

FIFTH EDITION

THE #1 BESTSELLING GUIDE TO
CORPORATE VALUATION

VALUATION

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Measuring *and* Managing the
Value of Companies

Updated
and Revised with
New Insights into
Business Strategy
and Investor
Behavior

TIM KOLLER • MARC GOEDHART • DAVID WESSELS

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About the Authors

The authors are all current or former consultants of McKinsey & Company's corporate finance practice. Collectively they have more than 50 years of experience in consulting and financial education.

McKinsey & Company is a management-consulting firm that helps leading corporations and organizations make distinctive, lasting, and substantial improvements in their performance. Over the past seven decades, the firm's primary objective has remained constant: to serve as an organization's most trusted external advisor on critical issues facing senior management. With consultants deployed from over 80 offices in more than 40 countries, McKinsey advises companies on strategic, operational, organizational, financial, and technological issues. The firm has extensive experience in all major industry sectors and primary functional areas, as well as in-depth expertise in high-priority areas for today's business leaders.

Tim Koller is a partner in McKinsey's New York office. He leads the firm's Corporate Performance Center and is a member of the leadership group of the firm's global corporate finance practice. In his 25 years in consulting Tim has served clients globally on corporate strategy and capital markets, mergers and acquisitions (M&A) transactions, and value-based management. He leads the firm's research activities in valuation and capital markets. He was formerly with Stern Stewart & Company and with Mobil Corporation. He received his MBA from the University of Chicago.

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Preface

The first edition of this book appeared in 1990, and we are encouraged that it continues to attract readers around the world. We believe the book appeals to readers everywhere because the approach it advocates is grounded in universal economic principles. While we continue to improve, update, and expand the text as our experience grows and as business and finance continue to evolve, those universal principles do not change.

The 20 years since that first edition have been a remarkable period in business history, and managers and investors continue to face opportunities and challenges emerging from it. The events of the economic crisis that began in 2007, as well as the Internet boom and its fallout almost a decade earlier, have strengthened our conviction that the core principles of value creation are general economic rules that continue to apply in all market circumstances. Thus, the extraordinarily high anticipated profits represented by stock prices during the Internet bubble never materialized, because there was no “new economy.” Similarly, the extraordinarily high profits seen in the financial sector for the two years preceding the start of the 2007 financial crisis were overstated, as subsequent losses demonstrated. The laws of competition should have alerted investors that those extraordinary profits couldn’t last and might not be real.

Over the past 20 years, we have also seen confirmed that for some companies, some of the time, the stock market may not be a reliable indicator of value. Knowing that value signals from the stock market may occasionally be unreliable makes us even more certain that managers need at all times to understand the underlying, intrinsic value of their company and how it can create more value. In our view, clear thinking about valuation and skill in using valuation to guide business decisions are prerequisites for company success.

WHY THIS BOOK

Not all CEOs, business managers, and financial managers *do* understand value in great depth, although they need to understand it fully if they are to do their jobs well and fulfill their responsibilities. This book offers them the necessary understanding, its practical intent reflecting its origin as a handbook for McKinsey consultants. We publish it for the benefit of current and future managers who want their companies to create value, and also for their investors. It aims to demystify the field of valuation and to clarify the linkages between strategy and finance. So while it draws on leading-edge academic thinking, it is primarily a how-to book and one we hope that you will use again and again. This is no coffee-table tome: If we have done our job well, it will soon be full of underlinings, margin notations, and highlightings.

The book's messages are simple: Companies thrive when they create real economic value for their shareholders. Companies create value by investing capital at rates of return that exceed their cost of capital. And these two truths apply across time and geography. The book explains why these core principles of value creation are true and how companies can increase value by applying the principles to decisions, and demonstrates practical ways to implement the principles in their decision-making.

