Eighth Edition

Case Studies in FINANCE

Managing for Corporate Value Creation

Robert F. Bruner

Kenneth M. Eades

Michael J. Schill

McGraw Hill Education

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CASE STUDIES IN FINANCE: MANAGING FOR CORPORATE VALUE CREATIONS, EIGHTH EDITION

Published by McGraw-Hill Education, 2 Penn Plaza, New York, NY 10121.

This book is printed on acid-free paper.

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

ISBN 978-1-259-27719-1
MHID 1-259-27719-4

Portfolio Manager: *Tim Vertovec*
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Content Licensing Specialist: *Beth Thole*
Compositor: *Aptara®, Inc.*

Library of Congress Cataloging-in-Publication Data

Names: Bruner, Robert F., 1949-author. | Eades, Kenneth M., author. | Schill, Michael J., author.
Title: Case studies in finance: managing for corporate value creation / Robert F. Bruner, Kenneth M. Eades, Michael J. Schill.
Description: Eighth Edition. | Dubuque, IA : McGraw-Hill Education, [2018] | Series: The McGraw-Hill/Irwin series in finance, insurance, and real estate | Revised edition of the authors' Case studies in finance, [2014]
Identifiers: LCCN 2017023496| ISBN 9781259277191 (alk. paper) | ISBN 1259277194 (alk. paper)
Subjects: LCSH: Corporations—Finance—Case studies. | International business enterprises—Finance—Case studies.
Classification: LCC HG4015.5 .B78 2017 | DDC 658.15—dc23 LC record available at https://lccn.loc.gov/2017023496

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Dedication

In dedication to
our wives

Barbara M. Bruner
Kathy N. Eades

And to the memory of
Mary Ann H. Schill

and to our children

About the Authors

Robert F. Bruner is University Professor, Distinguished Professor of Business Administration and Charles C. Abbott Professor of Business Administration and Dean Emeritus of the Darden Graduate School of Business Administration at the University of Virginia. He has taught and written in various areas, including corporate finance, mergers and acquisitions, investing in emerging markets, innovation, and technology transfer. In addition to *Case Studies in Finance*, his books include *Finance Interactive,* multimedia tutorial software in Finance (Irwin/McGraw-Hill 1997), *The Portable MBA* (Wiley 2003), *Applied Mergers and Acquisitions*, *(*Wiley, 2004), *Deals from Hell: M&A Lessons that Rise Above the Ashes* (Wiley, 2005) and *The Panic of 1907* (Wiley, 2007). He has been recognized in the United States and Europe for his teaching and case writing. *BusinessWeek* magazine cited him as one of the "masters of the MBA classroom." He is the author or co-author of over 400 case studies and notes. His research has been published in journals such as *Financial Management, Journal of Accounting and Economics, Journal of Applied Corporate Finance, Journal of Financial Economics, Journal of Financial and Quantitative Analysis,* and *Journal of Money, Credit, and Banking*. Industrial corporations, financial institutions, and government agencies have retained him for counsel and training. He has been on the faculty of the Darden School since 1982, and has been a visiting professor at Harvard, Columbia, INSEAD, and IESE. Formerly he was a loan officer and investment analyst for First Chicago Corporation. He holds the B.A. degree from Yale University and the M.B.A. and D.B.A. degrees from Harvard University. Copies of his papers and essays may be obtained from his website, http://www.darden.virginia.edu/web/Faculty-Research/Directory/Full-time/Robert-F-Bruner/ He may be reached via email at brunerr@virginia.edu.

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1988, Professor Eades was a member of the faculties at The University of Michigan and the Kellogg School of Management at Northwestern University. He has a B.S. from the University of Kentucky and Ph.D. from Purdue University. His website is http://www.darden.virginia.edu/web/Faculty-Research/Directory/Full-time/Kenneth-M-Eades/ and he may be reached via email at eades@virginia.edu.

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Foreword

As I think about developing the next generation of leaders in business and finance, I naturally reflect on my own path. My career in business has taught some profound lessons—and so did my experience at the University of Virginia's Darden School of Business. Both life experience and school learning are critical components in the development of any leader. For that reason, I have supported wholeheartedly higher education as the path toward a promising future.

As the world keeps changing, higher education must continually adapt. Practices, processes, and business models that were once popular have faded. At the same time, the field of Finance has witnessed dramatic changes, including the advent of new valuation models, the rise of new markets and institutions, the invention of new financial instruments, the impact of new information technologies, and growing globalization. In this environment, we must think critically about the changing world, pay attention to new ideas, and adapt in sensible ways. Business schools play a critical role in the change process: theory suggests new approaches, empirical research tests them, and classroom teaching transfers knowledge. The development of new teaching materials is vital to that process.

Case studies in Finance have evolved markedly over the past 40 years. This shift reflects the revolutionary changes in markets and organization, as well as the many significant advances in theory and empirical research. Because case studies are an invaluable teaching tool, it is critical that the body of cases grows with the practice of and scholarship in Finance.

I am pleased to introduce the reader to the eighth edition of *Case Studies in Finance,* by Robert F. Bruner, Kenneth M. Eades, and Michael J. Schill. These professors exemplify the practice-oriented scholar who understands the economic foundations of Finance and the extensive varieties of its practice. They translate business phenomena into material that is accessible both to experienced practitioners and novices in Finance.

This book is a valuable contribution to the teaching materials available in the field of Finance. First, these cases link managerial decisions to capital markets and investor expectations. At the core of most is a valuation task that requires students to look to financial markets to resolve the problem. Second, these cases feature a wide range of contemporary and relevant problems, including examples in real and financial options, agency conflicts, financial innovation, investing in emerging markets, and corporate control. They also cover classic topics in Finance, including dividend policy, the mix of debt and equity financing, the estimation of future financial requirements, and the choice between mutually exclusive investments. Finally, these cases invite students to harness technology they will use in the workplace to develop key insights.

I am confident this collection will help students, scholars, and practitioners sharpen their decision-making ability, and advance the development of the next generation of leaders in Finance.

John R. Strangfeld
Chairman and Chief Executive Officer
Prudential Financial, Inc.
May 3, 2017
Newark, New Jersey

Preface

The inexplicable is all around us. So is the incomprehensible. So is the unintelligible. Interviewing Babe Ruth[1] *in 1928, I put it to him "People come and ask what's your system for hitting home runs—that so?" "Yes," said the Babe, "and all I can tell 'em is I pick a good one and sock it. I get back to the dugout and they ask me what it was I hit and I tell `em I don't know except it looked good."*

—Carl Sandburg[2]

Managers are not confronted with problems that are independent of each other, but with dynamic situations that consist of complex systems of changing problems that interact with each other. I call such situations <u>*messes*</u> *. . . Managers do not solve problems: they manage messes.*

—Russell Ackoff[3]

Orientation of the Book

Practitioners tell us that much in finance is inexplicable, incomprehensible, and unintelligible. Like Babe Ruth, their explanations for their actions often amount to "I pick a good one and sock it." Fortunately for a rising generation of practitioners, tools and concepts of Modern Finance provide a language and approach for excellent performance. The aim of this book is to illustrate and exercise the application of these tools and concepts in a messy world.

Focus on Value

The subtitle of this book is *Managing for Corporate Value Creation*. Economics teaches us that value creation should be an enduring focus of concern because value is the foundation of survival and prosperity of the enterprise. The focus on value also helps managers understand the impact of the firm on the world around it. These cases harness and exercise this economic view of the firm. It is the special province of finance to highlight value as a legitimate concern for managers. The cases in this book exercise valuation analysis over a wide range of assets, debt, equities, and options, and a wide range of perspectives, such as investor, creditor, and manager.

Linkage to Capital Markets

An important premise of these cases is that managers should take cues from the capital markets. The cases in this volume help the student learn to look at the capital markets in four ways. First, they illustrate important players in the capital markets such as

[1]George Herman "Babe" Ruth (1895–1948) was one of the most famous players in the history of American baseball, leading the league in home runs for 10 straight seasons, setting a record of 60 home runs in one season, and hitting 714 home runs in his career. Ruth was also known as the "Sultan of Swat."

[2]Carl Sandburg, "Notes for Preface," in *Harvest Poems* (New York: Harcourt Brace Jovanovich, 1960), p.11.

[3]Russell Ackoff, "The Future of Operational Research is Past," *Journal of Operational Research Society,* 30, 1 (Pergamon Press, Ltd., 1979): 93–104.

individual exemplar Warren Buffett and institutions like investment banks, commercial banks, rating agencies, hedge funds, merger arbitrageurs, private equity firms, lessors of industrial equipment, and so on. Second, they exercise the students' abilities to interpret capital market conditions across the economic cycle. Third, they explore the design of financial securities, and illuminate the use of exotic instruments in support of corporate policy. Finally, they help students understand the implications of transparency of the firm to investors, and the impact of news about the firm in an efficient market.

Respect for the Administrative Point of View

The real world is messy. Information is incomplete, arrives late, or is reported with error. The motivations of counterparties are ambiguous. Resources often fall short. These cases illustrate the immense practicality of finance theory in sorting out the issues facing managers, assessing alternatives, and illuminating the effects of any particular choice. A number of the cases in this book present practical ethical dilemmas or moral hazards facing managers—indeed, this edition features a chapter, "Ethics in Finance" right at the beginning, where ethics belongs. Most of the cases (and teaching plans in the associated instructor's manual) call for *action plans* rather than mere analyses or descriptions of a problem.

Contemporaneity and Diversity

All of the cases in this book are set in the year 2006 or after and 25 percent are set in 2015 or later. A substantial proportion (57 percent) of the cases and technical notes are new, or significantly updated. The mix of cases reflects the global business environment: 52 percent of the cases in this book are set outside the United States, or have strong cross-border elements. Finally the blend of cases continues to reflect the growing role of women in managerial ranks: 31 percent of the cases present women as key protagonists and decision-makers. Generally, these cases reflect the increasingly diverse world of business participants.

Plan of the Book

The cases may be taught in many different combinations. The sequence indicated by the table of contents corresponds to course designs used at Darden. Each cluster of cases in the Table of Contents suggests a concept module, with a particular orientation.

1. **Setting Some Themes.** These cases introduce basic concepts of value creation, assessment of performance against a capital market benchmark, and capital market efficiency that reappear throughout a case course. The numerical analysis required of the student is relatively light. The synthesis of case facts into an important framework or perspective is the main challenge. The case, "Warren E. Buffett, 2016," sets the nearly universal theme of this volume: the need to think like an investor. The updated case entitled, "The Battle for Value, 2016: FedEx Corp. vs. United Parcel Service, Inc." explores the definition of business success and its connections to themes of financial management. "Larry Puglia and the T. Rowe Price Blue Chip Growth Fund," is an updated version of cases in prior

editions that explores a basic question about performance measurement: what is the right benchmark against which to evaluate success? And finally, “Genzyme and Relational Investors: Science and Business Collide?”, is a case that poses the dilemma of managing a public company when the objectives of the shareholders are not always easily aligned with the long-term objectives of the company and an activist investor is pressuring the company for change.

2. **Financial Analysis and Forecasting.** In this section, students are introduced to the crucial skills of financial-statement analysis, break-even analysis, ratio analysis, and financial statement forecasting. The section starts with a note, “Business Performance Evaluation: Approaches for Thoughtful Forecasting”, that provides a helpful introduction to financial statement analysis and student guidance on generating rational financial forecasts. The case, “The Financial Detective 2016”, asks students to match financial ratios of companies with their underlying business and financial strategies. “Whole Foods Market: The Deutsche Bank Report” provides students with the opportunity to reassess the financial forecast of a research analyst in light of industry dynamics. This case can also be used an opportunity for students to hone firm valuation skills with the evaluation of the analyst’s “buy, hold, or sell” recommendation. “Horniman Horticulture” uses a financial model to build intuition for the relevancy of corporate cash flow and the financial effects of firm growth. The case, “Guna Fibres” asks the students to consider a variety of working capital decisions, including the impact of seasonal demand upon financing needs. Other cases address issues in the analysis of working-capital management, and credit analysis.

