Corporate Finance

ELEVENTH EDITION

Stephen A. Ross

Sloan School of Management Massachusetts Institute of Technology

Randolph W. Westerfield

Marshall School of Business University of Southern California

Jeffrey Jaffe

Wharton School of Business University of Pennsylvania

Bradford D. Jordan

Gatton College of Business and Economics
University of Kentucky



Brief Contents

Part I **OVERVIEW** I Introduction to Corporate Finance Financial Statements and Cash Flow 20 Financial Statements Analysis and Financial Models Part II VALUATION AND CAPITAL BUDGETING 4 Discounted Cash Flow Valuation 87 Net Present Value and Other Investment Rules 135 Making Capital Investment Decisions 171 208 Risk Analysis, Real Options, and Capital Budgeting Interest Rates and Bond Valuation 238 Stock Valuation 273 Part III RISK 10 Risk and Return: Lessons from Market History 302 II Return and Risk: The Capital Asset Pricing Model (CAPM) 33 I 12 An Alternative View of Risk and Return: The Arbitrage Pricing Theory 374 13 Risk, Cost of Capital, and Valuation 396 Part IV CAPITAL STRUCTURE AND DIVIDEND POLICY 14 Efficient Capital Markets and Behavioral Challenges 43 I 15 Long-Term Financing: An Introduction 47 I 16 Capital Structure: Basic Concepts 490 17 Capital Structure: Limits to the Use of Debt 522 18 Valuation and Capital Budgeting for the Levered Firm 555 19 Dividends and Other Payouts 577 Part V LONG-TERM FINANCING 20 Raising Capital 617 21 Leasing 652

Part VI OPTIONS, FUTURES, AND CORPORATE FINANCE 677 22 Options and Corporate Finance 23 Options and Corporate Finance: Extensions and Applications 722 24 Warrants and Convertibles 746 25 Derivatives and Hedging Risk 767 **Part VII** SHORT-TERM FINANCE 26 Short-Term Finance and Planning 799 829 27 Cash Management 28 Credit and Inventory Management 85 I **Part VIII** SPECIAL TOPICS 29 Mergers, Acquisitions, and Divestitures 880 **30** Financial Distress 923 939 31 International Corporate Finance Appendix A: Mathematical Tables 966 Appendix B: Solutions to Selected End-of-Chapter Problems 975 Appendix C: Using the HP 10B and TI BA II Plus 978 **Financial Calculators** Glossary 982 999 Name Index 1001 Subject Index

Contents

PA	RT I Overview		2.7	Cash Flow from Financing Activities Cash Flow Management	33 34
Сни	APTER 1			Summary and Conclusions	35
Intr	oduction to Corporate Finance	100		Concept Questions	36
mer	oddetion to Corporate I mance			Questions and Problems	36
1.1	What Is Corporate Finance?	- 1		Excel Master It! Problem	41
	The Balance Sheet Model of the Firm	- 1		Mini Case: Cash Flows at Warf Computers, Inc.	. 42
	The Financial Manager	3	Снд	APTER 3	
1.2	The Corporate Firm	4		incial Statements Analysis	
	The Sole Proprietorship	4		Financial Models	44
	The Partnership	4	anu	I mancial Models	
	The Corporation	5	3.1	Financial Statements Analysis	44
	A Corporation by Another Name	7		Standardizing Statements	44
1.3	The Importance of Cash Flows	8		Common-Size Balance Sheets	45
1.4	The Goal of Financial Management	П		Common-Size Income Statements	46
	Possible Goals	11	3.2	Ratio Analysis	48
	The Goal of Financial Management	12		Short-Term Solvency or Liquidity Measures	49
	A More General Goal	12		Long-Term Solvency Measures	50
1.5	The Agency Problem and Control			Asset Management or Turnover Measures	52
	of the Corporation	13		Profitability Measures	54
	Agency Relationships	13		Market Value Measures	55
	Management Goals	14	3.3	The DuPont Identity	58
	Do Managers Act in the Stockholders' Interest			A Closer Look at ROE	58
	Stakeholders	16		Problems with Financial Statement Analysis	60
1.6	Regulation	16	3.4	Financial Models	61
	The Securities Act of 1933 and the Securities	17		A Simple Financial Planning Model	61
	Exchange Act of 1934	16		The Percentage of Sales Approach	63
	Sarbanes-Oxley	17	3.5	External Financing and Growth	67
	Summary and Conclusions	18 18		EFN and Growth	68
	Concept Questions	10		Financial Policy and Growth	70
CHA	APTER 2			A Note about Sustainable	7.4
Fina	ncial Statements and Cash Flow	20	2.4	Growth Rate Calculations	74
			3.6	Some Caveats Regarding Financial Planning Models	75
2.1	The Balance Sheet	20		Summary and Conclusions	7 3
	Liquidity	21		Concept Questions	76
	Debt versus Equity	22		Questions and Problems	78
	Value versus Cost	22		Excel Master It! Problem	83
2.2	The Income Statement	23		Mini Case: Ratios and Financial Planning at	
	Generally Accepted Accounting Principles	24		East Coast Yachts	84
	Noncash Items	25			
2.2	Time and Costs	25	PA	RT II Valuation and	
2.3	Taxes	26			
	Corporate Tax Rates	26 26	Ca	pital Budgeting	
2.4	Average versus Marginal Tax Rates Net Working Capital	28	Снд	APTER 4	
2.4	Cash Flow of the Firm	29		counted Cash Flow Valuation	87
2.6	The Accounting Statement of Cash Flows		4.1		
	Cash Flow from Operating Activities	32	4.1 4.2	Valuation: The One-Period Case The Multiperiod Case	87 91
	Cash Flow from Investing Activities	33	7.4	Future Value and Compounding	91
	. 0			LUIGUE VAIGE AUGI CONTOUNIUMS	/ 1

