ESSENTIALS OF Financial Management

FOURTH EDITION

EUGENE F. BRIGHAM • JOEL F. HOUSTON
Jun-Ming Hsu • Yoon Kee Kong • A. N. Bany-Ariffin

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BRIEF CONTENTS

Preface xv
About the Authors xxi
About the Adaptors xxiii

PART 1 Introduction to Financial Management 1
- CHAPTER 1 An Overview of Financial Management 3
- CHAPTER 2 Financial Markets and Institutions 29

PART 2 Fundamental Concepts in Financial Management and Financial Forecasting 61
- CHAPTER 3 Financial Statements, Cash Flow, and Taxes 63
- CHAPTER 4 Analysis of Financial Statements 109
- CHAPTER 5 Time Value of Money 155
- CHAPTER 6 Financial Planning and Forecasting 201

PART 3 Financial Assets 231
- CHAPTER 7 Interest Rates 233
- CHAPTER 8 Risk and Rates of Return 269
- CHAPTER 9 Bonds and Their Valuation 317
- CHAPTER 10 Stocks and Their Valuation 363

PART 4 Investing in Long-Term Assets: Capital Budgeting 403
- CHAPTER 11 The Cost of Capital 405
- CHAPTER 12 The Basics of Capital Budgeting 437
- CHAPTER 13 Cash Flow Estimation and Risk Analysis 471
- CHAPTER 14 Real Options and Other Topics in Capital Budgeting 511

PART 5 Capital Structure, Dividend Policy, and Working Capital Management 533
- CHAPTER 15 Capital Structure and Leverage 535
- CHAPTER 16 Distributions to Shareholders: Dividends and Share Repurchases 581
- CHAPTER 17 Working Capital Management 615

PART 6	**Special Topics in Financial Management**	**657**
CHAPTER 18	Derivatives and Risk Management	659
CHAPTER 19	Multinational Financial Management	703
CHAPTER 20	Hybrid Financing: Preferred Stock, Leasing, Warrants, and Convertibles	741
CHAPTER 21	Mergers and Acquisitions	777
Appendixes		
APPENDIX A	Solutions to Self-Test Questions and Problems	A-1
APPENDIX B	Answers to Selected End-of-Chapter Problems	B-1
APPENDIX C	Selected Equations and Tables	C-1
APPENDIX D	Frequently Used Symbols/Abbreviations	D-1
APPENDIX E	Present and Future Values Tables	E-1
Index		**I-1**

CONTENTS

Preface xv
About the Authors xxi
About the Adaptors xxiii

PART 1
INTRODUCTION TO FINANCIAL MANAGEMENT 1

CHAPTER 1
AN OVERVIEW OF FINANCIAL MANAGEMENT 3
Goals and Practices of Asian Firms 3
PUTTING THINGS IN PERSPECTIVE 5
1-1 What Is Finance? 5
1-1a Areas of Finance 5
1-1b Finance Within an Organization 6
1-1c Finance Versus Economics and Accounting 7
1-2 Jobs in Finance 7
1-3 Forms of Business Organization 8
1-4 The Main Financial Goal: Creating Value for Investors 10
1-4a Determinants of Value 10
1-4b Intrinsic Value 12
1-4c Consequences of Having a Short-Run Focus 13
1-5 Stockholder–Manager Conflicts 14
1-5a Compensation Packages 14
1-5b Direct Stockholder Intervention 15
1-5c Managers' Response 15
Are CEOs Overpaid? 16
1-6 Stockholder–Debtholder Conflicts 17
1-7 Balancing Shareholder Interests and the Interests of Society 19
A Company Ignoring Social Responsibility 20
1-8 Business Ethics 21
1-8a What Companies Are Doing 21
1-8b Consequences of Unethical Behavior 22
1-8c How Should Employees Deal with Unethical Behavior? 23
TYING IT ALL TOGETHER 24

CHAPTER 2
FINANCIAL MARKETS AND INSTITUTIONS 29
Technology and the Financial System 29
PUTTING THINGS IN PERSPECTIVE 31
2-1 The Capital Allocation Process 31
2-2 Financial Markets 33
2-2a Types of Markets 33
2-2b Recent Trends 35
Changing Technology Has Transformed Financial Markets 38
2-3 Financial Institutions 39
Securitization Has Dramatically Transformed the Banking Industry 43
2-4 The Stock Market 44
2-4a Physical Location Stock Exchanges 45
Global Perspectives: The NYSE and NASDAQ Go Global 45
2-4b Over-the-Counter (OTC) and the NASDAQ Stock Markets 46
2-5 The Market for Common Stock 47
2-5a Types of Stock Market Transactions 47
2-6 Stock Markets and Returns 50
2-6a Stock Market Reporting 51
2-6b Stock Market Returns 52
2-7 Stock Market Efficiency 53
Measuring the Market 53
2-7a Behavioral Finance Theory 56
2-7b Conclusions About Market Efficiency 57
TYING IT ALL TOGETHER 58
INTEGRATED CASE HIJ Financial Services Corporation 60

PART 2
FUNDAMENTAL CONCEPTS IN FINANCIAL MANAGEMENT AND FINANCIAL FORECASTING 61

CHAPTER 3
FINANCIAL STATEMENTS, CASH FLOW, AND TAXES 63

Unlocking the Valuable Information in Financial Statements 63

PUTTING THINGS IN PERSPECTIVE 64

3-1 Financial Statements and Reports 65

Global Perspectives: Global Accounting Standards: Will It Ever Happen? 66

3-2 The Balance Sheet 67
3-2a Allied's Balance Sheet 68

Cash Holdings and Net Operating Working Capital: A Closer Look 72

The Balance Sheet of an "Average" American Household 73

3-3 The Income Statement 74

3-4 Statement of Cash Flows 76

Massaging the Cash Flow Statement 79

3-5 Statement of Stockholders' Equity 80

3-6 Uses and Limitations of Financial Statements 81

3-7 Free Cash Flow 82

Free Cash Flow Is Important for Businesses Both Small and Large 84

3-8 MVA and EVA 85

3-9 Income Taxes 87
3-9a Individual Taxes 87
3-9b Corporate Taxes 89

TYING IT ALL TOGETHER 93

INTEGRATED CASE **D'Leon Inc., Part I** 103

Taking a Closer Look
Exploring Starbucks's Financial Statements 106

CHAPTER 4
ANALYSIS OF FINANCIAL STATEMENTS 109

Can You Make Money Analyzing Stocks? 109

PUTTING THINGS IN PERSPECTIVE 110

4-1 Ratio Analysis 111

4-2 Liquidity Ratios 112
4-2a Current Ratio 112

Financial Analysis on the Internet 113

4-2b Quick, or Acid Test, Ratio 114
4-3 Asset Management Ratios 114
4-3a Inventory Turnover Ratio 115
4-3b Days Sales Outstanding 116
4-3c Fixed Assets Turnover Ratio 116
4-3d Total Assets Turnover Ratio 117

