FIFTH EDITION

Cost of Capital

APPLICATIONS AND EXAMPLES

Shannon P. Pratt
Roger J. Grabowski

Foreword by Professor Richard Brealey

+ website

WILEY

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To our families for their support and encouragement, without which our careers and this book would not have been possible

Millie

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About the Authors

Dr. Shannon P. Pratt, CFA, FASA, ARM, MCBA, ABAR, CM&AA, is the chairman and CEO of Shannon Pratt Valuations, Inc., a nationally recognized business valuation firm headquartered in Portland, Oregon. He is also the founder and editor emeritus of Business Valuation Resources, LLC.

Dr. Pratt has performed valuation assignments for the following purposes: transaction (acquisition, divestiture, reorganization, public offerings, public companies going private); taxation (federal income, gift, and estate and local ad valorem); financing (securitization, recapitalization, restructuring), litigation support and dispute resolution (including dissenting stockholder suits, damage cases, and corporate and marital dissolution cases); and management information and planning. He has also managed a variety of fairness opinion and solvency opinion engagements. He regularly reviews business valuation reports for attorneys in litigation matters.

Dr. Pratt has testified on hundreds of occasions in such litigated matters as dissenting stockholder suits, various types of damages cases (including breach of contract, antitrust, and breach of fiduciary duty), divorces, and estate and gift tax cases. Among the cases in which he has testified are *Estate of Mark S. Gallo v. Commissioner, Charles S. Foltz, et al. v. U.S. News & World Report et al., Estate of Martha Watts v. Commissioner*, and *Okerlund v. United States*. He has also served as appointed arbitrator in numerous cases.

Previous Experience

Dr. Pratt was a professor of business administration at Portland State University from 1963 to 1969. During this time, he directed a research center known as the Investment Analysis Center, which worked closely with the University of Chicago's Center for Research in Security Prices. He entered the business valuation profession in 1969.

Education

Doctor of business administration, finance, Indiana University.

Bachelor of arts, business administration, University of Washington.

Professional Affiliations

Dr. Pratt is an Accredited Senior Appraiser and Fellow (FASA), Certified in Business Valuation, of the American Society of Appraisers (ASA) (their highest designation) and is also accredited in Appraisal Review and Management (ARM). He is a Chartered Financial Analyst (CFA). He is a Master Certified Business Appraiser (MCBA) with the Institute of Business Appraisers and also the first life member with the organization. He is Accredited in Business Appraisal Review (ABAR) with the National Association of Certified Valuators and Analysts (NACVA) and recipient of NACVA's Magna Cum Laude Award. He is a Master Certified Business Counselor (MCBC), and is Certified in Mergers and Acquisitions (CM&AA) with the Alliance of Merger and Acquisition Advisors.

Dr. Pratt is a life member of the ASA, and a life member of the Business Valuation Committee of that organization. He frequently teaches courses for the ASA. He is also a lifetime member emeritus of the Advisory Committee on Valuations of the ESOP Association. He is a member and a past president of the Portland Society of Financial Analysts, the recipient of the 2002 Distinguished Achievement Award, and a member of the Association for Corporate Growth. Dr. Pratt is a past trustee of the Appraisal Foundation and is currently an outside director and chair of the audit committee of Paulson Capital Corp., a NASDAQ-listed investment banking firm specializing in small initial public offerings (usually under $50 million).

Publications

Dr. Pratt is the author of more than 10 standard reference works for the valuation profession, including *Valuing a Business: The Analysis and Appraisal of Closely Held Companies*, 5th ed. (New York: McGraw-Hill, 2007); co-author, *The Lawyer's Guide to Cost of Capital*, with Roger J. Grabowski (Chicago: American Bar Association, 2014, forthcoming); co-author, *Guide to Business Valuations*, 23rd ed., with Jay Fishman, Cliff Griffith, and Jim Hitchner (Fort Worth, TX: Practitioners Publishing Company, 2013); co-author, *Standards of Value*, 2nd ed., with William Morrison and Jay Fishman (Hoboken, NJ: John Wiley & Sons, 2013); co-author, *Business Valuation and Taxes: Procedure, Law, and Perspective*, 2nd ed., with Judge David Laro (Hoboken, NJ: John Wiley & Sons, 2010); co-author, *The Lawyer's Business Valuation Handbook*, 2nd ed., with Alina V. Niculita (Chicago: American Bar Association, 2010); co-author with Roger J. Grabowski, *Cost of Capital: Applications and Examples*, 4th ed., (Hoboken, NJ: John Wiley & Sons, 2010); and co-author, *Cost of Capital in Litigation: Applications and Examples*, with Roger J. Grabowski (Hoboken, NJ: John Wiley & Sons, 2010). He has published nearly 200 articles on business valuation topics.