	The Power of Compounding: A Digression	94		Questions and Problems	162
	Present Value and Discounting	95		Excel Master It! Problem	169
	Finding the Number of Periods	98		Mini Case: Bullock Gold Mining	170
	The Algebraic Formula	101	_		
4.3	Compounding Periods	102	Сн	APTER 6	
	Distinction between Annual Percentage Rate		Mak	ing Capital Investment Decisions	171
	and Effective Annual Rate	103		Lawrence of Cook Floor The Koo	
	Compounding over Many Years	104	6.1	Incremental Cash Flows: The Key	171
	Continuous Compounding	104		to Capital Budgeting	1 71 171
4.4	Simplifications	106		Cash Flows—Not Accounting Income Sunk Costs	
	Perpetuity	106			172
	Growing Perpetuity	108		Opportunity Costs Side Effects	173 173
	Annuity	109			173
	Growing Annuity	115	6.2	Allocated Costs	174
4.5	Loan Amortization	116	0.2	The Baldwin Company: An Example	174
4.6	What Is a Firm Worth?	120		An Analysis of the Project Which Set of Books?	177
	Summary and Conclusions	122			179
	Concept Questions	123		A Note about Net Working Capital A Note about Depreciation	180
	Questions and Problems	123		·	181
	Excel Master It! Problem	133	6.3	Interest Expense Alternative Definitions	101
	Mini Case: The MBA Decision	134	0.3	of Operating Cash Flow	181
	Appendix 4A: Net Present Value:	124		The Top-Down Approach	182
	First Principles of Finance	134		The Bottom-Up Approach	182
	Appendix 4B: Using Financial Calculators	134		The Tax Shield Approach	183
Сн	APTER 5			Conclusion	184
	_		6.4	Some Special Cases of Discounted	101
	Present Value and Other		0.4	Cash Flow Analysis	184
Inve	stment Rules	135		Evaluating Cost-Cutting Proposals	184
5. I	Why Use Net Present Value?	135		Setting The Bid Price	186
5.2	The Payback Period Method	138		Investments of Unequal Lives: The Equivaler	
	Defining the Rule	138		Annual Cost Method	188
	Problems with the Payback Method	139	6.5	Inflation and Capital Budgeting	190
	Managerial Perspective	140		Interest Rates and Inflation	190
	Summary of Payback	141		Cash Flow and Inflation	192
5.3	The Discounted Payback Period Method	141		Discounting: Nominal or Real?	192
5.4	The Internal Rate of Return	141		Summary and Conclusions	195
5.5	Problems with the IRR Approach	145		Concept Questions	195
	Definition of Independent and Mutually			Ouestions and Problems	197
	Exclusive Projects	145		Excel Master It! Problems	205
	Two General Problems Affecting Both			Mini Cases: Bethesda Mining Company	205
	Independent and Mutually Exclusive Projects	145		Goodweek Tires, Inc.	206
	Problems Specific to Mutually Exclusive Projects	149			
	Redeeming Qualities of IRR	154	Сни	APTER 7	
	A Test	154		Analysis, Real Options,	
5.6	The Profitability Index	155			208
	Calculation of Profitability Index	155	and	Capital Budgeting	4 00
5.7	The Practice of Capital Budgeting	157	7.1	Sensitivity Analysis, Scenario Analysis	,
	Summary and Conclusions	159		and Break-Even Analysis	208
	Concept Questions	160		Sensitivity Analysis and Scenario Analysis	208

