INTRODUCTION TO

Management Accounting

Thirteenth Edition

CHAPTERS 1–14

Horngren | Sundem | Stratton

Introduction to Management Accounting

Thirteenth Edition

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Introduction to Management Accounting

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To Joan, Chelsea, Erik, Marissa,

Liz, Garth, Jens, Reed, Grant,

Norma, Gina, Adam, Nisha, and Tiana

ABOUT THE AUTHORS

Charles T. Horngren (*center*) is the Edmund W. Littlefield Professor of Accounting, emeritus, at Stanford University. A graduate of Marquette University, he received his MBA from Harvard University and his Ph.D. from the University of Chicago. He is also the recipient of honorary doctorates from Marquette University and DePaul University.

A certified public accountant, Horngren served on the Accounting Principles Board for six years, the Financial Accounting Standards Board Advisory Council for five years, and the Council of the American Institute of Certified Public Accountants for three years. For six years, he served as a trustee of the Financial Accounting Foundation, which oversees the Financial Accounting Standards Board and the Government Accounting Standards Board.

Horngren is a member of the Accounting Hall of Fame.

A member of the American Accounting Association, Horngren has been its president and its director of research. He received its first annual Outstanding Accounting Educator Award.

The California Certified Public Accountants Foundation gave Horngren its Faculty Excellence Award and its Distinguished Professor Award. He is the first person to have received both awards.

The American Institute of Certified Public Accountants presented its first Outstanding Educator Award to Horngren.

Horngren was named Accountant of the Year, Education, by the national professional accounting fraternity, Beta Alpha Psi.

Professor Horngren is also a member of the Institute of Management Accountants, where he has received its Distinguished Service Award. He was a member of the Institute's Board of Regents, which administers the Certified Management Accountant examinations.

Horngren is the author of other accounting books published by Prentice Hall: *Cost Accounting: A Managerial Emphasis*, Eleventh Edition, 2003 (with Srikant Datar and George Foster); *Introduction to Financial Accounting*, Eighth Edition, 2002 (with Gary L. Sundem and John A. Elliott); *Accounting*, Sixth Edition, 2005 (with Walter T. Harrison Jr. and Linda Bamber); and *Financial Accounting*, Fifth Edition, 2004 (with Walter T. Harrison Jr.).

Horngren is the Consulting Editor for the Charles T. Horngren Series in Accounting.

Gary L. Sundem (*left*) is the Julius A. Roller Professor of Accounting at the University of Washington, Seattle. He received his B.A. degree from Carleton College and his MBA and Ph.D. degrees from Stanford University.

Professor Sundem was the 1992–1993 President of the American Accounting Association. He was Executive Director of the Accounting Education Change Commission, 1989–1991, and served as Editor of *The Accounting Review*, 1982–1986.

A member of the Institute of Management Accountants, Sundem is past president of the Seattle chapter. He has served on IMA's national board of directors and chaired its Academic Relations and Professional Development committees.

Professor Sundem has numerous publications in accounting and finance journals including *Issues in Accounting Education, The Accounting Review, Journal of Accounting*

Research, and *The Journal of Finance*. He was selected as the Outstanding Accounting Educator by the American Accounting Association in 1998 and by the Washington Society of CPAs in 1987. He has made more than 200 presentations at universities in the United States and abroad.

William O. Stratton (*right*) is Professor of Accounting at Pepperdine University. He received B.S. degrees from Florida State University and Pennsylvania State University, his MBA from Boston University, and his Ph.D. from the Claremont Graduate University.

A certified management accountant, Stratton has lectured extensively at management accounting conferences in North America, South America, and Europe. He has developed and delivered professional workshops on activity-based management and performance achievement to manufacturing and service organizations throughout the United States and South America. In 1993, Professor Stratton was awarded the Boeing Competition prize for classroom innovation.

Stratton has numerous publications in accounting and international business journals including *Management Accounting, CMA Management, Decision Sciences, IIE Transactions*, *The Journal of Cost Management,* and *Synergie*.

PREFACE

Now more than ever, managers have to understand how their decisions effect costs.

Management accounting is an essential tool that enhances a manager's ability to make effective economic decisions. Because understanding concepts is more important than memorizing techniques, *Introduction to Management Accounting*, 13/e describes both theory and common practices so students understand how to produce information that's useful in day-to-day decision making. From the first chapter, we encourage students to think about why companies use various techniques, not to blindly apply the techniques.

Introduction to Management Accounting, 13/e deals with all business sectors—non-profit, retail, wholesale, service, selling, and administrative situations—as well as manufacturing. The focus is on planning and control decisions, not on product costing for inventory valuation and income determination.

Our Philosophy

Introduce concepts and principles early, then revisit them at more complex levels as students gain understanding, and provide appropriate real-company examples at every stage.

