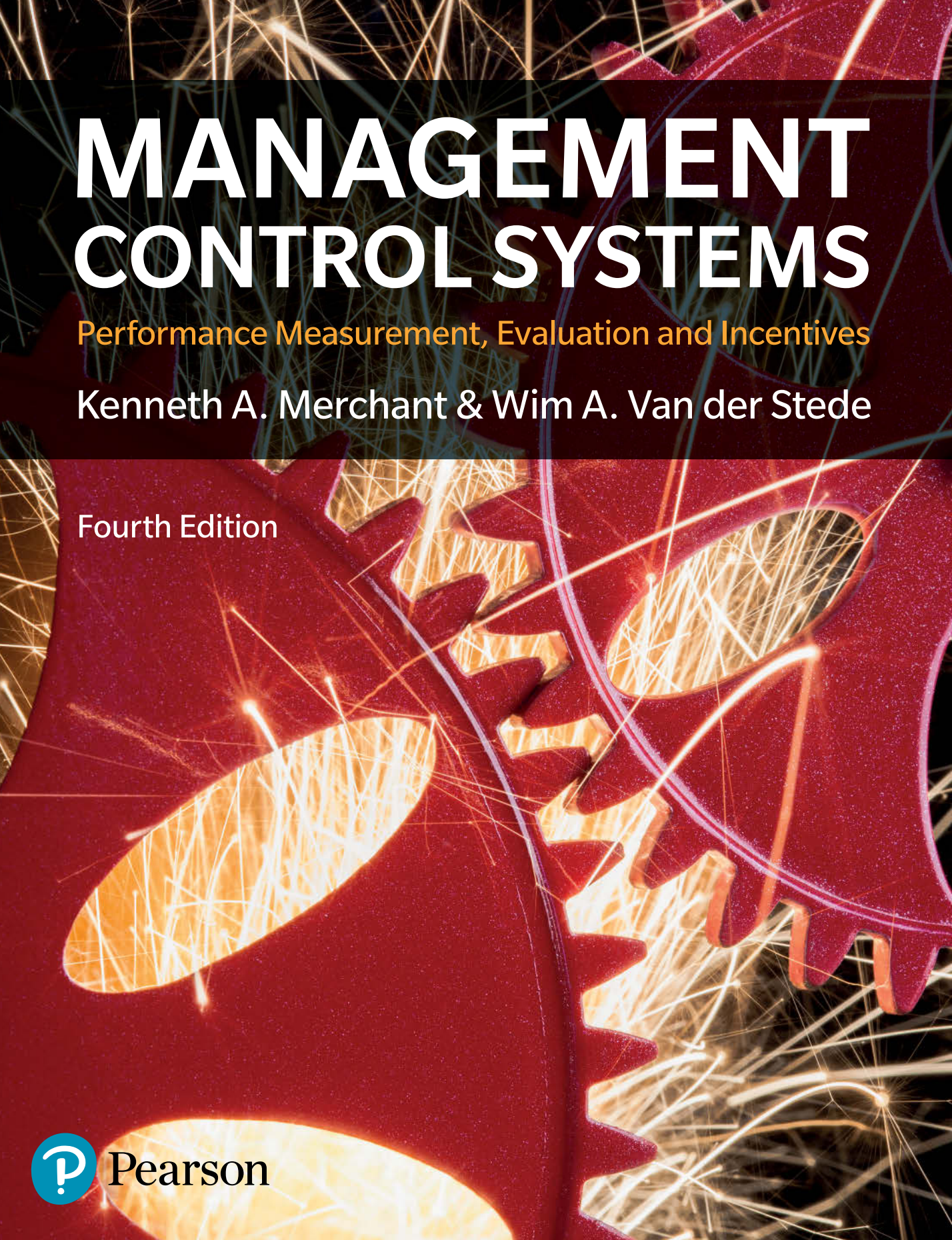

MANAGEMENT
CONTROL SYSTEMS
Performance Measurement, Evaluation and Incentives
Kenneth A. Merchant & Wim A. Van der Stede
Fourth Edition
Pearson