7.2	Break-Even Analysis Monte Carlo Simulation	212 216	Сна	PTER 9	
1.2	Step 1: Specify the Basic Model	216	Stoc	k Valuation	273
	Step 2: Specify a Distribution	210	9.1	The Present Value of Common Stocks	273
	for Each Variable in the Model	216	7.1	Dividends versus Capital Gains	273
	Step 3: The Computer Draws	210		Valuation of Different Types of Stocks	273
	One Outcome	219	9.2	Estimates of Parameters in the	2/4
	Step 4: Repeat the Procedure	219	7.2		270
	Step 5: Calculate NPV	220		Dividend Discount Model	278
7.3	Real Options	220		Where Does g Come From?	278
1.3	•			Where Does R Come From?	280
	The Option to Expand	221		A Healthy Sense of Skepticism	281
	The Option to Abandon	222		Dividends or Earnings: Which to Discount?	282
7.4	Timing Options	224		The No-Dividend Firm	282
7.4	Decision Trees	225	9.3	Comparables	283
	Summary and Conclusions	227		Price-to-Earnings Ratio	283
	Concept Questions	228		Enterprise Value Ratios	286
	Questions and Problems	228	9.4	Valuing Stocks Using Free Cash Flows	287
	Excel Master It! Problem	235	9.5	The Stock Markets	288
	Mini Case: Bunyan Lumber, LLC	236		Dealers and Brokers	289
				Organization of the NYSE	289
_	•			Types of Orders	292
CHA	APTER 8			NASDAQ Operations	292
Inte	rest Rates and Bond Valuation	238		Stock Market Reporting	293
	rest nates and Bena valuation			Summary and Conclusions	294
8. I	Bonds and Bond Valuation	238		Concept Questions	295
	Bond Features and Prices	238		Questions and Problems	295
	Bond Values and Yields	239		Excel Master It! Problem	299
	Interest Rate Risk	242		Mini Case: Stock Valuation at Ragan Engines	300
	Finding the Yield to Maturity:				
	More Trial and Error	244			
	Zero Coupon Bonds	246			
8.2	Government and		PA.	RT III Risk	
	Corporate Bonds	248			
	Government Bonds	248	Сна	PTER 10	
	Corporate Bonds	249	Pick	and Return: Lessons	
	Bond Ratings	251			202
8.3	Bond Markets	252	iron	Market History	302
	How Bonds Are Bought and Sold	252	10.1	Returns	302
	Bond Price Reporting	253		Dollar Returns	302
	A Note on Bond Price Quotes	256		Percentage Returns	304
8.4	Inflation and Interest Rates	257	10.2		306
0.4	Real versus Nominal Rates	257	10.3	Return Statistics	312
	Inflation Risk and Inflation-Linked Bonds	258	10.4	Average Stock Returns	0.2
	The Fisher Effect	259		and Risk-Free Returns	314
8.5	Determinants of Bond Yields	26 I	10.5	Risk Statistics	314
0.5	The Term Structure of Interest Rates	261	10.5	Variance	314
		201		Normal Distribution and Its Implications	317
	Bond Yields and the Yield Curve:	2/2		for Standard Deviation	317
	Putting It All Together	263	10.4		
	Conclusion	265	10.6	More on Average Returns	318
	Summary and Conclusions	265		Arithmetic versus Geometric Averages	318
	Concept Questions	265		Calculating Geometric Average Returns	318
	Questions and Problems	266		Arithmetic Average Return or Geometric	220
	Excel Master It! Problem	270		Average Return?	320
	Mini Case: Financing East Coast Yachts's		10.7	The U.S. Equity Risk Premium: Histor	
	Expansion Plans With A Bond Issue	271		and International Perspectives	320

10.8	2008: A Year of Financial Crisis Summary and Conclusions	323 325	12.3	Portfolios and Factor Models Portfolios and Diversification	377 379
	Concept Questions	325	12.4	Betas, Arbitrage, and Expected Returns	
	Questions and Problems	326	12.7	The Linear Relationship	382
	Excel Master It! Problem	328		The Market Portfolio and the Single Factor	383
	Mini Case: A Job at East Coast Yachts	329	12.5	The Capital Asset Pricing Model	505
	,			and the Arbitrage Pricing Theory	384
Спу	PTER 11			Differences in Pedagogy	384
				Differences in Application	384
	rn and Risk: The Capital Asset		12.6	Empirical Approaches to Asset Pricing	386
Prici	ng Model (CAPM)	33 I		Empirical Models	386
11.1	Individual Securities	331		Style Portfolios	387
11.2	Expected Return, Variance,			Summary and Conclusions	389
	and Covariance	332		Concept Questions	389
	Expected Return and Variance	332		Questions and Problems	390
	Covariance and Correlation	334		Excel Master It! Problem	394
11.3	The Return and Risk for Portfolios	337		Mini Case: The Fama–French Multifactor	
	The Expected Return on a Portfolio	337		Model and Mutual Fund Returns	395
	Variance and Standard Deviation of a Portfolio				
11.4	The Efficient Set for Two Assets	341	Сна	PTER 13	
11.5	The Efficient Set for Many Securities	346	Risk,	Cost of Capital,	
	Variance and Standard Deviation in a			/aluation	396
	Portfolio of Many Assets	347			
11.6	Diversification	349	13.1	The Cost of Capital	396
	The Anticipated and Unanticipated		13.2	Estimating the Cost of Equity	
	Components of News	349		Capital with the CAPM	397
	Risk: Systematic and Unsystematic	349		The Risk-Free Rate	400
	The Essence of Diversification	350		Market Risk Premium	400
11.7	Riskless Borrowing and Lending	352	13.3	Estimation of Beta	40
	The Optimal Portfolio	354		Real-World Betas	402
11.8	Market Equilibrium	355		Stability of Beta	402
	Definition of the Market Equilibrium Portfoli	o 355		Using an Industry Beta	403
	Definition of Risk When Investors		13.4	Determinants of Beta	405
	Hold the Market Portfolio	356		Cyclicality of Revenues	405
	The Formula for Beta	358		Operating Leverage	406
	A Test	359		Financial Leverage and Beta	406
11.9	Relationship between Risk and Expect		13.5	The Dividend Discount	
	Return (CAPM)	359		Model Approach	407
	Expected Return on Market	359		Comparison of DDM and CAPM	408
	Expected Return on Individual Security	360	13.6	Cost of Capital for Divisions	
	Summary and Conclusions	363		and Projects	409
	Concept Questions	364	13.7	Cost of Fixed Income Securities	411
	Questions and Problems	365		Cost of Debt	411
	Excel Master It! Problem	371		Cost of Preferred Stock	412
	Mini Case: A Job At East Coast		13.8	The Weighted Average	
	Yachts, Part 2	372		Cost of Capital	413
	Appendix IIA: Is Beta Dead?	373	13.9	Valuation with R _{WACC}	414
	• •			Project Evaluation and the R _{WACC}	414
6				Firm Valuation with the R _{WACC}	415
CHA	PTER 12		13.10	Estimating Eastman Chemical's	
An A	Alternative View of Risk and Retur	n:		Cost of Capital	418
The	Arbitrage Pricing Theory	374	13.11		40.
		274		Average Cost of Capital	420
12.1	Introduction	374		The Basic Approach	420
12.2	Systematic Risk and Betas	374		Flotation Costs and NPV	421