Roger J. Grabowski, FASA, is a managing director of Duff & Phelps, LLC.

Mr. Grabowski has directed valuations of businesses, partial interests in businesses, intellectual property, intangible assets, real property, and machinery and equipment for various purposes, including tax (income and ad valorem) and financial reporting, mergers and acquisitions, formation of joint ventures, divestitures, and financing. He developed methodologies and statistical programs for analyzing useful lives of tangible and intangible assets, such as customers and subscribers. His experience includes work in a wide range of industries, including sports, movies, recording, broadcast, and other entertainment businesses; newspapers, magazines, music, and other publishing businesses; retail; banking, insurance, consumer credit, and other financial services businesses; railroads and other transportation companies; mining ventures; software and electronic component businesses; and a variety of manufacturing businesses.

Mr. Grabowski has testified in court as an expert witness on the value of closely held businesses and business interests; matters of solvency, valuation, and amortization of intangible assets; and other valuation issues. His testimony in U.S. District Court was referenced in the U.S. Supreme Court opinion decided in his client's favor in the landmark *Newark Morning Ledger* income tax case. Among other cases in which he has testified were *Herbert V. Kohler Jr., et al., v. Comm.* (value of stock of the Kohler Company); *The Northern Trust Company, et al., v. Comm.* (the first U.S. Tax Court case that recognized the use of the discounted cash flow method for valuing a closely held business); *Oakland Raiders v. Oakland—Alameda County Coliseum Inc. et al.* (valuation of the Oakland Raiders); *In re: Louisiana Riverboat Gaming Partnership, et al. Debtors*; and *TMR Energy Limited v. The State Property Fund of Ukraine* (arbitration on behalf of the world's largest private company on cost of capital in Ukraine in a contract dispute).

Previous Experience

Mr. Grabowski was formerly managing director of the Standard & Poor's Corporate Value Consulting practice, a partner of PricewaterhouseCoopers, LLP, and one of its predecessor firms, Price Waterhouse (where he founded its U.S. Valuation Services practice and managed the Real Estate Appraisal practice). Prior to Price Waterhouse, he was a finance instructor at Loyola University of Chicago, a co-founder of Valtec Associates, and a vice president of American Valuation Consultants.

Education

Mr. Grabowski received his BBA—Finance from Loyola University of Chicago and completed all coursework in the doctoral program in finance at Northwestern University, Chicago.

Professional Affiliations

Mr. Grabowski is an Accredited Senior Appraiser and Fellow (FASA), Certified in Business Valuation, of the American Society of Appraisers (ASA) (their highest designation). He formerly served as editor of the *Business Valuation Review*, the quarterly journal of the Business Valuation Committee of the ASA.

Publications

Mr. Grabowski is the author of the annual Duff & Phelps *Risk Premium Report*. He lectures and publishes regularly. Mr. Grabowski is co-author of *The Lawyer's Guide to Cost of Capital* with Shannon Pratt (Chicago: American Bar Association, 2014, forthcoming); co-author of *Cost of Capital: Applications and Examples*, 4th ed., with Shannon Pratt (Hoboken, NJ: John Wiley & Sons, 2010); and co-author of *Cost of Capital in Litigation: Applications and Examples* with Shannon Pratt (Hoboken, NJ: John Wiley & Sons, 2010).

Recent articles include "Analysis of Long-Term Yields Since the Financial Crisis," the Institute of Chartered Accountants of England and Wales Valuations Group newsletter, co-authored with James Harrington and Richard Clohessy (May 2012); "Risk Free Rate Update," *Business Valuation Update* (September 2011); "Developing the Cost of Equity Capital: Risk-Free Rate and ERP during Periods of 'Flight to

Quality,'" *Business Valuation Review* (Winter 2010); "Estimating Discounts for Lack-of-Marketability for Restricted Stock," with Daniel McConaughy, *Valuation Strategies* (July/August 2010); and "Cost of Capital Estimation in the Current Distressed Environment," *Journal of Applied Research in Accounting and Finance* Vol. 4, No. 1 (July 2009).

Mr. Grabowski teaches courses for the ASA, including Cost of Capital, a course he developed.