MANAGEMENT
CONTROL SYSTEMS



Pearson

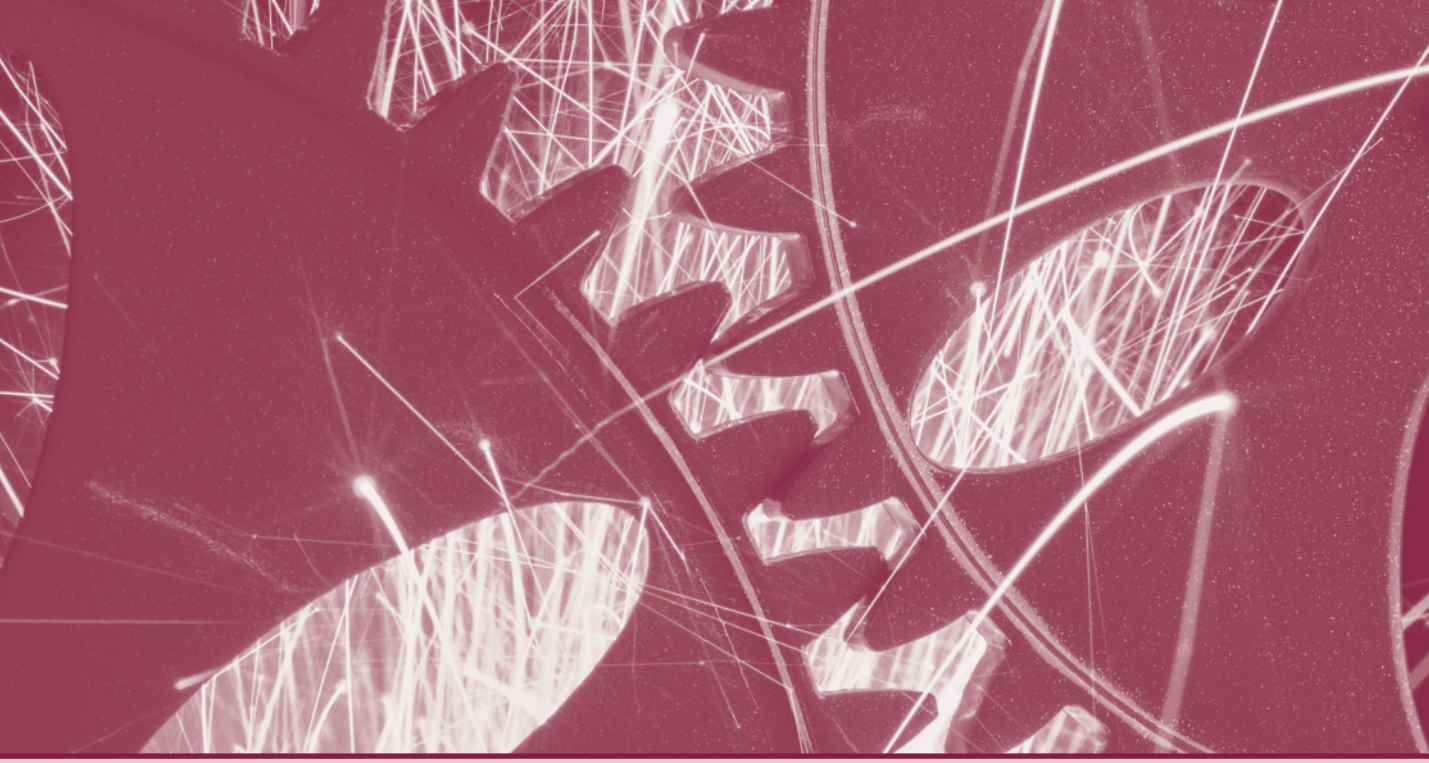
At Pearson, we have a simple mission: to help people make more of their lives through learning.

We combine innovative learning technology with trusted content and educational expertise to provide engaging and effective learning experiences that serve people wherever and whenever they are learning.

From classroom to boardroom, our curriculum materials, digital learning tools and testing programmes help to educate millions of people worldwide – more than any other private enterprise.

Every day our work helps learning flourish, and wherever learning flourishes, so do people.