3. **Estimating the Cost of Capital.** This module begins with an article that is a survey of “best practices” among leading firms for estimating the cost of capital during the low interest rate regime following the 2007–08 financial crisis. The cases following the survey article expose students to the skills in estimating the cost of capital for firms and their business segments. The cases aim to exercise and solidify students’ mastery of the capital asset pricing model, the dividend-growth model, and the weighted average cost of capital formula. “Roche Holdings AG: Funding the Genentech Acquisition” is a case that invites students to estimate the appropriate cost of debt for a massive debt offering. The case provides an introduction to the concept of estimating required returns. Two new cases ask the student to estimate the cost of capital for the firm. “H.J. Heinz: Estimating the Cost of Capital in Uncertain Times” gives students the opportunity to reassess the cost of capital following share price decline. “Royal Mail plc:Cost of Capital” affords students the challenge of critiquing a cost of capital estimate for recently privatized British postal service. The case “Chestnut Foods” requires students to consider arguments for and against risk-adjusted hurdle rates in a multi-divisional firm, as well as techniques for estimating divisional-specific cost of capital.

4. **Capital Budgeting and Resource Allocation.** The focus of these cases is the evaluation of individual investment opportunities as well as the assessment of corporate capital budgets. The analytical challenges range from setting the entire

capital budget for a resource-constrained firm ("Target Corporation") to basic time value of money problems ("The Investment Detective"). Key issues in this module include the estimation of Free Cash Flows, the comparison of various investment criteria (NPV, IRR, payback, and equivalent annuities), the treatment of issues in mutually exclusive investments, and capital budgeting under rationing. This module features several new cases. The first is "Centennial Pharmaceutical Corporation" provides an introduction to discounted cash flow principles by asking the student to compare values of two earnout plans. "Worldwide Paper Company" is an updated case that serves as an introduction to estimating cash flows and calculating the NPV of an investment opportunity. "Fonderia del Piemonte S.p.A." is a new addition to the book. Fonderia is an Italian company considering a capital investment in machinery that replaces existing equipment. The student must assess the incremental value to the company of investing in the new equipment. The Victoria Chemical cases give students cash flow estimates for a large capital investment opportunity ("Victoria Chemical plc (A): The Merseyside Project") as asks the student to provide a careful critique of the DCF analysis. The sequel case, ("Victoria Chemical plc (B): Merseyside and Rotterdam Projects", deepens the analysis by adding a competing and mutually exclusive investment opportunity. "The Procter and Gamble Company: Crest Whitestrips Advanced Seal" is a case that asks the student to value a new product launch but then consider the financial implications of a variety of alternative launch scenarios The case, "Jacobs Division", presents students an opportunity to consider the implications of strategic planning processes. "UVa Hospital System: The Long-term Acute Care Hospital Project", is an analysis of an investment decision within a not-for-profit environment. In addition to forecasting and valuing the project's cash flows, students must assess whether NPV and IRR are appropriate metrics for an organization that does not have stockholders. "Star River Electronics Ltd" has been updated for this edition and presents the student will a range of issues that the new CEO of the company must address, including the determination of the company's cost of capital and whether to invest in new machinery. We have used this case as an exam for the first half of the finance principles course in the MBA program.

5. **Management of the Firm's Equity: Dividends and Repurchases.** This module seeks to develop practical principles about dividend policy and share repurchases by drawing on concepts about dividend irrelevance, signaling, investor clienteles, bonding, and agency costs. The first case, "Rockboro Machine Tools Corporation", is set in 2015 and concerns a company that is changing its business strategy and considering a change in its dividend policy. The case serves as a comprehensive introduction to corporate financial policy and themes in managing the right side of the balance sheet. The second case, "EMI Group PLC", is new to this edition and features a struggling music producer in the U.K. confronted with whether it should continue to pay a dividend despite the profit pressures it is facing. And finally, "AutoZone, Inc." is a leading auto parts retailer that has been repurchasing shares over many years. The case serves as an excellent example of how share

repurchases impact the balance sheet and presents the student with the challenge of assessing the impact upon the company's stock price.

6. **Management of the Corporate Capital Structure.** The problem of setting capital structure targets is introduced in this module. Prominent issues are the use and creation of debt tax shields, the role of industry economics and technology, the influence of corporate competitive strategy, the tradeoffs between debt policy, dividend policy, and investment goals, and the avoidance of costs of distress. Following a technical note, "An Introduction to Debt Policy and Value", is a new case, "M&M Pizza", which explores the debt-equity choice within a perfect capital market environment—a capital market with full information and no costs of trading. This case provides an engaging environment for students to confront fundamental financial policy theory. "California Pizza Kitchen", is a real world analog to "M&M Pizza" as it addresses the classic dilemma entailed in optimizing the use of debt tax shields and providing financial flexibility for a national restaurant chain. The next four cases are all new to the book. "Dominion Resources: Cove Point" presents the student with the challenge of financing a large new project without creating substantial disruption to the firm's capital structure polices. The "Nokia OYJ: Financing the WP Strategic Plan" presents a similar theme as management has taken a new strategic direction and must make financing decisions that are cost effective, but also preserve financial flexibility going forward. "Kelly Solar" concerns a start-up that needs new funds for investment, but already has a significant amount of debt on the books that needs to be renegotiated before new investors will find their investment to be attractive. The case, "JC Penney Company", presents a large retail chain that is facing widespread performance challenges and needs to raise funds to offset the steadily declining cash balance that will eventually create a liquidity crisis for the company. The last case is "Horizon Lines, Inc." The case is about a company facing default on a debt covenant that will prompt the need for either Chapter 11 protection or a voluntary financial restructuring.

7. **Analysis of Financing Tactics: Leases, Options, and Foreign Currency.** While the preceding module is concerned with setting debt targets, this module addresses a range of tactics a firm might use to pursue those targets, hedge risk, and exploit market opportunities. Included are domestic and international debt offerings, leases, currency hedges, warrants, and convertibles. With these cases, students will exercise techniques in securities valuation, including the use of option-pricing theory. For example, the first case, "Baker Adhesives" explores the concept of exchange-rate risk and the management of that risk with a forward-contract hedge and a money-market hedge. "Vale SA" is new to this edition and is a Brazilian mining company that must choose between debt financing denominated in U.S. dollars, euros or British pounds. The case "J&L Railroad" presents a commodity risk problem for which students are asked to propose a specific hedging strategy using financial contracts offered on the open market or from a commercial bank. "WNG Capital, LLC" is a new case about a company that owns older aircraft that it leases to airlines as an alternative to the airline buying new aircraft. "MoGen, Inc" presents the pricing challenges associated with a

convertible bond as well as a complex hedging strategy to change the conversion price of the convertible through the purchase of options and issuance of warrants.

8. **Valuing the Enterprise: Acquisitions and Buyouts.** This module begins with an extensive introduction to firm valuation in the note "Methods of Valuation: Mergers and Acquisitions." The focus of the note includes valuation using DCF and multiples. This edition features six new cases in this module and five cases from the previous edition. The "Medfield Pharmaceuticals" introduces students to firm valuation with the reality of considering the difference between the value of firm assets in place and the value of firm growth opportunities in the context of a takeover offer for a pharmaceutical company. The case also includes important ethical considerations. "American Greetings" was in the prior edition and provides a straightforward firm valuation in the context of a repurchase decision and is designed to be an introduction to firm valuation. The new case "Ferrari: The 2015 Initial Public Offering", presents students the opportunity to value the legendary automotive company, and consider how to determine appropriate company comparables for a firm that is both an auto manufacturer and a luxury brand. The case, "Rosetta Stone: Pricing the 2009 IPO", provides an alternative IPO valuation case with additional focus on valuation with market multiples. "Sun Microsystems" is also returning from the previous edition and presents a traditional takeover valuation case with opportunities to evaluate merger synergies and cost of capital implications. The next five cases are all new to this edition. "Carter International" involves assessing the correct price to offer to acquire another hotel company. "DuPont Corporation: Sale of Performance Coatings" asks the student to assess the economics of divesting a business unit that is not meeting the strategic objectives of the firm. "Sanofi-Aventis's Tender Offer for Genzyme" is a sequel to the "Genzyme and Relational Investors: Science and Business Collide?" in which Genzyme's CEO must decide whether to accept a tender offer to acquire Genzyme. "Delphi Corporation" features a large auto parts company that has been in Chapter 11 bankruptcy for two years. The student must decide in the role of a non-secured lender whether to vote to approve the Plan of Reorganization to emerge from Chapter 11.

   And finally, the module features a merger negotiation exercise ("Flinder Valves and Controls Inc.") that provides an engaging venue for investigating the distribution of value in a merger negotiation. The comprehensive nature of cases in this module makes them excellent vehicles for end-of-course classes, student term papers, and/or presentations by teams of students.

This edition offers a number of cases that give insights about investing or financing decisions in emerging markets. These include "Guna Fibres Ltd.," "Star River Electronics Ltd.," and "Baker Adhesives."

Summary of Changes for this Edition

The eighth edition represents a substantial and significant change from the seventh edition.

This edition offers 31 new or significantly updated cases and technical notes, which represents 57 percent of the book. In the interest of presenting a fresh and contemporary collection, older cases have been updated and/or replaced with new case situations such that all the cases are set in 2006 or later and 25 percent are set in 2015 or later. Several of the favorite “classic” cases from the first seven editions are available online from McGraw-Hill such that instructors who adopt this edition may copy these older cases for classroom use. These materials can be find at www.mhhe.com/bescases8e. All cases and teaching notes have been edited to sharpen the opportunities for student analysis.

Supplements

The case studies in this volume are supported by various resources that help make student engagement a success:

- A guide to the novice on case preparation, “Note to the Student: How to Study and Discuss Cases” in this volume.
- All of the cases in this book are accompanied by a full teaching note that contains suggested student study questions, a hypothetical teaching plan, and a prototypical finished case analysis. In addition, the cases also have spreadsheet files that support student and instructor preparation of the cases. These materials are available to all instructors at the book’s website at www.mhhe.com/bescases8e. Also at the book’s website is an instructor’s resource manual that facilitates the use of these materials in a standard course by providing resources on how to design a case course and how the cases fit together.
- Two of the cases provide student counterparty roles for two negotiation exercises. The teaching materials present detailed discussions of case outcomes, one of which is designed to be used as second class period for the case. These supplemental materials can significantly extend student learning and expand the opportunities for classroom discussion.
- A companion book by Robert Bruner titled, *Socrates’ Muse: Reflections on Excellence in Case Discussion Leadership* (Irwin/McGraw-Hill, 2002), is available to instructors who adopt the book for classroom use. This book offers useful tips on case method teaching. This title is available through Create, McGraw-Hill Education’s on-demand and custom publishing system. Ask your learning technology representative for more details.

Acknowledgments

This book would not be possible without the contributions of many other people. Colleagues at Darden who have taught, co-authored, contributed to, or commented on these cases are Brandt Allen, Yiorgos Allayannis, Sam Bodily, Karl-Adam Bonnier, Susan Chaplinsky, John Colley, Bob Conroy, Mark Eaker, Rich Evans, Bob Fair, Paul Farris, Jim Freeland, Sherwood Frey, Bob Harris, Jared Harris, Mark Haskins, Michael Ho, Marc Lipson, Elena Loutskina, Pedro Matos, Matt McBrady, Charles Meiburg, Jud Reis, William Sihler and Robert Spekman. We are grateful for their collegiality and for the support for our casewriting efforts from the Darden School Foundation, the Mayo Center for Asset Management, the L. White Matthews Fund for Finance Casewriting,

the Batten Institute, Columbia Business School, INSEAD, the University of Melbourne and the University of Virginia's McIntire School of Commerce.

