed Costs 486
Breakdown of Traceable Fixed Costs 486
Activity-Based Costing 486
Traceable Costs Can Become Common 487
Segment Margin 488
Segment Reporting for Financial Accounting 488

Hindrances to Proper Cost Assignment 489

Omission of Costs 489

Inappropriate Methods for Assigning Traceable Costs among Segments 489

Failure to Trace Costs Directly 489

Inappropriate Allocation Base 490

Arbitrarily Dividing Common Costs among Segments 490

RESPONSIBILITY CENTRES 491

Cost Centre 491
Profit Centre 491
Investment Centre 491

EVALUATING INVESTMENT CENTRE PERFORMANCE—RETURN ON INVESTMENT 492

The Return on Investment Formula 492
Operating Income and Operating Assets Defined 492
Understanding Return on Investment 494
Example 1: Increased Sales without Any Increase in Operating Assets 496
Example 2: Decreased Operating Expenses with No Change in Sales or Operating Assets 496
Example 3: Invest in Operating Assets to Increase Sales 497

RESIDUAL INCOME 498

Motivation and Residual Income 499

Divisional Comparison and Residual Income 500

Criticisms of Residual Income 500

Criticisms of Return on Investment 497

BALANCED SCORECARD 501

Common Characteristics of Balanced
Scorecards 501

Tying Compensation to the Balanced Scorecard 504

Advantages of Timely Feedback 504

Knowledge in Action 504

Summary 505

Review Problem 1: Segmented Statements 505
Review Problem 2: Return on Investment and Residual

Income 506

Discussion Case 507

Questions 508

Exercises 508

Problems 512

Contents χv

Cases 519

Instant Quiz Solutions 524

ONLINE APPENDIX 11A: TRANSFER PRICING, QUALITY COSTS, AND SERVICE DEPARTMENT COST ALLOCATION

SECTION 4

Short-Term and Long-Term Decisions 525

Chapter Twelve

Relevant Costs for Decision Making

ENHANCING PRODUCT OFFERINGS TO STAY COMPETITIVE AT WESTIET 526

COST CONCEPTS FOR DECISION MAKING 527

Identifying Relevant Costs and Benefits 527

Different Costs for Different Purposes 528

An Example of Identifying Relevant Costs and Benefits 528

Reconciling the Total and Differential Approaches 531 Why Isolate Relevant Costs? 532

ANALYSIS OF VARIOUS DECISION SITUATIONS 533

Adding and Dropping Product Lines and Other Segments 533

A Comparative Format 535

Beware of Allocated Fixed Costs 535

The Make or Buy Decision 537

Strategic Aspects of the Make or Buy Decision 537

An Example of Make or Buy 537

Opportunity Cost 538

Special Orders 539

Joint Product Costs and the Sell or Process Further Decision 542

The Pitfalls of Allocation 542

Sell or Process Further Decisions 543

UTILIZATION OF A CONSTRAINED RESOURCE 545

Contribution Margin in Relation to a Constrained Resource 545

Managing Constraints 547

The Problem of Multiple Constraints 547

Knowledge in Action 548

Summary 548

Review Problem: Relevant Costs 548

Discussion Case 550

Questions 550

Exercises 550

Problems 558

Cases 565

Instant Quiz Solutions 571

APPENDIX 12A: PRICING PRODUCTS AND SERVICES 573

Cost-Plus Pricing 573

Setting a Target Selling Price Using the Absorption Costing Approach 573

Determining the Markup Percentage 574

Problems with the Absorption Costing Approach 574

Setting a Target Selling Price Using the Variable Costing Approach 575

Setting a Target Selling Price for Service Companies Using Time and Materials Pricing 576

Time Component 577

Materials Component 577

An Example of Time and Materials Pricing 577

TARGET COSTING 578

Reasons for Using Target Costing 579 An Example of Target Costing 579

Chapter Thirteen

Capital Budgeting Decisions 583

GOING FOR GOLD 583

CAPITAL BUDGETING-PLANNING **INVESTMENTS** 584

Typical Capital Budgeting Decisions 584 The Time Value of Money 584

DISCOUNTED CASH FLOWS-THE NET PRESENT VALUE METHOD 585

The Net Present Value Method Illustrated 585

Emphasis on Cash Flows 587

Typical Cash Outflows 587

Typical Cash Inflows 587

Recovery of the Original Investment

Simplifying Assumptions 589

xvi Contents

Choosing a Discount Rate 589

An Extended Example of the Net Present Value Method 589

The Total-Cost Approach 591

The Incremental-Cost Approach 592

Least-Cost Decisions 593

DISCOUNTED CASH FLOWS—THE INTERNAL RATE OF RETURN METHOD 594

The Internal Rate of Return Method Illustrated 594
Using the Internal Rate of Return 594
The Weighted-Average Cost of Capital as a Screening Tool 595
Comparison of the Net Present Value and Internal Rate of Return Methods 596
Real Options 596