To learn more, please visit us at **www.pearson.com/uk**



MANAGEMENT CONTROL SYSTEMS

Performance Measurement, Evaluation, and Incentives

Kenneth A. Merchant
University of Southern California

Wim A. Van der Stede
London School of Economics

Fourth edition

Pearson

Harlow, England • London • New York • Boston • San Francisco • Toronto • Sydney • Dubai • Singapore • Hong Kong
Tokyo • Seoul • Taipei • New Delhi • Cape Town • Sao Paulo • Mexico City • Madrid • Amsterdam • Munich • Paris • Milan

PEARSON EDUCATION LIMITED
Edinburgh Gate
Harlow CM20 2JE
United Kingdom
Tel: +44 (0)1279 623623
Web: www.pearson.com/uk

First published 2003 (print)
Second edition published 2007 (print)
Third edition published 2012 (print and electronic)
Fourth edition published 2017 (print and electronic)

© Pearson Education Limited 2003, 2007 (print)
© Pearson Education Limited 2012, 2017 (print and electronic)

The rights of Kenneth A. Merchant and Wim A. Van der Stede to be identified as authors of this work have been asserted by them in accordance with the Copyright, Designs and Patents Act 1988.

The print publication is protected by copyright. Prior to any prohibited reproduction, storage in a retrieval system, distribution or transmission in any form or by any means, electronic, mechanical, recording or otherwise, permission should be obtained from the publisher or, where applicable, a licence permitting restricted copying in the United Kingdom should be obtained from the Copyright Licensing Agency Ltd, Barnard's Inn, 86 Fetter Lane, London EC4A 1EN.

The ePublication is protected by copyright and must not be copied, reproduced, transferred, distributed, leased, licensed or publicly performed or used in any way except as specifically permitted in writing by the publishers, as allowed under the terms and conditions under which it was purchased, or as strictly permitted by applicable copyright law. Any unauthorised distribution or use of this text may be a direct infringement of the authors' and the publisher's rights and those responsible may be liable in law accordingly.

Pearson Education is not responsible for the content of third-party internet sites.

ISBN: 978-1-292-11055-4 (print)
978-1-292-11058-5 (PDF)
978-1-292-18187-5 (ePub)

British Library Cataloguing-in-Publication Data
A catalogue record for the print edition is available from the British Library

Library of Congress Cataloging-in-Publication Data
Names: Merchant, Kenneth A., author. | Van der Stede, Wim A., author.
Title: Management control systems: performance measurement, evaluation and incentives / Kenneth A. Merchant, University of Southern California, Wim A. Van der Stede, London School of Economics.
Description: Fourth Edition. | New York: Pearson, [2017] | Revised edition of the authors' Management control systems, 2012.
Identifiers: LCCN 2016053625| ISBN 9781292110554 (print) | ISBN 9781292110585 (pdf) | ISBN 9781292181875 (epub)
Subjects: LCSH: Industrial management. | Cost control. | Managerial accounting. | Performance—Measurement. | Industrial management—Case studies. | Cost control—Case studies. | Managerial accounting—Case studies.
Classification: LCC HD31 .M3972 2017 | DDC 658—dc23
LC record available at https://lccn.loc.gov/2016053625

10 9 8 7 6 5 4 3 2 1
21 20 19 18 17

Print edition typeset in 9/12, Charter ITC Std Regular by iEnergizer Aptara® Ltd.
Printed by Ashford Colour Press Ltd, Gosport

NOTE THAT ANY PAGE CROSS REFERENCES REFER TO THE PRINT EDITION

To our families

Gail, Abbidee, Madelyn (KM)

Ashley, Emma, Erin (WVDS)

This page intentionally left blank

BRIEF CONTENTS

Preface xiii

Acknowledgements xvi

SECTION I
The Control Function of Management

1 Management and Control 3

SECTION II
Management Control Alternatives and Their Effects

2 Results Controls 33

3 Action, Personnel, and Cultural Controls 86

4 Control System Tightness 128

5 Control System Costs 173

6 Designing and Evaluating Management Control Systems 221

SECTION III
Financial Results Control Systems

7 Financial Responsibility Centers 261

8 Planning and Budgeting 297

9 Incentive Systems 353

SECTION IV
Performance Measurement Issues and Their Effects

10 Financial Performance Measures and Their Effects 397

11 Remedies to the Myopia Problem 448

12 Using Financial Results Controls in the Presence of Uncontrollable Factors 517

SECTION V
Corporate Governance, Important Control-Related Roles, and Ethics

13 Corporate Governance and Boards of Directors 573

14 Controllers and Auditors 629

15 Management Control-Related Ethical Issues 677

SECTION VI
Management Control When Financial Results Are Not the Primary Consideration