Mark Bronson is a managing director in the transfer pricing practice of Duff & Phelps. He has significant experience addressing transfer pricing issues for multinational companies and government agencies. He has helped numerous clients resolve disputes through audit, appeals, competent authority, and Advance Pricing Agreement (APA) venues. Mr. Bronson has a wide variety of industry experience, with a particular focus on pharmaceutical, biomedical device, and other technology-driven industries. His transfer pricing experience includes more than 15 years in a consulting environment, as well as two years as an economist with the APA program at the Internal Revenue Service.

Mr. Bronson holds an MBA with accounting and finance concentrations from the University of Chicago Graduate School of Business. He also has a BA from the University of Rochester in economics and statistics.

Joanne Fong, CFA, CPA, is a senior manager in the Transaction Advisory Services—Valuation and Business Modeling practice in the Chicago office of Ernst & Young LLP. Ms. Fong holds a master of business administration degree and a bachelor of business administration degree, both from the University of Michigan, Ross School of Business.

Ms. Fong specializes in advising corporate clients on matters regarding value and value drivers (including risk-adjusted cost of capital) in connection with portfolio optimization, mergers and acquisitions, divestitures, and restructurings.

William H. Frazier, ASA, is a managing director in the Valuation and Financial Opinions Group of Stout Risius Ross, Inc. He has over 35 years of experience in business valuation and corporate finance. He has participated as an appraiser and/or expert witness in numerous U.S. Tax Court cases, including *Hendrix*, *Jelke*, *McCord*, *Dunn*, and *Gladys Cook*. Mr. Frazier has written numerous articles on the subject of business valuation for tax purposes, appearing in such publications as the *Business Valuation Review*, *Valuation Strategies*, *BV E-Letter*, and *Estate Planning*.

Prior to joining Stout Risius Ross, Mr. Frazier was a founding partner of Howard Frazier Barker Elliott, Inc. (HFBE), where he provided financial advisory and valuation opinions for purposes of corporate mergers, acquisitions and spin-offs, reorganizations and recapitalizations; estate, gift, and income tax requirements; estate planning, employee stock ownership plans; and other requirements. Prior to HFBE, Mr. Frazier was an officer of a major regional investment banking firm, where he was involved in public offerings of equity and debt securities, private placements, mergers and acquisitions, venture capital, and valuation and fairness opinions. Mr. Frazier is the developer of the Non-Marketable Investment Company Evaluation (NICE) Method.

Mr. Frazier holds professional licenses as FINRA Series 7 General Securities Representative, the FINRA Series 63 Uniform Securities Agent State Law Exam, and the FINRA Series 24 General Securities Principal. He previously was a member of the Business Valuation Committee of the American Society of Appraisers (ASA), serving as treasurer and secretary. He is currently the chairman of the Government Relations Committee of the ASA and serves on the board of the ASA's Education Foundation. He served on the IRS Advisory Council (IRSAC) from 2008 to 2011 and was a member of the Valuation Advisory Board of *Trusts & Estates*.

Thomas W. Hamilton, PhD, CRE, FRICS, CVS, is a commercial real estate professor at the University of St. Thomas Opus College of Business and founder and president of Karvel-Hamilton Real Estate Analytics/PROTEC. He holds an MS and a PhD in real estate and urban land economics from the University of Wisconsin–Madison, an MS in finance from the University of Wyoming, and a BS in natural resources from the University of Wisconsin–Madison. He has been a consultant to the telecommunications industry and the public utility industry in the United States for over 20 years, verifying and evaluating valuation and ad valorem tax strategies and problems, and has been a consultant to numerous local and state agencies in the analysis of property tax equity and incidence. He is a Counselor of Real Estate (CRE), a Fellow of the Royal Institution of Chartered Surveyors (FRICS), a Distinguished Fellow of the National Association of Industrial and Office Properties (NAIOP), and a licensed real estate broker and a licensed appraiser. He is a former Fellow and adjunct faculty member of the Lincoln Land Institute in Cambridge, Massachusetts, and former research associate with the International Association of Assessing Officers in Chicago, Illinois.

Dr. Hamilton has researched and published numerous articles on complex appraisal techniques and ad valorem issues and concerns in national and international journals and has been a nationally syndicated real estate columnist. His research currently focuses on income-based valuation methodologies for complex real estate assets, and he has successfully developed methods to identify and correct systematic, inequitable mass appraisal valuation processes. Dr. Hamilton has spoken to numerous organizations across the United States on topics ranging from general urban land economics, to financial risk management and to econometric analyses of the built environment.