Colleagues at other schools provided worthy insights and encouragement toward the development of the eight editions of *Case Studies in Finance*. We are grateful to the following persons (listed with the schools with which they were associated at the time of our correspondence or work with them):

Michael Adler, *Columbia*
Raj Aggarwal, *John Carroll*
Turki Alshimmiri, *Kuwait Univ.*
Ed Altman, *NYU*
James Ang, *Florida State*
Paul Asquith, *M.I.T.*
Bob Barnett, *North Carolina State*
Geert Bekaert, *Stanford*
Michael Berry, *James Madison*
Randy Billingsley, *VPI&SU*
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Research Assistants working under our direction have helped gather data and prepare drafts. Research assistants who contributed to various cases in this and previous editions include Darren Berry, Chris Blankenship, Justin Brenner, Anna Buchanan, Anne Campbell, Drew Chambers, Sean Carr, Jessica Chan, Jenny Craddock, Lucas Doe, Jake Dubois, Brett Durick, David Eichler, Ali Erarac, Shachar Eyal, Rick Green, Daniel Hake, Dennis Hall, Jerry Halpin, Peter Hennessy, Dot Kelly, Vladimir Kolcin, Nili Mehta, Casey Opitz, Katarina Paddack, Suprajj Papireddy, Thien Pham, Chad Rynbrandt, John Sherwood, Elizabeth Shumadine, Janelle Sirleaf, Jane Sommers-Kelly, Don Stevenson, Carla Stiassni, Sanjay Vakharia, Larry Weatherford, and Steve Wilus. We have supervised numerous others in the development of individual cases—those worthy contributors are recognized in the first footnote of each case.

A busy professor soon learns the wisdom in the adage, "Many hands make work light." we are very grateful to the staff of the Darden School for its support in this project. Excellent editorial assistance at Darden was provided by the staff of Darden Business Publishing and the Darden Case Collection. We specifically thank Leslie Mullin (Senior Editor) and Margaret Ebin, Lucinda Ewing and Debbie O'Brien (Editors). Ginny Fisher gave stalwart secretarial support. Valuable library research support was given by Karen Marsh King and Susan Norrisey. The patience, care, and dedication of these people are richly appreciated.

At McGraw-Hill, Chuck Synovec has served as Brand Manager for this book. Melissa Leick was the project manager, and Jennifer Upton served as Product Developer for this edition. Our thanks extend to those who helped us on prior editions as well, including Mike Junior, who originally recruited Bob Bruner to do this project, and Michele Janicek.

Of all the contributors, our wives, Barbara M. Bruner, Kathy N. Eades, and Mary Ann H. Schill as well as our children have endured great sacrifices as the result of our work on this book. As Milton said, "They also serve who only stand and wait." Development of this eighth edition would not have been possible without their fond patience.

All these acknowledgments notwithstanding, responsibility for these materials is ours. We welcome suggestions for their enhancement. Please let us know of your experience with these cases, either through McGraw-Hill/Irwin, or at the coordinates given below.

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[4]Students should know that we are unable to offer any comments that would assist their preparation of these cases without the prior express request of their instructors.

Note to the Student: How to Study and Discuss Cases

"Get a good idea and stay with it. Dog it and work at it until it's done, and done right."
—Walt Disney

You enroll in a "case method" course, pick up the book of case studies or the stack of loose-leaf cases, and get ready for the first class meeting. If this is your first experience with case discussions, the odds are that you are clueless and a little anxious about how to prepare for this course. That's fairly normal but something you should try to break through quickly in order to gain the maximum from your studies. Quick breakthroughs come from a combination of good attitude, good "infrastructure," and good execution—this note offers some tips.

Good Attitude

Students learn best that which they teach themselves. Passive and mindless learning is ephemeral. Active and mindful learning simply sticks. The case method makes learning sticky by placing you in situations that require invention of tools and concepts *in your own terms.* The most successful case students share a set of characteristics that drive self-teaching:

1. **Personal initiative, self-reliance.** Case studies rarely suggest how to proceed. Professors are more like guides on a long hike: they can't carry you, but they can show you the way. You must arrive at the destination under your own power. You must figure out the case on your own. To teach yourself means that you must sort ideas out in ways that make sense to you, personally. To teach yourself is to give yourself two gifts: the idea you are trying to learn, and greater self-confidence in your own ability to master the world.
2. **Curiosity, a zest for exploration as an end in itself.** Richard P. Feynman, who won the Nobel Prize in Physics in 1965, was once asked whether his key discovery was worth it. He replied, ". . . [the Nobel Prize is] a pain in the . . . I don't like honors . . . The prize is the pleasure of finding the thing out, the kick in the discovery, the observation that other people use it [my work]—those are the real things, the honors are unreal to me."[1]

[1]Richard P. Feynman, *The Pleasure of Finding Things Out,* Cambridge, Perseus Publishing, 1999, page 12.

3. **A willingness to take risks.** Risk-taking is at the heart of all learning. Usually one learns more from failures than successes. The banker, Walter Wriston, once said, "Good judgment comes from experience. Experience comes from bad judgment."
4. **Patience and persistence.** Case studies are messy, a realistic reflection of the fact that managers don't manage problems, they manage messes.[2] Initially, reaching a solution will seem to be the major challenge. But once you reach *a* solution, you may discover other possible solutions, and face the choice among the best alternatives.
5. **An orientation to community and discussion.** Much of the power of the case method derives from a willingness to *talk* with others about your ideas and/or your points of confusion. This is one of the paradoxes of the case method: you must teach yourself, but not in a vacuum. The poet, T.S. Eliot, said, "there is no life not lived in community." Talking seems like such an inefficient method of sorting through the case, but if exploration is an end in itself then talking is the only way. Furthermore, talking is an excellent means of testing your own mastery of ideas, of rooting out points of confusion, and generally, of preparing you for professional life.
6. **Trust in the process.** The learnings from a case-method course are impressive. They arrive cumulatively over time. In many cases, the learnings continue well after the course has finished. Occasionally, these learnings hit you with the force of a tsunami. But generally, the learnings creep in quietly, but powerfully, like the tide. After the case course, you will look back and see that your thinking, mastery, and appreciation have changed dramatically. The key point is that you should not measure the success of your progress on the basis of any single case discussion. Trust that in the cumulative work over many cases you will gain the mastery you seek.

Good Infrastructure

"Infrastructure" consists of all the resources that the case student can call upon. Some of this is simply given to you by the professor: case studies, assignment questions, supporting references to textbooks or articles, and computer data or models. But you can go much farther to help yourself. Consider these steps:

1. **Find a quiet place to study. Spend at least 90 minutes there for each case study.** Each case has subtleties to it, which you will miss unless you can concentrate. After two or three visits, your quiet place will take on the attributes of a

[2] One of the iconic professors in operations research, Russell Ackoff, once wrote, "Managers are not confronted with problems that are independent of each other, but with dynamic situations that consist of complex systems of changing problems that interact with each other. I call such situations messes . . . Managers do not solve problems: they manage messes." ((Russell Ackoff, "The Future of Operational Research is Past," *Journal of Operational Research Society,* 30, 1 (Pergamon Press, Ltd., 1979): 93–104.))

habit: you will slip into a working attitude more easily. Be sure to spend enough time in the quiet place to give yourself a chance to really engage the case.

2. **Access a business dictionary.** If you are new to business and finance, some of the terms will seem foreign; if English is not your first language, *many* of the terms will seem foreign if not bizarre. Get into the habit of looking up terms that you don't know. The benefit of this becomes cumulative. You can find good definitions online.
3. **Skim the business news each day; read a substantive business magazine or blog regularly; follow the markets.** Reading a newspaper or magazine helps build a *context* for the case study you are trying to solve at the moment, and helps you make connections between the case study and current events. The terminology of business and finance that you see in the publications helps reinforce your use of the dictionary, and hastens your mastery of terms you will see in the cases. Your learning by reading business periodicals is cumulative. Some students choose to follow a good business news website on the Internet. These have the virtue of being inexpensive and efficient, but they tend to screen too much. Having the printed publication in your hands, and leafing through it, helps the process of *discovery*, which is the whole point of the exercise.
4. **Learn the basics of spreadsheet modeling on a computer.** Many case studies now have supporting data available for analysis in spreadsheet files, such as Microsoft Excel. Analyzing the data on a computer rather than by hand both speeds up your work, and extends your reach.
5. **Form a study group.** The ideas in many cases are deep; the analysis can get complex. *You will learn more, and perform better in class participation by discussing the cases together in a learning team before you come to class.* Your team should devote an average of an hour to each case. High performance teams show a number of common attributes:

   a. Members commit to the success of the team.

   b. The team plans ahead, leaving time for contingencies.

   c. The team meets regularly.

   d. Team members show up for meetings and are *prepared* to contribute.

   e. There may or may not be a formal leader, but assignments are clear. Team members meet their assigned obligations.

6. **Get to know your professor.** In the case method, students inevitably learn more from one another than from the instructor. But the teacher is part of the learning infrastructure too: a resource to be used wisely. Never troll for answers in advance of a case discussion. Do your homework; use classmates and learning teams to clear up most questions so that you can focus on the meatiest issues with the teacher. Be very organized and focused about what you would like to discuss. Remember that teachers like to learn too: if you reveal a new insight about a case or bring a clipping about a related issue in current events, the professor and student both gain from their time together. Ultimately, the best payoff to the professor is the "aha" in the student's eyes when he or she masters an idea.

Good Execution

Good attitude and infrastructure must be employed properly—and one needs good execution. The extent to which a student learns depends on how the case study is approached. What can one do to gain the maximum from the study of these cases?

1. **Reading the case**. The very first time you read any case, look for the forest not the trees. This requires that your first reading be quick. Do not begin taking notes on the first round; instead, read the case like a magazine article. The first few paragraphs of a well-constructed case usually say something about the problem—read those carefully. Then quickly read the rest of the case, seeking mainly a sense of the scope of the problems, and what information the case contains to help resolve them. Leaf through the exhibits, looking for what information they hold, rather than for any analytical insights. At the conclusion of the first pass, read any supporting articles or notes that your instructor may have recommended.
2. **Getting into the case situation. Develop your "awareness."** With the broader perspective in mind, the second and more detailed reading will be more productive. The reason is that as you now encounter details, your mind will be able to organize them in some useful fashion rather than inventorying them randomly. Making linkages among case details is necessary toward solving the case. At this point you can take the notes that will set up your analysis.

   The most successful students project themselves into the position of the decision-maker because this perspective helps them link case details as well as develop a stand on the case problem. Assignment questions may help you do this; but it is a good idea to get into the habit of doing it yourself. Here are the kinds of questions you might try to answer in preparing every case:

   a. Who are the protagonists in the case? Who must take action on the problem? What do they have at stake? What pressures are they under?
   b. In what business is the company? What is the nature of its product? What is the nature of demand for that product? What is the firm's distinctive competence? With whom does it compete?[3] What is the structure of the industry? Is the firm comparatively strong or weak? In what ways?
   c. What are the goals of the firm? What is the firm's strategy in pursuit of these goals? (The goals and strategy might be explicitly stated, or they may be implicit in the way the firm does business.) What are the firm's apparent functional policies in marketing (e.g., push- versus-pull strategy), production

[3]Think broadly about competitors. Mark Twain wrote in *A Connecticut Yankee in King Arthur's Court,* "The best swordsman in the world doesn't need to fear the second best swordsman in the world; no, the person for him to be afraid of is some ignorant antagonist who has never had a sword in his hand before; he doesn't do the thing he ought to do, and so the expert isn't prepared for him; he does the thing he ought not to do; and it often catches the expert out and ends him on the spot."

(e.g., labor relations, use of new technology, distributed production vs. centralized), and finance (e.g., the use of debt financing, payment of dividends)? Financial and business strategies can be inferred from analysis of financial ratios and a sources and uses of funds statement.