16 Management Control in Not-for-profit Organizations 721

Index **761**

This page intentionally left blank

CONTENTS

Preface xiii
Acknowledgements xvi

SECTION I
The Control Function of Management

1 Management and Control 3

Management and control 8
Causes of management control problems 12
Characteristics of good management control 15
Control problem avoidance 15
Control alternatives 19
Outline of this text 19
Notes 20
Leo's Four-Plex Theater 22
Wong's Pharmacy 23
Private Fitness, Inc. 23
Atlanta Home Loan 25

SECTION II
Management Control Alternatives and their Effects

2 Results Controls 33

Prevalence of results controls 34
Results controls and the control problems 37
Elements of results controls 38
Conditions determining the effectiveness of results controls 42
Conclusion 46
Notes 46
Office Solutions, Inc. 48
Puente Hills Toyota 58
Kooistra Autogroep 71
Houston Fearless 76, Inc. 78

3 Action, Personnel, and Cultural Controls 86

Action controls 86
Action controls and the control problems 91
Prevention vs. Detection 92
Conditions determining the effectiveness of action controls 93
Personnel controls 95
Cultural controls 97
Personnel/cultural controls and the control problems 101
Effectiveness of personnel/cultural controls 101
Conclusion 103
Notes 103
Witsky and Associates, Inc. 105
The Platinum Pointe Land Deal 106
EyeOn Pharmaceuticals, Inc. 114
Axeon N.V. 121

4 Control System Tightness 128

Tight results control 128
Tight action controls 131
Tight personnel/cultural controls 137
Conclusion 139
Notes 140
Controls at the Bellagio Casino Resort 142
PCL: A Breakdown in the Enforcement of Management Control 168

5 Control System Costs 173

Direct costs 173
Indirect costs 174
Adaptation costs 182
Conclusion 186
Notes 187
Philip Anderson 189
Sunshine Fashion: Fraud, Theft, and Misbehavior among Employees 190
Better Beauty, Inc. 194
Fit Food, Inc. 206
Atlantis Chemical Industries 212

6 Designing and Evaluating Management Control Systems 221

What is desired and *what is likely* 221
Choice of controls 222
Choice of control tightness 229
Adapting to change 230
Keeping a behavioral focus 231
Maintaining good control 231
Notes 232
Diagnostic Products Corporation 233
Game Shop, Inc. 242
Family Care Specialists Medical Group, Inc. 252

SECTION III
Financial Results Control Systems

7 Financial Responsibility Centers 261

Advantages of financial results control systems 261
Types of financial responsibility centers 262
Choice of financial responsibility centers 267
The transfer pricing problem 269
Conclusion 274
Notes 275
Kranworth Chair Corporation 275
Zumwald AG 283
Global Investors, Inc. 285

8 Planning and Budgeting 297

Purposes of planning and budgeting 297
Planning cycles 299
Target setting 301
Planning and budgeting practices, and criticisms 310
Conclusion 312
Notes 313
Royal Wessanen NV 315
The Stimson Company 323
Multiple Versions of the Plan 332
Vitesse Semiconductor Corporation 333
VisuSon, Inc.: Business Stress Testing 342

9 Incentive Systems 353

Purposes of incentives 355
Monetary incentives 357
Incentive system design 364
Criteria for evaluating incentive systems 365
Group rewards 370
Conclusion 370
Notes 371
Harwood Medical Instruments PLC 374
Superconductor Technologies, Inc. 375
Raven Capital, LLC 384

SECTION IV
Performance Measurement Issues and Their Effects

10 Financial Performance Measures and Their Effects 397

Value creation 398
Market measures of performance 399
Accounting measures of performance 401
Investment and operating myopia 404
Return-on-investment measures of performance 406
Residual income measures as a possible solution to the ROI measurement problems 411
Conclusion 413
Notes 414
Behavioral Implications of Airline Depreciation Accounting Policy Choices 415
Las Ferreterías de México, S.A. de C.V. 417
Industrial Electronics, Inc. 421
Haengbok Bancorp 422
Corbridge Industries, Inc. 424
King Engineering Group, Inc. 433
Berkshire Industries PLC 442

11 Remedies to the Myopia Problem 448

Pressures to act myopically 448
Reduce pressures for short-term profit 450
Control investments with preaction reviews 451
Extend the measurement horizon (use long-term incentives) 453
Measure changes in value directly 455
Improve the accounting measures 455
Measure a set of value drivers 456
Conclusion 460

