

Handbook of Advanced Business Valuation

Robert F. Reilly, CFA, ASA, CPA, CBA
Managing Director
Willamette Management Associates

Robert P. Schweihs, ASA
Managing Director
Willamette Management Associates

McGraw-Hill

New York • San Francisco • Washington, D.C. • Auckland
Bogota • Caracas • Lisbon • London • Madrid • Mexico City
Milan • Montreal • New Delhi • San Juan • Singapore
Sydney • Tokyo • Toronto

Contents

Preface	vii
Acknowledgments	xi
About the Editors	xviii

Part I Technical Topics	1
--------------------------------	----------

1 The Income Approach—Estimating the Cost of Capital	3
---	----------

Shannon P. Pratt

Introduction. Definition of the Cost of Capital. Components of the Cost of Capital. Cost of Capital Equals Discount Rate. Discount Rate Versus Capitalization Rate. Characteristics of Cost of Capital. Cost of Capital by Capital Structure Component. *Cost of Debt. Cost of Preferred Equity. Cost of Common Equity.* Weighted Average Cost of Capital. *Definition. Company Actual Versus Hypothetical Capital Structure.* Estimation of Cost of Equity Capital. *Elements Reflected in Cost of Equity. Capital Asset Pricing Model (CAPM). Assumptions Underlying the CAPM. Build-Up Model. Discounted Cash Flow Method. Arbitrage Pricing Model.* Common Errors in Estimation and Use of Cost of Capital. *Confusing Discount Rates with Capitalization Rates. Using the Firm's Cost of Capital to Evaluate a More or Less Risky Acquisition or Project. Mistaking Historical Rates of Return for Expected Rates of Return. Mismatching the Discount Rate with the Economic Income Measure. Performing an Excess Earnings Method of Valuation That Results in an Unrealistic Cost of Capital. Projecting Growth Beyond That Which the Capital Being Valued Will Support. Internally Inconsistent Capital Structure Projection. Assumptions That Produce a Standard of Value Other Than That Called for in the Valuation Engagement. Summary.*

2 International Cost of Capital	25
--	-----------

James T. Budyak and Lee P. Hackett

Introduction. Multiple Step Process. Political Risk Analysis. Interest Rate Analysis. *Economic Considerations. Yield Differentials. High-Yield Debt.* Income Tax Rate Analysis. Applying Risk Premiums. Stage of Development. Economic Dependencies. Summary of International Cost of Capital Theory. Forecast Considerations. *Nominal or Real? Currency Exchange Risk. Application. Global Hurdle Rates. Lack of Perfect Data. Data Sources. Political Risk Data. Interest Rate Data. Brady Bonds. International Equity Risk Premiums. Comparable Countries. Country Betas. Income Tax Rates. Computer Models.* Sample Report Section—Discount Rate

Development. *Overview. Base U.S.WACC. Methodology. Conclusion.*

3 Equity Risk Premiums 55

David W. King and Roger J. Grabowski

Introduction. The Realized Return Approach. The Selection of the Observation Period. The Selection of Which Average to Use—Arithmetic or Geometric? Minority Ownership Interest Returns or Controlling Ownership Interest Returns? Forward-Looking Approaches. *Bottom-Up Approaches. Top-Down Approaches.* The Use of Surveys. Other Data Sources. Expected Returns and the Size Effect. *Observed Equity Risk Premiums. Criticisms of the Small Stock Effect.* Summary and Conclusion.

4 Discounts for Lack of Marketability—Empirical Evidence Related to Pre-IPO Pricing 81

/Steven D. Garber and Jeffrey A. Herbst, Esq.

Introduction. Use of Empirical Evidence and Lack of Marketability Discounts—Regulatory Oversight and a Standard of Care. Summary of Restricted Stock Studies. Summary Results of the Robert W. Baird and Company Study. Summary Results of the Willamette Management Associates Study. Baird Study versus Willamette Management Associates Study. Willamette Management Associates Pre-IPO Study Methodology. Willamette Management Associates Pre-IPO Study—A Closer Look. Discount for Lack of Marketability—Critical Factors. *Discount for Lack of Marketability—Block Size. Discount for Lack of Marketability—Time Frame. Discount for Lack of Marketability—Industry.* Common Critiques of the Willamette Management Associates Pre-IPO Study. Summary.

