Contents in Brief

PART ONE	INTRODUCTION TO CORPORATE FINANCE	1
Chapter 1	Introduction to Corporate Finance 3	
Chapter 2	The Objective in Corporate Finance 11	
Chapter 3	The Time Value of Money 44	
Chapter 4	Understanding Financial Statements 68	
Chapter 5	Value and Price: An Introduction 116	
Chapter 6	The Basics of Risk 149	
PART TWO	INVESTMENT ANALYSIS	
		185
Chapter 7	Estimating Hurdle Rates for Firms 186	
Chapter 8	Estimating Hurdle Rates for Projects 228	
Chapter 9 Chapter 10	Estimating Earnings and Cash Flows on Projects 256	
Chapter 11	Investment Decision Rules 285	
Chapter 12	Investment Analysis with Inflation and Exchange Rate Risk 318	
Chapter 13	Project Interactions, Side Benefits, and Side Costs 352	
Chapter 14	Investments in Noncash Working Capital 389	
Chapter 15	Investments in Cash and Marketable Securities 423 Investment Returns and Corporate Strategy 451	
BART TERRE		
PART THREE	THE FINANCING DECISION	481
Chapter 16	An Overview of Financing Choices 482	
Chapter 17	The Financing Process 509	
Chapter 18	The Financing Mix: Tradeoffs on Theory 537	
Chapter 19	The Optimal Financing Mix 571	
Chapter 20	The Financing Mix and Choices 619	
PART FOUR	THE DIVIDEND DECISION	
		657
Chapter 21	Dividend Policy 658	
Chapter 22	Analyzing Cash Returned to Stockholders 686	
Chapter 23	Beyond Cash Dividends: Buybacks, Spinoffs, and Divestitures 718	
PART FIVE	VALUATION	7.0
Chapter 24		749
Chapter 25	Valuation: Principles and Practice 750	
Chapter 26	Value Enhancement: Tools and Techniques 791	
oriapiei 20	Acquisitions and Takeovers 834	
PART SIX	THE LINK BETWEEN VALUATION AND CORPORATE	
	FINANCE DECISIONS	879
hapter 27 hapter 28	Option Applications in Corporate Finance 887 Back to First Principles 924	0/3
	Solutions to Odd-Numbered Questions and Problems 933 Index 971	

Contents

	Preface vii
	A Reader's Guide xi
PART ONE	INTRODUCTION TO CORPORATE FINANCE
Chapter 1	Introduction to Corporate Finance 3 Corporate Finance and the Firm 3 First Principles of Corporate Finance 4 Corporate Financial Decisions, Firm Value, and Equity Value 8 The Tools of Corporate Finance 9 Summary 9
Chapter 2	The Objective in Corporate Finance 11 Stockholder Wealth Maximization as the Objective in Decision Making 11 Why Do We Need a Unique Objective? 12 The Characteristics of the 'Right' Objective 13 Why Corporate Finance Focuses on Stock Price Maximization 13 When Is Stock Price Maximization the Only Objective a Firm Needs? 14 Stock Price Maximization and Agency Costs 15 Stockholders and Managers 16 Stockholders and Bondholders 21 The Firm and Financial Markets 22 The Firm and Society 27 Stock Price Maximization with Agency Costs 27 Alternatives to Stock Price Maximization 28 A Different System for Disciplining Management (Corporate Governance) 29 Choosing an Alternative Objective 30 Stock Price Maximization with Lower Agency Costs 31 Stockholders and Managers 32 Stockholders and Bondholders 34 Firms and Financial Markets 35 Firms and Society 36 A Postscript — The Limits of Corporate Finance 37 Summary 38 Real Companies, Real Time: Corporate Governance Analysis 40