	Internal Equity and Flotation Costs	422 423	15.2	Corporate Long-Term Debt Is It Debt or Equity?	475 476
	Summary and Conclusions	423		. ,	476
	Concept Questions Questions and Problems	425		Long-Term Debt: The Basics The Indenture	478
	Mini Case: Cost of Capital for Swan Motors	429	15.3	Some Different Types of Bonds	48 I
	Appendix 13A: Economic Value Added and	427	13.3	Floating-Rate Bonds	481
	the Measurement of Financial			•	481
	Performance	430	15.4	Other Types of Bonds Bank Loans	482
	renormance	430	15.4	International Bonds	483
T) A 1	DT IV Conital Characters		15.6	Patterns of Financing	483
PAI	RT IV Capital Structure	e	15.7	Recent Trends in Capital Structure	485
and	d Dividend Policy		13.7	Which Are Best: Book or Market Values?	486
	2 21110101101 1 0110 9			Summary and Conclusions	486
Сна	PTER 14			Concept Questions	487
	•			Questions and Problems	487
	ent Capital Markets	42.1		Questions and Froblems	707
and	Behavioral Challenges	43 I	Спу	PTER 16	
14.1	Can Financing Decisions Create Value?	43 I			400
14.2	A Description of Efficient Capital Markets		Capi	tal Structure: Basic Concepts	490
	Foundations of Market Efficiency	435	16.1	The Capital Structure Question	
14.3	The Different Types of Efficiency	436		and the Pie Theory	490
	The Weak Form	436	16.2	Maximizing Firm Value versus	
	The Semistrong and Strong Forms	437		Maximizing Stockholder Interests	491
	Some Common Misconceptions about the		16.3	Financial Leverage and Firm Value:	
	Efficient Market Hypothesis	439		An Example	493
14.4	The Evidence	440		Leverage and Returns to Shareholders	493
	The Weak Form	440		The Choice between Debt and Equity	495
	The Semistrong Form	442		A Key Assumption	497
	The Strong Form	444	16.4	Modigliani and Miller: Proposition II	
14.5	The Behavioral Challenge			(No Taxes)	497
	to Market Efficiency	445		Risk to Equityholders Rises with Leverage	497
	Rationality	445		Proposition II: Required Return to	
	Independent Deviations from Rationality	447		Equityholders Rises with Leverage	498
	Arbitrage	448		MM: An Interpretation	504
14.6	Empirical Challenges to Market Efficiency	449	16.5	Taxes	506
14.7	Reviewing the Differences	454		The Basic Insight	506
14.8	Implications for Corporate Finance	456		Present Value of the Tax Shield	508
	1. Accounting Choices, Financial Choices,			Value of the Levered Firm	508
	and Market Efficiency	456		Expected Return and Leverage	
	2. The Timing Decision	457		under Corporate Taxes	510
	3. Speculation and Efficient Markets	458		The Weighted Average Cost	
	4. Information in Market Prices	460		of Capital, R_{WACC} , and Corporate Taxes	512
	Summary and Conclusions	462		Stock Price and Leverage under	
	Concept Questions	463		Corporate Taxes	513
	Questions and Problems	467		Summary and Conclusions	515
	Mini Case: Your 401(k) Account at			Concept Questions	515
	East Coast Yachts	469		Questions and Problems	516
				Mini Case: Stephenson Real Estate Recapitaliza	tion 521
Сна	PTER 15				
		471	Сна	PTER 17	
Long	-Term Financing: An Introduction	4/1		tal Structure: Limits to	
15.1	Some Features of Common			Use of Debt	522
	and Preferred Stocks	47 I	the t	Ose of Dent	JLL
	Common Stock Features	47 I	17.1	Costs of Financial Distress	522
	Preferred Stock Features	474		Bankruptcy Risk or Bankruptcy Cost?	522