UNCERTAIN CASH FLOWS 597

An Example of Uncertain Cash Flows 597

PREFERENCE DECISIONS—THE RANKING OF INVESTMENT PROJECTS 598

Internal Rate of Return Method 598

Net Present Value Method 598

Comparing the Preference Rules 599

Post-audit of Investment Projects 600

OTHER APPROACHES TO CAPITAL BUDGETING DECISIONS 601

The Payback Method 601

Evaluation of the Payback Method 601

An Extended Example of Payback 602

Payback and Uneven Cash Flows 604

THE SIMPLE RATE OF RETURN METHOD 604

Criticisms of the Simple Rate of Return 605

BEHAVIOURAL CONSIDERATIONS 606

Knowledge in Action 607
Summary 607
Review Problem: Comparison of Capital Budgeting
Methods 608
Discussion Case 609
Questions 609
Exercises 610
Problems 613
Cases 621
Instant Quiz Solutions 623

APPENDIX 13A: THE CONCEPT OF PRESENT VALUE 625

The Mathematics of Interest 625

Compound Interest 625

Present Value and Future Value 626

Present Value of a Series of Cash Flows (Annuity) 627

Present Value of an Annuity Due 629

Deferred Annuities 630

Future Value of an Annuity 630

Using Microsoft Excel 631

APPENDIX 13B: INCOME TAXES IN CAPITAL BUDGETING DECISIONS 635

The Concept of After-Tax Cost 635

Capital Cost Allowance Tax Shield 636

Capital Cost Allowance Instead of
Depreciation 637

Example of Income Taxes and Capital
Budgeting 639

SECTION 5

External Reporting and Analysis 645

Online Chapter Fourteen



Financial Statement Analysis 647

LIMITATIONS OF FINANCIAL STATEMENT ANALYSIS 648

Comparison of Financial Data 648 The Need to Look beyond Ratios 648

STATEMENTS IN COMPARATIVE AND COMMONSIZE FORM 648

Dollar and Percentage Changes on Statements 648 Common-Size Statements 652

RATIO ANALYSIS—THE COMMON SHAREHOLDER (PROFITABILITY RATIOS) 653

Earnings per Share 653
Price-Earnings Ratio 654
Dividend Payout and Yield Ratios 654
The Dividend Payout Ratio 655
Return on Total Assets 655
Return on Common Shareholders' Equity 655

Contents XVII

Financial Leverage 656 Book Value per Share 656

RATIO ANALYSIS—THE SHORT-TERM CREDITOR (LIQUIDITY RATIOS) 657

Working Capital 657 Current Ratio 657 Acid-Test (Quick) Ratio 658 Accounts Receivable Turnover 659 Inventory Turnover 659

RATIO ANALYSIS—THE LONG-TERM CREDITOR (SOLVENCY RATIOS) 660

Times Interest Earned Ratio 660

Debt-to-Equity Ratio 661

SUMMARY OF RATIOS AND SOURCES OF COMPARATIVE INFORMATION 661

Knowledge in Action 663

Summary 664

Review Problem: Selected Ratios and Financial Leverage 664

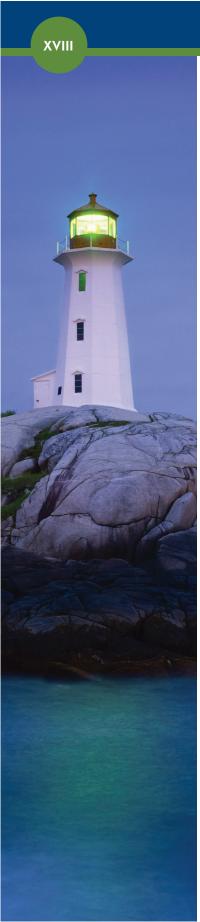
Discussion Case 666

Questions 666

Exercises 666

Problems 671

ENDNOTES EN-1
PHOTO CREDITS PC-1
COMPANY/NAME INDEX IN-1
SUBJECT INDEX IN-3



Garrison/Libby/Webb:

For centuries, the lighthouse has stood as a beacon of guidance for mariners at sea. More than an aid to navigation, the lighthouse symbolizes safety, permanence, reliability, and the comforts of the familiar.