Chapter 3 The Time Value of Money 44 The Intuitive Basis for the Time Value of Money 44 Cash Flows and Time Lines 45 Time Value of Money: Compounding and Discounting 46 Compounding 46 Discounting 48 The Frequency of Discounting and Compounding Time Value of Money: Annuities and Perpetuities 52 Annuities 52 Growing Annuities 60 Perpetuities 62 Growing Perpetuities 62 Summary 63 Chapter 4 Understanding Financial Statements 68 The Basic Accounting Statements 68 Informational Needs 69 Asset Measurement and Valuation 72 Accounting Principles Underlying Asset Measurement 72 Measuring Asset Value 72 How Well Do Accountants Categorize Assets and Measure Value? 76 Measuring Financing Mix 81 Accounting Principles Underlying Liability and Equity Measurement 81 Measuring the Value of Liabilities and Equities 81 How Well Do Accountants Measure the Financing Mix of the Firm? 86 Measuring Earnings and Profitability 89 Accounting Principles Underlying Measurement of Earnings and Profitability 89 Measuring Accounting Earnings and Profitability 89 How Well Do Accountants Measure Profitability? 99 Measuring Risk 100 Accounting Principles Underlying Risk Measurement 100 Accounting Measures of Risk 101 How Well Do Accountants Measure the Risk in a Business? 106 Other Issues in Analyzing Financial Statements 107 Differences in Accounting Standards and Practices 107 Summary 110 Real Companies, Real Time: Accounting Information and Financial Analysis 113 Chapter 5 Value and Price: An Introduction 116 Why Do We Need Valuation? 116 Valuing an Asset with Guaranteed Cash Flows 117 Default-free Zero-coupon Bond 117 Default-free Coupon Bond 118 Bond Value and Interest Rate Sensitivity and Duration 119 Introducing Uncertainty into Valuation 121 Valuing an Asset with Default Risk 121 Valuing an Asset with Equity Risk 124 Valuing an Asset with an Infinite Life 127 Equity and Firm Valuation 127 Dividends and Equity Valuation 128 A Broader Measure of Cash Flows to Equity 131 From Valuing Equity to Valuing the Firm 133 Valuing an Asset with Contingent Cash Flows (Options) 134

Cash Flows on Options 135

Determinants of Option Value 136
A Simple Model for Valuing Options 137
The Binomial Model 137
Market Prices and Value 141
The Pricing Process 142
Information, Expectations and Prices 142
Market Efficiency 143
Testing Market Efficiency 144
Summary 146

Chapter 6

The Basics of Risk 149

What Is Risk? 149
Motivation and Perspective in Analyzing Risk 150
Equity Risk and Expected Return 151
Defining Risk 151
Diversifiable and Nondiversifiable Risk 155
Models Measuring Market Risk 163
A Comparative Analysis of Risk and Return Models 172
Models of Default Risk 175
The Determinants of Default Risk 175
Bond Ratings and Interest rates 176
Summary 179
Real Companies, Real Time 183

PART TWO INVESTMENT ANALYSIS

185

Chapter 7

Estimating Hurdle Rates for Firms 186

The Cost of Equity and Capital 186
Why Do We Need Hurdle Rates for Firms? 187
Cost of Equity 187
Riskless Rate 188
Risk Premium 190
Betas 196
Estimating the Cost of Equity 210
Risk, Cost of Equity, and Private Firms 211
From Cost of Equity to Cost of Capital 212
Calculating the Cost of Debt 212
Calculating the Cost of Hybrid Securities 214
Calculating the Weights of Debt and Equity Components 216
Estimating the Cost of Capital 218

Best Practices at Firms 219 Summary 220

Real Companies, Real Time: Risk and Return: Analysis for the Firm 225

Chapter 8

Estimating Hurdle Rates for Projects 228

What Is a Project? 229

Hurdle Rates for Firms versus Hurdle Rates for Projects and Investments 229

Equity Risk and Cost of Equity for Project 230

Sources of Equity Risk in a Project 230

Diversifiable and Nondiversifiable Project Risk 232

Project Equity Risk and the Marginal Investor 233

Measuring Cost of Equity for Projects 237

Default Risk and Cost of Debt for Projects 244

Financing Mix and Cost of Capital for Projects 245

Adjusting for Project Risk 246

Adjusting Discount Rates 246
Adjusting Expected Cash Flows 247
Risk Adjustment Practices 249
Common Errors in Project Risk Assessment 250
Summary 250
Real Companies, Real Time: Risk and Return 254

Chapter 9 Estimating Earnings and Cash Flows on Projects 256

Estimating Project Revenues and Expenses 256

Experience and History 257

Market Testing 259

Scenario Analysis 260

Estimation Error and Risk 263

Converting Operating Forecasts into Accounting Forecasts 263

Why Forecast Accounting Earnings? 263

From Forecasts to Operating Income 263

From Operating Income to Net Income on Projects 267

From Project Earnings to Project Cash Flows 269

From Project Cash Flows to Incremental Cash Flows 273

Nonincremental Cash Flows 273

The Argument for Incremental Cash Flows 275

An Argument for Time Weighting Cash Flows 277

The Process of Time Weighting 278

Project Decisions and Time-weighted Cash Flows 278

The Case for Time-weighted Cash Flows 279

Summary 279

Real Companies, Real Time: Estimating Earnings and Cash Flows 284

Chapter 10 Investment Decision Rules 285

What Is an Investment Decision Rule? 285

Categorizing Investment Decision Rules 286

Accounting Income-Based Decision Rules 286

Cash Flow-Based Decision Rules 292

Discounted Cash Flow Measures 296

Comparing Investment Decision Rules 307

Net Present Value and Internal Rate of Return: A Closer Look 307

What Approaches Do Firms Use in Investment Analysis? 310

Summary 312

Real Companies, Real Time: Analyzing Investment Decision Rules Only If Feasible 316