17.2	Description of Financial Distress Costs Direct Costs of Financial Distress: Legal	524	18.7	Beta and Leverage The Project Is Not Scale Enhancing	567 569
	and Administrative Costs of Liquidation			Summary and Conclusions	570
	or Reorganization	524		Concept Questions	570
	Indirect Costs of Financial Distress	526		Questions and Problems	57
	Agency Costs	527		Mini Case: The Leveraged Buyout	
17.3	Can Costs of Debt Be Reduced?	530		of Cheek Products, Inc.	575
	Protective Covenants	530		Appendix 18A: The Adjusted Present	
	Consolidation of Debt	531		Value Approach to	
17.4	Integration of Tax Effects			Valuing Leveraged Buyouts	576
	and Financial Distress Costs	532			
	Pie Again	533	Снаг	PTER 19	
17.5	Signaling	534		•	E 7 7
17.6	Shirking, Perquisites, and Bad		DIVIG	lends and Other Payouts	577
	Investments: A Note on		19.1	Different Types of Payouts	577
	Agency Cost of Equity	536	19.2	Standard Method of Cash	
	Effect of Agency Costs of Equity			Dividend Payment	578
	on Debt–Equity Financing	538	19.3	The Benchmark Case: An Illustration	
	Free Cash Flow	538		of the Irrelevance of Dividend Policy	580
17.7	The Pecking-Order Theory	539		Current Policy: Dividends Set Equal	-
	Rules of the Pecking Order	540		to Cash Flow	580
	Implications	541		Alternative Policy: Initial Dividend Is Greater	300
17.8	Personal Taxes	542		Than Cash Flow	581
	The Basics of Personal Taxes	542		The Indifference Proposition	581
	The Effect of Personal Taxes on Capital Structure			Homemade Dividends	582
17.9	How Firms Establish Capital Structure	544		A Test	583
,	Summary and Conclusions	549			583
	Concept Questions	549	19.4	Dividends and Investment Policy	
	Questions and Problems	550	19.4	Repurchase of Stock	584
	Mini Case: Mckenzie Corporation's	330		Dividend versus Repurchase:	LOI
	Capital Budgeting	553		Conceptual Example	585
	Appendix 17A: Some Useful Formulas of	333		Dividends versus Repurchases:	F0.
	Financial Structure	554		Real-World Considerations	586
	Appendix 17B: The Miller Model and the	JJT	19.5	Personal Taxes, Dividends,	
	Graduated Income Tax	554		and Stock Repurchases	587
	Graduated income rax	JJT		Firms without Sufficient Cash to Pay	
				a Dividend	587
6				Firms with Sufficient Cash to Pay a Dividend	588
СНА	PTER 18			Summary of Personal Taxes	591
V alu	ation and Capital Budgeting		19.6	Real-World Factors Favoring	
	he Levered Firm	555		a High-Dividend Policy	59 l
				Desire for Current Income	59
18.1	Adjusted Present Value Approach	555		Behavioral Finance	592
18.2	Flow to Equity Approach	557		Agency Costs	593
	Step 1: Calculating Levered			Information Content of Dividends	
	Cash Flow (LCF)	557		and Dividend Signaling	594
	Step 2: Calculating R_s	558	19.7	The Clientele Effect: A Resolution	
	Step 3: Valuation	558		of Real-World Factors?	596
18.3	Weighted Average Cost		19.8	What We Know and Do Not Know	
	of Capital Method	558		about Dividend Policy	598
18.4	A Comparison of the APV, FTE,			Corporate Dividends are Substantial	598
	and WACC Approaches	559		Fewer Companies Pay Dividends	599
	A Suggested Guideline	560		Corporations Smooth Dividends	600
18.5	Valuation When the Discount Rate			Some Survey Evidence about Dividends	60
	Must Be Estimated	562	19.9	Putting It All Together	603
18.6	APV Example	564	19.10		605