5 Discounts Seen in Private Placements of Restricted Stock: The Management Planning, Inc., Long-Term Study (1980-1996) 97

Robert P. Oliver and Roy H. Meyers

Introduction. The Relevance of Restricted Stock Discounts. Finding Private Placement Transactions. Analysis of the Relationships Between Specific Factors and the Size of Discounts. *Factors with the Most Explanatory Power. Factors with Some Explanatory Power. Factors with Minimum Explanatory Power. The Influence of Registration Rights on Discounts.* Observations and Conclusions.

Part II Special Applications 117

6 S Corporations—Premium or Discount? 119

Gary R. Trugman

Introduction. What Is an S Corporation? Valuation Issues. *Standard of Value. Purpose of the Assignment. Control versus Minority Ownership Interest. Distributing versus Nondistributing. Corporate or Personal Income Tax Rate.*

Holding Period of the Investment. Timing of the Valuation. Conclusion.

7 Blockage Discounts 139

Joseph S. Estabrook

Introduction. Tax Court Cases and Considerations in Determining Blockage. How to Estimate the Size of a Blockage Discount. Other General Factors in Considering the Amount of a Blockage Discount. *Alternate Valuation Date for Estate Tax Purposes. Underwriting Fees and Other Sales-Related Expenses. Separate Valuation of Contemporaneous Gifts. Blockage Discount Applies to Assets Other than Stock. Summary. Bibliography.*

8 The Valuation of Family Limited Partnerships 155

Charles L. Elliott

Overview. The Rationale Behind FLPs. Chapter 14 of the Internal Revenue Code. The Partnership Beginner's Kit for the Valuation Analyst. *Business Purpose. Contributions. Management Prerogatives. Distributions to the Partners. Transferability of Limited Partnership Interests.* Control in the Context of Limited Partnership versus a Corporation. Valuation Parameters. *Security Partnerships. Real Estate Partnerships. The Section 754 Election. Illustrative Case. Summary*

9 In-Process R&D 175

Lawrence B. (Larry) Gooch

Methodology. Contributory Assets. Nonwasting Assets. Wasting Assets. Existing Technology. Estimating In-Process Cash Flows. Estimating Useful Life of In-Process Technology. Revenue Projection. Projecting Expenses. Cost of Capital. Example 1. *Assumptions. Analysis.* Example 2. Example 3. Summary. Bibliography.

Part III Special Issues Related to Specific-Purpose Valuations 205

10' The Business Appraiser's Role in Estate Planning 207

S. Stacy Eastland and John W. Porter

Introduction. Valuations from Qualified and Respected Analysts Should Be Obtained at the Appropriate Estate Planning Stage. The Valuation Analyst's Credibility Is Key. The Valuation Analyst Should Understand and Apply the Fair Market Value Standard. Dealing with Legal Issues. A Team of Experts? The Estate Planning Professional Should Hire the Valuation Analyst. Remember That Anything Committed to Writing May Be Discoverable. The Analyst, the Taxpayer, and the Taxpayer's Representatives Need Not Retain Drafts of Valuations. The Valuation Should Be in a Form That Fully Sets Forth the Analyst's Conclusions and Is Admissible in Court. When Partial Interests Are Valued, the Discounts Should Be Appropriately Tied to the Specific Attributes of the Interest in the Valuation Entity. Conclusion.