For this reason, we continue to illustrate the tenth Canadian edition of our flagship accounting publication, *Managerial Accounting* by Garrison, Libby, and Webb, with an image that we feel encapsulates the greatest strengths of this market-leading text.

Garrison is your guide through the challenges of learning managerial accounting. It identifies the three functions that managers must perform within their organizations—plan operations, control activities, and make decisions—and explains the managerial accounting information necessary for these functions, how to collect or prepare it, and how to interpret it. To achieve this, the tenth Canadian edition of *Managerial Accounting* focuses, now as in the past, on three qualities:

Your guide through the challenges of learning managerial accounting

Relevance. Every effort is made to help students relate the concepts in this book to the decisions made by managers in practice. With chapter openers based on real-world scenarios, in-chapter examples providing practical applications, knowledge in action summaries, and extensive end-of-chapter material, a student reading Garrison should never have to ask, "Why am I learning this?"

Balance. Garrison provides extensive examples and end-of-chapter material covering the breadth of business types found in practice, including manufacturing, service, retail, wholesale organizations, and not-for-profit entities. In the tenth Canadian edition, material related to the adoption of International Financial Reporting Standards (IFRS) continues to be highlighted with icons in the margins of the text.

Clarity. Generations of students have praised Garrison for the accessibility and readability of its writing, but that's just the beginning. Discussions of technical material have been simplified, chapters have been reordered, more specialized topics have been moved to online appendices, and the entire book has been thoroughly revised with the objective of making learning and teaching from Garrison as easy as possible. Key term definitions and icons signifying ethics, writing, and Excel assignments continue to add clarity for both students and instructors. In addition, students and instructors will work with clear, well-written supplements that employ consistent terminology.

The authors' steady focus on these three core elements has led to tremendous results.

What makes Garrison such a powerful learning tool?

Managerial Accounting is full of pedagogy designed to make studying productive. On the following pages, you will see the kind of engaging, helpful pedagogical features that make Garrison a favourite among both instructors and students.



Learning Aids

These pedagogical boxes emphasize and summarize key content for students.

LEARNING AID

Key Formulas for Contribution Format Income Statements

Operating income = Unit CM \times Q – Fixed expenses CM = Sales – Variable expenses

M per unit = Per unit sales - Per unit variable expenses

CM ratio = Total CM ÷ Total sales or CM ratio = Per unit CM ÷ Per unit sales

In these formulas, CM = contribution margin and Q = quantity of goods sold in units

IN BUSINESS

When deciding whether to bid for a major sporting event such as the Olympic Games, the potential host would perform a careful analysis of the expected differential revenues and differential costs. For example, according to some estimates, the differential costs to British Columbia of hosting the Vancouver 2010 Olympics were about \$1.5 billion. Differential costs are those that were incurred only as a result of hosting the games. Examples are the cost of facilities such as the speed-skating arena that would not have been built if Vancouver had not won the Olympic bid, security for the events, and galas sponsored by the provincial government. Costs that would have been incurred even if British Columbia had not hosted the Olympics, such as upgrades to the Sea-to-Sky Highway leading to Whistler, are not considered differential costs.

A large source of differential revenue for British Columbia will be the money received in the years following the games as the result of tourists visiting the province after watching the Olympics on television. Some experts estimated that the 2010 Olympics could result in an additional 1.1 million to 2.7 million tourists for British Columbia in the five years following the games. According to a 2014 report prepared by Tourism BC, total tourism revenues for British Columbia in 2012 increased 2.5% compared to 2011 and 40.5% compared to 2002, suggesting estimates of the differential revenues

In Business

These helpful boxed features offer a glimpse into how real companies use the managerial accounting concepts discussed in the chapter. Every chapter contains several of these current examples.

Generally Accepted Accounting Principles

Financial accounting statements prepared for external users must be prepared in accordance with generally accepted accounting principles (GAAP). External users must have some assurance that the reports have been prepared in accordance with some common set of ground rules. Beginning January 1, 2011, Canada joined more than 100 other countries, including Australia, New Zealand, and European Union member countries, in adopting International Financial Reporting Standards (IFRS) for publicly accountable enterprises. As of that date, in Canada, IFRS became GAAP for public companies. The purpose of IFRS is simple: to enhance the comparability and clarity of financial information on a global basis. Given the increasing degree of globalization of the economy and the interconnectedness of capital markets, accounting standard setters in Canada concluded that it was crucial to adopt IFRS.2 Private companies and not-for-profit organizations are not required to adopt IFRS but instead can use accounting standards for private enterprises (ASPE). While the common ground rules established by IFRS will enhance comparability across external reporting jurisdictions, they do not necessarily lead to the type of reports that would be most useful



IFRS Icon

The IFRS icon continues to identify where changes as a result of IFRS adoption in Canada are affecting managerial accounting.