4-4 Debt Management Ratios 118
4-4a Total Debt to Total Capital 119
4-4b Times-Interest-Earned Ratio 120

4-5 Profitability Ratios 121
4-5a Operating Margin 121
4-5b Profit Margin 121

Global Perspectives: China's Move to IFRS 122

4-5c Return on Total Assets 122
4-5d Return on Common Equity 123
4-5e Return on Invested Capital 123
4-5f Basic Earning Power (BEP) Ratio 124

4-6 Market Value Ratios 125
4-6a Price/Earnings Ratio 125
4-6b Market/Book Ratio 126

4-7 Tying the Ratios Together: The DuPont Equation 127

Microsoft Excel: A Truly Essential Tool 128

4-8 Potential Misuses of ROE 129

Economic Value Added (EVA) Versus Net Income 130

4-9 Using Financial Ratios to Assess Performance 131
4-9a Comparison to Industry Average 131
4-9b Benchmarking 132
4-9c Trend Analysis 135

4-10 Uses and Limitations of Ratios 135

Looking for Warning Signs Within the Financial Statements 137

4-11 Looking Beyond the Numbers 138

TYING IT ALL TOGETHER 139

INTEGRATED CASE **D'Leon Inc., Part II** 150

Taking a Closer Look
Conducting a Financial Ratio Analysis on Hewlett Packard Co. 154

WEB APPENDIX 4A
Common Size and Percent Change Analyses

CHAPTER 5

TIME VALUE OF MONEY 155

Who Wants to be a Millionaire? 155

PUTTING THINGS IN PERSPECTIVE 156

5-1 Time Lines 157

5-2 Future Values 157
5-2a Step-by-Step Approach 158
5-2b Formula Approach 159

Simple Versus Compound Interest 159

5-2c Financial Calculators 159
5-2d Spreadsheets 160

Hints on Using Financial Calculators 161

5-2e Graphic View of the Compounding Process 163

5-3 Present Values 164
5-3a GraphicViewof the Discounting Process 166

5-4 Finding the Interest Rate, I 166

5-5 Finding the Number of Years, N 167

5-6 Annuities 168

5-7 Future Value of an Ordinary Annuity 169

5-8 Future Value of an Annuity Due 171

5-9 Present Value of an Ordinary Annuity 172

5-10 Finding Annuity Payments, Periods, and Rates 174
5-10a Finding Annuity Payments, PMT 174
5-10b Finding the Number of Periods, N 175
5-10c Finding the Interest Rate, I 176

5-11 Perpetuities 176

5-12 Uneven Cash Flows 177

5-13 Future Value of an Uneven Cash Flow Stream 179

5-14 Solving for I with Uneven Cash Flows 180

5-15 Semiannual and Other Compounding Periods 180

5-16 Comparing Interest Rates 183

5-17 Fractional Time Periods 185

5-18 Amortized Loans 186

TYING IT ALL TOGETHER 187

INTEGRATED CASE **Kwangtung Commerical Bank** 198

WEB APPENDIX 5A
Continuous Compounding and Discounting

WEB APPENDIX 5B
Growing Annuities

CHAPTER 6

FINANCIAL PLANNING AND FORECASTING 201

Effective Forecasting Is Even More Important During Volatile Times 201

PUTTING THINGS IN PERSPECTIVE 202

6-1 Strategic Planning 203

6-2 The Sales Forecast 204

6-3 The AFN Equation 206
6-3a Excess Capacity Adjustments 208

6-4 Forecasted Financial Statements 211
6-4a Part I. Inputs 214
6-4b Part II. Forecasted Income Statement 214
6-4c Part III. Forecasted Balance Sheet 215
6-4d Part IV. Ratios and EPS 215
6-4e Using the Forecast to Improve Operations 216
6-5 Using Regression to Improve Forecasts 217
6-6 Analyzing the Effects of Changing Ratios 218
6-6a Modifying Accounts Receivable 218
6-6b Modifying Inventories 218
6-6c Other "Special Studies" 219

TYING IT ALL TOGETHER 219

INTEGRATED CASE **New World Chemicals Inc.** 226

Taking a Closer Look
Forecasting the Future Performance of Abercrombie & Fitch 228

PART 3
FINANCIAL ASSETS 231

CHAPTER 7

INTEREST RATES 233

Interest Rates Remain Low as the Economy Recovers from Recession and Financial Crisis 233

PUTTING THINGS IN PERSPECTIVE 234

7-1 The Cost of Money 235

7-2 Interest Rate Levels 236

7-3 The Determinants of Market Interest Rates 240
7-3a The Real Risk-Free Rate of Interest, r* 240
7-3b The Nominal, or Quoted, Risk-Free Rate of Interest, $r_{RF} = r^* + IP$ 241
7-3c Inflation Premium (IP) 242

7-3d Default Risk Premium (DRP) 243
7-3e Liquidity Premium (LP) 243
7-3f Interest Rate Risk and the Maturity Risk Premium (MRP) 244

An Almost Riskless Treasury Bonds 244

7-4 The Term Structure of Interest Rates 247

7-5 What Determines the Shape of the Yield Curve? 249

The Links Between Expected Inflation and Interest Rates: A Closer Look 251

7-6 Using the Yield Curve to Estimate Future Interest Rates 253

7-7 Macroeconomic Factors That Influence Interest Rate Levels 256
7-7a Federal Reserve Policy 256
7-7b Federal Budget Deficits or Surpluses 257
6-7c International Factors 257
7-7d Business Activity 258

7-8 Interest Rates and Business Decisions 258

TYING IT ALL TOGETHER 260

INTEGRATED CASE **Morton Handley & Company** 267

CHAPTER 8

RISK AND RATES OF RETURN 269

Managing Risk with a Portfolio Concept 269

PUTTING THINGS IN PERSPECTIVE 271

8-1 The Risk-Return Trade-Off 272

8-2 Stand-Alone Risk 273
8-2a Statistical Measures of Stand-Alone Risk 274
8-2b Measuring Stand-Alone Risk: The Standard Deviation 277
8-2c Using Historical Data to Measure Risk 278
8-2d Measuring Stand-Alone Risk: The Coefficient of Variation 279
8-2e Risk Aversion and Required Returns 279