11	Valuation Issues Unique to ESOPs	219
	<i>Gregory K. Brown</i>	
	Introduction. <i>Uses and Applications. Statutory Requirements. Types of ESOPs. Special Considerations. Permissible Employer Securities. ESOP Tax Incentives. Periodic Contributions to the Plan Are Tax-Deductible. Tax-Deferred Rollovers. Deductible Dividends. Distributions, Diversification, and Put Options. Voting Rights. S Corporations IC Corporations. Independent Appraiser Requirements. Internal Revenue Code Requirements. ERISA Requirements. Independent Appraiser Role as a Nonfiduciary. A Typical Leveraged ESOP Transaction. Illustrative Example. Multiple Investor Leveraged ESOPs. Special Valuation Issues in ESOPs. ESOP Stock Valuation Factors. Control Versus Minority Ownership Basis for Valuation. Lack of Marketability Discount. Postransaction ESOP Debt. ESOP as Seller.</i>	
12	Use of Alternative Equity Securities in the Capital Structure of ESOP Companies	237
	<i>Chester A. Gougis</i>	
	Introduction. <i>Types of Complex Securities Used in Employee Stock Ownership and Other Benefit Plans. Standard Convertible Preferred Stock. Floor Put Convertible Preferred Stock. High-Yield Convertible Preferred Stock. Super Common Stock. Tracking Stock. Fixed Dollar Convertible Preferred Stock. Performance Stock. Reasons for Choosing Complex Securities. ESOP Debt Repayment Requirements. Taxation Issues. Compensation Issues. Impact of Postransaction Dilution. Corporate Governance Issues. Valuation Issues for Complex ESOP Securities. Summary</i>	
13	Valuation for Ad Valorem Taxation	247
	<i>Claire H. Donias</i>	
	Introduction. <i>Definition of Value. Premise of Value. Valuation Date. Valuation Approaches. Assets Subject to Valuation. The Valuation Process. Reclassifications. Valuation Adjustments. Adjusted Income. Net Cash Flow. Rate of Return. Business Enterprise Valuation. Valuation of Operating Assets. Analysis and Observations. Direct Valuation Procedure. Conclusion.</i>	
14	Economic Damages: Use and Abuse of Business Valuation Concepts	273
	<i>John R. Phillips and Michael Joseph Wagner, Esq.</i>	
	Introduction. <i>Value the Whole or Just a Part? Use All Valuation Approaches? Value Before or After Taxes? The Rule of Thumb. Complications to the Rule of Thumb. A Typical Lost Profits Claim. Value Only the Future? Know Only the Past? Value Only the Future? Consider Only Information at the Date of Value? Projected or Expected Cash Flows. Differences in Reporting Requirements. Use Legal Precedent? Conclusion.</i>	

15	Fair Value for Oppressed and Dissenting Shareholders	295
	<i>Anne C. Singer and Jay E. Fishman</i>	
	Introduction. The Dissenter's Fair Value Case. The Oppressed Shareholder's Fair Value Case. Fair Value as a Standard of Value. The Valuation Date. Fair Value Methodology. Conclusion.	
16	Fairness Opinions	309
	<i>M. Mark Lee and Gilbert E. Matthews</i>	
	Overview. Definition of Fairness Opinion. Importance in Litigation. When Fairness Opinions May Be Advisable. Standards of Financial Fairness. • Fairness Opinions—The Legal Context. Determinants of the Range of Financial Fairness. Other Matters to Be Considered. The Fairness Opinion Process. Selection of the Financial Adviser. Evaluating the Engagement. The Role of the Engagement Team. Developing the Conclusion. Presenting the Opinion. The Final Opinion Letter.	
17	Solvency Opinions	337
	<i>David Light, Richard May, John Miscione, and John O'Brien</i>	
	Purpose of Solvency Analysis. Brief Definition of Solvency Analysis and Description of Tests for Solvency. Balance Sheet Test. Cash Flow Test. The Adequate (Reasonable) Capital Test. Projected Cash Flow Sensitivity Analysis. Black-Scholes Option Pricing Analysis. Sensitivity Methodology. Scenario I: Management's Best Estimate. Scenario II: Inflationary Sales Growth and Original Projected Profit Margins. Scenario III: No Changes. Key Variables of Historical and Projected Operations. Sensitivity Analysis Outcomes. Conclusions for Our Example. Summary and Conclusion.	
18	How Valuations Affect Transactions: Psychological Powers of Financial Numbers	353
	<i>Robert S. Socol and Robert Lawrence Kuhn</i>	
	Value of Valuations. Psychological Factors. Valuation as Metric. Valuation as Certainty. Valuation as Self-Esteem. Valuation as Manipulator. Myths of Value. Myth 1—Value Is Clear. Myth 2—Value Is Consistent. Myth 3—Value Is Constant. Myth 4—Value Is Only for Transactions. Valuation in Transactions. Valuation in Mergers and Acquisitions. Valuations in Private Placements. Valuations in Initial Public Offerings (IPOs). Valuations in ESOPs. Valuation in Buy I Sell Agreements. Conclusion.	