Knowledge in Action

New to the tenth edition, these summaries provide examples of how key concepts covered in the chapter are applied by managers in practice. They are intended to reinforce the practical relevance of the material being learned.



KNOWLEDGE IN ACTION

- anagers can apply their knowledge about cost behaviour whe Calculating sales needed to achieve break-even profit levels Estimating sales needed to achieve desired profit targets Estimating the impact of sales volume changes on profit

- Costing products and analyzing differences between actual and budgeted resul Deciding whether to keep or drop a product Deciding whether to keep or drop a product



Managerial Accounting has earned a reputation for the best practice material of any text on the market. The tenth Canadian edition includes both new and revised exercises, problems, and cases. Features include:



Instant Quiz 2-3
If a merchandising company has cost of goods sold of \$250,000, beginning merchandise inventory of \$50,000, and ending merchandise inventory of \$40,000, calculate the amount of inventory purchases for the period.

Instant Quizzes

New to the tenth edition, these short questions are designed to allow students to test their understanding of key topics as they work through each chapter. Each question is intended to take only a few minutes at most to complete. Several instant quizzes are included in each chapter, starting with Chapter 2. To provide feedback for the instant quizzes, solutions for all questions are provided at the end of each chapter.

Review Problems & Solutions





DISCUSSION CASE DISCUSSION CASE 3-1 Despite the numerous benefits of developing an accurate understanding of cost behaviour discussions and the second of t

- Discussion Cases

New to the tenth edition, these short cases focus on one or more of the concepts covered in the chapter. They are designed to provoke careful thought about key topics and to generate in-class discussion. One case has been developed for each chapter.



Questions



Foundational Exercises

New to the tenth Canadian edition of Garrison! Each chapter now contains one Foundational exercise that includes "building block" questions related to one concise set of data. These exercises can be used for in-class discussion or as homework assignments. The Foundational Exercises are available on Connect.







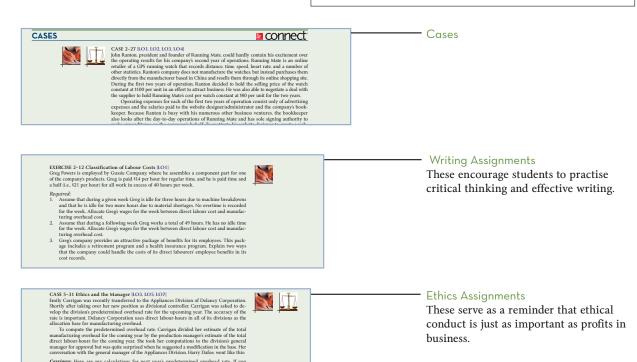
Excel Simulations

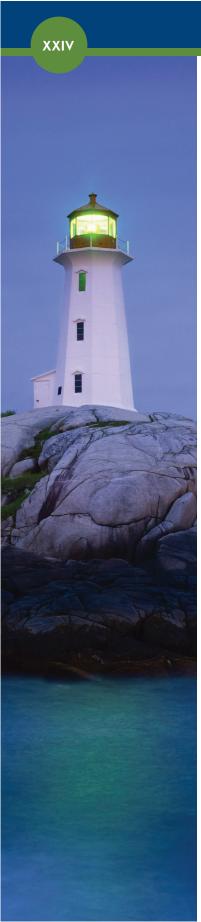
Carrigan: Here are my calculations for next year's predetermined overhead rate. If you approve, we can enter the rate into the computer on January 1 and be up and running in the

New to the tenth Canadian edition of Garrison! Simulated Excel questions, assignable within Connect, allow students to practise their Excel skills—such as using basic formulas and formatting—within the context of managerial accounting. These questions feature animated, narrated Help and Show me tutorials (when enabled), as well as automatic feedback and grading for both students and professors.

Applying Excel

This 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 what they do. Applying Excel is integrated with McGraw-Hill's Connect, allowing students to practise their skills online with algorithmically generated datasets.





Focus on the Tenth Canadian Edition

Book Philosophy and Structure

Developing and improving a textbook on a topic as broad as managerial accounting is an ongoing challenge requiring a guiding philosophy.