As management accounting builds on financial accounting, the concepts within management accounting build on one another. Students begin their understanding of managerial decisions by asking, "How will my decisions affect the costs and revenues of the organization?" Students then progress to more complex questions: "What is the most appropriate cost-management system for the company?" "What products or services should we emphasize?" "What do our budget variances mean?"

Our goals are to choose relevant subject matter and to present it clearly and accessibly using many examples drawn from actual companies. Companies such as Starbucks, Boeing, AT&T, McDonald's, Microsoft, and more set the stage for chapter material and are revisited throughout so that students understand management accounting concepts in a real-company context.

Take your pick—two different text versions fit any course structure.

Introduction to Management Accounting, 13/e (Chapters 1–14) provides a concise treatment of management accounting topics suitable for a one-term course.

Introduction to Management Accounting, 13/e (Chapters 1–17) includes three financial accounting chapters in addition to the fourteen management accounting chapters. This version is especially suited to continuing education or MBA courses where students need to learn financial and management accounting in a one-term course. The financial accounting chapters also provide material for any student who may need a financial accounting review.

Introduction to Financial Accounting, 8/e and *Introduction to Management Accounting*, 13/e provide a seamless presentation for any first year accounting course. Please contact your Prentice Hall representative about cost-savings discounts when both books are adopted.

New Edition Enhancements

- **NEW and revised Business First boxes** provide insights into operations at well-known domestic and international companies, including technology and e-Commerce companies such as Reichhold Inc., DaimlerChrysler, IBM, Battelle, and EncripTix.
- **NEW and revised chapter opening vignettes** help students understand accounting's role in current business practice. We revisit the chapter opening company later in chapter discussions so students can see how accounting decisions effect real company practices. Starbucks, General Motors, L. A. Darling, AT&T, Boeing, Nantucket Nectars, and McDonald's are just some of the companies students will recognize.
- **NEW Making Managerial Decisions boxes** in all chapters allow students to take what they've learned, apply this material to a real business situation, and then plot a course of action.
- **NEW assignment material in all chapters**, including an Excel Application Exercise, new end-of-chapter summaries, and Fundamental Assignment Problems in selected chapters, and a general updating of most exercises and problems to reflect significant text changes.
- **NEW Ethics problems or cases** in each chapter.

Updated Material

- Chapter 1—includes significantly more ethics coverage including new Business First boxes; coverage of ERP and XBRL added.
- Chapter 2—clarified distinction between total and unit contribution margin, including new exhibit comparing gross margin and contribution margin; two new Business First boxes; new Boeing examples throughout the chapter discussion.
- Chapter 3—Discussion of capacity decisions expanded; new problem material on data presentation and analysis.
- Chapter 4—major chapter revision focusing on simplifying the presentation as well as adding more examples and illustrations; ABC coverage simplified with more examples and illustrations and complex multistage ABC moved to an appendix; includes new section on process mapping.
- Chapter 5—new, expanded ethics discussions as well as expanded coverage of target costing; new assignments on ABC and target costing.
- Chapter 6—new Nantucket Nectars examples throughout chapter; new Business First box on outsourcing; shortened and simplified discussion of more advanced material by placing it in Summary Problem for Your Review with solution; several new questions, exercises, and problems using the chapter-opening company.
- Chapter 7—new Business First box on budgeting as a value driver; new section on activity-based master budgets; new Making Managerial Decisions boxes.
- Chapter 8—simplified coverage of variance analysis; McDonald's, chapter-opening company, is revisited throughout the chapter discussion.
- Chapter 9—balanced scorecard moved to a section on nonfinancial measures and heavily revised with a new example; "Goal Congruence, Managerial Effort, and Motivation" heavily revised for clearer presentation; added coverage of Six Sigma and two new Business First boxes.
- Chapter 10—heavily revised and reorganized section on transfer pricing is now covered later in the chapter; EVA material revised; new section, "Budgeting, Performance Targets, and Ethics."
- Chapter 11—inflation now covered in an appendix; added coverage on internal rate of return (IRR), real options, and ethical issues concerning tax avoidance and evasion.

- Chapter 12—extensive chapter revision includes revised exhibits as well as new discussions involving chapter-opening company, L. A. Darling; Exhibit 12-1 revised to set overall framework for chapter discussions; problems 12-34 through 12-36 added to illustrate and apply chapter discussion for service-department cost allocation, process maps, ABC product costing, and ABC customer profitability.
- Chapter 13—combines the coverage of overhead in two chapters of the Twelfth edition into one logical discussion; the major illustration used in both Chapters 13 and 14 is based on same company, allowing students to study Chapter 14 before 13 or study only Chapter 14; discussion simplified by eliminating many journal entries; chapter illustrations use Dell Computer Corporation, the chapter-opening company; simplified discussion by deleting sections on *selection of expected activity level for computing the fixed-overhead rate* and *actual, normal, and standard costing*.
- Chapter 14—consolidates coverage of these two product-costing systems into one new chapter; the process-costing section of the chapter opens with a vignette that combines two companies: one with a job-costing system and the other with a process-costing system; Summary Problem for Your Review applies concepts to chapter-opening company; simplified coverage of process costing by deleting first-in, first-out method for process-costing systems.
- Chapter 15—Microsoft used extensively throughout chapter discussions; added material on ethics, including Business First box; improved explanation of cash versus accrual accounting.
- Chapter 16—extensively rewritten coverage of statement of cash flows, including discussion of free cash flow; new appendix on accounting for inventory (in Chapter 19 of Twelfth edition).
- Chapter 17—consolidated goodwill discussion; revised and updated financial ratios; now includes General Motors consolidated statements; new appendix on changing prices and income measurement (in Chapter 19 of Twelfth edition).
- Financial Accounting review streamlined and covered in three rather than four chapters.