The Historical Trade-Off Between Risk and Return 280

8-3 Risk in a Portfolio Context: The CAPM 281
8-3a Expected Portfolio Returns, $\hat{r}_p$ 282
8-3b Portfolio Risk 283

More Stocks, Less Risk? 287

8-3c Risk in a Portfolio Context: The Beta Coefficient 288

Global Perspectives: The Benefits of Diversifying Overseas 293

8-4 The Relationship Between Risk and Rates of Return 294

Estimating the Market Risk Premium 296

8-4a The Impact of Expected Inflation 298
8-4b Changes in Risk Aversion 299
8-4c Changes in a Stock's Beta Coefficient 300

8-5 Some Concerns About Beta and the CAPM 301

8-6 Some Concluding Thoughts: Implications for Corporate Managers and Investors 302

TYING IT ALL TOGETHER 304

INTEGRATED CASE **Merrill Finch Inc.** 312

Taking a Closer Look
Using Past Information to Estimate Required Returns 315

WEB APPENDIX 8A
Calculating Beta Coefficients

CHAPTER 9

BONDS AND THEIR VALUATION 317

Bond Price, Return, Risk and Diversification 317

PUTTING THINGS IN PERSPECTIVE 318

9-1 Who Issues Bonds? 319

9-2 Key Characteristics of Bonds 320
9-2a Par Value 320
9-2b Coupon Interest Rate 320
9-2c Maturity Date 321
9-2d Call Provisions 321
9-2e Sinking Funds 322
9-2f Other Features 323

9-3 Bond Valuation 324

9-4 Bond Yields 327
9-4a Yield to Maturity 328
9-4b Yield to Call 329

9-5 Changes in Bond Values Over Time 332

9-6 Bonds with Semiannual Coupons 335

9-7 Assessing a Bond's Riskiness 337
9-7a Price Risk 337
9-7b Reinvestment Risk 338
9-7c Comparing Price Risk and Reinvestment Risk 340

9-8 Default Risk 341
9-8a Various Types of Corporate Bonds 342
9-8b Bond Ratings 343
9-8c Bankruptcy and Reorganization 347

9-9 Bond Markets 348

Accrued Interest and the Pricing of Coupon Bonds 348

TYING IT ALL TOGETHER 351

INTEGRATED CASE **Oriental Asset Management Corp.** 360

Taking a Closer Look
Using Asian Bonds Online to Understand Interest Rates and Their Impact on Bond Valuation 361

WEB APPENDIX 9A
Zero Coupon Bonds

WEB APPENDIX 9B
Bond Risk and Duration

WEB APPENDIX 9C
Bankruptcy and Reorganization

CHAPTER 10

STOCKS AND THEIR VALUATION 363
What is the Value of a Stock? 363

PUTTING THINGS IN PERSPECTIVE 364

10-1 Legal Rights and Privileges of Common Stockholders 365
 10-1a Control of the Firm 365
 10-1b The Preemptive Right 366

10-2 Types of Common Stock 367

10-3 Stock Price Versus Intrinsic Value 367
 10-3a Why Do Investors and Companies Care About Intrinsic Value? 368

10-4 The Discounted Dividend Model 369
 10-4a Expected Dividends as the Basis for Stock Values 371

10-5 Constant Growth Stocks 372
 10-5a Illustration of a Constant Growth Stock 373
 10-5b Dividends Versus Growth 374
 10-5c Which Is Better: Current Dividends or Growth? 376
 10-5d Required Conditions for the Constant Growth Model 376

10-6 Valuing Nonconstant Growth Stocks 377

Limitations of the Discounted Dividend Model 381

10-7 Enterprise-Based Approach to Valuation 381
 10-7a The Corporate Valuation Model 382
 10-7b Comparing the Corporate Valuation and Discounted Dividend Models 384

The Validity of EVA and MVA 385

10-8 Preferred Stock 386

TYING IT ALL TOGETHER 387

INTEGRATED CASE **Mutual of Chicago Insurance Company** 394

Taking a Closer Look
Estimating Exxon Mobil Corporation's Intrinsic Stock Value 395

APPENDIX 10A
Stock Market Equilibrium 398

PART 4

INVESTING IN LONG-TERM ASSETS: CAPITAL BUDGETING 403

CHAPTER 11

THE COST OF CAPITAL 405
Creating Value at Disney 405

PUTTING THINGS IN PERSPECTIVE 406

11-1 An Overview of the Weighted Average Cost of Capital (WACC) 406

11-2 Basic Definitions 408

11-3 Cost of Debt, $r_d(1-T)$ 409

11-4 Cost of Preferred Stock, r_p 411

11-5 The Cost of Retained Earnings, r_s 412
 11-5a The CAPM Approach 413
 11-5b Bond-Yield-Plus-Risk-Premium Approach 414
 11-5c Dividend-Yield-Plus-Growth-Rate, or Discounted Cash Flow (DCF), Approach 414
 11-5d Averaging the Alternative Estimates 416

11-6 Cost of New Common Stock, r_e 417
 11-6a Add Flotation Costs to a Project's Cost 417
 11-6b Increase the Cost of Capital 418
 11-6c When Must External Equity Be Used? 419

11-7 Composite, or Weighted Average, Cost of Capital, WACC 420

11-8 Factors That Affect the WACC 420
 11-8a Factors the Firm Cannot Control 421
 11-8b Factors the Firm Can Control 421

Some Real-World Estimates of the WACC 422

11-9 Adjusting the Cost of Capital for Risk 423

11-10 Some Other Problems with Cost of Capital Estimates 425

TYING IT ALL TOGETHER 426

INTEGRATED CASE **Coleman Technologies Inc.** 434

Taking a Closer Look
Calculating 3M's Cost of Capital 435

WEB APPENDIX 11A
The Cost of New Common Stock and WACC

CHAPTER 12
THE BASICS OF CAPITAL BUDGETING 437
Marina Bay Sands Integrated Resort: Living up to Its Expectations? 437

PUTTING THINGS IN PERSPECTIVE 438

12-1 An Overview of Capital Budgeting 438
12-2 Net Present Value (NPV) 441
12-3 Internal Rate of Return (IRR) 444
Why NPV Is Better Than IRR 447
12-4 Multiple Internal Rates of Return 447
12-5 Reinvestment Rate Assumptions 449
12-6 Modified Internal Rate of Return (MIRR) 450
12-7 NPV Profiles 454
12-8 Payback Period 457
12-9 Conclusions on Capital Budgeting Methods 459
12-10 Decision Criteria Used in Practice 460