The authors of the tenth Canadian edition use the framework established by Garrison, Noreen, and Brewer in their fourteenth U.S. edition as a starting point. Although we rely on this framework in guiding our general approach, we have developed a text that distinctly reflects the Canadian business and education setting. Our main objectives are to make the various topics as easy to learn for students as possible and to provide the flexibility necessitated by the varied requirements of our Canadian users. We have developed a text that can be covered in a single-term course and that also provides students with a useful resource for subsequent courses in managerial accounting.

In the first two chapters we describe the key responsibilities of managers, their need for managerial accounting information, and the role of professional ethics for management accountants. We also address the major differences between financial and managerial accounting and cover key cost terms and classifications. Next, we cover two major topic areas that support the information needs of managerial accounting: cost behaviour and analysis, and the costing of products and services. This foundation material is the basis for Chapters 3 and 4, which focus on cost behaviour patterns, cost prediction models, and cost-volume-profit analysis. The remaining foundation material is covered in Chapters 5 through 8, which examine the major types of costing systems used by organizations.

In Chapters 9 through 11, we build on this foundation in our coverage of planning and control topics. Chapters 9 and 10 explore how managers can use predetermined costs in the form of budgets and standard costs both in planning for the future and in evaluating past performance. Chapter 11 covers a variety of management control techniques, including responsibility centre reporting and evaluation and performance measurement.

The second major application of the foundation material is examined in Chapters 12 and 13, which focus on short-term and long-term decision analysis. In Chapter 12, we cover relevant costs and analysis techniques used for short-term decisions, and in Chapter 13, we present the approaches used to analyze long-term capital budgeting decisions. Because the analysis required for short- and long-term decisions requires estimates of future costs, a thorough understanding of the cost behaviour concepts covered in Chapters 3 and 4 is essential. The book concludes with online Chapter 14 on financial statement analysis, which we view as an extension of both the control topics covered in earlier chapters and the decision analysis material presented in Chapters 12 and 13.

Each chapter provides an extensive set of exercises, problems, and cases that cover manufacturing, service, and not-for-profit organizations, as well as international businesses. This material has been developed to give students an appreciation for the types of situations faced by a wide variety of actual businesses. Feedback from our

users indicates that while there is variety in the set of topics covered in any single course and the order in which they are covered, the structure and flexibility offered by our book makes it well suited to meet their needs.

Overall, our book is written in a way that facilitates understanding at the conceptual level and provides a sound basis for application.

What's New in the Tenth Edition

The tenth Canadian edition has been reviewed extensively to identify improvements over previous editions. The results of peer reviews and the authors' efforts are reflected in the revisions, reorganization, and new content development throughout the book. We have reordered the material in the tenth edition, placing the chapters on cost behaviour (Chapter 3) and cost-volume-profit (Chapter 4) concepts before the chapters on costing systems (Chapters 5 through 8). This reordering reflects our belief that understanding cost behaviour and analysis techniques is very helpful when studying costing systems. To demonstrate the practical application of the topics covered in the book, a new Knowledge in Action summary has been developed for each chapter after Chapter 1. These bullet point summaries give examples of how managers actually use the concepts covered in the chapter. Many exercises, problems, cases, and research questions have been revised and new ones created. We have also created a new Discussion Case at the end of each chapter. These short cases are designed to stimulate in-class discussion of a particular topic and require students to think more deeply about one or more key concepts. To further facilitate learning, we have developed new Instant Quizzes in most chapters that are designed to give students an opportunity to test their understanding of each major topic as they work through the chapter. The quizzes are short questions covering a single topic. To provide students with feedback, solutions to the Instant Quizzes are provided at the end of each chapter. Additionally, in several chapters, we have updated or created new Learning Aids to emphasize key materials and to reinforce students' understanding of the decision-making approach used for certain analysis techniques. We are confident that, collectively, these changes will enhance students' understanding and application of key managerial accounting topics.