Supplements for Instructors and Students

INSTRUCTOR'S RESOURCE CD-ROM A complete, one-step resource for instructors, including all faculty and student supplements as well as testing software. Available upon request from your local Pearson Prentice Hall representative.

INSTRUCTOR'S RESOURCE MANUAL BY SCOTT YETMAR (CLEVELAND STATE UNIVERSITY) Substantially revised, this resource manual provides insightful and useful tips on how to best manage course content when using *Introduction to Management Accounting*, 13/e in class. Chapter-by-chapter explanations and pedagogical philosophies are clearly delineated and oriented to greatly aid the teaching process.

SOLUTIONS MANUAL AND SOLUTIONS TRANSPARENCIES BY CHARLES T. HORNGREN (EMERITUS STANFORD UNIVERSITY), GARY L. SUNDEM (UNIVERSITY OF WASHINGTON, SEATTLE), AND WILLIAM O. STRATTON (PEPPERDINE UNIVERSITY) Comprehensive solutions for all end-of-chapter material. Also available in acetate form for in-class presentation.

TEST ITEM FILE BY SCOTT YETMAR (CLEVELAND STATE UNIVERSITY) A ready-to-use bank of testing material. Each chapter includes a variety of types of questions, including true/false, multiple choice, and critical thinking problems. Intended for ease of use, each question is linked to chapter objectives, and also provides suggested difficulty level and reference to text pages where answers can be found.

TestGenEQ by Tamarack Software, Inc. Testing software designed to aid in creating custom tests in minutes. Features include question randomization, a point-and-drag interface, and extensive customizable settings.

PowerPoint Presentation by Olga Quintana (University of Miami) Complete PowerPoint presentations for each chapter. Instructors may download and use each presentation as is or customize the slides to create a tailor-made slide show. Each presentation allows instructors to offer a more interactive presentation using colorful graphics, outlines of chapter material, and graphical explanations of difficult topics. Available online at http://www.prenhall.com/horngren and on the Instructor's Resource CD-ROM.

Course Web site at http://www.prenhall.com/horngren A complete online resource that offers a variety of Internet-based teaching and learning support. Our Web site provides a wealth of resources for students and faculty.
Resources include

- an online study guide;
- downloadable supplements, including PowerPoint and General Ledger Software for student use;
- learning assessment sections;
- practice tests with immediate feedback for self-study use.

Student Study Guide by Frank R. Selto (University of Colorado) The Student Study Guide contains a wealth of resources designed to aid students in text comprehension. Each chapter includes chapter overviews, study tips, self-test questions, demonstration problems and worked-out solutions, and more.

Spreadsheet Templates by Albert Fisher (Community College of Southern Nevada) Ready-made templates to accompany selected end-of-chapter problems can be found at http://www.prenhall.com/horngren.

Excel Application Exercises The Excel Application Exercises were prepared by Glenda C. Levendowski, CPA, Mesa Community College and Terry Levendowski, CMA, CPA, Consultant.

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Charles T. Horngren
Gary L. Sundem
William O. Stratton

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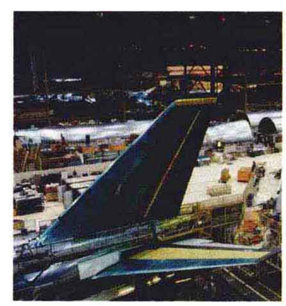

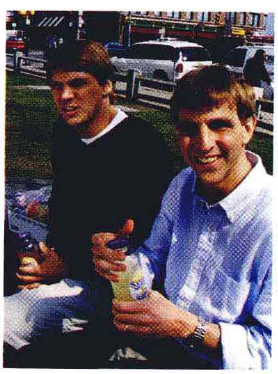

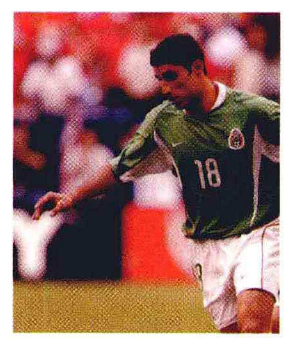

Part 3 Capital Budgeting