	Some Details about Stock Splits		CHAI	PTER 21	
	and Stock Dividends	605	Leasi	ing	652
	Value of Stock Splits and Stock Dividends	607			
	Reverse Splits	608	21.1	Types of Leases	652
	Summary and Conclusions	609 609		The Basics	652
	Concept Questions Questions and Problems	611		Operating Leases	653
		615		Financial Leases	653
	Mini Case: Electronic Timing, Inc.	013	21.2	Accounting and Leasing	654
			21.3	Taxes, the IRS, and Leases	656
			21.4	The Cash Flows of Leasing	657
PAI	RT V Long-Term		21.5	A Detour for Discounting	
				and Debt Capacity with	
ГШ	ancing			Corporate Taxes	659
CIIA	PTER 20			Present Value of Riskless Cash Flows	659
			21.7	Optimal Debt Level and Riskless Cash Flows	660
Raisi	ng Capital	617	21.6	NPV Analysis of the	
20. I	Early-Stage Financing			Lease-versus-Buy Decision	661
20.1	and Venture Capital	617	21.7	The Discount Rate	661
	Venture Capital	618	21.7	Debt Displacement	//2
	Stages of Financing	619		and Lease Valuation	662
	Some Venture Capital Realities	620		The Basic Concept of Debt Displacement	662 663
	Venture Capital Investments	020	21.8	Optimal Debt Level in the Xomox Example	665
	and Economic Conditions	621	21.6	Does Leasing Ever Pay? The Base Case Reasons for Leasing	666
20.2	The Public Issue	621	21.7	Good Reasons for Leasing	666
20.3	Alternative Issue Methods	622		Bad Reasons for Leasing	669
20.4	The Cash Offer	624	21.10	Some Unanswered Questions	670
	Investment Banks	627	21.10	Are the Uses of Leases	070
	The Offering Price	628		and Debt Complementary?	670
	Underpricing: A Possible Explanation	629		Why Are Leases Offered by Both	0,0
20.5	The Announcement of New Equity			Manufacturers and Third-Party Lessors?	670
	and the Value of the Firm	63 I		Why Are Some Assets Leased More	0.0
20.6	The Cost of New Issues	632		Than Others?	671
	The Costs of Going Public: A Case Study	634		Summary and Conclusions	671
20.7	Rights	635		Concept Questions	672
	The Mechanics of a Rights Offering	635		Questions and Problems	673
	Subscription Price	635		Mini Case: The Decision to Lease or Buy at	
	Number of Rights Needed to Purchase			Warf Computers	675
	a Share	637		Appendix 21A: APV Approach to Leasing	676
	Effect of Rights Offering on Price of Stock	637			
	Effects on Shareholders	639			
	The Underwriting Arrangements	639	DΔI	RT VI Options, Futures	2
20.8	The Rights Puzzle	640		· · · · · · · · · · · · · · · · · · ·	٥,
20.9	Dilution	641	and	l Corporate Finance	
	Dilution of Proportionate Ownership	641		_	
	Stock Price Dilution	641	CHAI	PTER 22	
	Book Value	642	Optio	ons and Corporate Finance	677
	Earnings Per Share	643		•	
	Conclusion	643	22.1	Options	677
20.10	0	643	22.2	Call Options	678
20.11	Issuing Long-Term Debt	644	20.0	The Value of a Call Option at Expiration	678
	Summary and Conclusions	645	22.3	Put Options	679
	Concept Questions	645	22.4	The Value of a Put Option at Expiration	679
	Questions and Problems	648	22.4	Selling Options	681
	Mini Case: East Coast Yachts Goes Public	650	22.5	Option Quotes	682