The specific changes in each of the individual chapters of the tenth edition are summarized below:

- Chapter 1 has been revised to improve clarity and to remove content deemed too advanced for an introductory text. Most notably the section on process management has been considerably shortened and the section on business plans removed. New In Business segments have been added.
- Chapter 2 has a new opening vignette based on an actual service company, and several In Business segments have been revised or replaced with more current material. Exhibit 2-6 has been revised to clarify the cost flow example. Exhibits 2-7 and 2-9 have been replaced with Learning Aids. Seven Instant Quizzes have been included and a Knowledge in Action summary added.
- In Chapter 3, new examples have been developed to illustrate key cost behaviour concepts, and the related graphs have been revised. Several of the In Business segments have been revised or replaced to reflect more current material. Five Instant Quizzes have been included and a Knowledge in Action summary added.
- Chapter 4 has a new opening vignette illustrating the use of the break-even concept in practice. Several In Business segments have been updated or replaced to reflect more current material. A new section on calculating multi-product break-even units has been developed, including a new Exhibit 4–6. The Learning Aid on multi-product cost-volume-profit analysis has been updated to include break-even units. Nine Instant Quizzes have been included and a Knowledge in Action summary added.
- Chapter 5 has an updated opening vignette to reflect more current information, and several new examples of the use of job-order costing in service industries have been added. A new In Business segment has been added to describe job-order costing in a non-profit organization. References to paper copies of job tickets, cost sheets, and so on have been removed in favour of screen shots from a computerized database and discussion of how costs accumulate electronically in computerized costing systems. The discussion of disposition of over/ underapplied overhead in the body of the chapter as well as the material included in Appendix 5A has been expanded to consider the impact of International Accounting Standard (IAS) 2 on external reporting of product/service costs. Five Instant Quizzes have been included and a Knowledge in Action summary added.

- Chapter 6 includes a new opening vignette illustrating the type of production process for which process costing is ideal. The main example built and elaborated upon throughout the chapter has been revised and refreshed. The appendix on service department cost allocation has been moved to online Appendix 11A: Transfer Pricing, Quality Costs, and Service Department Cost Allocation (see also Chapter 11 below) since users expressed the view that the material is better suited to being online. Finally, four Instant Quizzes and a Knowledge in Action summary have been added.
- Chapter 7 includes a new opening vignette illustrating the usefulness of activity-based costing (ABC) in the auto industry. In addition, three new In Business segments have been added to illustrate the use of ABC in the travel and service industries. The review problem has been refreshed and a new review problem has been added that compares costs under traditional and ABC systems. Five Instant Quizzes have been included and a Knowledge in Action summary added.
- Chapter 8 includes a new opening vignette illustrating a real-life example of managers' motivation to build inventory under an absorption costing system and how variable costing avoids this problem. In addition, the discussion of lean accounting has been enhanced, and a new In Business segment illustrating how lean accounting can be used to improve cost management in hospitals is included. Five Instant Quizzes and a Knowledge in Action summary are also included.
- Chapter 9 has a new opening vignette that builds on the vignette developed for Chapter 2. A new example has been developed to illustrate the preparation of the master budget and its supporting components and the use of flexible budgets. The cash budget section has been revised to utilize the approach for calculating and paying interest expense employed in practice. The discussion of the financing section of the cash budget has been clarified to enhance understandability and a new formula has been included to simplify the calculation of borrowings and loan repayments. New In Business segments have been developed. Eight Instant Quizzes have been included and the Knowledge in Action summary added.
- Chapter 10 includes one new and one updated In Business segment describing examples in the service industry. The Sales Variance Analysis Appendix has

- been added to the end of Chapter 10 as Appendix 10C (was Appendix 11A in the ninth edition) as the material fits better with the material in this chapter. Five Instant Quizzes and a Knowledge in Action summary have been added.
- Chapter 11 now includes an updated version of the opening vignette as well as two new In Business segments concerning the using of the balanced scorecard in Canadian organizations. In addition, the coverage of material in this chapter has been reduced to better reflect knowledge necessary for an introductory course on managerial accounting. To facilitate coverage of more complex material by some instructors (e.g., transfer pricing, cost of quality, and profitability analysis), these topics have been included in the new online Appendix 11A: Transfer Pricing, Quality Costs, and Service Department Cost Allocation. Four Instant Quizzes and a Knowledge in Action summary have been included.
- Chapter 12 has a new opening vignette concerning relevant costing in the airline industry, and a new In
 Business segment on relevant costs in the decision to lay
 off employees has been added. Six Instant Quizzes and a
 Knowledge in Action summary have been included.
- In Chapter 13, the opening vignette has been updated. All examples have been revised to discontinue the use of present value tables in performing the calculations. Instead, all present value amounts are now based on the use of formulas available in Microsoft Excel. The discussion of present value concepts has also been revised as needed to incorporate the use of formulas from Microsoft Excel. In keeping with these changes, the present value factor appendices have been removed. The discussion of the weighted-average cost of capital has been revised to improve clarity. New In Business segments have been developed. Six Instant Quizzes have been included and a Knowledge in Action summary added.
- In Chapter 14, an online chapter, some of the examples have been revised to reflect current values from publicly available sources of financial information.
 The discussion has been revised to identify the various users of the different analyses described in the chapter. Exhibit 14–5 has been transformed into a Learning Aid. What is now Exhibit 14–5 has been updated to provide current website addresses for information sources. A Knowledge in Action summary has been added.