D. How well has the firm performed in pursuit of its goals? (The answer to this question calls for simple analysis using financial ratios, such as the DuPont system, compound growth rates, and measures of value creation.)

The larger point of this phase of your case preparation is to broaden your awareness of issues. Perhaps the most successful investor in history, Warren Buffett, said, "Any player unaware of the fool in the market, probably is the fool in the market."[4] Awareness is an important attribute of successful managers.

3. **Defining the problem.** A common trap for many executives is to assume that the issue at hand is the real problem worthiest of their time, rather than a symptom of some larger problem that *really* deserves their time. For instance, a lender is often asked to advance funds to help tide a firm over a cash shortfall. Careful study may reveal that the key problem is not a cash shortfall, but rather product obsolescence, unexpected competition, or careless cost management. Even in cases where the decision is fairly narrowly defined (such as in a capital expenditure choice), the "problem" generally turns out to be the believability of certain key assumptions. Students who are new to the case method tend to focus narrowly in defining problems and often overlook the influence which the larger setting has on the problem. In doing this the student develops narrow specialist habits, never achieving the general manager perspective. It is useful and important for you to define the problem yourself, and in the process, validate the problem as suggested by the protagonist in the case.
4. **Analysis: run the numbers and go to the heart of the matter.** Virtually all finance cases require numerical analysis. This is good because figure-work lends rigor and structure to your thinking. But some cases, reflecting reality, invite you to explore blind alleys. If you are new to finance, even these explorations will help you learn.[5] The best case students develop an instinct for where to devote their analysis. Economy of effort is desirable. If you have invested wisely in problem definition, economical analysis tends to follow. For instance, a student might assume that a particular case is meant to exercise financial forecasting skills and will spend two or more hours preparing a detailed forecast, instead of preparing a simpler forecast in one hour and conducting a sensitivity analysis based on key assumptions in the next hour. An executive rarely thinks of a situation as having to do with a forecasting method or discounting or any other technique, but rather

[4]Buffett was quoted by Michael Lewis in his book, *Liar's Poker.*

[5]Case analysis is often iterative: an understanding of the big issues invites an analysis of details—then the details may restructure the big issues and invite the analysis of other details. In some cases, getting to the "heart of the matter" will mean just such iteration.

thinks of it as a problem of judgment, deciding on which people or concepts or environmental conditions to bet. The best case analyses get down to the *key bets* on which the executive is wagering the prosperity of the firm, and his or her career. Get to the business issues quickly, and avoid lengthy churning through relatively unimportant calculations.

5. **Prepare to participate: take a stand.** To develop analytical insights without making recommendations is useless to executives, and drains the case study experience of some of its learning power. A stand means having a point of view about the problem, a recommendation, and an analysis to back up both of them. The lessons most worth learning all come from taking a stand. From that truth flows the educative force of the case method. In the typical case, the student is projected into the position of an executive who must do something in response to a problem. It is this choice of what to do that constitutes the executive's "stand." Over the course of a career, an executive who takes stands gains wisdom. If the stand provides an effective resolution of the problem, so much the better for all concerned. If it does not, however, the wise executive analyzes the reasons for the failure and may learn even more than from a success. As Theodore Roosevelt wrote:

   > *The credit belongs to the man*[6] *who is actually in the arena—whose face is marred by dust and sweat and blood . . . who knows the great enthusiasms, the great devotions—and spends himself in a worthy cause—who at best if he wins knows the thrills of high achievement—and if he fails, at least fails while daring greatly so that his place shall never be with those cold and timid souls who know neither victory nor defeat.*

6. **In class: participate actively in support of your conclusions, but be open to new insights.** Of course, one can have a stand without the world being any wiser. To take a stand in case discussions means to participate actively in the discussion and to advocate your stand until new facts or analyses emerge to warrant a change.[7] Learning by the case method is not a spectator sport. A classic error many students make is to bring into the case method classroom the habits of the lecture hall (i.e., passively absorbing what other people say). These habits fail miserably in the case method classroom because they only guarantee that one absorbs the truths and fallacies uttered by others. The purpose of case study is to develop and exercise *one's own* skills and judgment. This takes practice and participation, just as in a sport. Here are two good general suggestions: (1) defer significant note-taking until after class and (2) strive to contribute to every case discussion.

7. **Immediately after class: jot down notes, corrections and questions.** Don't overinvest in taking notes during class—that just cannibalizes "air time" in which you could be learning through discussing the case. But immediately after, collect

[6]Today, a statement such as this would surely recognize women as well.

[7]There is a difference between taking a stand and pigheadedness. Nothing is served by clinging to your stand to the bitter end in the face of better analysis or common sense. Good managers recognize new facts and arguments as they come to light, and adapt.

your learnings and questions in notes that will capture your thinking. Of course, ask a fellow student or your teacher questions that will help clarify issues that still puzzle you.

8. **Once a week, flip through notes. Make a list of your questions, and pursue answers.** Take an hour each weekend to review your notes from class discussions during the past week. This will help build your grasp of the flow of the course. Studying a subject by the case method is like building a large picture with small mosaic tiles. It helps to step back to see the big picture. But the main objective should be to make an inventory of anything you are unclear about: terms, concepts, and calculations. Work your way through this inventory with classmates, learning teams, and ultimately the instructor. This kind of review and follow-up builds your self-confidence and prepares you to participate more effectively in future case discussions.

Conclusion: Focus on Process, and Results Will Follow

View the case method experience as a series of opportunities to test your mastery of techniques and your business judgment. If you seek a list of axioms to be etched in stone, you are bound to disappoint yourself. As in real life, there are virtually no "right" answers to these cases in the sense that a scientific or engineering problem has an exact solution. Jeff Milman has said, "The answers worth getting are never found in the back of the book." What matters is that you obtain a way of thinking about business situations that you can carry from one job (or career) to the next. In the case method it is largely true that *how you learn is what you learn.*[8]

[8]In describing the work of case teachers, John H. McArthur has said, "How we teach is what we teach."

Ethics in Finance

"The first thing is character, before money or anything else."

—J. P. Morgan (in testimony before the U.S. Congress)

"The professional concerns himself with doing the right thing rather than making money, knowing that the profit takes care of itself if the other things are attended to."

—Edwin LeFevre, *Reminiscences of a Stock Operator*

Integrity is paramount for a successful career in finance and business, as practitioners remind us. One learns, rather than inherits, integrity. And the lessons are everywhere, even in case studies about finance. To some people, the world of finance is purely mechanical, devoid of ethical considerations. The reality is that ethical issues are pervasive in finance. Still, disbelief that ethics matter in finance can take many forms.

- "It's not my job," says one person, thinking that a concern for ethics belongs to a CEO, an ombudsperson, or a lawyer. But if you passively let someone else do your thinking, you expose yourself to complicity in unethical decisions of others. Even worse is the possibility that if everyone assumes that someone else owns the job of ethical practice, then perhaps *no one* owns it and that therefore the enterprise has no moral compass at all.
- Another person says, "When in Rome, do as the Romans do. It's a dog-eat-dog world: we have to play the game their way if we mean to do business there." Under this view, everybody is assumed to act ethically relative to their local environment so that it is inappropriate to challenge unethical behavior. This is moral relativism. The problem with this view is that it presupposes that you have no identity, that you are defined like a chameleon by the environment around you. Relativism is the enemy of personal identity and character. You *must* have a view if you are rooted in any cultural system. Prepare to take a stand.
- A third person says, "It's too complicated. Civilization has been arguing about ethics for 3,000 years. You expect me to master it in my lifetime?" The response must be that we use complicated systems dozens of times each day without full mastery of their details. Perhaps the alternative would be to live in a cave, a simpler life but much less rewarding. Moreover, as courts have been telling the business world for centuries, ignorance of the law is no defense: if you want to succeed in the field of finance, you must grasp the norms of ethical behavior.

There is no escaping the fact that ethical reasoning is vital to the practice of business and finance. Tools and concepts of ethical reasoning belong in the financial toolkit alongside other valuable instruments of financial practice.

Ethics and economics were once tightly interwoven. The patriarch of economics, Adam Smith, was actually a scholar of moral philosophy. Though the two fields may have diverged in the last century, they remain strong complements.[i] Morality concerns norms and teachings. Ethics concerns the process of making morally *good* decisions, or as Andrew Wicks wrote, "Ethics has to do with pursuing—and achieving—laudable ends."[ii] The *Oxford English Dictionary* defines "moral" as "Of knowledge, opinions, judgments, etc.; Relating to the nature and application of the distinction between right and wrong."[iii] "Ethics," on the other hand, is defined as "The science of morals."[iv] To see how decision-making processes in finance have ethical implications, consider the following case studies.

1. Fraud. For several decades, Bernard Madoff operated a money management firm that reported annual returns of about 10% in good years and bad, performance that was astonishing for its regularity.[v] Madoff claimed that he was able to earn such reliable returns from investing in the shares of mature companies, along with a "collar" (put and call options that limited the risk). He marketed his services to investors on the strength of his reported performance, his years in the investment business, and his ethnic and social affinity in prominent clubs and communities. But in the Panic of 2008, worried investors sought to withdraw their investments from the Madoff firm. On December 10, 2008, Bernard Madoff admitted to F.B.I. agents that his investment fund was "one big lie," exploiting some 13,500 individual investors and charities.[vi] Investigation and court proceedings eventually revealed that Madoff had operated a massive "Ponzi scheme," in which the investments by new investors were used to pay high returns to existing investors. The collapse of his firm cost investors some $50 billion in losses.[vii] Madoff was convicted of 11 Federal crimes and received a sentence of 150 years in jail. A number of other individuals, charities, and firms were investigated, indicted, convicted, and/or fined on related charges. Several[1] analysts over the years warned that Madoff's performance was unrealistic and probably fraudulent; but the SEC took no action. Afterward, the agency issued a 477-page report[viii] of an internal investigation that resulted in disciplinary actions against eight SEC employees, but no terminations. This was the largest Ponzi scheme in history and generated an enormous range of accusations of negligence or complicity in the fraud.
2. Negligence. In 2011, the Financial Crisis Inquiry Commission delivered a report on the Panic of 2008 that found "a systemic breakdown in accountability and ethics. The integrity of our financial markets and the public's trust in those markets are essential to the economic well-being of our nation. The soundness and the sustained prosperity of the financial system and our economy rely on the notions of fair dealing, responsibility, and transparency. In our economy, we expect businesses and individuals to pursue profits, at the same time that they produce products and services of quality and conduct themselves well. . . . Unfortunately—as

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[1]Harry Markopoulos of Rampart Investment Management raised concerns with the SEC in May, 2000. In 2001, Michael Ocrant, editor of MARHedge published an article questioning the possibility of Madoff's performance. Also in 2001, Erin Arvedlund published an article in *Barrons* questioning the consistency of Madoff's returns.

has been the case in past speculative booms and busts—we witnessed an erosion of standards of responsibility and ethics that exacerbated the financial crisis. This was not universal, but these breaches stretched from the ground level to the corporate suites. They resulted not only in significant financial consequences but also in damage to the trust of investors, businesses, and the public in the financial system. . . . This report catalogues the corrosion of mortgage-lending standards and the securitization pipeline that transported toxic mortgages from neighborhoods across America to investors around the globe. Many mortgage lenders set the bar so low that lenders simply took eager borrowers' qualifications on faith, often with a willful disregard for a borrower's ability to pay. . . . These trends were not secret. As irresponsible lending, including predatory and fraudulent practices, became more prevalent, the Federal Reserve and other regulators and authorities heard warnings from many quarters. Yet the Federal Reserve neglected its mission "to ensure the safety and soundness of the nation's banking and financial system and to protect the credit rights of consumers." It failed to build the retaining wall before it was too late. And the Office of the Comptroller of the Currency and the Office of Thrift Supervision, caught up in turf wars, preempted state regulators from reining in abuses. . . . In our inquiry, we found dramatic breakdowns of corporate governance, profound lapses in regulatory oversight, and near fatal flaws in our financial system."[ix]

3. Incentives that distort values. From August, 2015 to May, 2016, the share prices of Valeant Pharmaceutical fell about 90%.[x] This destruction of share value reflected the accumulated doubts about the adequacy of the firm's disclosure of accounting results and material information pertaining to its strategy and risks. The company had grown rapidly by acquisition and by sharply raising the prices of product lines that it had purchased. Congress began an investigation into the firm's practices and complained that Valeant was withholding information. Short-sellers alleged that Valeant used a related firm, Phillidor, to book fake sales—Valeant denied this, but then ceased its ties to Phillidor and shut down its operations. The board of directors sacked its CEO. And a prominent backer of Valeant, activist investor, Bill Ackman, "deeply and profoundly apologize[d]" to investors for his support of Valeant's management. Analysts cited liberal option-based executive compensation as one stimulus for Valeant's aggressive behavior.