TYING IT ALL TOGETHER 461

INTEGRATED CASE **Allied Components Company** 468

CHAPTER 13
CASH FLOW ESTIMATION AND RISK ANALYSIS 471
Home Depot Carefully Evaluates New Investments 471

PUTTING THINGS IN PERSPECTIVE 472

13-1 Conceptual Issues in Cash Flow Estimation 472
13-1a Free Cash Flow Versus Accounting Income 473
13-1b Timing of Cash Flows 474
13-1c Incremental Cash Flows 474
13-1d Replacement Projects 474
13-1e Sunk Costs 475
13-1f Opportunity Costs Associated with Assets the Firm Owns 475
13-1g Externalities 476
13-2 Analysis of an Expansion Project 477
13-2a Effect of Different Depreciation Rates 480
13-2b Cannibalization 480
13-2c Opportunity Costs 481
13-2d Sunk Costs 481
13-2e Other Changes to the Inputs 481
13-3 Replacement Analysis 482
13-4 Risk Analysis in Capital Budgeting 484
13-5 Measuring Stand-Alone Risk 485
13-5a Sensitivity Analysis 485
13-5b Scenario Analysis 487
13-5c Monte Carlo Simulation 489
Global Perspectives: Capital Budgeting Practices in the Asian/Pacific Region 489
13-6 Within-Firm and Beta Risk 490
13-7 Unequal Project Lives 491
13-7a Replacement Chains 492
13-7b Equivalent Annual Annuities (EAA) 492
13-7c Conclusions About Unequal Lives 492

TYING IT ALL TOGETHER 494

INTEGRATED CASE **Allied Food Products** 505

APPENDIX 13B
Tax Depreciation 509

WEB APPENDIX 13B
Refunding Operations

WEB APPENDIX 13C
Using the CAPM to Estimate the Risk-Adjusted Cost of Capital

WEB APPENDIX 13D
Techniques for Measuring Beta Risk

CHAPTER 14
REAL OPTIONS AND OTHER TOPICS IN CAPITAL BUDGETING 511
Anheuser-Busch Used Real Options to Enhance Its Value 511

PUTTING THINGS IN PERSPECTIVE 512

14-1 Introduction to Real Options 512
14-2 Growth (Expansion) Options 513
14-3 Abandonment/Shutdown Options 515
14-4 Investment Timing Options 516
14-5 Flexibility Options 519
14-6 The Optimal Capital Budget 521
14-7 The Post-Audit 523

TYING IT ALL TOGETHER 524

INTEGRATED CASE **21st Century Education Products** 529

PART 5 CAPITAL STRUCTURE, DIVIDEND POLICY, AND WORKING CAPITAL MANAGEMENT 533

CHAPTER 15
CAPITAL STRUCTURE AND LEVERAGE 535
Sime Darby and Capital Structure Conservatism 535

PUTTING THINGS IN PERSPECTIVE 536

15-1 Book, Market, or "Target" Weights? 536
15-1a Measuring the Capital Structure 537
15-1b Capital Structure Changes Over Time 539

15-2 Business and Financial Risk 539
15-2a Business Risk 540
15-2b Factors That Affect Business Risk 541
15-2c Operating Leverage 542
15-2d Financial Risk 546

15-3 Determining the Optimal Capital Structure 552
15-3a WACC and Capital Structure Changes 552
15-3b The Hamada Equation 553
15-3c The Optimal Capital Structure 555

15-4 Capital Structure Theory 558
Yogi Berra on the MM Proposition 558
15-4a The Effect of Taxes 559
15-4b The Effect of Potential Bankruptcy 560
15-4c Trade-Off Theory 561
15-4d Signaling Theory 562
15-4e Using Debt Financing to Constrain Managers 563
15-4f Pecking Order Hypothesis 564
15-4g Windows of Opportunity 564

15-5 Checklist for Capital Structure Decisions 565

15-6 Variations in Capital Structures 567

TYING IT ALL TOGETHER 568

INTEGRATED CASE CHEETAH CAFE COMPANY 577

Taking a Closer Look
Exploring the Capital Structures for Four Restaurant Companies 579

WEB APPENDIX 15A
Degree of Leverage

CHAPTER 16
DISTRIBUTIONS TO SHAREHOLDERS: DIVIDENDS AND SHARE REPURCHASES 581
Tenaga Nasional Berhad Ramps Up Dividend Payout Policy 581

PUTTING THINGS IN PERSPECTIVE 582

16-1 Dividends Versus Capital Gains: What Do Investors Prefer? 582
16-1a Dividend Irrelevance Theory 583
16-1b Reasons Some Investors Prefer Dividends 584
16-1c Reasons Some Investors Prefer Capital Gains 584

16-2 Other Dividend Policy Issues 585
16-2a Information Content, or Signaling, Hypothesis 585
16-2b Clientele Effect 586

16-3 Establishing the Dividend Policy in Practice 587
16-3a Setting the Target Payout Ratio: The Residual Dividend Model 587

Global Perspectives: Dividend Yields Around the World 592

16-3b Earnings, Cash Flows, and Dividends 593
16-3c Payment Procedures 594

16-4 Dividend Reinvestment Plans 596

16-5 Summary of Factors Influencing Dividend Policy 597
16-5a Constraints 597
16-5b Investment Opportunities 598
16-5c Alternative Sources of Capital 598
16-5d Effects of Dividend Policy on r_s 598

16-6 Stock Dividends and Stock Splits 599
16-6a Stock Splits 599
16-6b Stock Dividends 600
16-6c Effect on Stock Prices 600

16-7 Stock Repurchases 602
16-7a The Effects of Stock Repurchases 602
16-7b Advantages of Repurchases 604
16-7c Disadvantages of Repurchases 604
16-7d Conclusions on Stock Repurchases 605

TYING IT ALL TOGETHER 606

INTEGRATED CASE Southeastern Steel Company 613

Taking a Closer Look
Tenaga Nasional Berhad's Dividend Policy 614

WEB APPENDIX 16A
The Residual Dividend Model: An Example

CHAPTER 17
WORKING CAPITAL MANAGEMENT 615
Successful Firms Efficiently Manage Their Working Capital 615

PUTTING THINGS IN PERSPECTIVE 616

17-1 Background on Working Capital 616

17-2 Current Assets Investment Policies 617

17-3 Current Assets Financing Policies 619
17-3a Maturity Matching, or "Self-Liquidating," Approach 619
17-3b Aggressive Approach 619
17-3c Conservative Approach 621
17-3d Choosing Between the Approaches 621