Notes 461
Catalytic Solutions, Inc. 462
Dortmunder-Koppel GmbH 470
Johansen's: The New Scorecard System 478
Mainfreight 488
Statoil 501

12 Using Financial Results Controls in the Presence of Uncontrollable Factors 517

The controllability principle 519
Types of uncontrollable factors 520
Controlling for the distorting effects of uncontrollables 522
Other uncontrollable factor issues 529
Conclusion 529
Notes 530
Olympic Car Wash 531
Beifang Chuang Ye Vehicle Group 532
Hoffman Discount Drugs, Inc. 534
Howard Building Corporation, Inc. *541*
Bank of the Desert (A) 554
Bank of the Desert (B) 556
Fine Harvest Restaurant Group (A) 561
Fine Harvest Restaurant Group (B) 565

SECTION V
Corporate Governance, Important Control-Related Roles, and Ethics

13 Corporate Governance and Boards of Directors 573

Laws and regulations 574
The Sarbanes-Oxley Act 575
Boards of directors 580
Audit committees 583
Compensation committees 585
Conclusion 586
Notes 586
Arrow Motorcar Corporation 588
Golden Parachutes? 594
Pacific Sunwear of California, Inc. 598
Entropic Communications, Inc. 610
Bio/Precise Medical Devices, Inc. 625

14 Controllers and Auditors 629

Controllers 629
Auditors 633
Conclusion 639
Notes 640
Don Russell: Experiences of a Controller/CFO 641
Desktop Solutions, Inc. (A): Audit of the St. Louis Branch 648
Desktop Solutions, Inc. (B): Audit of Operations Group Systems 657
Andrew G. Scavell, Chief Risk Officer 660

15 Management Control-Related Ethical Issues 677

Good ethical analyses and their importance 678
Why do people behave unethically? 682
Some common management control-related ethical issues 684
Spreading good ethics within an organization 689
Conclusion 691
Notes 692
Two Budget Targets 694
Conservative Accounting in the General Products Division 694
Education Food Services at Central Maine State University 695
The "Sales Acceleration Program" 697
The Expiring Software License 698
Wired, PLC 699
Mean Screens USA, Inc. 700
Lernout & Hauspie Speech Products 701
Ethics@Cisco 708

SECTION VI
Management Control When Financial Results Are Not the Primary Consideration

16 Management Control in Not-for-profit Organizations 721

Corporations, B corporations, and not-for-profits 722
Key differences between for-profit and not-for-profit organizations 723

Goal ambiguity and conflict 724
Difficulty in measuring and rewarding performance 725
Accounting differences 727
External scrutiny 728
Employee characteristics 731
Conclusion 731
Notes 733
SCI Ontario: Achieving, Measuring, and Communicating Strategic Success 735
University of Southern California: Responsibility Center Management System 746
Index **761**

PREFACE

This text provides materials for a comprehensive course on management control systems (MCSs). MCSs are defined broadly to include everything managers do to help ensure that their organization's strategies and plans are carried out or, if conditions warrant, are modified. Thus, the text could also be used in any course that focuses on topics related to the back end of the management process, such as strategy implementation or execution.

Because management control is a core function of management, all students interested in business or management can benefit from this text. However, courses based on the materials presented here should be particularly useful for those who are, or aspire to be, managers, management consultants, financial specialists (e.g. controllers, budget analysts, auditors), or human resource specialists (e.g. personnel directors, compensation consultants).

This edition includes 70 cases for classroom use. Case studies that stimulate learning through the analysis of complex situations such as those often faced in the "real world" are generally recognized to be perhaps the best pedagogical conduit for teaching a MCSs course. Because MCSs, the contexts in which they operate, and the outcomes they produce, are complex and multidimensional, simple problems and exercises cannot capture the essence of the issues managers face in designing and using MCSs. Students must develop the thinking processes that will guide them successfully through decision tasks with multiple embedded issues, incomplete information, and large amounts of relatively unstructured information. They must learn to develop problem-finding skills as well as critical thinking and problem-solving skills, and they must learn how to articulate and defend their ideas. Case analyses, discussions, and presentations provide an effective method for simulating these tasks in a classroom.