Laws and regulations often provide a "bright red line" to constrain bad behavior. But ethics demand an even higher standard. Bernard Madoff broke the law against fraudulent behavior. His family, friends, and associates seem to have looked the other way over the years, rather than urging him not to proceed. Leading up to the Panic of 2008, many watchdogs grew lax and neglected their duties to the wider public. And in the case of Valeant, managers and directors of the company fueled a toxic culture of growth at any cost to others.

Why One Should Care about Ethics in Finance

Managing in ethical ways is not merely about avoiding bad outcomes. There are at least five positive arguments for bringing ethics to bear on financial decision-making.

Sustainability. Unethical practices are not a foundation for enduring, sustainable, enterprise. This first consideration focuses on the *legacy* one creates through one's financial transactions. What legacy do you want to leave? To incorporate ethics into our finance mindset is to think about the kind of world that we would like to live in, and that our children will inherit.

One might object that in a totally anarchic world, unethical behavior might be the only path to life. But this only begs the point: we don't live in such a world. Instead, our world of norms and laws ensures a corrective process against unethical behavior.

Ethical behavior builds trust. Trust rewards. The branding of products seeks to create a bond between producer and consumer: a signal of purity, performance, or other attributes of quality. This bond is built by trustworthy behavior. As markets reveal, successfully branded products command a premium price. Bonds of trust tend to pay. If the field of finance were purely a world of one-off transactions, it would seem ripe for opportunistic behavior. But in the case of repeated entry into financial markets and transactions, for instance by active buyers, intermediaries, and advisors, reputation can count for a great deal in shaping the expectations of counterparties. This implicit bond, trust, or reputation can translate into more effective and economically attractive financial transactions and policies.

Surely, ethical behavior should be an end in itself. If you are behaving ethically only to get rich, then you are hardly committed to that behavior. Some might even see this as an imperfect means by which justice expresses itself.

Ethical behavior builds teams and leadership which underpin process excellence. Standards of global best practice emphasize that good business processes drive good outcomes. Stronger teams and leaders result in more agile and creative responses to problems. Ethical behavior contributes to the strength of teams and leadership by aligning employees around shared values, and building confidence and loyalty.

An objection to this argument is that in some settings promoting ethical behavior is no guarantee of team-building. Indeed, teams might blow apart over disagreement about what is ethical or what action is appropriate to take. But typically, this is not the fault of ethics, rather of team processes for handling disagreements.

Ethics sets a higher standard than laws and regulations. To a large extent, the law is a crude instrument: it tends to trail rather than anticipate behavior; it contains gaps that become recreational exploitation for the aggressive business person; Justice may neither be swift nor proportional to the crime; and as Andrew Wicks said, it "puts you in an adversarial posture with respect to others which may be counterproductive to other objectives in facing a crisis."[xi] To use only the law as a basis for ethical thinking is to settle for the lowest common denominator of social norms. As former Chairman of the Securities and Exchange Commission, Richard Breeden, said, "It is not an adequate ethical standard to want to get through the day without being indicted."[xii]

Some might object to this line of thinking by claiming that in a pluralistic society, the law is the only baseline of norms on which society can agree. Therefore, isn't the law a "good enough" guide to ethical behavior? Lynn Paine argued that this leads to a "compliance" mentality and that ethics takes one farther. She wrote, "Attention to law, as an important source of managers' rights and responsibilities, is integral to, but not a substitute for, the ethical point of view—a point of view that is attentive to rights, responsibilities, relationships, opportunities to improve and enhance human well-being, and virtue and moral excellence."[xiii]

Reputation and conscience. Motivating ethical behavior only by appealing to benefits and avoiding costs is inappropriate. By some estimates, the average annual income for a lifetime of crime (even counting years spent in prison) is large—it seems that crime *does* pay. If income were all that mattered, most of us would switch into this lucrative field. The business world features enough cheats and scoundrels to offer any professional the opportunity to break promises, or worse, for money. Ethical professionals decline these opportunities for reasons having to do with the kind of people they want to be. Amar Bhide and Howard Stevenson wrote, "The businesspeople we interviewed set great store on the regard of their family, friends, and the community at large. They valued their reputations, not for some nebulous financial gain but because they took pride in their good names. Even more important, since outsiders cannot easily judge trustworthiness, businesspeople seem guided by their inner voices, by their consciences. . . . We keep promises because it is right to do so, not because it is good business."[xiv]

For Whose Interests Are You Working?

Generally the financial executive or deal designer is an agent acting on behalf of others. For whom are you the agent? Two classic schools of thought emerge.

- **Stockholders.** Some national legal frameworks require directors and managers to operate a company in the interests of its shareholders. The shareholder focus lends a clear objective: do what creates shareholders' wealth. This would seem to limit charitable giving, "living wage" programs, voluntary reduction of pollution, and enlargement of pension benefits for retirees—all of these loosely gather under the umbrella of "social responsibility" movement in business. Milton Friedman (1962), perhaps the most prominent exponent of the stockholder school of thought, argued that the objective of business is to return value to its owners and that to divert the objective to other ends is to expropriate shareholder value and threaten the survival of the enterprise. Also, the stockholder view would argue that if all companies deviated, the price system would cease to function well as a carrier of information about the allocation of resources in the economy. The stockholder view is perhaps dominant in the U.S., U.K, and other countries in the Anglo-Saxon sphere.
- **Stakeholders.** The alternative view admits that stockholders are an important constituency of the firm, but that other groups such as employees, customers, suppliers, and the community also have a stake in the activities and success of the firm. Edward Freeman (1984) argued that the firm should be managed in the interest of the broader spectrum of constituents. The manager would necessarily be obligated to account for the interests and concerns of the various constituent groups in arriving at business decisions—the aim would be to satisfy them all, or at least the most

> concerned stakeholders on each issue. The complexity of this kind of decision-making can be daunting and slow. In addition, it is not always clear which stakeholder interests are relevant in making specific decisions. Such a definition seems to depend highly on the specific context, which would seem to challenge the ability to achieve equitable treatment of different stakeholder groups and across time. But the important contribution of this view is to suggest a relational view of the firm and to stimulate the manager to consider the diversity of those relationships.

Adding complexity to the question of whose interests one serves is the fact that often one has many allegiances—not only to the firm or client, but also to one's community, family, etc. Obligations that one has as an employee or professional are only a subset of obligations one has on the whole.

What is "good"? Consequences, Duties, Virtues.

One confronts ethical issues when one must choose among alternatives on the basis of right versus wrong. The ethical choices may be stark where one alternative is truly right and the other truly wrong. But in professional life the alternatives typically differ more subtly as in choosing which alternative is *more* right or *less* wrong. Ernest Hemingway said that what is moral is what one feels good after and what is immoral is what one feels bad after. Since feelings about an action could vary tremendously from one person to the next, this simplistic test would seem to admit moral relativism as the only course, an ethical "I'm OK, You're OK" approach. Fortunately 3,000 years of moral reasoning lend frameworks for greater definition of what is "right" and "wrong."

"Right" and "wrong" defined by *consequences.* An easy point of departure is to focus on outcomes. An action might be weighed in terms of its utility[xv] for society. Who is hurt or helped must be taken into consideration. Utility can be assessed in terms of the pleasure or pain for people. People choose to maximize utility. Therefore, right action is that which produces the greatest good for the greatest number of people.

"Utilitarianism" has proved to be controversial. Some critics feared that this approach might endorse gross violations of norms that society holds dear including the right to privacy, the sanctity of contracts, and property rights, when weighed in the balance of consequences for all. And the calculation of utility might be subject to special circumstances or open to interpretation, making the assessment rather more situation-specific than some philosophers could accept.

Utilitarianism was the foundation for modern neoclassical economics. Utility has proved to be difficult to measure rigorously and remains a largely theoretical idea. Yet utility-based theories are at the core of welfare economics and underpin analyses of phenomena varying as widely as government policies, consumer preferences, and investor behavior.

"Right" and "wrong" defined by *duty or intentions*. Immoral actions are ultimately self-defeating. A practice of writing bad checks, for instance, if practiced universally, would result in a world without check-writing and probably very little credit. Therefore you should act on rules which you would require to be applied universally[xvi]. You should treat a person as an end, never as a means. It is vital to ask whether an action would show respect for other persons and whether that action was something a rational person would do—"If everyone behaved this way, what kind of world would we have?"

Critics of this perspective argue that its universal view is too demanding, indeed, impossible for a businessperson to observe. For instance, the profit motive focuses on the manager's duty to just one company. But Norman Bowie responds, "Perhaps focusing on issues other than profits . . . will actually enhance the bottom line . . . .Perhaps we should view profits as a consequence of good business practices rather than as the goal of business."[xvii]

"Right" and "wrong" defined by *virtues*. Finally, a third tradition[xviii] in philosophy argues that the debate over "values" is misplaced: the focus should be on *virtues* and the qualities of the practitioner. The attention to consequences or duty is fundamentally a focus on *compliance.* Instead, one should consider whether an action is consistent with being a virtuous person. This view argues that personal happiness flowed from being virtuous, and not merely from comfort (utility) or observance (duty). It acknowledges that vices are corrupting. And it focuses on personal pride: "If I take this action would I be proud of what I see in the mirror? If it were reported tomorrow in the newspaper, would I be proud of myself?" Warren Buffett, CEO of Berkshire Hathaway, and one of the most successful investors in modern history issues a letter to each of his operating managers each year emphasizing the importance of personal integrity: He said that Berkshire can afford financial losses, but not losses in reputation. He wrote, "Make sure everything you do can be reported on the front page of your local newspaper written by an unfriendly, but intelligent reporter."[xix]

Critics of virtue-based ethics raise two objections. First, a virtue to one person may be a vice to another. Solomon (1999) points out that Confucius and Nietzsche, two other virtue ethicists, held radically different visions of virtue: Confucius extolled virtues such as respect and piety. In contrast, Nietzsche extolled risk-taking, war-making, and ingenuity. Thus, virtue ethics may be context-specific. Second, virtues can change over time. What may have been regarded as "gentlemanly" behavior (i.e., formal politeness) in the 19th Century, might have been seen by feminists in the late 20th Century as insincere and manipulative.

Discrete definition of "right" and "wrong" remains a subject of ongoing discourse. But the practical person can abstract from these and other perspectives useful guidelines toward ethical work:

- How will my action affect others? What are the consequences?
- What are my motives and my duty here? How does this decision affect them?
- Does this action serve the best that I can be?

What Can *You* Do to Promote Ethical Behavior in Your Firm?

An important contributor to unethical business practices is the existence of a work environment that promotes such behavior. Leaders in corporate work places need to be proactive in shaping a high performance culture that sets high ethical expectations. The leader can take a number of steps to shape an ethical culture.