17-4 The Cash Conversion Cycle 622
17-4a Calculating the Targeted CCC 622
17-4b Calculating the CCC from Financial Statements 623

Some Real-World Examples of the Cash Conversion Cycle 624

17-5 The Cash Budget 627

17-6 Cash and Marketable Securities 630
17-6a Currency 630
17-6b Demand Deposits 631
17-6c Marketable Securities 632

17-7 Inventories 633

17-8 Accounts Receivable 634
17-8a Credit Policy 634
17-8b Setting and Implementing the Credit Policy 635
17-8c Monitoring Accounts Receivable 636

17-9 Accounts Payable (Trade Credit) 638
A Difficult Balancing Act 639

17-10 Bank Loans 641
17-10a Promissory Note 641
17-10b Line of Credit 642
17-10c Revolving Credit Agreement 642
17-10d Costs of Bank Loans 643

17-11 Commercial Paper 645

17-12 Accruals (Accrued Liabilities) 646

17-13 Use of Security in Short-Term Financing 646

TYING IT ALL TOGETHER 647

INTEGRATED CASE **Ski Equipment Inc.** 653

WEB APPENDIX 17A
Inventory Management

WEB APPENDIX 17B
Short-Term Loans and Bank Financing

PART 6
SPECIAL TOPICS IN FINANCIAL MANAGEMENT 657

CHAPTER 18
DERIVATIVES AND RISK MANAGEMENT 659
Asian Derivatives Markets 659

PUTTING THINGS IN PERSPECTIVE 660

18-1 Reasons to Manage Risk 661

CFOs Assess the Costs and Benefits of Risk Management 663

18-2 Background on Derivatives 664

18-3 Options 666
18-3a Option Types and Markets 666
18-3b Factors That Affect the Value of a Call Option 668
18-3c Exercise Value Versus Option Price 669

18-4 Introduction to Option Pricing Models 671

Expensing Executive Stock Options 674

18-5 The Black-Scholes Option Pricing Model (OPM) 675
18-5a OPM Assumptions and Equations 675
18-5b OPM Illustration 676

Using The VIX as a Measure of Investors' Fears 677

18-6 Forward and Futures Contracts 679

18-7 Other Types of Derivatives 683
18-7a Swaps 683
18-7b Structured Notes 684

Credit Instruments Create New Opportunities and Risks 684

18-7c Inverse Floaters 686

18-8 Using Derivatives To Reduce Risks 686
18-8a Security Price Exposure 686
18-8b Futures 687
18-8c Swaps 688
18-8d Commodity Price Exposure 689
18-8e The Use and Misuse of Derivatives 690

18-9 Risk Management 690
18-9a An Approach to Risk Management 691

PWC's Guide for Assessing and Managing Risk 692

TYING IT ALL TOGETHER 694

INTEGRATED CASE **Tropical Sweets Inc.** 698

Taking a Closer Look
Chipotle Mexican Grill: Call and Put Option Pricing and Interest Rate Futures 700

APPENDIX 18A
Valuation of Put Options 701

CHAPTER 19
MULTINATIONAL FINANCIAL MANAGEMENT 703
Asian Firms Look Overseas for Business Expansion 703

PUTTING THINGS IN PERSPECTIVE 704

19-1 Multinational, or Global, Corporations 704

Corporate Inversions Have Attracted Increased Criticism **707**

19-2 Multinational Versus Domestic Financial Management 708

19-3 The International Monetary System 709
19-3a International Monetary Terminology 710
19-3b Current Monetary Arrangements 710

The Debt Crisis Hits Europe **711**

19-4 Foreign Exchange Rate Quotations 713
19-4a Cross Rates 714
19-4b Interbank Foreign Currency Quotations 715

19-5 Trading in Foreign Exchange 716
19-5a Spot Rates and Forward Rates 716

19-6 Interest Rate Parity 717

19-7 Purchasing Power Parity 720

Hungry for a Big Mac? Go to Hong Kong! **721**

19-8 Inflation, Interest Rates, and Exchange Rates 724

19-9 International Money and Capital Markets 725
19-9a International Credit Markets 725
19-9b International Stock Markets 726

Stock Market Indexes Around the World **726**

19-10 Investing Overseas 728

Global Perspectives: Measuring Country Risk **728**

Global Perspectives: Investing in International Stocks **729**

19-11 International Capital Budgeting 731

19-12 International Capital Structures 732

TYING IT ALL TOGETHER 734

INTEGRATED CASE Citrus Products Inc. 739

Taking a Closer Look
Using the Internet to Follow Exchange Rates and International Indexes 740

CHAPTER 20
HYBRID FINANCING: PREFERRED STOCK, LEASING, WARRANTS, AND CONVERTIBLES 741

Tesla's Investors Love the Convertible 741

PUTTING THINGS IN PERSPECTIVE 742

20-1 Preferred Stock 742
20-1a Basic Features 743

Preferred Stock: Does It Make Sense for Individual Investors? **744**

20-1b Adjustable-Rate Preferred Stock 745
20-1c Advantages and Disadvantages of Preferred Stock 745

20-2 Leasing 746
20-2a Types of Leases 746

Are Changes to the Financial Reporting of Leases on the Horizon? **747**

20-2b Financial Statement Effects 748
20-2c Evaluation by the Lessee 750
20-2d Other Factors That Affect Leasing Decisions 753

20-3 Warrants 754
20-3a Initial Market Price of a Bond with Warrants 754
20-3b Use of Warrants in Financing 755
20-3c The Component Cost of Bonds with Warrants 756
20-3d Problems with Warrant Issues 757

20-4 Convertibles 758
20-4a ConversionRatio andConversion Price 758
20-4b The Component Cost of Convertibles 759
20-4c Use of Convertibles in Financing 763
20-4d Convertibles Can Reduce Agency Costs 763

20-5 A Final Comparison of Warrants and Convertibles 764

20-6 Reporting Earnings When Warrants or Convertibles Are Outstanding 765

TYING IT ALL TOGETHER 766

INTEGRATED CASE Fish & Chips Inc., Part I
Fish & Chips Inc., Part II 773

Taking a Closer Look
Using the Internet to Follow Hybrid Securities 775

CHAPTER 21
MERGERS AND ACQUISITIONS 777

Mergers: A Growth Strategy for Global Corporations 777

PUTTING THINGS IN PERSPECTIVE 778

21-1 Rationale for Mergers 778
21-1a Synergy 778
21-1b Tax Considerations 779
21-1c Purchase of Assets Below Their Replacement Cost 779