Although the text was designed primarily for use with graduate students and practicing professionals, it can be, and has been, used successfully with undergraduate students who have had a prior management accounting course. All that should be recognized when using this material with pre-work experience students is that some of the cases might be too challenging. That said, there are several suitable candidates to select from among the set of cases at the end of each chapter to tailor to various audiences and/or to achieve various course objectives (see also below).

This text is different from other MCS texts in a number of important ways. First, the basic organizing framework is different. The first major module discusses management controls based on the object of control: results, actions, or personnel/culture. The object-of-control framework has considerable advantages over other possible organizing frameworks. It has clean, clearly distinguishable categories. It is also relatively all-inclusive in the sense that the reader can relate many management controls and other control classifications and theories (for example, proactive vs. reactive controls, prevention vs. detection controls, and agency theory concepts such as adverse selection and monitoring vs. incentives) to it. It is also intuitive; that is, students can easily see that managers must make choices from among these categories of management control. Thus, using the object-of-control focus, the text is structured around a framework that describes the core management control problems that need to be addressed, the MCSs that can be used to address those problems, and the outcomes that can be produced, both positive (intended) and negative (unintended).

Second, the treatment of management control is broad. Like all MCS textbooks, this text focuses intensively on the use and effects of financial performance measures and associated *results controls*, which are in common use at managerial levels in many organizations. However, it also provides a broader treatment of management controls (organized around the object-of-control framework) to put the financial results controls in proper perspective. For example, the text describes many situations where financial results controls are not effective and discusses the alternatives that managers can use in those situations (such as nonfinancial performance indicators or greater reliance on stronger cultures).

Third, the text provides considerable discussion on the causes and remedies of the most common and serious management control-related problems, including the implications of issues of uncontrollability on manager's behaviors; the tendency of managers to adopt a short-term horizon in their decision-making; and managers' and employees' propensities to engage in distortive "gameplaying" evidencing misalignment with organizational objectives.

Fourth, the text provides a whole chapter of ethics coverage. There are many management control-related ethical issues, and both erstwhile and recent scandals across industries, including the automobile and banking sectors, but also the public and not-for-profit sectors, clearly suggest the need to develop managers' and prospective managers' ethical reasoning skills more fully. Related to this is coverage of corporate governance, to which we also devote a chapter.

Fifth, the important concepts, theories, and issues are not discussed just in abstract terms. They are illustrated with a large number of real-world examples, far more than typically included in any other MCS textbook. The examples make the textual discussion more concrete and bring the subject to life.

Finally, the mix of cases provided here is different from those included in other MCS textbooks in four important ways:

- Nearly all of the cases are real (that is, they describe the facts of an actual situation) although some of them are disguised (that is, they do not use the company's real name and/or use scaled figures/data to avoid identification or to protect data confidentiality). The relatively small number of cases that do not describe the (disguised) facts of an actual situation are "vignettes" that are, even so, almost always based on an observed situation but do not describe all of it. Instead, they focus on a particular (narrower) issue. Reality (and lack of disguise where possible) enhance student interest and learning about, for example, types of industries, companies, and organizational roles.
- Most of the cases (except the vignettes) include rich descriptions of the context within which the MCSs are operating. The descriptions give students opportunities to try to identify and address management control problems and issues within the multidimensional situations within which practicing managers cope with them.
- Most of the cases are of relatively recent vintage, and the set of cases has been chosen to ensure coverage of the latest MCS topics and issues, such as related to stress testing of budgets; mitigating management myopia; balancing sustainable value creation; motivating ethical behaviors; and using the EVA™ or Balanced Scorecard measurement systems or alternative budgeting approaches, just to name a few.
- The cases are descriptive of the operations and issues faced by companies located in many different countries and regions around the world, including Asia, Europe, Latin America, Oceania, as well as North America.

The cases permit the exploration of the management control issues in a broad range of settings. Included are cases on both large and small firms, manufacturing and service firms, domestic-focused and multinational firms, and for-profit and not-for-profit organizations. The cases present issues faced by personnel in both line and staff roles at corporate, divisional, and functional levels of the organization, as well as by members of boards of directors. Instructors can use this set of cases to teach a management control course that is broad in scope or one that is more narrowly focused (for example, MCSs in service organizations by focusing on the cases from the retail, financial, healthcare, education and other service sectors).