James Harrington is a director at Duff & Phelps, where he provides technical support on client engagements involving cost of capital and business valuation matters, and is a major contributor in the development of Duff & Phelps's studies, surveys, online content and tools, and internal models for use by the firm's analysts worldwide. Mr. Harrington is the editor of the Duff & Phelps *Risk Premium Report* and developer of the *Report*'s online companion application, the *Risk Premium Calculator*.

Previously, Mr. Harrington was director of valuation research in Morningstar's Financial Communications Business, and led the group that produced the *Ibbotson SBBI Valuation Yearbook*, *SBBI Classic Yearbook*, and *Ibbotson Cost of Capital Yearbook*. Mr. Harrington holds a bachelor's degree in marketing from Ohio State University and an MBA in both finance and economics from the University of Illinois at Chicago.

Michelle Johnson is a managing director in the Transfer Pricing practice of Duff & Phelps. Ms. Johnson has significant experience advising clients on transfer pricing and valuation matters, including transfer pricing documentation preparation, ASC 740 (FIN 48) recognition and measurement analyses, advanced pricing agreements, and transfer pricing policy development. She led the development of the practice's ASC 740 service line and has taken leadership roles, including management of the group's national operations. She is an award-winning speaker and has presented at numerous conferences and seminars regarding transfer pricing issues.

Ms. Johnson's recent publications include Wolter Kluwer's *Guide to International Transfer Pricing: Law, Compliance and Tax Planning Strategies*, and the *BNA Tax Management Portfolio* on ASC 740-10 (FIN 48) (published in 2012). She obtained her master's degree in economics from New York University and a BS in economics and French from the University of Illinois.

Glen N. Kernick is a managing director in the Silicon Valley office of Duff & Phelps, LLC and the Technology Industry practice leader. He has performed numerous valuations and financial analyses for more than 16 years for a variety of purposes including financial reporting, tax, fairness opinions, litigation, and strategic planning. He was formerly a managing director of the Standard & Poor's Corporate Value Consulting practice and a director at PricewaterhouseCoopers, LLP. Mr. Kernick received an MBA from the University of Washington and a bachelor of arts in economics from the University of California, San Diego.

Kimberly Linebarger, ASA, CVA, is a senior financial analyst with Shannon Pratt Valuations. Mrs. Linebarger has managed business valuation projects for a variety of purposes, including shareholder disputes, marital dissolutions, mergers and acquisitions, damages actions, and estate matters. Mrs. Linebarger received a bachelor of science degree with an emphasis in finance from Portland State University. She currently serves on the National Association of Certified Valuators and Analysts' Valuation Credentialing Board. As an analyst with Shannon Pratt Valuations she has contributed to multiple publications on business valuation.

James Morris, PhD, AM, received his PhD in finance from the University of California, Berkeley. He is a retired professor emeritus of finance at the University of Colorado at Denver, where he taught courses in business valuation, financial modeling, and financial management; he has also served on the finance faculties at the Wharton School of the University of Pennsylvania and at the University of Houston, and also has taught finance courses at business schools in England, France, and Germany. In addition, he has taught short programs on financial modeling to industry audiences in Australia, New Zealand, and Singapore.

Dr. Morris's recent publications include: *Introduction to Financial Models for Management and Planning*, with J. Daley (CRC Press, 2009); "Life and Death of Businesses: A Review of Research on Firm Mortality," *Journal of Business Valuation and Economic Analysis* (2009); "Firm Mortality and Business Valuation," *Valuation Strategies* (September/October 2009); "The Iterative Process Using CAPM to Calculate the Cost of Equity Component of the Weighted Average Cost of Capital When Capital Structure Is Changing," Appendix 7.2 in Pratt and Grabowski, *Cost of Capital: Applications and Examples*, 3rd ed. (Hoboken, NJ: John Wiley & Sons, 2008); "Growth in the Constant Growth Model," *Business Valuation Review* (Winter 2006); "Understanding the Minefield of Weighted Average Cost of Capital," *Business Valuation Review* (Fall 2005); and "Reconciling the Equity and Invested Capital Methods of Valuation When the Capital Structure Is Changing," *Business Valuation Review* (March 2004). In addition, his research articles have been published in the *Journal of Finance*, *Journal of Financial & Quantitative Analysis*, *Journal of Applied Psychology*, *Academy of Management Journal*, and *Management Science*, among others. In addition to teaching, he provides valuation services to the business community.