The technical chapters of the book aim to explain step-by-step how to do valuation well. We spell out valuation frameworks that we use in our consulting work, and we illustrate them with detailed case studies that highlight the practical judgments involved in developing and using valuations. Just as important, the management chapters discuss how to use valuation to make good decisions about courses of action for a company. Specifically, they will help business managers understand how to:

- Decide among alternative business strategies by estimating the value of each strategic choice.
- Develop a corporate portfolio strategy, based on understanding which business units a corporate parent is best positioned to own, and which might perform better under someone else's ownership.
- Assess major transactions, including acquisitions, divestitures, and restructurings.
- Improve a company's performance management systems to align an organization's various parts to create value.
- Communicate effectively with investors, including both who to talk and listen to and how.
- Design an effective capital structure to support the corporation's strategy and minimize the risk of financial distress.

STRUCTURE OF THE BOOK

In this fifth edition, we continue to expand the practical application of finance to real business problems, reflecting the economic events of the past decade, new developments in academic finance, and the authors' own experiences. The edition is organized in six parts, each with a distinct focus.

Part One, **Foundations of Value**, provides an overview of value creation. We make the case that managers should focus on long-term value creation despite the capital market turmoil of the past several years. We explain the two core principles of value creation: first, the idea that return on capital and growth drive cash flow, which in turn drives value, and second, the conservation of value principle, that anything that doesn't increase cash flow doesn't create value (unless it reduces risk). We devote a chapter each to return on invested capital and to growth, including strategic principles and empirical insights.

Part Two, **Core Valuation Techniques**, is a self-contained handbook for using discounted cash flow (DCF) to value a company. A reader will learn how to analyze historical performance, forecast free cash flows, estimate the appropriate opportunity cost of capital, identify sources of value, and interpret results. We also show how to use multiples of comparable companies to supplement DCF valuations.

Part Three, **Intrinsic Value and the Stock Market**, presents the empirical evidence that share prices reflect the core principles of value creation and are not influenced by earnings management, accounting results, or institutional trading factors such as cross-listings. It also describes the rare circumstances under which share prices for individual companies or, very occasionally, the market in general may temporarily violate the core principles. The final chapter explains what makes stock markets efficient, which type of investors ultimately determine the trading range of a company's share price, and the implications of their influence for managers.

Part Four, **Managing for Value**, applies the value creation principles to practical decisions that managers face. It explains how to design a portfolio of businesses; how to create value through mergers, acquisitions, and divestitures; how to construct an appropriate capital structure; and how companies can improve their communications with the financial markets.

Part Five, **Advanced Valuation Issues**, explains how to analyze and incorporate in your valuation such complex issues as taxes, pensions, reserves, inflation, and foreign currency. Part Five also includes a comprehensive case valuing Heineken N.V., the Dutch brewer, illustrating how to apply both the core and advanced valuation techniques.

Part Six, **Special Situations**, is devoted to valuation in more complex contexts. We explore the challenges of valuing high-growth companies, companies in emerging markets, cyclical companies, and banks. In addition, we show how

uncertainty and flexibility affect value, and how to apply option pricing theory and decision trees in valuations.

WHAT'S NEW ABOUT THE FIFTH EDITION

Most of the case examples and empirical analyses have been updated, and we have reflected changes in accounting rules. We have enhanced the global perspective in the book with extensive examples and data from both the United States and Europe.

To make the book easier to navigate, we have broken up long chapters from the previous edition into several shorter chapters, so that each is a more manageable size and the reader can find important topics faster. In addition, we have created a new part on advanced valuation issues, removing these topics from the section dedicated to core techniques. This makes the core techniques section shorter and easier to read and also allows us more space to devote to advanced topics.

An important addition to the book is the expanded discussion of return on invested capital (ROIC) and growth in two new chapters in Part One. The new ROIC chapter shows the linkages between different levels of ROIC and different business strategies, to help executives assess whether their strategies can lead to high and sustained returns on capital. In the new growth chapter, we show the different effects on value of different types of growth, to help companies prioritize growth initiatives.

Finally, Part Three is an entirely new section that deals with the stock market. As in past editions, we show that stock market values generally reflect companies' fundamental economic performance: markets are not fooled by accounting gimmicks used to embellish results. For the fifth edition, however, we have expanded our discussion of those market inefficiencies that do occur from time to time. We also present new insights on how to segment investors into different types, how the different types of investors affect the market, and the implications of this segmentation for executives.