The cases provide considerable scheduling flexibility. Most of the cases cut across multiple topic areas because MCSs are inherently multidimensional. For example, the classroom focus for the Statoil case in Chapter 11 might be on performance measurement, as Statoil uses a key-performance-indicator (KPI) structure that is "balanced scorecard"-like. Or it could be on Statoil's planning and budgeting system, which separates the functions of target setting, forecasting and resource allocation using the principles of "Beyond Budgeting." To illustrate the latter further or in more depth, Statoil could be followed (or preceded) by the Mainfreight case, which offers ample opportunity for students to discuss and critically challenge the idea of beyond budgeting. In that context, both cases could be taught related to the subject matter in Chapter 8 on planning and budgeting instead of with Chapter 11. Yet, there are still sufficient cases listed with Chapter 11 to focus on remedies to the myopia problem, such as the new Johansen's case that describes a retail company that has adopted a balanced scorecard-based performance evaluation system. Students also have to consider the industry characteristics, the organization structure, the characteristics of

the people in key positions, and the company's history (e.g. a recent merger), so instructors can choose to use the Statoil case, say, when they wish to focus on the effects of one or more of these factors on the design of MCSs. As a consequence, the ordering of the cases is not intended to be rigid. Many alternatives are possible. A case overview sheet in the accompanying Instructors Manual to this text provides a matrix that helps instructors disentangle the various relevant topics for which each case could be fruitfully used.

In this fourth edition, we made various updates, most obviously in those areas where the world has been moving fast during the past few years, particularly since the 2008–2009 financial crisis and subsequent economic recession. This includes changes in incentive systems (Chapter 9), corporate governance (Chapter 13), and also ethics-related concerns (Chapter 15). Throughout the text, we incorporated recent research findings and updated the survey statistics and examples provided. We also added some new, exciting cases. Twenty-one of the 70 cases included in this edition are new, and an additional 12 were revised or brought up to date. Some of the new cases cover relatively recent and/or perennially pivotal topics, such as "mobile monitoring" of employees (Witsky and Associates, Inc.); planning and budgeting flexibility (Wessanen N.V.); alternatives to traditional budgeting (Mainfreight); project management (The Stimson Company); comprehensive multi-criteria performance evaluations (Johansen's); "hands-on" relative performance evaluations using real-world data (Fine Harvest Restaurant Group); as well as crucial ethical considerations (Ethics@Cisco). Others were intended to address the topics in new and different settings, such as King Engineering Group (an ESOP, or "employee stock ownership plan," company), or in relevant control-related roles, such as corporate risk officers (Andrew G. Scavell, CRO).

In developing the materials for this fourth edition, we have benefited from the insightful comments, helpful suggestions, and cases of many people. Ken owes special thanks to the two professors who served as his mentors at the Harvard Business School: William Bruns and Richard Vancil. Ken also appreciates the valuable research assistance from Michelle Spaulding. And Wim is especially grateful to Olivia Hanyue Luo for her capable research assistance. At Pearson Education, we are indebted to Commissioning Editors Caitlin Lisle and Rebecca Pedley for their support of this revision project from start to finish. Finally, Abhishek Agarwal of Aptara and Matthew Van Atta made very detailed and helpful suggestions in copyediting the manuscript.

We thank the Asia Case Research Center at the University of Hong Kong for granting permission to use two of their Poon Kam Kai Series cases (PCL and Sunshine Fashion). We appreciate Darden Business Publishing's help with their permission for use of the Johansen's case, and we also thank Winnie O'Grady for letting us use the Mainfreight case. Finally, we thank our co-authors on several cases included in this text, the names of whom are listed with the cases.

In closing, we wish to acknowledge that there is certainly no one best way to convey the rich subjects related to MCSs. We have presented one useful framework in the best way we know how, but we welcome comments about the content or organization of the text, or regarding any errors or omissions. Please direct them to us.

Kenneth A. Merchant
Deloitte & Touche LLP Chair of Accountancy
Leventhal School of Accounting
Marshall School of Business
University of Southern California
Los Angeles, CA 90089-0441
U.S.A.

Phone: (213) 821-5920
Fax: (213) 747-2815
E-mail: kmerchant@marshall.usc.edu

Wim A. Van der Stede
CIMA Professor of Accounting and Financial Management
London School of Economics
Department of Accounting
Houghton Street
London WC2A 2AE
U.K.

Phone: (020) 7955-6695
Fax: (020) 7955-7420
E-mail: w.van-der-stede@lse.ac.uk