Alina V. Niculita, ASA, CFA, is president and COO of Shannon Pratt Valuations, where she works on all aspects of case management, including the fundamental aspects of business valuation, financial analysis, and report writing. Ms. Niculita has been involved in business valuation engagements for various purposes such as business transactions, gift and estate taxes, employee stock ownership plans (ESOPs), marital dissolution, bankruptcy, and litigation support. She also worked on valuations of intangible assets, goodwill, solvency, and fairness opinions, and she is frequently involved in report review work.

Ms. Niculita is a co-author of *The Lawyer's Business Valuation Handbook*, 2nd ed., with Shannon Pratt (Chicago: American Bar Association, 2010) and *Closely Held Business Valuation* with Nicholas J. Mastracchio (Bloomberg BNA Portfolio); she is a contributing author to several books including Cost *of Capital Applications and Examples*, 4th ed.; *Valuing a Business: The Analysis and Appraisal of Closely Held Companies*, 5th ed.; *The Market Approach to Valuing Businesses Workbook*, 2nd ed.; *Business Valuation Body of Knowledge Workbook*, 2nd ed.; and *Cost of Capital Workbook*, 2nd ed. Ms. Niculita received a dual MBA in finance from the Joseph M. Katz Graduate School of Business, University of Pittsburgh, and from the Czech Management Center, Czech Republic. She also received a bachelor of sciences degree in economics with a concentration in banking and finance from the Academy of Economic Studies, Bucharest, Romania.

Carla Nunes, CFA, is a director in the Office of Professional Practice of Duff & Phelps LLC, where she provides firmwide technical guidance on a variety of valuation, financial, and tax reporting issues. She recently spent a year in Duff & Phelps's London office, promoting the firm's International Financial Reporting Standards (IFRS) education efforts and marketing initiatives, as well as dealing with IFRS implementation issues.

Prior to this role, Ms. Nunes was part of Duff & Phelps's Valuation Advisory Services business unit, focusing on the valuation needs of consumer and industrial products firms, primarily for financial reporting or tax purposes. Before Duff & Phelps, she was a manager in the Standard & Poor's Corporate Value Consulting practice and a senior associate at PricewaterhouseCoopers, LLP. She has 17 years of experience in providing valuation, financial analysis, and tax services.

Ms. Nunes has conducted numerous business and asset valuations for a variety of purposes, including purchase price allocations, goodwill impairment testing, mergers and acquisitions, corporate tax restructuring, and debt analyses. She has substantial experience working with multinational companies, having addressed complex tax, international cost of capital, and foreign exchange issues. She is also one of

Duff & Phelps's experts in addressing valuation issues related to cost of capital and foreign exchange. Ms. Nunes is a regular instructor at Duff & Phelps's annual new-hire training event.

Ms. Nunes received her MBA in finance from the University of Rochester, completed coursework for a masters of taxation from Villanova University School of Law, and received an honors degree in business administration from the Technical University of Lisbon. She also holds the Chartered Financial Analyst (CFA) designation and is a member of the CFA Institute, the CFA Society of Philadelphia, and the American Institute of Certified Public Accountants.

Niel Patel is an analyst in the Valuation Advisory Services and Office of Professional Practice of Duff & Phelps, where he provides firmwide technical guidance on client engagements involving cost of capital, business valuation matters, and designing and implementing various valuation models.

Mr. Patel is a contributor to the Duff & Phelps 2012 and 2013 *Risk Premium Reports* and online *Calculator*, *2012 U.S. and Canadian Goodwill Impairment Studies*, and the quarterly publication of Duff & Phelps, *Valuation Insight*. He received his bachelor's degree in accounting and finance from Loyola University of Chicago.

David M. Ptashne, CFA, is a director with the Chicago office of Duff & Phelps LLC. His more than 10 years of valuation and economic consulting experience include significant experience performing valuation studies of businesses, interests in businesses, and intangible property. His services have been rendered for a variety of purposes, including tax planning and compliance (frequently in connection with transfer pricing), litigation and international arbitration, financial reporting, mergers and acquisitions, management planning, and estate and gift tax matters. Mr. Ptashne is an active participant with industry groups such as the National Association for Business Economics and Bloomberg BNA, where he has been an award-winning speaker. He has also contributed to various publications concerning cost of capital and transfer pricing, including prior editions of this book. He received a bachelor of science degree in finance with high honors from the University of Illinois at Urbana–Champaign.