Chapter 11 Investment Analysis with Inflation and Exchange Rate Risk 318

Dealing with Inflation in Project Analysis 318

Understanding Inflation 319

Dealing with Expected Inflation in Project Analysis 320

Dealing with the Effects of Unanticipated Inflation on Net Present Value 322

Analyzing Foreign Projects 325

An Introduction to Exchange Rates 325

Estimating Discount Rates for Foreign Projects 331

Estimating Cash Flows for a Foreign Project 335

Other Issues in Estimating Cash Flows on Foreign Projects 339

Domestic Projects with International Exposure 340

Managing Project Risk 341

Should Project Risk Be Managed? 341

How Do You Manage Project Risk? 342

Summary 347

Real Companies, Real Time: Analyzing Inflation and International Risk 350

Chapter 12 Project Interactions, Side Benefits, and Side Costs 352

Mutually Exclusive Projects 352

Projects with Equal Lives 353

Projects with Different Lives 356

The Replacement Decision: A Special Case of Mutually Exclusive Projects 361

Capital Rationing 362

Reasons for Capital Rationing Constraints 363

Sources of Capital Rationing 364

Project Selection with Capital Rationing 366

Side Costs of Projects 369

Opportunity Costs 369

Product Cannibalization 373

Side Benefits of Projects and Project Synergies 377

Options Embedded in Projects 379

Ingredients of an Option 379

The Option to Delay a Project 379

The Option to Expand a Project 381

The Option to Abandon a Project 382

Incorporating Options into Investment Analysis 383

Summary 383

Chapter 13 Investments in Noncash Working Capital 389

Noncash Working Capital 389

Working Capital in Investment Analysis 391

Measuring and Estimating Working Capital Needs 392

The Effect of Working Capital on Cash Flows 394

Working Capital and Net Present Value 396

The Tradeoff from Reducing Working Capital 396

The Effect on Cash Flows 397

The Effect on Liquidity 397

The Effect on Operations 398

The Optimal Level of Working Capital 398

Industry Differences in Management of Working Capital 400

Components of Noncash Working Capital 402

Inventory 402

The Granting of Trade Credit: Accounts Receivable 410

The Use of Trade Credit: Accounts Payable 414

Summary 417

Real Companies, Real Time: Analyzing Working Capital Policy 421

Chapter 14 Investments in Cash and Marketable Securities 423

Operating Cash 423

Reasons for Holding Operating Cash 424

How Much Operating Cash to Hold 424

The Effect of Operating Cash on Value 427

Reducing the Need for Operating Cash 428

Near-Cash Investments 429

Near-Cash Investment Choices 429

Cash versus Near-cash Investments 433

The Effect of Near-cash Investments on Value 435

Investments in Risky Securities 440

Reasons for Holding Risky Securities 440

Accounting for Investments in Risky Securities 442

The Effect of Risky Investments on Firm Value 443

Cash Holdings at U.S. Firms 444

Summary 446

Real Companies, Real Time: Analyzing Cash and Marketable Securities 449

Chapter 15

Investment Returns and Corporate Strategy 451

Analyzing a Firm's Existing Projects 452

Analyzing an Individual Project Using Cash Flows 452

Analyzing a Firm's Project Portfolio 453

The Sources of Good Projects 458

Competitive Product Markets, Barriers to Entry, and Good Projects 458

Management Actions and Investment Returns 462

Acquisitions 463

Corporate Strategy and Project Quality 464

Underperforming Projects: Reasons and Response 466

Reasons for Project Failure 466