22.6 22.7	Combinations of Options Valuing Options	683 686	24.3	Warrant Pricing and the Black-Scholes Model	750
	Bounding the Value of a Call	686	24.4	Convertible Bonds	752
	The Factors Determining Call Option Values	688	24.5	The Value of Convertible Bonds	752
	A Quick Discussion of Factors Determining		25	Straight Bond Value	752
	Put Option Values	691		Conversion Value	753
22.8	An Option Pricing Formula	69 I		Option Value	754
	A Two-State Option Model	692	24.6	Reasons for Issuing Warrants	75
	The Black–Scholes Model	694	24.0	and Convertibles	755
22.9	Stocks and Bonds as Options	699		Convertible Debt versus Straight Debt	755
	The Firm Expressed In Terms of	077		Convertible Debt versus Common Stock	756
	Call Options	700		The "Free Lunch" Story	757
	The Firm Expressed in Terms of Put Options	701		The "Expensive Lunch" Story	758
	A Resolution of the Two Views	702		A Reconciliation	758
	A Note about Loan Guarantees	702	24.7	Why Are Warrants and	/30
22 10	Options and Corporate Decisions:	703	24.7	Convertibles Issued?	758
22.10	Some Applications	704			758
	Mergers and Diversification	70 4 704		Matching Cash Flows	759
		704		Risk Synergy	
22.11	Options and Capital Budgeting	706		Agency Costs	759
22.11	Investment in Real Projects	700	240	Backdoor Equity	760
	and Options	708	24.8	Conversion Policy	760
	Summary and Conclusions	711		Summary and Conclusions	761
	Concept Questions	711		Concept Questions	762
	Questions and Problems	712		Questions and Problems	763
	Excel Master It! Problem	719		Mini Case: S&S Air's Convertible Bond	765
	Mini Case: Clissold Industries Options	720			
Сна	PTER 23			PTER 25	
Opti	ons and Corporate Finance:		Deri	vatives and Hedging Risk	767
Exte	nsions and Applications	722	25.1 25.2	Derivatives, Hedging, and Risk Forward Contracts	767 768
23.I	Executive Stock Options	722	25.2	Futures Contracts	769
	Why Options?	722	25.3 25.4		773
	Valuing Executive Compensation	723	25.4	Hedging Interest Rate Futures Contracts	775
23.2	Valuing a Start-Up	726	25.5		775
23.3	More about the Binomial Model	729		Pricing of Treasury Bonds	
	Heating Oil	729		Pricing of Forward Contracts Futures Contracts	776 777
23.4	Shutdown and Reopening Decisions	735			
	Valuing a Gold Mine	735	25 /	Hedging in Interest Rate Futures	778
	The Abandonment and Opening Decisions	736	25.6	Duration Hedging	782
	Valuing the Simple Gold Mine	738		The Case of Zero Coupon Bonds	782
	Summary and Conclusions	742		The Case of Two Bonds with the Same	700
	Concept Questions	742		Maturity but with Different Coupons	783
	Questions and Problems	743		Duration	784
	Mini Case: Exotic Cuisines'	, 13		Matching Liabilities with Assets	786
	Employee Stock Options	745	25.7	Swaps Contracts	788
	Employee stock Options	7 13		Interest Rate Swaps	789
_				Currency Swaps	790
Сна	PTER 24			Credit Default Swaps	791
War	rants and Convertibles	746		Exotics	79 I
			25.8	Actual Use of Derivatives	792
24. I	Warrants	746		Summary and Conclusions	794
24.2	The Difference between Warrants			Concept Questions	794
	and Call Options	747		Questions and Problems	796
	How the Firm Can Hurt Warrant Holders	750		Mini Case: Williamson Mortgage, Inc.	798

PAF	RT VII Short-Term			Cash Concentration Accelerating Collections: An Example	839 840
Finance		27.4	Managing Cash Disbursements	842	
1 111			27.7	Increasing Disbursement Float	842
Сная	PTER 26			Controlling Disbursements	843
		700	27.5	Investing Idle Cash	844
Snor	t-Term Finance and Planning	799	2	Temporary Cash Surpluses	844
26.I	Tracing Cash and Net Working Capital	800		Characteristics of Short-Term Securities	845
26.2	The Operating Cycle			Some Different Types of Money Market Securities	
	and the Cash Cycle	80 I		Summary and Conclusions	846
	Defining the Operating and Cash Cycles	802		Concept Questions	847
	The Operating Cycle and the			Questions and Problems	848
	Firm's Organization Chart	804		Mini Case: Cash Management at	
	Calculating the Operating and Cash Cycles	804		Richmond Corporation	850
	Interpreting the Cash Cycle	807		Appendix 27A: Determining the	
	A Look at Operating and Cash Cycles	807		Target Cash Balance	850
26.3	Some Aspects of Short-Term			Appendix 27B: Adjustable Rate Preferred	
	Financial Policy	808		Stock, Auction Rate Preferre	ed
	The Size of the Firm's Investment			Stock, and Floating-Rate	
	in Current Assets	809		Certificates of Deposit	850
	Alternative Financing Policies for Current Assets	810			
	Which Is Best?	812	Сна	PTER 28	
26.4	Cash Budgeting	814	Cred	lit and Inventory Management	85 I
	Cash Outflow	815			051
	The Cash Balance	816	28. I	Credit and Receivables	851
26.5	The Short-Term Financial Plan	816		Components of Credit Policy	852
	Unsecured Loans	816		The Cash Flows from Granting Credit	852
	Secured Loans	817	20.2	The Investment in Receivables	852
	Other Sources	817	28.2	Terms of the Sale	853
	Summary and Conclusions	818		The Basic Form	853
	Concept Questions	818		The Credit Period	853
	Questions and Problems	819		Cash Discounts	855
	Excel Master It! Problem	827	20.2	Credit Instruments	856
	Mini Case: Keafer Manufacturing Working		28.3	Analyzing Credit Policy	857
	Capital Management	828		Credit Policy Effects	857
_			20.4	Evaluating a Proposed Credit Policy	857
CHAF	PTER 27		28.4	Optimal Credit Policy	859
Cash	Management	829		The Total Credit Cost Curve	860
	_		20.5	Organizing the Credit Function	861
27. I	Reasons for Holding Cash	829	28.5	Credit Analysis	861
	The Speculative and Precautionary Motives	829		When Should Credit Be Granted?	862
	The Transaction Motive	830		Credit Information	863
	Compensating Balances	830	20.7	Credit Evaluation and Scoring	864
	Costs of Holding Cash	830	28.6	Collection Policy	864
27.2	Cash Management versus Liquidity Management	830		Monitoring Receivables	864
27.2	Understanding Float Disbursement Float	83 I	20.7	Collection Effort	865
		831	28.7	Inventory Management	865
	Collection Float and Net Float	832		The Financial Manager and Inventory Policy	866
	Float Management	833		Inventory Types	866
	Electronic Data Interchange and Check 21:	027	20.0	Inventory Costs	866
27.2	The End of Float?	836	28.8	Inventory Management Techniques	867
27.3	Cash Collection and Concentration	837		The ABC Approach	867
	Components of Collection Time	837		The Economic Order Quantity Model	868
	Cash Collection Lockboxes	838 838		Extensions to the EOQ Model	872 872
	LOCKDOXES	030		Managing Derived-Demand Inventories	0/2