Gary Roland, CFA, CPA, is a managing director in the Office of Professional Practice residing in the Philadelphia office of Duff & Phelps. The Office of Professional Practice provides technical interpretation and guidance on financial reporting valuation matters such as business combinations, intangible assets, goodwill and asset impairments. Mr. Roland has 28 years of valuation experience. He was formerly a director in Standard & Poor's Corporate Value Consulting practice and at PricewaterhouseCoopers, LLP. He received an MBA and a bachelor of sciences degree in engineering from the State University of New York at Buffalo.

Mark W. Shirley, CPA/ABV/CFF, CVA, CFFA, CFE, is the managing partner of V & L Consultants, LLC, in Baton Rouge, Louisiana. Prior to entering the private sector, Mr. Shirley received extensive training and experience during his employment with the Internal Revenue Service. Since 1984, his consulting practice has concentrated on the disciplines of business valuation, forensic/investigative accounting, and financial analysis/modeling.

Technical and academic materials by Mr. Shirley have been published by Wiley Law Publications, Aspen Legal Press, and Business Valuation Resources including contributions to: *Tax and Financial Planning Strategies in Divorce*; *Cost of Capital*, 3rd and 4th eds. and 4th ed. *Workbook; Valuing Professional Practices and Licenses*; and *BVR's Guide to Personal v. Enterprise Goodwill*. Technical articles have been published in *The Valuation Examiner*, *BewertungsPraktiker* Nr., *The Practical Accountant*, *CPA Litigation Services Counselor*, the *Gatekeeper Quarterly*, and the *Journal of Forensic Accounting*.

Mr. Shirley has developed training and continuing education courses for the legal, accounting, and valuation/appraisal professions. Additionally, he has developed advanced training courses in applied statistics and financial modeling for valuation/appraisal accrediting organizations. Current academic projects include the development of forensic accounting course materials for university MBA and master's in accounting curriculum and reference materials for the Louisiana family law courts.

Mr. Shirley is an adjunct faculty member at the National Judicial College, University of Nevada, Reno, and serves on the Advisory Panel for *Mdex Online* and *The Daubert Tracker*, an online *Daubert* research database.

Bennett Stewart is the chairman and chief executive officer of EVA Dimensions LLC, and an expert in shareholder value, performance management, and incentive compensation.

Mr. Stewart is best known for developing and promoting the practical applications of economic profit under the trademark name of EVA (economic value added), starting with publication of his 1991 book, *The Quest for Value* (HarperBusiness), which formally launched EVA as a corporate management technique and precipitated its appearance on the cover of *Fortune* magazine in September 1993 with the tagline, "EVA—It's the Real Key to Creating Wealth." His new book, *Best-Practice EVA* (John Wiley & Sons, 2013), presents a significantly improved version of EVA that makes it a far more practical tool for corporate management and in boardrooms.

Mr. Stewart formed EVA Dimensions in 2006 (as a spin-off from Stern Stewart, the global EVA consulting firm) with the goal to turn EVA into an acknowledged standard of excellence in corporate financial management and equity research. In recent years he was instrumental in developing a predictive stock-rating model called PRVit (pronounced "prove-it" and standing for the "performance-risk-valuation investment technology"), which scores stocks as attractive to own or sell based on their fundamental EVA values. The buy-sell ratings are updated daily on Bloomberg, and PRVit reports are available through Fidelity.com. EVA Dimensions' equity research team uses PRVit to help fund managers at investment houses make better buy-sell decisions.

Mr. Stewart holds a cum laude degree in electrical engineering from Princeton University (1974) and an MBA from the University of Chicago (1976). He chairs the audit and finance committee of ITC Holdings (NYSE:ITC), is a member of the Advisory Board for the *Morgan Stanley Journal of Applied Corporate Finance*, and formerly chaired the Alumni Advisory Council for Princeton's Department of Operations Research and Financial Engineering.

David Turf, CFA, is a managing director in the Investment Banking Group of Duff & Phelps LLC. He is a member of the Transaction Opinions practice and serves on the Senior Review Committee. He has extensive experience executing engagements for fairness opinions, solvency opinions, and valuation opinions.