21-1d Diversification 780
21-1e Managers' Personal Incentives 780
21-1f Breakup Value 780

21-2 Types of Mergers 781

21-3 Level of Merger Activity 781

21-4 Hostile Versus Friendly Takeovers 783

21-5 Merger Analysis 784
21-5a Valuing the Target Firm 784
21-5b Setting the Bid Price 788

More Than Just Financial Statements **789**

21-5c Post-Merger Control 790

21-6 The Role of Investment Bankers 791
21-6a Arranging Mergers 792
21-6b Developing Defensive Tactics 792
21-6c Establishing a Fair Value 793
21-6d Financing Mergers 793
21-6e Arbitrage Operations 794

21-7 Do Mergers Create Value? The Empirical Evidence 794

The Track Record of Large Mergers **795**

21-8 Corporate Alliances 796

21-9 Private Equity Investments 796

21-10 Divestitures 797
21-10a Types of Divestitures 797
21-10b Divestiture Illustrations 797

TYING IT ALL TOGETHER **799**

INTEGRATED CASE B&Q PLC 803

Taking a Closer Look
Using Dealbook to Follow Recent Merger and Acquisitions Announcements *804*

WEB APPENDIX 21A
Merger Regulation

WEB APPENDIX 21B
Holding Companies

APPENDIXES

APPENDIX A **Solutions to Self-Test Questions and Problems** **A-1**

APPENDIX B **Answers to Selected End-of-Chapter Problems** **B-1**

APPENDIX C **Selected Equations and Tables** **C-1**

APPENDIX D **Frequently Used Symbols/Abbreviations** **D-1**

APPENDIX E **Future and Present Values Tables** **E-1**

INDEX **I-1**

PREFACE

Essentials of Financial Management was written as an introductory text that students would find interesting and easy to understand. *Fundamentals* immediately became the leading undergraduate finance text, and it has maintained that position ever since. Our continuing goal with this edition is to produce a book and ancillary package that sets a new standard for finance textbooks.

Finance is an exciting and continually changing field. Since the last edition, many important changes have occurred within the global financial environment. In the midst of this changing environment, it is certainly an interesting time to be a finance student. In this latest edition, we highlight and analyze the events leading to these changes from a financial perspective. Although the financial environment is ever changing, the tried-and-true principles that the book has emphasized over the past three and a half decades are now more important than ever.

STRUCTURE OF THE BOOK

Our target audience is a student taking his or her first, and perhaps only, finance course. Some of these students will decide to major in finance and go on to take courses in investments, money and capital markets, and advanced corporate finance. Others will choose marketing, management, or some other nonfinance business major. Still others will major in areas other than business and take finance plus a few other business courses to gain information that will help them in law, real estate, or other fields.

Our challenge has been to provide a book that serves all of these audiences well. We concluded that we should focus on the core principles of finance, including the basic topics of time value of money, risk analysis, and valuation. Moreover, we concluded that we should address these topics from two points of view: (1) that of an investor who is seeking to make intelligent investment choices and (2) that of a business manager trying to maximize the value of his or her firm's stock. Both investors and managers need to understand the same set of principles, so the core topics are important to students regardless of what they choose to do after they finish the course.

In planning the book's structure, we first listed the core topics in finance that are important to virtually everyone. Included were an overview of financial markets, methods used to estimate the cash flows that determine asset values, the time value of money, the determinants of interest rates, the basics of risk analysis, and the basics of bond and stock valuation procedures. We cover these core topics in the first nine chapters. Next, because most students in the course will probably work for a business firm, we want to show them how the core ideas are implemented in practice. Therefore, we go on to discuss cost of capital, capital budgeting, capital structure, dividend policy, working capital management, financial forecasting, risk management, international operations, hybrids, and mergers and acquisitions.

Nonfinance majors sometimes wonder why they need to learn finance. As we have structured the book, it quickly becomes obvious to everyone why they need to understand time value, risk, markets, and valuation. Virtually all students

enrolled in the basic course expect at some point to have money to invest, and they quickly realize that the knowledge gained from Chapters 1 through 9 will help them make better investment decisions. Moreover, students who plan to go into the business world soon realize that their own success requires that their firms be successful, and the topics covered in Chapters 11 through 21 will be helpful here. For example, good capital budgeting decisions require accurate forecasts from people in sales, marketing, production, and human resources, and nonfinancial people need to understand how their actions affect the firm's profits and future performance.

ORGANIZATION OF THE CHAPTERS: A VALUATION FOCUS

As we discuss in Chapter 1, in an enterprise system such as that of the United States, the primary goal of financial management is to maximize their firms' values. At the same time, we stress that managers should not do "whatever it takes" to increase the firm's stock price. Managers have a responsibility to behave ethically, and when striving to maximize value, they must abide by constraints such as not polluting the environment, not engaging in unfair labor practices, not breaking the antitrust laws, and the like. In Chapter 1, we discuss the concept of valuation, explain how it depends on future cash flows and risk, and show why value maximization is good for society in general. This valuation theme runs throughout the text.

Stock and bond values are determined in the financial markets, so an understanding of those markets is essential to anyone involved with finance. Therefore, Chapter 2 covers the major types of financial markets, the rates of return that investors have historically earned on different types of securities, and the risks inherent in these securities. This information is important for anyone working in finance, and it is also important for anyone who has or hopes to own any financial assets. In this chapter, we also highlight how this environment has changed in the aftermath of the financial crisis.

Asset values depend in a fundamental way on earnings and cash flows as reported in the accounting statements. Therefore, we review those statements in Chapter 3 and then, in Chapter 4, show how accounting data can be analyzed and used to measure how well a company has operated in the past and how well it is likely to perform in the future.

Chapter 5 covers the time value of money (TVM), perhaps the most fundamental concept in finance. The basic valuation model, which ties together cash flows, risk, and interest rates, is based on TVM concepts, and these concepts are used throughout the remainder of the book. Therefore, students should allocate plenty of time to studying Chapter 5.

Chapter 7 deals with interest rates, a key determinant of asset values. We discuss how interest rates are affected by risk, inflation, liquidity, the supply of and demand for capital in the economy, and the actions of the Federal Reserve. The discussion of interest rates leads directly to the topics of bonds in Chapter 9 and stocks in Chapters 8 and 10, where we show how these securities (and all other financial assets) are valued using the basic TVM model.