Adopt a code of ethics. One dimension of ethical behavior is to acknowledge some code by which one intends to live. Corporations, too, can adopt codes of conduct that shape ethical expectations. Firms recognize the "problem of the commons" inherent in unethical behavior by one or a few employees. In 1909, the Supreme Court decided that a corporation could be held liable for the actions of its employees.[xx] Since then, companies have sought to set expectations for employee behavior, including codes of ethics.[xxi] **Exhibits 1 and 2** give excerpts of codes from J.P. Morgan Chase and General Electric Company—they are clear statements that define right behavior. Corporate codes are viewed by some critics as cynical efforts that seem merely to respond to executive liability that might arise from white collar and other economic crimes. Companies and their executives may be held liable for employee behavior, even if the employee acted contrary to instructions. Mere observance of guidelines in order to reduce liability is a legalistic approach to ethical behavior. Instead, Lynn Paine (1994) urged firms to adopt an "integrity strategy" that uses ethics as the driving force within a corporation. Deeply-held values would become the foundation for decision making across the firm and would yield a frame of reference that would integrate functions and businesses. By this view, ethics defines what a firm stands for.

In addition, an industry or professional group can organize a code of ethics. One example relevant for finance professionals is the Code of Ethics of the CFA Institute, the group that confers the Chartered Financial Analyst (CFA) designation on professional securities analysts and portfolio managers. An excerpt of the CFA Institute Code of Ethics is given in **Exhibit 3**.

Talk about ethics within your team and firm. Many firms seek to reinforce a culture of integrity with a program of seminars and training in ethical reasoning. A leader can stimulate reflection through informal discussion of ethical developments (e.g., indictments, convictions, civil lawsuits) in the industry or profession or of ethical issues that the team may be facing. This kind of discussion (without preaching) signals that it is on the leader's mind and is a legitimate focus of discussion. One executive regularly raises issues such as these informally over lunch and morning coffee. Leaders believe ethical matters are important enough to be the focus of team discussions.

Find and reflect on your dilemmas. The challenge for many finance practitioners is that ethical dilemmas are not readily given to structured analysis, in the same way one values a firm or balances the books. Nevertheless, one can harness the questions raised in the field of ethics to lend some rigor to one's reflections. Laura Nash (1981) abstracted a list of twelve questions on which the thoughtful practitioner might reflect in grappling with an ethical dilemma:

1. Have I defined the problem correctly and accurately?
2. If I stood on the other side of the problem, how would I define it?
3. What are the origins of this dilemma?
4. To whom and what am I loyal, as a person and as a member of a firm?
5. What is my intention in making this decision?

6. How do the likely results compare with my intention?
7. Can my decision injure anyone? How?
8. Can I engage the affected parties in my decision before I decide or take action?
9. Am I confident that my decision will be valid over a long period of time as it may seem at this moment?
10. If my boss, the CEO, the directors, my family, or community learned about this decision, would I have misgivings?
11. What signals (or symbols) might my decision convey, if my decision were understood correctly? If misunderstood?
12. Are there exceptions to my position, "special circumstances" under which I might make an alternative decision?

Act on your reflections. This may be the toughest step of all. The field of ethics can lend structure to one's thinking but has less to say about the action to be taken. Confronting a problem of ethics within a team or organization, one can consider a hierarchy of responses, from questioning and coaching to "whistle blowing" (either to an internal ombudsperson or if necessary to an outside source), and possibly, to exit from the organization.

Conclusion

Analysis of ethical issues in finance is vital. The cases of Bernard Madoff and other major business scandals show that ethical issues pervade the financial environment. Ethics is one of the pillars on which stands success in finance—it builds sustainable enterprise, trust, organizational strength, and personal satisfaction. Therefore, the financial decision maker must learn to identify, analyze, and act on ethical issues that may arise. Consequences, duties, and virtues stand out as three important benchmarks for ethical analysis. Nevertheless, the results of such analysis are rarely clear-cut. But real business leaders will take the time to sort through the ambiguities and do "the right thing" in the words of Edwin LeFevre. These and other ethical themes will appear throughout finance case studies and one's career.

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EXHIBIT 1 | J.P. Morgan Chase & Co. Excerpts from Code of Conduct and Code of Ethics for Finance Professionals[xxii]

JPMC Finance Officers and Finance Professionals must act honestly, promote ethical conduct and comply with the law . . . They are specifically required to:

- Carry out their responsibilities honestly, in good faith and with integrity, due care and diligence . . .
- Comply with applicable government laws, rules and regulations . . .
- Never . . . coerce, manipulate, mislead or fraudulently influence the firm's independent auditors . . .
- Protect the confidentiality of non-public information relating to JPMC and its clients . . .
- Address actual or apparent conflicts of interest . . .
- Promptly report . . . any known or suspected violation . . .

. . .

JPMC strictly prohibits intimidation or retaliation against anyone who makes a good faith report about a known or suspected violation of this Policy, or of any law or regulation.

EXHIBIT 2 | Excerpts from "The Spirit and the Letter:" General Electric's "Code of Conduct"

Statement of integrity

We have been ranked first for integrity and governance. But none of that matters if each of us does not make the right decisions and take the right actions. . . . Do not allow anything—not "making the numbers," competitive instincts or even a direct order from a superior—to compromise your commitment to integrity. . . . Leaders must address employees' concerns about appropriate conduct promptly and with care and respect.

There is no conflict between excellent financial performance and high standards of governance and compliance—in fact, the two are mutually reinforcing.

. . .

- Obey the applicable laws and regulations . . .
- Be honest, fair and trustworthy . . .
- Avoid all conflicts of interest . . .
- Foster an atmosphere [of] fair employment practices . . .
- Strive to create a safe workplace and to protect the environment.
- . . . Sustain a culture where ethical conduct is recognized, valued and exemplified by all employees.

Source: "Integrity: The Spirit and Letter of Our Commitment" General Electric Company, June 2005, page 3. A longer version of this resource is also available at https://www.sec.gov/Archives/edgar/data/1262449/000119312508061906/dex142.htm.

EXHIBIT 3 | CFA Institute Code of Ethics, 2014

High ethical standards are critical to maintaining the public's trust in financial markets and in the investment profession. . . .

- Act with integrity, competence, diligence, respect . . .
- Place . . . the interests of clients above their own personal interests.
- Use reasonable care and exercise independent professional judgment . . .
- Practice and encourage others. . . .
- Promote the integrity of . . . capital markets.
- Maintain and improve their professional competence . . .

Source: CFA Institute 2014. "Code of Ethics and Standard of Professional Conduct" (Charlottesville, Virginia) http://www.cfapubs.org/doi/pdf/10.2469/ccb.v2014.n6.1

Endnotes

[i]Sen (1987) and Werhane (1999) have argued that Smith's masterpiece, *Wealth of Nations*, is incorrectly construed as a justification for self-interest, and that it speaks more broadly about virtues such as prudence, fairness, and cooperation.

[ii]Wicks (2003) page 5.

[iii]*Oxford English Dictionary* 1989. Vol. IX, page 1068.

[iv]*Ibid.* Vol. V, page 421.

[v]"The Con of the Century," *The Economist,* December 18, 2008 at http://www.economist.com/node/12818310.

[vi]Mark Seal, "Madoff's World," *Vanity Fair,* April, 2009 at http://www.vanityfair.com/news/2009/04/bernard-madoff-friends-family-profile.

[vii]Henriques, Diana and Zachery Kouwe, "Prominent Trader Accused of Defrauding Clients," *New York Times,* December 11, 2008.

[viii]"Investigation of Failure of the SEC to Uncover Bernard Madoff's Ponzi Scheme," U.S. Securities and Exchange Commission, Office of Investigations, August 31, 2009.

[ix]"*The Financial Crisis Inquiry Report,"* 2011, Philip Angelides, Chair, pages xxii, xxiii, and xxvii–xxviii.

[x]For further information on the Valeant case study, see Stephen Gandel, "What Caused Valeant's Epic 90% plunge," *Fortune,* March 20, 2016, at http://fortune.com/2016/03/20/valeant-timeline-scandal/. And see Miles Johnson, "What went wrong with Ackman and Valeant—the alternative edition" *Financial Times,* March 30, 2017 at https://ftalphaville.ft.com/2017/03/30/2186644/what-went-wrong-with-ackman-and-valeant-the-alternative-edition/.

[xi]Wicks (2003) page 11.

[xii]Quoted in K.V. Salwen, 1991 "SEC Chief's criticism of ex-managers of Salomon suggests civil action is likely," *Wall Street Journal* Nov. 20, A10.

[xiii]Paine (1999), pages 194–195.

[xiv]Bhide and Stevenson, 1990, pages 127–128.

[xv]The Utilitarian philosophers, Jeremy Bentham (1748–1832), James Mill (1773–1836), and John Stuart Mill (1806–1873), argued that the utility (or usefulness) of ideas, actions, and institutions could be measured in terms of their consequences.

[xvi]The philosopher, Immanuel Kant (1724–1804) sought a foundation for ethics in the purity of one's motives.

[xvii]Bowie (1999) page 13.

[xviii]This view originates in ancient Greek philosophy, starting from Socrates, Plato, and Aristotle.

[xix]Russ Banham, "The Warren Buffett School," *Chief Executive,* December 2002, downloaded from http://www.robertpmiles.com/BuffettSchool.htm, May 19, 2003.

[xx]See *New York Central v. United States*, 212 US 481.

[xxi]Murphy (1997) compiles 80 exemplary ethics statements.

[xxii]Source: J.P. Morgan Chase & Company, website: https://www.jpmorganchase.com/corporate/About-JPMC/ab-code-of-ethics.htm downloaded May 18, 2017.

PART 1

Setting Some Themes

CASE 1

Warren E. Buffett, 2015

On August 10, 2015, Warren E. Buffett, chair and CEO of Berkshire Hathaway Inc., announced that Berkshire Hathaway would acquire the aerospace-parts supplier Precision Castparts Corporation (PCP). In Buffett's largest deal ever, Berkshire would purchase all of PCP's outstanding shares for $235 per share in cash, a 21% premium over the trading price a day earlier. The bid valued PCP's equity at $32.3 billion.[1] The total transaction value would be $37.2 billion, including assuming PCP's outstanding debt—this was what analysts called the "enterprise value." "I've admired PCP's operation for a long time. For good reasons, it is the supplier of choice for the world's aerospace industry, one of the largest sources of American exports,"[2] Buffett said. After the announcement, Berkshire Hathaway's Class A[3] shares moved down 1.1% at market open, a loss in market value of $4.05 billion.[4] PCP's share price jumped 19.2% at the news[5]; the S&P 500 Composite Index opened up 0.2%. **Exhibit 1.1** illustrates the recent share-price performance for Berkshire Hathaway, PCP, and the S&P 500 Index. **Exhibit 1.2** presents recent consolidated financial statements for the firm.

[1]The difference between enterprise value and equity value is the amount of debt outstanding. On August 10, 2015, PCP's debt amounted to about $4.9 billion—this differs from the debt indicated in **Exhibit 1.9**, which was dated March 31, 2015.

[2]Tomi Kilgore, "Warren Buffett's $3.72 Billion Buy of Precision Castparts is His Biggest Buyout Ever," Marketwatch, August 10, 2015 http://www.marketwatch.com/story/warren-buffetts-372-billion-buy-of-precision-castparts-is-his-biggest-buyout-deal-ever-2015-08-10 (accessed Dec. 12, 2016).

[3]Each Class A common share is entitled to one vote per share. Class B common stock possesses dividend and distribution rights equal to one-fifteen-hundredth (1/1,500) of such rights of Class A common stock. Each Class B common share possesses voting rights equivalent to one-ten-thousandth (1/10,000) of the voting rights of a Class A share.

[4]The per-share change in Berkshire Hathaway's Class A share price at the date of the announcement was $1,895. The company had 811,755 Class A shares outstanding and 1,247,366,163 Class B shares outstanding. Class B common shares are equivalent to 1/1500th of Class A common shares.

[5]The per-share change in PCP share price after the announcement was $37.28. The stock closed at $193.88 on August 7, 2015, and opened on August 10, 2015, at $231.16.