Mr. Turf has advised boards of directors, management, trustees and shareholders on a variety of corporate finance and valuation issues for mergers, acquisitions, divestitures, ESOPs, financings, and other general corporate purposes. He has provided fairness opinions in a variety of transactions, including going-private, reverse-merger, restructuring, and related-party transactions. He has provided solvency opinions in spin-offs, leveraged buyouts and recapitalizations, and other transactions. In addition, he has structured debt securities and issued commercially reasonable opinions for debt issuances in related-party transactions.

Prior to joining Duff & Phelps in 1997, Mr. Turf was an assistant vice president in the commercial loan department of Corus Bank. He received an MBA with a focus on finance and organizational behavior from the J. L. Kellogg Graduate School of Management at Northwestern University. He also received a BS in finance from the University of Illinois at Urbana–Champaign.

Foreword

The opportunity cost of capital is one of the most important concepts in finance. For example, if you are a chief financial officer contemplating a possible capital expenditure, you need to know what return you should look to earn from the investment. If you are an investor who needs to plan for future expenditures, you need to ask what return you can expect to earn on your portfolio.

Shannon Pratt and Roger Grabowski have produced a remarkably comprehensive review of the subject. With over 1,000 pages of close-packed material, the book is not for bedtime reading, but it is a work that valuation practitioners, CFOs, and others will find an invaluable reference.

The book is somewhat wider ranging than its title suggests, for its focus is on valuation. It does not simply discuss how to estimate the cost of capital, but also shows how this estimate can be used to solve a variety of valuation problems. Indeed, it is here that the book makes some of its most useful contributions. Most finance texts provide an overview of how the cost of capital can be used to discount the expected cash flows from a proposed capital project. What I find most interesting about this book is that it also tackles much less well covered topics. For example, boards of securities firms that need to value level 3 securities will find useful advice on illiquidity discounts. Practitioners who need to estimate the value of control will find a chapter on this issue. And so on. It is this all-embracing nature of the analysis that makes this book such a valuable addition to the financial manager's bookshelf.

Richard Brealey
London Business School

Preface

Cost of capital is an essential, albeit complex element of virtually every application of finance. Literally billions and billions of dollars turn on decisions regarding the cost of capital in each of the following contexts:

- Mergers and acquisitions
- Shareholder disputes
- Capital budgeting
- Bankruptcies and reorganizations
- Business damages cases
- Gift, estate, and income tax matters
- Marital property settlements
- Ratemaking in regulated industries
- Property taxation

This book addresses developments related to estimating the cost of capital in all of these contexts. We use the term *estimates* rather than determinations because the cost of capital is *forward-looking*. It is the *expected* rate of return required to attract capital to a particular investment or project as of a given date, reflecting economic and other factors surrounding the expected returns and the risk of the investment or project at that particular point in time.

Cost of capital is the pricing of risk. Since risk is in the mind of the beholder, it cannot be measured directly. This book addresses ways to measure risk to lead to an estimate of the appropriate cost of capital.

EFFECT OF FEDERAL RESERVE ACTIONS ON LONG-TERM INTEREST RATES

Federal Reserve actions kept long-term interest rates low from 1942 through 1951 and again from the fall of 2011 through at least the writing of this book. We analyze the effect of these actions on the traditional data and procedures used to estimate the cost of capital, and suggest ways to control for it.

WHY DID WE UNDERTAKE UPDATING THE BOOK?

Our experience tells us that practitioners need assistance to better understand and estimate the cost of capital and in communicating their results, not from the viewpoint of portfolio management but from the viewpoint of business owners and managers.

We decided to do this update to the book because of the changes in cost of capital resulting from the financial crisis that began in 2008, the subsequent recession, and today's uncertain environment.

The purpose of this book is to present both the theoretical development of cost of capital estimation and its practical application to valuation and capital budgeting in current practice. It is intended both as a learning text for those who want to study the subject and as a handy reference for those who are interested in background or seek direction in some specific aspect of cost of capital.

The objective is to serve two primary categories of users:

1. The *practitioner* who seeks a greater understanding of the latest theory and practice in cost of capital estimation
2. The *reviewer* who needs to make an informed evaluation of another party's methodology and data used to produce a cost of capital estimate

No other valuation text designed for the practitioner treats the cost of capital with the breadth and depth that this one does. In terms of breadth, this book treats cost of capital for uses in business valuation, project assessment and capital budgeting, divisional cost of capital, reporting unit valuation, goodwill impairment testing, valuing intangible assets for financial reporting, and transfer pricing.