The background material provided in Chapters 1 through 9 is essential to both investors and corporate managers. These are finance topics, not business or corporate finance topics as those terms are commonly used. Thus, Chapters 1 through 9 concentrate on the concepts and models used to establish values, whereas Chapters 11 through 21 focus on specific actions managers can take to maximize their firms' values.

Because most business students don't plan to specialize in finance, they might think the business finance chapters are not particularly relevant to them. This is most decidedly not true, and in the later chapters we show that all really important business decisions involve every one of a firm's departments—marketing, accounting, production, and so on. Thus, although a topic such as capital budgeting can be thought of as a financial issue, marketing people provide inputs on likely unit sales and sales prices; manufacturing people provide inputs on costs; and so on. Moreover, capital budgeting decisions influence the size of the firm, its products, its profits, and its stock price, and those factors affect all of the firm's employees, from the CEO to the mail room staff.

INNOVATIONS FOR THE FOURTH EDITION

A great deal has happened in the financial markets and corporate America since the third edition was published. In this fourth edition, we have made several important changes to reflect this dynamic environment. Below, we provide a brief summary of the more significant changes.

1. Today's students are tomorrow's business and government leaders, and it is essential that they understand the key principles of finance, and the important role that financial markets and institutions have on our economy. Since the last edition, a number of key events have significantly influenced the financial markets and finance in general. Over the last few years, we have witnessed continued weakness in the economy following the global financial crisis of 2008 and 2009, the European debt crisis, and growing unrest overseas. At the same time, the Federal Reserve's aggressive policy of quantitative easing has pushed interest rates to the lowest levels in years, which is partially responsible for the dramatic run-up in the U.S. stock market between August 2011 and August 2014. Throughout the fourth edition, we discuss these events and their implications for financial markets and corporate managers, and we use these examples to illustrate the importance of the key concepts covered in *Fundamentals* for investors, businesses, and even government officials.
2. In the fourth edition, we also continue to highlight the important influences of increased globalization and changing technology. These influences have created new opportunities, but they have also generated new sources of risk for individuals and businesses. Since the last edition, we have seen, for example, Facebook and Twitter's initial public offerings, the rise of Bitcoin, several high-profile mergers, and the rise of corporate inversions—where U.S. companies pursue strategies to move their headquarters to lower-tax countries.
3. Instructors and students continually impress upon us the importance of having interesting and relevant real-world examples. Throughout the fourth edition we have added several new examples where recent events help illustrate the key concepts covered in the text. We have also expanded and updated the many tables where we present real-world data, and we have revised the old Thomson One problems so that they can now be used with general Internet financial websites. To reflect this change, these problems are now called Taking A Closer Look. New Internet problems have been added in Chapters 9, 18, 19, 20, and 21. Finally, as is always the case, we have also made significant changes to many of the opening vignettes that precede each chapter.
4. Behavioral finance theory continues to have an important influence on the academic literature and it has in many ways reshaped the way that many of us think about financial markets and corporate finance. As a reflection of its growing importance, in Chapter 2 we moved the discussion of behavioral

finance and its impact on the efficient markets hypothesis from a separate box into its own section. In addition, we continue to highlight the importance of securitization, the role of derivatives, and the increasing importance of hedge funds, mutual funds, and private equity firms.

5. We updated the tax discussion in Chapter 3 to reflect 2014 tax rates and tax law changes for tax returns due April 15, 2015. Impacts of these changes are discussed throughout the text, especially in the capital structure and dividend chapters.
6. In Chapter 4, we revised the definition of the debt ratio. We calculate it as interest-bearing debt divided by the sum of interest-bearing debt and equity. This revision is more consistent with our discussions in the capital budgeting, capital structure, and forecasting chapters.
7. We have added more Quick Questions that are designed to keep students actively involved and focused as they read the text. Here, in a separate box, we pose a question and then show students how to answer it. These Quick Questions go through examples to make the finance concepts more concrete, and in that sense they mimic what effective instructors often do in a classroom setting. Additional Quick Questions have been included in Chapters 3, 4, 7, and 8.
8. In Chapter 15, we changed the Bigbee illustration (that works through the calculations to determine the optimal capital structure) to reflect lower interest rates.

When revising the text, we always rely heavily on a team of reviewers who offer suggestions for making the text more readable and relevant to students. We give special thanks to these reviewers later in the preface; their comments and recommendations certainly helped us improve this fourth edition.

DIGITAL SOLUTIONS FOR THE FOURTH EDITION

Changing technology and new ideas have had an exciting and dramatic influence on the ways we teach finance. Innovative instructors are developing and utilizing different classroom strategies, and new technology has allowed us to present key material in a more interesting and interactive fashion. As textbook authors, we think these new developments are tremendously exciting, and we have worked closely with our publisher's top team of innovative content and media developers, who have created a whole new set of revolutionary products for the fourth edition including:

MINDTAP™

MindTap™, Cengage Learning's fully online, highly personalized learning experience combines readings, multimedia activities, and assessments into a singular Learning Path. MindTap™ guides students through their course with ease and engagement with a learning path that includes an Interactive Chapter Reading, Problems, and the Online Homework Assignment. Instructors can personalize the Learning Path for their students by customizing the robust suite of the Fourth Edition resources and adding their own content via apps that integrate into the MindTap™ framework seamlessly with Learning Management Systems.

CHAPTERS ADAPTED IN THE FOURTH EDITION

- Professor Jun-Ming Hsu adapted Chapters 1, 2, 8, and 10.
- Dr. Yoon Kee Kong adapted Chapters 5, 9, and 18.
- Dr. A.N. Bany-Ariffin adapted Chapters 15, 16, and 19.

CONCLUSION

Finance is, in a real sense, the cornerstone of the enterprise system—good financial management is vitally important to the economic health of all firms and hence to the nation and the world. Because of its importance, finance should be widely and thoroughly understood, but this is easier said than done. The field is complex, and it undergoes constant change due to shifts in economic conditions. All of this makes finance stimulating and exciting, but challenging and sometimes perplexing. We sincerely hope that this fourth edition of *Essentials* will meet its own challenge by contributing to a better understanding of the financial systems in Asia and the United States.

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INTRODUCTION TO FINANCIAL MANAGEMENT

CHAPTER

1 An Overview of Financial Management
2 Financial Markets and Institutions

CHAPTER 1

AN OVERVIEW OF FINANCIAL MANAGEMENT

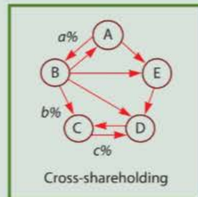
Goals and Practices of Asian Firms

In 1776, Adam Smith described the action of an "invisible hand" that drives firms to pursue profits, and concluded that profit maximization is the right goal for firms. Modern financial academicians and professionals subscribe to a modified version of Adam Smith's theory, asserting that a firm's goal is to maximize the wealth of its stockholders (which means maximizing stock prices) while avoiding practices harmful to society by not polluting the environment, not engaging in unfair employment practices, and not creating monopolies that exploit consumers.