The Response to Bad Investments 469

Summary 474

Real Companies, Real Time: Analyzing a Firm's Existing Investments 479

PART THREE THE FINANCING DECISION

Chapter 16

An Overview of Financing Choices 482

The Distinction between Debt and Equity 482

Equity Financing Options 484

Equity Choices for Private Firms 484

Equity Choices for Publicly Traded Firms 485

Debt Financing Options 488

Bank Debt 488

Bonds 489

Leasing 492

Hybrid Securities 498

Convertible Debt 498

Preferred Stock 501

Option-linked Bonds 503

Summary 504

Real Companies, Real Time: Analyzing a Firm's Current Financing Choices 507

Chapter 17

The Financing Process 509

Financing Choices and a Firm's Life Cycle 509

Internal versus External Financing 510

Growth, Risk, and Financing 511

How Firms have Actually Raised Funds 512

The Process of Raising Capital 518

Private Firm Expansion: Raising Funds from Private Equity 518

From Private to Publicly Traded Firm: The Initial Public Offering 520

The Choices for a Publicly Traded Firm 528

Summary 532

Real Companies, Real Time: Examining a Firm's Financial Transitions 535

Chapter 18

The Financing Mix: Tradeoffs and Theory 537

The Benefits of Debt 538

The Tax Advantages of Debt 538

The Discipline of Debt 540

The Costs of Debt 542

Expected Bankruptcy Costs from Debt 542

The Agency Costs of Borrowing 545

Loss of Flexibility 549

Summarizing the Debt Tradeoff 550

The Tradeoff for Equity Investors 550

The Managerial View of the Tradeoff 552

No Optimal Capital Structure 553

The Irrelevance of Debt in a Tax-free World 554

The Irrelevance of Debt with Taxes 555

The Consequences of Debt Irrelevance 557

The Significance of the Miller-Modigliani Theorem 558

Optimal Capital Structure 559

The Case for an Optimal Capital Structure 559

Empirical Evidence on the Existence of an Optimal Capital Structure 559

How Firms Choose their Capital Structures 560

The Financing Mix and a Firm's Life Cycle 561

A Financing Mix Based on Comparable Firms 563

Following a Financing Hierarchy 563

Summary 565

Real Companies, Real Time: Capital Structure Choices 569

Chapter 19 The Optim

The Optimal Financing Mix 571

Operating Income Approach 571

Steps in Applying the Operating Income Approach 571

Limitations of the Operating Income Approach 574

Refinements on the Operating Income Approach 574

Cost of Capital Approach 574

Cost of Capital and Firm Value 575

Steps in Cost of Capital Approach 577

Constrained Cost of Capital Approaches 589

Extensions of the Cost of Capital Approach 592

Leverage and the Return Differential 596

Steps in the Return Differential Approach 596

Limitations of the Return Differential Approach 599

Adjusted Present Value Approach 600

Steps in the Adjusted Present Value Approach 600

Benefits and Limitations of the Adjusted Present Value Approch 604

Comparative Analysis 605

Comparing to Industry Average 605

Controlling for Differences among Firms 606

Selecting the Optimal Debt Ratio 608

Summary 608

Real Companies, Real Time: The Optimal Financing Mix 616

Chapter 20

The Financing Mix and Choices 619

Choosing a Financing Mix 619

No Change, Gradual Change, or Immediate Change 620

Implementing Changes in Financial Mix 623

Choosing the Right Financing Instruments 631

Matching Financing Cash Flows with Asset Cash Flows 632

Tax Implications 639

Views of Ratings Agencies, Equity Research Analysts, and Regulatory Authorities 640