	Summary and Conclusions	874		Summary and Conclusions	914
	Concept Questions	875		Concept Questions	914
	Questions and Problems	876		Questions and Problems	915
	Mini Case: Credit Policy at Braam Industries	879		Mini Case: The Birdie Golf—Hybrid Golf Merger	92
	Appendix 28A: More about Credit				
	Policy Analysis	879	Сна	PTER 30	
				ncial Distress	923
PAI	RT VIII Special Topics				
	ar viii speciai ispics		30.1	What Is Financial Distress?	923
Сна	PTER 29		30.2	What Happens in Financial Distress?	925
More	gers, Acquisitions, and Divestitures	880	30.3	Bankruptcy Liquidation	
i ici g	cis, Acquisitions, and Divestitures	000		and Reorganization	927
29. I	The Basic Forms of Acquisitions	880		Bankruptcy Liquidation	927
	Merger or Consolidation	880	20.4	Bankruptcy Reorganization	929
	Acquisition of Stock	881	30.4	Private Workout or Bankruptcy:	022
	Acquisition of Assets	188		Which Is Best?	932
	A Classification Scheme	882		The Marginal Firm	932
	A Note about Takeovers	882		Holdouts	933
29.2	Synergy	883		Complexity	933
29.3	Sources of Synergy	884		Lack of Information	933
	Revenue Enhancement	884	30.5	Prepackaged Bankruptcy	933
	Cost Reduction	885	30.6	Predicting Corporate Bankruptcy:	
	Tax Gains	887		The Z-Score Model	935
	Reduced Capital Requirements	889		Summary and Conclusions	936
29.4	Two Financial Side Effects of			Concept Questions	937
	Acquisitions	890		Questions and Problems	937
	Earnings Growth	890			
	Diversification	891	Сна	PTER 31	
29.5	A Cost to Stockholders	0,,			000
_,,,	from Reduction in Risk	892	Inter	national Corporate Finance	939
	The Base Case	892	31.1	Terminology	940
	Both Firms Have Debt	892	31.2	Foreign Exchange Markets	,
	How Can Shareholders Reduce Their Losses	0,2	0	and Exchange Rates	940
	from the Coinsurance Effect?	894		Exchange Rates	94
29.6	The NPV of a Merger	894	31.3	Purchasing Power Parity	946
	Cash	894	31.3	Absolute Purchasing Power Parity	946
	Common Stock	896		Relative Purchasing Power Parity	947
	Cash versus Common Stock	897	31.4	Interest Rate Parity, Unbiased	/ 1/
29.7	Friendly versus Hostile Takeovers	898	31.4	Forward Rates, and the	
29.8	Defensive Tactics	900		International Fisher Effect	949
27.0	Deterring Takeovers before Being in Play	900		Covered Interest Arbitrage	949
	Deterring a Takeover after the Company Is in Play			Interest Rate Parity	950
29.9	Have Mergers Added Value?	903		Forward Rates and Future Spot Rates	951
27.7	Returns to Bidders	905		·	952
	Target Companies	906	31.5	Putting It All Together International Capital Budgeting	95 3
	The Managers versus the Stockholders	906	31.3		954
20 10	•	908		Method 1: The Home Currency Approach	955
29.10	•			Method 2: The Foreign Currency Approach	
29.11	Accounting for Acquisitions	910		Unremitted Cash Flows	955
29.12	0 ,	911	21.7	The Cost of Capital for International Firms	956
29.13		912	31.6	Exchange Rate Risk	956
	Sale	912		Short-Term Exposure	956
	Spin-Off	912		Long-Term Exposure	957
	Carve-Out	913		Translation Exposure	958
	Tracking Stocks	913		Managing Exchange Rate Risk	959

31.7	Political Risk	959	Appendix A: Mathematical Tables	966
	Summary and Conclusions	960	Appendix B: Solutions to Selected End-of-Chapter Problems	975
	Concept Questions	961	Appendix C: Using the HP 10B and TI BA II Plus	
	Questions and Problems	962	Financial Calculators	978
	Excel Master It! Problem	965	Glossary	982
	Mini Case: East Coast Yachts Goes		Name Index	999
	International	965	Subject Index	1001