Despite the emphasis on shareholder value by most businesses today, the self-interests of managers can affect the stock value of a firm. Managers who pursue their own benefit by perquisite consumption, overinvestment, or underinvestment can decrease shareholder wealth. To align the interests of managers with those of stockholders, firms usually provide incentive programs such as stock options to managers. If a firm gives its CEO stock options at $50, her/his personal wealth increases when the stock price exceeds $50. However, research has found that equity-based compensations drive CEOs to undertake riskier policies, conduct value-decreasing mergers and acquisitions (M&As), and report inaccurate financial statements. These findings indicate that the solution to an old problem (the agency problem) can bring about a new one, that of risk-taking.

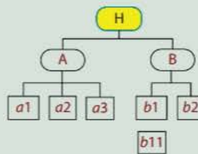
In contrast, firms in East Asia emphasize stockholder wealth much less than those in the Western world. Also, they seem to worry less about agency problems, since they provide fewer incentive programs to managers. However, there are several practices that influence firms to maximize shareholder wealth, such as shareholdings of affiliates, control rights, and ownership structure.

- *Shareholdings of affiliates*. East Asian firms commonly use cross-shareholdings to operate their businesses. For instance, Japanese firms in large groups such as Mitsui, Mitsubishi, and Sumitomo hold one another's shares, which is called "keiretsu". As shown in the right-hand graph, firm A holds *a*% of firm B's share, B holds *b*% of C's share, and C holds *c*% of D's share. In this form, firms in the group are indirectly in command of firm A. This type of structure ensures managers of firms in the group care more about firm A's policy than maximization of shareholder wealth. It also reduces the possibility of activities that force managers to increase the firm value, such as proxy fights and hostile M&As.

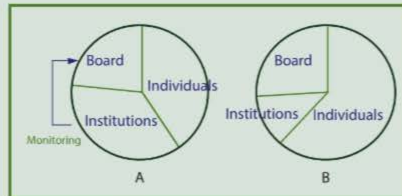


Cross-shareholding

Another prevalent method of controlling affiliated firms uses pyramid shareholdings, which means that firms build up several layers of subsidiaries. This allows a firm to control more subsidiary firms and diversify operating risk. For instance, a firm can invest 100% of its funds in another firm or 20% share in each of five similar firms. It can make a firm into part of a conglomerate group, which may have greater market power and obtain more funds from banks. South Korean firms such as Samsung, LG, and Hyundai use this type of shareholdings to form their own "chaebol" or monopolistic business family. However, firms in the group would prioritize the benefit of the mother firm (H in the right-hand graph) over that of shareholder wealth.



- *Control rights*. Many firms in East Asia are family-owned and do not clearly separate ownership and management. This phenomenon is popular in Hong Kong, South Korea, Singapore, and Taiwan. Family members occupy both board and top management positions, resulting in priority for family benefits over an increase in shareholder wealth. For instance, when the firm needs to buy a piece of land, managers may forgo one suitable for the firm to buy the one owned by a family member.
- *Ownership structure*. Compared to the capital markets in Western countries, East Asian markets consist of fewer institutional investors. The graph below depicts two types of ownership structure, where A has more institutional ownership than B.



Most firms in East Asia are more like B, which has a weaker monitoring effect from institutional investors. In this situation, the board is more likely to expropriate wealth from individual investors through self-dealing and insider trading.

Aware of such phenomena, the governments in East Asian countries have imposed regulations on firms to improve their corporate governance mechanisms, such as restrictions on the voting rights of affiliated firms in the mother firm, greater disclosure of information, and a mandatory minimum number of independent board directors. All these actions aim to compel firms to act in the interests of shareholders.

Source: Jeffrey L. Coles, Naveen D. Daniel, and Lalitha Naveen, "Managerial Incentives and Risk-taking," *Journal of Financial Economics*, 79 (2006), pp. 431–468; Yaniv Grinstein and Paul Hribar, "CEO Compensation and Incentives: Evidence from M&A Bonuses," *Journal of Financial Economics*, 73 (2004), pp. 119–143; Natasha Burns and Simi Kedia, "The Impact of Performance-based Compensation on Misreporting," *Journal of Financial Economics* 79 (2006), pp. 35–67; Stijn Claessens and Joseph P. H. Fan, "Corporate Governance in Asia: A Survey," *International Review of Finance*, 3 (2002), pp. 71–103.

PUTTING THINGS IN PERSPECTIVE

This chapter will give you an idea of what financial management is all about. We begin the chapter by describing how finance is related to the overall business environment, by pointing out that finance prepares students for jobs in different fields of business, and by discussing the different forms of business organization. For corporations, management's goal should be to maximize shareholder wealth, which means maximizing the value of the stock. When we say "maximizing the value of the stock," we mean the "true, long-run value," which may be different from the current stock price. In the chapter, we discuss how firms must provide the right incentives for managers to focus on long-run value maximization. Good managers understand the importance of ethics, and they recognize that maximizing long-run value is consistent with being socially responsible.

When you finish this chapter, you should be able to:

- Explain the role of finance and the different types of jobs in finance.
- Identify the advantages and disadvantages of different forms of business organization.
- Explain the links between stock price, intrinsic value, and executive compensation.
- Identify the potential conflicts that arise within the firm between stockholders and managers and between stockholders and bondholders, and discuss the techniques that firms can use to mitigate these potential conflicts.
- Discuss the importance of business ethics and the consequences of unethical behavior.

1-1 What is Finance?

Finance is defined by Webster's *Dictionary* as "the system that includes the circulation of money, the granting of credit, the making of investments, and the provision of banking facilities." Finance has many facets, which makes it difficult to provide one concise definition. The discussion in this section will give you an idea of what finance professionals do and what you might do if you enter the finance field after you graduate.

1-1a Areas of Finance

Finance as taught in universities is generally divided into three areas: (1) financial management, (2) capital markets, and (3) investments.

Financial management, also called corporate finance, focuses on decisions relating to how much and what types of assets to acquire, how to raise the capital needed to purchase assets, and how to run the firm so as to maximize its value. The same principles apply to both for-profit and not-for-profit organizations; and as the title suggests, much of this book is concerned with financial management.