VALUATION SPREADSHEET

An Excel spreadsheet valuation model accompanies this book and can be downloaded following the instructions on the card adhered to the back cover of this book. This valuation model is similar to the model we use in practice. Practitioners will find the model easy to use in a variety of situations: mergers and acquisitions, valuing business units for restructuring or value-based management, or testing the implications of major strategic decisions on the value of your company. We accept no responsibility for any decisions based on your inputs to the model. If you would like to purchase the model on CD-ROM (ISBN 978-0-470-42457-5), please call (800) 225-5945, or visit www.wileyvaluation.com to purchase the model via Web download (ISBN 978-0-470-89455-2).

Acknowledgments

No book is solely the effort of its authors. This book is certainly no exception, especially since it grew out of the collective work of McKinsey's corporate finance practice and the experiences of its consultants throughout the world.

Most important, we would like to thank Tom Copeland and Jack Murrin, two of the co-authors on the first three editions of this book. We are deeply indebted to them for establishing the early success of this book, for mentoring the current authors, and for their hard work in providing the foundations on which this edition builds.

Ennius Bergsma deserves our special thanks. Ennius initiated the development of McKinsey's corporate finance practice in the mid-1980s. He inspired the original internal McKinsey valuation handbook and mustered the support and sponsorship to turn that handbook into a real book for an external audience.

Concurrent with this fifth edition, McKinsey is publishing a shorter book, entitled *Value: The Four Cornerstones of Corporate Finance*, which explains the principles of value and their implications for managers and investors without going into the technical detail of this how-to guide to valuation. We've greatly benefited from the ideas of that book's co-authors, Richard Dobbs and Bill Huyett, as well as the lead editor, Neil DeCarlo.

Of course, we could not have devoted the time and energy to this book without the support and encouragement of McKinsey's corporate finance practice leadership, in particular Christian Caspar, Richard Dobbs, Bernie Ferrari, Bill Huyett, Rob Latoff, Thomas Luedi, Nick Leung, Pedro Rodeia, Michael Silber, and Vincenzo Tortoricci.

Tim and Marc lead McKinsey's Corporate Performance Center (CPC), a group of dedicated corporate finance experts that influences our thinking every day. A special thank-you to Bernie Ferrari, who initiated the group and nurtured its development. The CPC's leaders include: Ankur Agrawal, André

Annema, Andres Cottin, Bas Deelder, Susan Nolen Foushee, Regis Huc, Mimi James, Mauricio Jaramillo, Bin Jiang, Marc Metakis, Jean-Hugues Monier, Rishi Raj, Werner Rehm, Ram Sekar, and Zane Williams.

We've made extensive use of McKinsey's Corporate Performance Analytical Tool (CPAT), which provides a great database and deep analytical capability. Thank you to Bin Jiang, who developed and oversees CPAT, and to Bing Cao, who analyzed the data for us. Dick Foster, a former McKinsey colleague and mentor, inspired the development of CPAT.

Gina Campbell, our lead editor, ensured that our ideas were expressed clearly and concisely. She also had to cope with our difficult schedules, which she handled gracefully. Thank you, Gina. Karen Schenkenfelder provided careful editing and feedback throughout the process. We are indebted to her excellent eye for detail. Kim Bartko oversaw the production of the more than 300 exhibits in this book, a Herculean task given the variety of formats and technologies employed. We are also grateful to Joseph Mandel for his painstaking help with final fact-checking.

Bill Javetski and Rik Kirkland ensured that we received superior editorial support from McKinsey's external publishing team.