Part IV	Special Issues Related to Valuations in Specific Industries	365
19	Sports Team Valuation and Venue Feasibility <i>John E. (Jack) Kane</i> Introduction. Sports Team Valuation. <i>The Economics of Professional Sports.</i> Owner IPlayer Relationships. <i>Laws and League Regulations.</i> <i>Broadcasting and Cable Connection.</i> <i>Venue Attributes.</i> <i>Valuation Methodology.</i> Venue Feasibility. <i>Feasibility Analysis Outline.</i> <i>The Hampton Roads Rhinos—A Case Study.</i> Concluding Remarks.	367
20	Valuing Automobile Dealerships <i>James L. (Butch) Williams</i> Overview. What Are the Major Reasons for Valuation? Understanding the Industry. <i>Multiple Businesses in One.</i> <i>Dealership Accounting.</i> <i>Industry Statistics.</i> <i>Industry Terminology.</i> The Valuation Engagement. <i>Document Request Checklist.</i> <i>Key Risk Areas.</i> Understanding How Dealerships Are Purchased and Sold. <i>Which Assets Are Purchased and Sold Directly?</i> <i>How Are These Assets Purchased and Sold?</i> <i>What About Stock Purchases and Sales?</i> Methods for Valuing Dealerships. <i>Does the Purpose Matter?</i> <i>How Does the Emergence of Publicly Traded Companies Influence Value in Automobile Dealerships ?</i> <i>Common Normalization Adjustments.</i> Summary. Bibliography.	397
21	Valuing Radio Broadcasting Companies <i>Richard M. Wise and Drew S. Dorweiler</i> The Radio Broadcasting Industry. <i>Introduction.</i> <i>Regulatory Environment.</i> <i>Industry Trends.</i> Valuation. <i>Value Drivers.</i> <i>Valuation Methodology.</i> Industry Transactions. <i>Price Trends.</i> <i>Market Transactions.</i> <i>Transactional and Market Data.</i> Canadian Radio Broadcasting Industry. <i>Background.</i> <i>1998 Deregulation.</i> Conclusion.	415
22	Physician Practice Valuation in an Ever-Changing Health Care Market <i>Charles A. Wilhoite</i> Introduction. Physician Practice Valuation Methodology. <i>Valuation Approaches.</i> <i>Asset-Based Approach.</i> <i>Income Approach.</i> <i>Market Approach,</i> Key Valuation Issues. <i>Managing Expectations.</i> <i>Identifying and Rationalizing Value Trade-Offs.</i> <i>Issues of Management I Operational Control.</i> <i>Complying with Regulatory Constraints.</i> The Impact of Market Activity on Current Practice Values. Summary and Conclusion.	439

23	<i>J</i>Valuation of Emerging Growth Companies	467
"	<i>James G. Rabe and Tracy Lefteroff</i> Introduction. Reasons for Valuing Emerging Growth Companies. <i>Financing Events. Incentive Compensation. Gift and Estate Tax Planning. Litigation Support. Management of Intangible Assets.</i> Valuation Approaches. <i>Asset-Based Approach. Market Approach. Income Approach.</i> Early Stage Financing Securities in Emerging Growth Companies. <i>Capital Structure. Illustrative Example.</i> Typical Features of Early Stage Financing Securities. Valuation Considerations. Discount for Lack of Marketability. Conclusion.	
24	Special Considerations in the Valuation of Closely Held Government Technology Service Firms	489
	<i>Thomas J. Millon Jr. and Michael Mendelevitz</i> Introduction. The 8(a) Program. Information Technology Business Services. <i>The Private Sector. The Public Sector.</i> Special Considerations. Key Person Valuation Discount. Commercial versus Government. Controlling Ownership Interest Situations. Summary and Conclusion.	
	Index	501