The reader can expect to learn about:

- The *theory* of what drives the cost of capital
- *Procedures* currently in use to estimate cost of capital
- *Data* available as inputs to the models to estimate cost of capital

Our emphasis is on the cost of equity capital. We present in-depth analysis of the components, including the equity risk premium, beta, and the size effect. We also analyze criticism of many procedures used for developing estimates of the cost of capital and present a number of alternative procedures.

WHAT'S NEW IN THIS EDITION

There has been a surge of new research since the previous edition. We have attempted to reflect these developments through the time we are writing this book, found in new and updated books, in newly published articles, and, particularly, in many unpublished working papers. Readers can access most of the working papers through our footnote references.

New chapters:

- "How Courts View Cost of Capital" (Chapter 38), dealing with oppression and fairness matters; estate and gift matters; corporate restructuring and other federal tax matters, including transfer pricing; cost of capital issues in intellectual property and other damages disputes; bankruptcy cases; family law matters; ad valorem taxation matters; and regulated industry matters
- Cost of capital for closely held businesses (Chapter 27)
- Two new case studies detailing the procedures for estimating cost of capital

Updated and expanded discussion of many important topics, including:

- Equity risk premium and the risk-free rate, including the impact of Federal Reserve actions
- Development of cost of capital in mergers and acquisitions;
- How to use Ibbotson's and Duff & Phelps cost of capital data
- Company-specific risk—factors to consider and how to measure
- Criticisms of CAPM and reasons why multiple procedures should be used in developing discount and capitalization rates
- Added evidence of the existence and magnitude of the size effect
- Updated chapter on cost of capital in transfer pricing
- Cost of capital for family holding companies
- Cost of Capital of REITs
- Global cost of capital estimation, including a new size study of European companies
- Adjusting discount and capitalization rates for different measures of economic income, including pretax discount rates
- Changing discount rates reflecting changes in risk
- Additional residual (terminal) value models to provide more flexibility to the analyst
- "Glossary of Cost of Capital Terms" (Appendix III)—added terms as defined by the International Valuation Standards Committee

We again expanded the chapters on common errors made in valuation and advice from the authors about dealing with specific, often controversial, cost of capital issues.

Supplemental information is available to readers on the John Wiley & Sons website, including hundreds of PowerPoints to use in the classroom and for presentations.

Finally, the index is newly improved to make it easier for readers to locate material on a particular topic.

ABOUT THE WEBSITE

We have added the following materials to the companion website.

URL: www.wiley.com/go/costofcapital
Password: coc5e

Appendices

IV. Sample Report Submitted to U.S. Tax Court

Example of a report submitted to the U.S. Tax Court to assist in communicating application of cost of capital estimation procedures in a straightforward manner to the nontechnical reader.

V. Review of Statistical Analysis

Comprehensive review of the statistics discussed and used in developing cost of capital estimates.

VI. Notation System and Abbreviations Used in This Book
VII. PowerPoints That Accompany the Chapters

To assist those that may want to use the book in seminars and in the classroom.

VIII. Examples (Microsoft Excel models) of changing capital structures discussed in Appendix 21A.

AUDIENCES FOR THE BOOK

In addition to the traditional professional valuation practitioner, we designed this book to serve the needs of:

- *Corporate finance officers* for pricing or evaluating mergers and acquisitions, raising private or public equity, property taxation, and stakeholder disputes
- *Investment bankers* for pricing, public offerings, mergers and acquisitions, and private equity financing
- *CPAs* who deal with either valuation for financial reporting or client valuations issues
- *Judges and attorneys* who deal with valuation issues
- *Academicians and students* who wish to learn anything from the basic theory to the latest research

Our goal is to enhance the insights of users of cost of capital applications as well as originators of such applications. Several chapter appendixes present detailed expositions of the more complex procedures.

FINAL THOUGHTS

We have enjoyed the challenge of assembling the materials for this edition. We do anticipate updating the book again, so please contact the authors with any questions, comments, or suggestions for the next edition.

Shannon P. Pratt, CFA, FASA, ARM, MCBA, ABAR, CM&AA
Shannon Pratt Valuations, Inc.
9725 S.W. Beaverton-Hillsdale Highway, Suite 360
Beaverton, OR 97005
(503) 716-8532
www.shannonpratt.com
E-mail: shannon@shannonpratt.com

Roger J. Grabowski, FASA
Duff & Phelps, LLC
311 S. Wacker Drive, Suite 4200
Chicago, IL 60606
(312) 697-4720
www.duffandphelps.com
E-mail: roger.grabowski@duffandphelps.com