The Effects of Asymmetric Information 641

Implications for Agency Costs 642

Summary 649

Real Companies, Real Time: Mechanics of Moving to the Optimal Financing Mix 653

PART FOUR	THE DIVIDEND DECISION
Chapter 21	Dividend Policy 658 Background on Dividend Policy 658 The Dividend Process 659 Measures of Dividend Policy 660 Empirical Evidence on Dividend Policy 661 The Dividend Irrelevance School 666 Assumptions Needed for Dividend Irrelevance 666 A Proof of Dividend Irrelevance 667 Dividend Policy when Dividends are Irrelevant 669 The "Dividends Are Bad" School 669 Taxing Ordinary Income and Capital Gains 670 Timing of Tax Payments 670 Measuring the Dividend Tax Disadvantage 671 The "Dividends are Good" School 674 Some Reasons for Paying Dividends that Do Not Measure Up 674 Some Good Reasons for Paying Dividends 676 Summary 682 Real Companies, Real Time: The Tradeoff on Dividend Policy 684
Chapter 22	Analyzing Cash Returned to Stockholders 686 Cash Returned to Stockholders 687 The Effects of Buying Back Stock 687 The Magnitude of Stock Buybacks 687 A Cash Flow Approach to Analyzing Dividend Policy 689 Step 1: Measuring Cash Available to Be Returned to Stockholders 689 Step 2: Assessing Project Quality 694 Step 3: Evaluating Dividend Policy 697 Step 4: Interaction between Dividend Policy and Financing Policy 702 A Comparable-firm Approach to Analyzing Dividend Policy 704 Using Firms in the Industry 704 Using the Market 706 Managing Changes in Dividend Policy 708 Empirical Evidence 708 Lessons for Firms 710 Summary 710 Real Companies, Real Time: A Framework for Analyzing Dividends 715
Chapter 23	Beyond Cash Dividends: Buybacks, Spinoffs, and Divestitures Alternative Ways of Returning Cash to Stockholders 719 Equity Repurchases 719 Forward Contracts to Buy Equity 725 Actions that Affect Number of Shares Outstanding 726 Stock Splits 726 Stock Dividends 729 Actions that Affect Claims on Assets 729 Divestitures 730 Spinoffs, Splitoffs, and Splitups 732 Equity Carve-outs (ECOs) 735 Tracking Stock 739 Comparing the Alternatives 741 Key Differences 742 Choosing between the Alternatives 743

Summary 744

Real Companies, Real Time: Choosing a Way of Returning Cash to Stockholders 747

PART FIVE VALUATION

749

Chapter 24

Valuation: Principles and Practice 750

Discounted Cash Flow Valuation 750

Cash Flow to the Firm 751

Expected Growth 757

Discount Rate 760

Asset Life 761

The Missing Pieces of Value 765

The Final Estimate of Value 769

Valuing Equity Directly 774

Relative Valuation 775

Standardized Values and Multiples 775

Determinants of Multiples 776

The Use of Comparable Firms 778

Reconciling Different Valuations 783

Summary 784

Real Companies, Real Time: Valuation 789

Chapter 25

Value Enhancement: Tools and Techniques 791

Value-Creation: A Discounted Cash Flow (DCF) Perspective 791

Value-Creating and Value-Neutral Actions 792

Ways of Increasing Value 793

The Value Enhancement Chain 807

Alternatives to the Traditional Valuation Model 810

Economic Value Added 812

Cash Flow Return on Investment 822

Cash Flow Return on Investment, Internal Rate of Return, and Discounted Cash

Flow Value 823

CFROI and Firm Value: Potential Conflicts 826

A Postscript on Value Enhancement 826

Summary 827

Real Companies, Real Time: Value Enhancement 832

Chapter 26

Acquisitions and Takeovers 834

Background on Acquisitions 834

Classifying Acquisitions 835

The Process of an Acquisition 835

A Brief History of Mergers and Acquisitions in the United States 836

Empirical Evidence on the Value Effects of Takeovers 837

Steps in an Acquisition 838

Developing an Acquisition Strategy 839

Choosing a Target Firm and Valuing Control/Synergy 843

Structuring the Acquisition 857

Following Up on the Acquisition 863

Takeover Restrictions 866

Restrictions on Acquisitions 867

Analyzing Management and Leveraged Buyouts 868

Summary 872

Real Companies, Real Time: Acquisitions Analysis 876

879

PART SIX THE LINK BETWEEN VALUATION AND CORPORATE FINANCE DECISIONS

Chapter 27

Option Applications in Corporate Finance 881

Basics of Option Pricing 881

Alternatives to the Binomial Model 882

Extensions of Option Pricing 886

Options in Investment Analysis 889

The Option to Delay a Project 889

The Option to Expand a Project 897

When Are Delay and Expansion Options Valuable? 901

The Option to Abandon a Project 903

Option Applications in Valuation 905

Valuing Firms with Patents or Licenses 905

Valuing Natural Resource Firms 906

Valuing Equity in Troubled Firms 907

Option Pricing in Capital Structure and Dividend Policy Decisions 913

The Conflict between Bondholders and Stockholders 914

Security Design and Valuation 915

Value of Financial Flexibility 916

Summary 919

Chapter 28

Back to First Principles 924

Back to First Principles 924

The Investment Principle 924

The Financing Principle 925

The Dividend Principle 926

Interrelationships and Life Cycle Effects 926

Interrelationship between Principles 927

The Life Cycle Effect 927

Core Propositions/Beliefs 929

Faith in Markets, but not Blind Faith... 929

The Future, Not the Past 930

Show Me the Money 930

Manage for the Marginal Investor 931

Summary 932

Solutions to Odd-Numbered Questions and Problems 933

Index 971