Teaching and Learning with Technology

Get Connect Accounting. Get Results.



ing 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, instructors can deliver assignments, quizzes, and tests easily online. Students can practice important skills at their own pace and on their own schedule.

Key Features of Garrison Connect

Simple Assignment Management and Smart Grading

- Spend more time teaching and less time managing
- Create and deliver assignments easily with selectable end-of-chapter questions, test bank items, and more.
- Go paperless with online submission and grading of student assignments.
- Have assignments graded automatically, giving students immediate feedback on their work and comparisons with correct answers.
- Reinforce classroom concepts with practice tests and instant quizzes.

Online Assignments

Assign text end-of-chapter exercises, problems, and cases, algorithmic questions, test bank items, Excel simulations, Applying Excel questions, Foundational exercises, and more.

Intelligent Response Technology (IRT)

IRT is a redesigned student interface for the Garrison Connect end-of-chapter assessment content. The benefits include improved answer acceptance to reduce students' frustration with formatting issues (such as rounding). 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.

Instructor Library

The Connect Instructor Library provides all of the critical resources instructors need to build their course including access to the eBook version of the text, PowerPoint slides. Solutions Manual, Instructor's Manual, Test Bank, and more. The Connect Instructor Library also allows instructors to upload their own files.

eBook

The Connect eBook allows for anytime, anywhere access to the text. Capabilities like highlighting, note sharing, and bookmarking provide students with a convenient tool for comprehensive review. A powerful search function allows students to pinpoint and connect key concepts

LearnSmart

■ LEARNSMART[®] LearnSmart uses intelligent adaptive technology to deliver results in boosting grades, increasing course retention, and strengthening memory recall. The proven LearnSmart engine has helped over 2 million student users answer nearly 1.5 billion questions since 2009. LearnSmart builds a unique learning experience for each student's individual needs. It starts by identifying the topics a student knows and does not know. As the student progresses, LearnSmart adapts and adjusts the content based on his or her individual strengths, weaknesses, and confidence, ensuring that every minute spent studying with LearnSmart is the most efficient and productive study time possible.

SmartBook

■SMARTBOOK ** 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. As a student engages with SmartBook, 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. The LearnSmart questions are integrated within the SmartBook, allowing students to practice and reinforce what they have read.

Connect Insight



edition of Garrison! Visu-

alized data tailored to your needs as an instructor make it possible to quickly confirm early signals of success, or identify early warning signs regarding student performance or concept mastery-even while on the go.



Services and Support

Instructor Support

The following instructor resources are available online on Connect:

Instructor's Manual The *Instructor's Manual* includes chapter overviews, assignment grids featuring levels of difficulty, and chapter-by-chapter lists of service examples.

Solutions Manual This supplement contains completely worked out solutions to all assignment material and a general discussion of the use of group exercises. In addition, the manual contains suggested course outlines and a listing of exercises, problems, and cases scaled according to difficulty.

Computerized Test Bank Nearly 2,000 questions are organized by chapter and include true/false, multiple-choice, and essay questions, plus computational problems. Use it to make different versions of the same test, change the answer order, edit and add questions, and conduct online testing. Technical support for this software is available. The files are also available in RTF for printing.

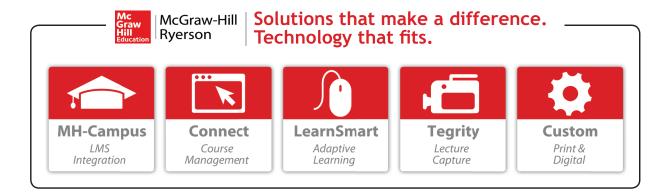
Microsoft PowerPoint Slides Available on Connect, these slides offer a great visual complement for your lectures. A complete set of slides covers each chapter.

Microsoft Excel Templates These are the solutions to the Microsoft Excel templates offered online.

Superior Solutions and Support

The McGraw-Hill Ryerson team is ready to help you assess and integrate any of our products, technology, and services into your course for optimal teaching and learning performance. Whether it's helping your students improve their grades, or putting your entire course online, the McGraw-Hill Ryerson team is here to help you. Contact your Learning Solutions Consultant today to learn how to maximize all of McGraw-Hill Ryerson's resources!