The acquisition of PCP, Berkshire Hathaway's largest deal ever, renewed public interest in its sponsor, Buffett. In many ways, he was an anomaly. One of the richest individuals in the world (with an estimated net worth of about $66.5 billion according to *Forbes*), he was also respected and even beloved. Though he had accumulated perhaps the best investment record in history (a compound annual increase in wealth for Berkshire Hathaway of 21.6% from 1965 to 2014),[6] Berkshire Hathaway paid him only $100,000 per year to serve as its CEO. While Buffett and other insiders controlled 39.5% of Berkshire Hathaway, he ran the company in the interests of all shareholders. "We will not take cash compensation, restricted stock, or option grants that would make our results superior to [those of Berkshire's investors]," Buffett said. "I will keep well over 99% of my net worth in Berkshire. My wife and I have never sold a share nor do we intend to."[7]

Buffett was the subject of numerous laudatory articles and at least eight biographies, yet he remained an intensely private individual. Although acclaimed by many as an intellectual genius, he shunned the company of intellectuals and preferred to affect the manner of a down-home Nebraskan (he lived in Omaha) and a tough-minded investor. In contrast to the investment world's other "stars," Buffett acknowledged his investment failures both quickly and publicly. Although he held an MBA from Columbia University and credited his mentor, Benjamin Graham, with developing the philosophy of value-based investing that had guided Buffett to his success, he chided business schools for the irrelevance of their finance and investing theories.

Numerous writers sought to distill the essence of Buffett's success. What were the key principles that guided Buffett? Could those principles be applied broadly in the 21st century, or were they unique to Buffett and his time? By understanding those principles, analysts hoped to illuminate the acquisition of PCP. What were Buffett's probable motives in the acquisition? What did Buffett's offer say about his valuation of PCP, and how would it compare with valuations for other comparable firms? Would Berkshire's acquisition of PCP prove to be a success? How would Buffett define success?

Berkshire Hathaway Inc.

Berkshire Hathaway was incorporated in 1889 as Berkshire Cotton Manufacturing and eventually grew to become one of New England's biggest textile producers, accounting for 25% of U.S. cotton-textile production. In 1955, Berkshire Cotton Manufacturing merged with Hathaway Manufacturing and began a secular decline due to inflation, technological change, and intensifying competition from foreign rivals. In 1965, Buffett and some partners acquired control of Berkshire Hathaway, believing that its financial decline could be reversed.

Over the next 20 years, it became apparent that large capital investments would be required for the company to remain competitive, and that even then the financial returns

[6]In comparison, the annual average total return on all large stocks from 1965 to the end of 2014 was 9.9%. (See Warren Buffett, annual letter to shareholders, 2014.)

[7]Warren Buffett, annual letter to shareholders, 2001. Warren Buffett has since pledged to donate 99% of his net worth to philanthropic foundations. See http://givingpledge.org.

would be mediocre. Fortunately, the textile group generated enough cash in the early years to permit the firm to purchase two insurance companies headquartered in Omaha: National Indemnity Company and National Fire & Marine Insurance Company. Acquisitions of other businesses followed in the 1970s and 1980s; Berkshire Hathaway exited the textile business in 1985.

The investment performance of a share in Berkshire Hathaway had astonished most observers. As shown in **Exhibit 1.3**, a $100 investment in Berkshire Hathaway stock on September 30, 1976, would compound to a value of $305,714 as of July 31, 2015, approximately 39 years later. The investment would result in a 305,614% cumulative return, 22.8% when annualized. Over the same period, a $100 investment in the S&P 500 would compound to a value of $1,999 for a cumulative return of 1,899.1% or 8.0% annualized.[8]

In 2014, Berkshire Hathaway's annual report described the firm as "a holding company owning subsidiaries engaged in a number of diverse business activities."[9] Berkshire Hathaway's portfolio of businesses included:

- *Insurance:* Insurance and reinsurance[10] of property and casualty risks worldwide and with reinsurance of life, accident, and health risks worldwide in addition (e.g., GEICO, General Re).
- *Railroad:* A long-lived asset with heavy regulation and high capital intensity, the company operated one of the largest railroad systems in North America (i.e., BNSF).
- *Utilities and Energy:* Generate, transmit, store, distribute, and supply energy through the subsidiary Berkshire Hathaway Energy company.
- *Manufacturing:* Numerous and diverse manufacturing businesses were grouped into three categories: (1) industrial products, (2) building products, and (3) consumer products (e.g., Lubrizol, PCP).
- *Service and Retailing:* Providers of numerous services, including fractional aircraft-ownership programs, aviation pilot training, electronic-components distribution, and various retailing businesses, including automotive dealerships (e.g., NetJets, Nebraska Furniture Mart).
- *Finance and Financial Products:* Manufactured housing and related consumer financing; transportation equipment, manufacturing, and leasing; and furniture leasing (e.g., Clayton Homes, ULTX, XTRA).

Exhibit 1.4 gives a summary of revenues, operating profits, capital expenditures, depreciation, and assets for Berkshire Hathaway's various business segments. The company's investment portfolio also included equity interests in numerous publicly traded companies, summarized in **Exhibit 1.5**.

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[8]The annualized return calculation assumes a 39-year period (actual time period is 38 years 10 months).

[9]Berkshire Hathaway Inc. annual report, 2004.

[10]Reinsurance was insurance for insurance companies, a way of transferring or "ceding" some of the financial risk insurance companies assumed in insuring cars, homes, and businesses to another insurance company, the reinsurer. Insurance Information Institute, "Reinsurance," November 2014, http://www.iii.org/issue-update/reinsurance (accessed Dec. 9, 2016).

Buffett's Investment Philosophy

Warren Buffett was first exposed to formal training in investing at Columbia University, where he studied under Benjamin Graham. A coauthor of the classic text, *Security Analysis*, Graham developed a method of identifying undervalued stocks (that is, stocks whose prices were less than their intrinsic value). This became the cornerstone of modern value investing. Graham's approach was to focus on the value of assets, such as cash, net working capital, and physical assets. Eventually, Buffett modified that approach to focus also on valuable franchises that were unrecognized by the market.

Over the years, Buffett had expounded his philosophy of investing in his chair's letter to shareholders in Berkshire Hathaway's annual report. By 2005, those lengthy letters had acquired a broad following because of their wisdom and their humorous, self-deprecating tone. The letters emphasized the following elements:

1. **Economic reality, not accounting reality.** Financial statements prepared by accountants conformed to rules that might not adequately represent the *economic* reality of a business. Buffett wrote:

   > Because of the limitations of conventional accounting, consolidated reported earnings may reveal relatively little about our true economic performance. Charlie [Munger, Buffett's business partner] and I, both as owners and managers, virtually ignore such consolidated numbers . . . Accounting consequences do not influence our operating or capital-allocation process.[11]

   Accounting reality was conservative, backward looking, and governed by generally accepted accounting principles (GAAP), even though investment decisions should be based on the economic reality of a business. In economic reality, intangible assets such as patents, trademarks, special managerial expertise, and reputation might be very valuable, yet, under GAAP, they would be carried at little or no value. GAAP measured results in terms of net profit, while in economic reality the results of a business were its *flows of cash*.

   A key feature of Buffett's approach defined economic reality at the level of the business itself, not the market, the economy, or the security—he was a *fundamental analyst* of the business. His analysis sought to judge the simplicity of the business, the consistency of its operating history, the attractiveness of its long-term prospects, the quality of management, and the firm's capacity to create value.

2. **The cost of the lost opportunity.** Buffett compared an investment opportunity against the next-best alternative, the lost opportunity. In his business decisions, he demonstrated a tendency to frame his choices as either/or decisions rather than yes/no decisions. Thus an important standard of comparison in testing the attractiveness of an acquisition was the potential rate of return from investing in the common stocks of other companies. Buffett held that there was no fundamental difference between buying a business outright and buying a few shares of that business in the equity market. Thus for him, the comparison of an investment against other returns available in the market was an important benchmark of performance.

[11]Berkshire Hathaway Inc. annual report, 2004.

3. **Embrace the time value of money.** Buffett assessed intrinsic value as the present value of future expected performance:

   > [All other methods fall short in determining whether] an investor is indeed buying something for what it is worth and is therefore truly operating on the principle of obtaining value for his investments . . . Irrespective of whether a business grows or doesn't, displays volatility or smoothness in earnings, or carries a high price or low in relation to its current earnings and book value, the investment shown by the discounted-flows-of-cash calculation to be the cheapest is the one that the investor should purchase.[12]

   Enlarging on his discussion of intrinsic value, Buffett used an educational example:

   > We define intrinsic value as the discounted value of the cash that can be taken out of a business during its remaining life. Anyone calculating intrinsic value necessarily comes up with a highly subjective figure that will change both as estimates of future cash flows are revised and as interest rates move. Despite its fuzziness, however, intrinsic value is all important and is the only logical way to evaluate the relative attractiveness of investments and businesses.
   >
   > To see how historical input (book value) and future output (intrinsic value) can diverge, let us look at another form of investment, a college education. Think of the education's cost as its "book value." If it is to be accurate, the cost should include the earnings that were foregone by the student because he chose college rather than a job. For this exercise, we will ignore the important non economic benefits of an education and focus strictly on its economic value. First, we must estimate the earnings that the graduate will receive over his lifetime and subtract from that figure an estimate of what he would have earned had he lacked his education. That gives us an excess earnings figure, which must then be discounted, at an appropriate interest rate, back to graduation day. The dollar result equals the intrinsic economic value of the education. Some graduates will find that the book value of their education exceeds its intrinsic value, which means that whoever paid for the education didn't get his money's worth. In other cases, the intrinsic value of an education will far exceed its book value, a result that proves capital was wisely deployed. In all cases, what is clear is that book value is meaningless as an indicator of intrinsic value.[13]

   To illustrate the mechanics of this example, consider the hypothetical case presented in **Exhibit 1.6**. Suppose an individual has the opportunity to invest \$50 million in a business—this is its cost or book value. This business will throw off cash at the rate of 20% of its investment base each year. Suppose that instead of receiving any dividends, the owner decides to reinvest all cash flow back into the business—at this rate, the book value of the business will grow at 20% per year. Suppose that the investor plans to sell the business for its book value at the end of the fifth year. Does this investment create value for the individual? One determines this by discounting the future cash flows to the present at a cost of equity of 15%. Suppose that this is the investor's opportunity cost, the required return that could have been earned elsewhere at comparable risk. Dividing the present value of future cash flows (i.e., Buffett's intrinsic value) by the cost of the

[12]Berkshire Hathaway Inc. annual report, 1992.

[13]Berkshire Hathaway Inc. annual report, 1992.

investment (i.e., Buffett's book value) indicates that every dollar invested buys securities worth $1.23. Value is created.

Consider an opposing case, summarized in **Exhibit 1.7**. The example is similar in all respects, except for one key difference: the annual return on the investment is 10%. The result is that every dollar invested buys securities worth $0.80. Value is destroyed.

Comparing the two cases in **Exhibits 1.6** and **1.7**, the difference in value creation and destruction is driven entirely by the relationship between the expected returns and the discount rate: in the first case, the spread is positive; in the second case, it is negative. Only in the instance where expected returns equal the discount rate will book value equal intrinsic value. In short, book value or the investment outlay may not reflect the economic reality. One needs to focus on the prospective rates of return, and how they compare to the required rate of return.

4. **Measure performance by gain in intrinsic value, not accounting profit.** Buffett wrote:

> Our long-term economic goal . . . is to maximize Berkshire's average annual rate of gain in intrinsic business value on a per-share basis. We do not measure the economic significance or performance of Berkshire by its size; we measure by per-share progress. We are certain that the rate of per-share progress will diminish in the future—a greatly enlarged capital base will see to that. But we will be disappointed if our rate does not exceed that of the average large American corporation.[14]

The gain in intrinsic value could be modeled as the value added by a business above and beyond the charge for the use of capital in that business. The gain in intrinsic value was analogous to the economic-profit and market-value-added measures used by analysts in leading corporations to assess financial performance. Those measures focus on the ability to earn returns in excess of the cost of capital.