The intellectual origins of this book lie in the present value method of capital budgeting and in the valuation approach developed by Professors Merton Miller and Franco Modigliani (both Nobel laureates) in their 1961 *Journal of Business* article entitled "Dividend Policy, Growth and the Valuation of Shares." Others have gone far to popularize their approach. In particular, Professor Alfred Rappaport (Northwestern University) and Joel Stern (Stern Stewart & Co.) were among the first to extend the Miller-Modigliani enterprise valuation formula to real-world applications. In addition to these founders of the discipline, we would also like to acknowledge those who have personally shaped our knowledge of valuation, corporate finance, and strategy. For their support and teachings, we thank Tony Bernardo, Dick Foster, Bob Holthausen, Rob Kazanjian, Ofer Nemirovsky, Eduardo Schwartz, Chandan Sengupta, Jaap Spronk, Joel Stern, Bennett Stewart, Sunil Wahal, and Ivo Welch.

A number of colleagues worked closely with us on the fifth edition, providing support that was essential to its completion. Jonathan Reef reviewed the text and double-checked all the numbers in Part Two, Core Valuation Techniques, and Part Five, Advanced Valuation Issues. In Part One, Foundations of Value, Bin Jiang and Bing Cao provided most of the data analysis and insights, which involved crunching large amounts of data. Bas Deelder, Ankur Agrawal, and Mauricio Jaramillo drove much of our thinking about total returns to shareholders (TRS) decomposition. In Part Three, Intrinsic Value and the Stock Market, Richard Gerards supported the work showing that the markets value substance over form. Bin Jiang, Bing Cao, Werner Rehm, and Zane Williams were our thought partners on how the market behaves in aggregate. In Part Four, Managing for Value, André Annema co-wrote the divestitures chapter, while Werner Rehm contributed to the capital structure chapter. Rob

Palter and Werner Rehm contributed to the investor communications chapters. In Part Five, Advanced Valuation Issues, Martijn Olthof prepared the analysis for the Heineken case study. In Part Six, *Special Situations*, André Annema contributed to the emerging markets chapter, Bas Deelder contributed to the chapter on valuing banks, and Marco de Heer's dissertation formed the basis for the chapter on valuing cyclical companies. Michael Kuritzky, Vijen Patel, Abishek Saxena, and Ram Sekar helped write the questions at the end of the chapters in the University edition. We thank them all for their insights and hard work.

We would like to thank again all those who contributed to the first four editions. We owe a special debt to Dave Furer for help and late nights developing the original drafts of this book more than 20 years ago. The first four editions and this edition drew upon work, ideas, and analyses from Carlos Abad, Paul Adam, Buford Alexander, Petri Allas, Alexandre Amson, André Annema, the late Pat Anslinger, Vladimir Antikarov, Ali Asghar, Bill Barnett, Dan Bergman, Olivier Berlage, Peter Bisson, the late Joel Bleeker, Nidhi Chadda, Carrie Chen, Steve Coley, Kevin Coyne, Johan Depraetere, Mikel Dodd, Lee Dranikoff, Will Draper, Christian von Drathen, David Ernst, Bill Fallon, George Fenn, Susan Nolen Foushee, Russ Fradin, Gabriel Garcia, Alo Ghosh, Irina Grigorenko, Fredrik Gustavsson, Marco de Heer, Keiko Honda, Alice Hu, Régis Huc, Mimi James, Bin Jiang, Chris Jones, William Jones, Phil Keenan, Phil Kholos, David Krieger, Shyanjaw Kuo, Bill Lewis, Kurt Losert, Harry Markl, Yuri Maslov, Perry Moilinoff, Fabienne Moimaux, Jean-Hugues Monier, Mike Murray, Terence Nahar, Juan Ocampo, Martijn Olthof, Neha Patel, John Patience, Bill Pursche, S. R. Rajan, Werner Rehm, Frank Richter, David Rothschild, Michael Rudolf, Yasser Salem, Antoon Schneider, Meg Smoot, Silvia Stefini, Konrad Stiglbrunner, Ahmed Taha, Bill Trent, David Twiddy, Valerie Udale, Sandeep Vaswani, Kim Vogel, Jon Weiner, Jack Welch, Gustavo Wigman, David Willensky, Marijn de Wit, Pieter de Wit, Jonathan Witter, David Wright, and Yan Yang.

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VALUATION

**MEASURING AND
MANAGING THE
VALUE OF
COMPANIES**

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Part One

Foundations of Value