For more information on the latest technology and Learning Solutions offered by McGraw-Hill Ryerson and its partners, please visit us online: www.mheducation.ca/he/solutions.



Reviewers

The efforts of many people are needed to develop and improve a text. Among these people are the reviewers and consultants who point out areas of concern, cite areas of strength, and make recommendations for change. In this regard, the professors named on this page provided feedback that was enormously helpful in preparing the tenth Canadian edition of *Managerial Accounting*.

Suggestions have been received from many of our colleagues across Canada and throughout the world who have used the prior editions of *Managerial Accounting*. This is vital feedback that we rely on in each edition. Each of those who have offered comments and suggestions has our thanks.

Bharat Aggarwal, Sheridan Institute of Technology

George Boland, *Queen's University* Gillian Bubb, *University of the Fraser* Valley

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Ian Feltmate, Acadia University
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University

Amy Kwan, University of Toronto Glenn Leonard, University of New Brunswick, Fredericton Winston Marcellin, George Brown College

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The tenth Canadian edition of *Managerial Accounting* has benefited from the assistance of numerous individuals and groups. This assistance was invaluable in providing us with materials, review comments and suggestions, and technical assistance. Commissioned reviewers across Canada assisted with suggestions and clarifications that reflect their views of the materials they examined.

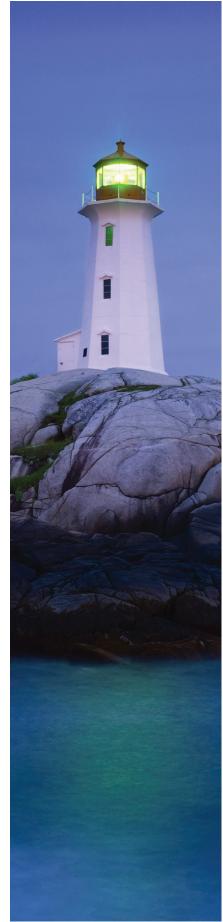
Materials were provided by the American Accounting Association, CGA-Canada and CMA-Canada (both now part of CPA Canada), and SAP Canada. In each case, an acknowledgement is included when the material is used in the textbook. The U.S. authors acknowledge materials provided by the AICPA, the Institute of Certified Management Accountants, and the Chartered Institute of Management Accountants (United Kingdom).

We also received invaluable input and support through the years from present and former colleagues and students. We are indebted to the following individuals who helped adapt, critique, and shape the ancillary package for the Canadian market: Shannon Butler, Western University; Susan Cohlmeyer, Memorial University; Robert Ducharme, University of Waterloo; Kathy Falk, University of Toronto, Mississauga; Ian Feltmate, Acadia University; Bonnie Martel, Niagara College; Don Smith, Georgian College; and Mike Meehan, Sheridan College.

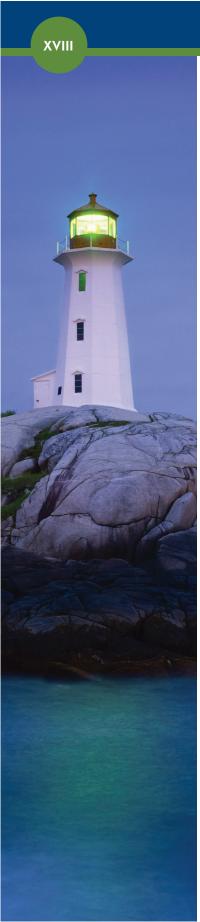
The extraordinary efforts of a talented group of individuals at McGraw-Hill Ryerson made all of this come together. We especially thank Keara Emmett, for her guidance throughout this project; Amy Rydzanicz, for initiating the developmental work for this edition and for tirelessly following the whole process through until the final printing; Jessica Barnoski, who managed the final production of this book; and all the marketing and sales people who helped bring this book to both instructors and students. We also thank all those who worked behind the scenes to ensure the successful completion of this book. Special thanks to Julia Cochrane for her careful editing and proofreading of the entire textbook.

Despite the assistance we received, we acknowledge our responsibility for the contents of this book. We appreciate suggestions and questions from our audience.

MANAGERIAL ACCOUNTING Tenth Canadian Edition







Garrison/Libby/Webb:

For centuries, the lighthouse has stood as a beacon of guidance for mariners at sea. More than an aid to navigation, the lighthouse symbolizes safety, permanence, reliability, and the comforts of the familiar.

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