5. **Set a required return consistent with the risk you bear.** Conventional academic and practitioner thinking held that the more risk one took, the more one should get paid. Thus discount rates used in determining intrinsic values should be determined by the risk of the cash flows being valued. The conventional model for estimating the cost of equity capital was the capital asset pricing model (CAPM), which added a risk premium to the long-term risk-free rate of return, such as the U.S. Treasury bond yield. In August 2015, a weighted average of Berkshire Hathaway's cost of equity and debt capital was about 0.8%.[15]

Buffett departed from conventional thinking by using the rate of return on the long-term (e.g., 30-year) U.S. Treasury bond to discount cash flows—in August 2015, the yield on the 30-year U.S. Treasury bond was 2.89%. Defending this practice, Buffett argued that he avoided risk, and therefore should use a risk-free

[14]Berkshire Hathaway Inc. annual report, 2004.

[15]Berkshire Hathaway's cost of equity was 9.2%, which reflected a beta of 0.90, an expected market return of 9.90%, and a risk-free rate of 2.89%. The yield on corporate bonds rated AA was 3.95%—and after a 39% expected marginal tax rate, the cost of debt would be 2.3%. Weights of capital were 16.9% for debt and 83.1% for equity. In contrast, the beta for PCP was 0.38. Analysts expected that PCP's cash flows would grow indefinitely at about the long-term expected real growth rate of the U.S. economy, 2.5%.

discount rate. His firm used little debt financing. He focused on companies with predictable and stable earnings. He or his vice chair, Charlie Munger, sat on the boards of directors, where they obtained a candid inside view of the company and could intervene in management decisions if necessary. Buffett once said, "I put a heavy weight on certainty. If you do that, the whole idea of a risk factor doesn't make sense to me. Risk comes from not knowing what you're doing."[16] He also wrote:

> We define risk, using dictionary terms, as "the possibility of loss or injury." Academics, however, like to define "risk" differently, averring that it is the relative volatility of a stock or a portfolio of stocks—that is, the volatility as compared to that of a large universe of stocks. Employing databases and statistical skills, these academics compute with precision the "beta" of a stock—its relative volatility in the past—and then build arcane investment and capital allocation theories around this calculation. In their hunger for a single statistic to measure risk, however, they forget a fundamental principle: it is better to be approximately right than precisely wrong.[17]

6. **Diversify reasonably.** Berkshire Hathaway represented a diverse portfolio of business interests. But Buffett disagreed with conventional wisdom that investors should hold a broad portfolio of stocks in order to shed company-specific risk. In his view, investors typically purchased far too many stocks rather than waiting for one exceptional company. Buffett said:

> Figure businesses out that you understand and concentrate. Diversification is protection against ignorance, but if you don't feel ignorant, the need for it goes down drastically.[18]

7. **Invest based on information, analysis, and self-discipline, not on emotion or hunch.** Buffett repeatedly emphasized awareness and information as the foundation for investing. He said, "Anyone not aware of the fool in the market probably is the fool in the market."[19] Buffett was fond of repeating a parable told to him by Graham:

> There was a small private business and one of the owners was a man named Market. Every day, Mr. Market had a new opinion of what the business was worth, and at that price stood ready to buy your interest or sell you his. As excitable as he was opinionated, Mr. Market presented a constant distraction to his fellow owners. "What does he know?" they would wonder, as he bid them an extraordinarily high price or a depressingly low one. Actually, the gentleman knew little or nothing. You may be happy to sell out to him when he quotes you a ridiculously high price, and equally happy to buy from him when his price is low. But the rest of the time, you will be wiser to form your own ideas of the value of your holdings, based on full reports from the company about its operation and financial position.[20]

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[16] Jim Rasmussen, "Buffett Talks Strategy with Students," *Omaha World-Herald*, January 2, 1994, 26.

[17] Berkshire Hathaway Inc. annual report, 1993; Andrew Kilpatrick, *Of Permanent Value: The Story of Warren Buffett* (Birmingham, AL: AKPE, 1994): 574.

[18] *Forbes*, October 19, 1993; Kilpatrick, 574.

[19] Quoted in Michael Lewis's *Liar's Poker* (New York: Norton, 1989): 35.

[20] Berkshire Hathaway Inc. annual report, 1987. This quotation was paraphrased from James Grant's *Minding Mr. Market* (New York: Times Books, 1993): xxi.

Buffett used this allegory to illustrate the irrationality of stock prices as compared to true intrinsic value. Graham believed that an investor's worst enemy was not the stock market, but oneself. Superior training could not compensate for the absence of the requisite temperament for investing. Over the long term, stock prices should have a strong relationship with the economic progress of the business. But daily market quotations were heavily influenced by momentary greed or fear and were an unreliable measure of intrinsic value. Buffett said:

> As far as I am concerned, the stock market doesn't exist. It is there only as a reference to see if anybody is offering to do anything foolish. When we invest in stocks, we invest in businesses. You simply have to behave according to what is rational rather than according to what is fashionable.[21]

Accordingly, Buffett did not try to "time the market" (i.e., trade stocks based on expectations of changes in the market cycle)—his was a strategy of patient, long-term investing. As if in contrast to Mr. Market, Buffett expressed more contrarian goals: "We simply attempt to be fearful when others are greedy and to be greedy only when others are fearful."[22] Buffett also said, "Lethargy bordering on sloth remains the cornerstone of our investment style,"[23] and "The market, like the Lord, helps those who help themselves. But unlike the Lord, the market does not forgive those who know not what they do."[24]

8. **Look for market inefficiencies.** Buffett scorned the academic theory of capital-market efficiency. The efficient-markets hypothesis (EMH) held that publicly known information was rapidly impounded into share prices, and that as a result, stock prices were fair in reflecting what was known about the company. Under EMH, there were no bargains to be had, and trying to outperform the market would be futile. "It has been helpful to me to have tens of thousands turned out of business schools that taught that it didn't do any good to think," Buffett said.[25]

> I think it's fascinating how the ruling orthodoxy can cause a lot of people to think the earth is flat. Investing in a market where people believe in efficiency is like playing bridge with someone who's been told it doesn't do any good to look at the cards.[26]

9. **Align the interests of agents and owners.** Explaining his significant ownership interest in Berkshire Hathaway, Buffett said, "I am a better businessman because I am an investor. And I am a better investor because I am a businessman."[27]

   As if to illustrate this sentiment, he said:

> A managerial "wish list" will not be filled at shareholder expense. We will not diversify by purchasing entire businesses at control prices that ignore long-term economic consequences

[21] Peter Lynch, *One Up on Wall Street* (New York: Penguin Books, 1990): 78.
[22] Berkshire Hathaway Inc. annual report, 1986.
[23] Berkshire Hathaway Inc. annual report, 1990.
[24] Berkshire Hathaway Inc. letters to shareholders, 1977–83.
[25] Kilpatrick, 353.
[26] L. J. Davis, "Buffett Takes Stock," *New York Times*, April 1, 1990.
[27] *Forbes*, October 19, 1993; Kilpatrick, 574.

> to our shareholders. We will only do with your money what we would do with our own, weighing fully the values you can obtain by diversifying your own portfolios through direct purchases in the stock market.[28]

For four out of six Berkshire directors, more than 50% of the family net worth was represented by shares in Berkshire Hathaway. The senior managers of Berkshire Hathaway subsidiaries either held shares in the company or were compensated under incentive plans that imitated the potential returns from an equity interest in their business unit, or both.[29]

Precision Castparts

"In the short run, the market is a voting machine but in the long run, it is a weighing machine."
—Benjamin Graham[30]

The vote was in and the market's reaction to Berkshire Hathaway's acquisition of PCP indicated disapproval. The market ascribed $4.05 billion less value to Berkshire Hathaway after the announced acquisition than before it. At the same time, the value of PCP jumped more than $5 billion, close to 20% of the market value of the firm. The market seemed to be saying that Buffett and Berkshire had overpaid for the business.

Buffett didn't seem to think so. And despite his age, he didn't appear to be slowing down. PCP was the largest acquisition in a string of large purchases over the past several years, including Duracell, Kraft, Heinz, and Burlington Northern Santa Fe, totaling more than $70 billion in deal value in all. These acquisitions, along with many more over the years, followed a similar blueprint (**Exhibit 1.8**). The gist of the acquisition criteria seemed to be relatively straightforward—Berkshire Hathaway looked for well-run businesses producing consistent results offered at a fair price. As Berkshire Hathaway stated in its press release following the PCP acquisition:

> PCP fits perfectly into the Berkshire model and will substantially increase our normalized per-share earning power. Under CEO Mark Donegan, PCP has become the world's premier supplier of aerospace components (most of them destined to be original equipment, though spares are important to the company as well). Mark's accomplishments remind me of the magic regularly performed by Jacob Harpaz at IMC, our remarkable Israeli manufacturer of cutting tools. The two men transform very ordinary raw materials into extraordinary products that are used by major manufacturers worldwide. Each is the da Vinci of his craft. PCP's products, often delivered under multi year contracts, are key components in most large aircraft.[31]

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[28]"Owner-Related Business Principles," Berkshire Hathaway annual report, 2004.

[29]In April 2005, the U.S. Securities and Exchange Commission interviewed Buffett in connection with an investigation into the insurance giant AIG and its dealings with Berkshire Hathaway's General Reinsurance unit. Buffett reported that he had questioned General Re's CEO about the transactions with AIG, but that he never learned any details.

[30]as quoted in Berkshire Hathaway Inc. letter to shareholders, 1993.

[31]PCP press release, August 10, 2015.

PCP manufactured complex metal components and products for very specific applications, mainly in the critical aerospace and power applications. The components were used in products with highly complex engineering processes, such as large jet-aircraft engines. Its customer base was concentrated and sophisticated, including General Electric, Pratt & Whitney, and Rolls-Royce, for whom they had been supplying castings for multiple decades.[32]

Exhibit 1.9 presents PCP's income statement and balance sheet ending March 31, 2015. **Exhibit 1.10** provides financials on comparable firms. **Exhibit 1.11** provides valuation multiples for comparable firms. The beta of PCP, measured after the acquisition announcement, was 0.38.

Conclusion

The announcement of Berkshire Hathaway's acquisition of PCP prompted some critical commentary. The Economist magazine wrote,

> But [Buffett] is far from a model for how capitalism should be transformed. He is a careful, largely ethical accumulator of capital invested in traditional businesses, preferably with oligopolistic qualities, whereas what America needs right now is more risk-taking, lower prices, higher investment and much more competition. You won't find much at all about these ideas in Mr. Buffett's shareholder letters.[33]

Conventional thinking held that it would be difficult for Warren Buffett to maintain his record of 21.6% annual growth[34] in shareholder wealth. Buffett acknowledged that "a fat wallet is the enemy of superior investment results."[35] He stated that it was the firm's goal to meet a 15% annual growth rate in intrinsic value. Would the PCP acquisition serve Berkshire Hathaway's long-term goals? Was the bid price appropriate? How did Berkshire Hathaway's offer measure up against the company's valuation implied by the multiples for comparable firms? Did Berkshire Hathaway overpay for PCP? Was the market's reaction rational?

Or did Buffett pay a fair price for a great business? If so, what determines a fair price? What makes a great business? And why would Berkshire Hathaway be interested in buying PCP? Why would PCP be interested in selling itself to Berkshire Hathaway? What value did Berkshire Hathaway bring to the equation?

[32]PCP annual report, 2014.

[33]"The Other Side of Warren Buffett," *Economist*, August 13, 2016.

[34]Berkshire Hathaway Inc. letter to shareholders, 2014.

[35]Garth Alexander, "Buffett Spends $2bn on Return to His Roots," *Times* (London), August 17, 1995.