

WESTON & BRIGHAM'S

managerial
FINANCE

British



Edition

J Fred Weston

*Professor of Managerial Economics and Finance
University of California, Los Angeles*

Eugene F Brigham

*Professor of Finance
University of Florida*

Managerial Finance

*First British edition adapted from the
sixth American edition by*

John Boyle

*Senior Lecturer in Finance
Polytechnic of the South Bank, London*

Robin J Limmack

*Lecturer in Accountancy and Finance
University of Stirling*

Holt, Rinehart and Winston

London · New York · Sydney · Toronto

Holt, Rinehart and Winston Ltd: 1 St Anne's Road
Eastbourne, East Sussex BN21 3UN

Typeset in India by the Macmillan Company of India Ltd.
Printed in Great Britain by J W Arrowsmith Ltd, Bristol.

British edition ©1979 Holt, Rinehart and Winston Ltd. *All rights reserved.* It is illegal to reproduce, except by special permission of the copyright owners, any part of this publication. Reproduction of this material by any duplication process whatsoever without authorization is a violation of copyright.

This edition is an adaptation of *Managerial Finance*, Sixth Edition, © 1978 The Dryden Press, a division of Holt, Rinehart and Winston, New York.

ISBN 0-03-910197-5

Last digit is print number: 9 8 7 6 5 4 3

Preface

In the United Kingdom in recent years, academics and business practitioners alike have shown a growing awareness of the importance of the study of managerial finance. The major accountancy bodies have reflected this awareness by including the study of finance in their examination schemes. Additionally, an increasing number of universities and polytechnics have introduced courses, at the undergraduate, postgraduate and post-experience levels, which involve the study of finance. The popularity of courses such as the Certified Diploma in Accounting and Finance is evidence of the demand for this by business practitioners.

We have been engaged for several years in the teaching of finance on various courses and have become increasingly concerned by the scarcity of comprehensive textbooks which include a study of the theoretical concepts of finance within the framework of the United Kingdom financial environment. While there have been some excellent textbooks produced for this subject, very few have related specifically to the United Kingdom or have taken students from a study of the basic concepts of finance through to the major recent developments.

In creating this British version of *Managerial Finance* we have attempted to fulfil the need for such a text by appropriately adapting a highly successful and well-proven United States book. Thus we have made maximum use of the vast academic and business experience embodied in the sixth edition of *Managerial Finance* but have reset it in the context of the United Kingdom environment. Wherever possible, original material has been retained although chapters relating to the institutional framework and sources of finance have been completely rewritten, as have several end-of-chapter problems. References have been supplemented by more recent British publications, and terminology has been revised in an attempt to overcome the traditional reluctance of British students to use textbooks with American terminology. The major areas of change can be summarized as follows:

1. We have up-dated all material that may change over time and wherever possible we have used British rather than American examples.
2. Chapters 2 to 5 have been recast to conform with British practices of financial reporting. An appendix which examines limitations of financial statements in an inflationary environment has been added to Chapter 2.

3. Chapter 6 has been revised to take account of the special features of the market for short-term funds in Britain. These special features have influenced the approach to current asset management dealt with in Chapter 7. The sources of short-term funds for British industry have been outlined in Chapter 8 with particular reference to bank finance, trade credit and bills of exchange.
4. Chapters 12, 13 and 14 have been completely rewritten to take account of the British financial environment. At the same time, the new material has been added with the intention of retaining the spirit and, wherever possible, the form of the original. Problems and questions relevant to British experience have been added to these chapters.
5. The Appendix to Chapter 16 on the Option Pricing Model has been up-dated to include developments in the recently opened traded options market in London.
6. Chapter 21 has been extensively revised to incorporate the relationship between long-term and short-term interest rates which operate in the London market. The implications of these relationships for investment timing have been discussed.
7. The chapters on mergers, reconstructions and small businesses have been revised and new material, appropriate to Britain, has been added.

Treatment of some topics has had to be kept to a minimum in order to maintain the philosophy of the original text. For example, Appendix A to Chapter 2 has been included to make students aware of the limitations of financial statements for analytical purposes, and not to provide a detailed study of the problems of accounting for inflation. In one case – Chapter 24 – no alteration has been made to the subject matter of the chapter, because by its very nature it has an international flavour.

We believe that this textbook offers sufficient flexibility to form the foundation for courses in finance at various levels. The book may be used as a first course in finance at the undergraduate and professional levels by omitting selected chapters and appendices. More advanced courses would include the more advanced chapters, together with various appendices and cases, supplemented by journal articles.

In our work of adaptation we benefited enormously from constructive criticism from a number of sources. In particular we should like to thank for their help the following: A. F. Fox (Stirling), A. J. Mason (London), H. Lipman (London), Dr D. Garbutt (Dundee), A. V. Pizzey (Nottingham), Dr R. Spencer (London), S. J. Curry (Birmingham) and R. H. Berry (Coventry).

We would also like to express our appreciation to all of the Holt, Rinehart and Winston editorial staff, and in particular David Inglis and Patricia Terry, for their discipline in keeping us to deadlines and ensuring a timely publication.

Polytechnic of the South Bank
University of Stirling
1979

John Boyle
Robin J. Limmack

Preface to Sixth American Edition

Financial management has undergone many changes in recent years. Strong inflationary pressures have pushed interest rates to unprecedented heights, and the resulting high cost of capital has led to profound changes in corporate financial policies and practices. Academic researchers have made significant advances, especially in the areas of capital budgeting and the cost of capital. At the same time, business practitioners are making increasing use of financial theory, and feedback from the 'real world' has led to revisions in financial theory. To a large extent, these trends dictated the revisions made in this Sixth Edition of *Managerial Finance*.

The changes in the Sixth Edition of *Managerial Finance* continue the basic philosophy of previous editions. This is to provide users with coverage of all important areas of managerial finance and financial management, while providing flexibility in the use of the materials. At present, the major theoretical chapters on the cost of capital and valuation are near the end of the book in order to work up to the most difficult material as an increasing challenge to the reader. However, some users tell us they start with these chapters so they can use the concepts in their treatment of the materials in the earlier chapters. Different sequencing patterns have been reported by other professors. Still others use different combinations of the materials in the first, second or subsequent courses in a finance sequence. Since faculty, students and curriculum needs and personalities vary among different schools, we believe this flexibility is an important strength of *Managerial Finance* – and it is no accident; we have planned for it.

This flexibility objective has guided the placement of some new materials in the Sixth Edition. Three important recent developments in finance are the Capital Asset Pricing Model (CAPM), the Options Pricing Model (OPM) and the State-Preference Model (SPM). The Capital Asset Pricing Model is discussed in Appendix D to Chapter 11 and in Appendix C to Chapter 19. The Option Pricing Model has been set forth in Appendix A to Chapter 16. We utilize the State-Preference Model to provide a wrap-up of the discussion of financial leverage in Appendix D to Chapter 19. These and other materials continue the up-to-date coverage of *Managerial Finance* while providing flexibility in the sequence and in the courses in which the topics are treated.

In addition to containing new materials, the revision reflects our experience, and that of others, in teaching business finance. Organizational changes have been made to

provide for smoother flow and greater continuity; points that proved troublesome to students have been clarified; a few outright errors have been corrected; and, of course, descriptive materials have been updated. Moreover, the end-of-chapter questions, problems, and references have been clarified and strengthened.

Much of the specific content of the book is the result of our experience in executive development programs over a number of years. This experience, in addition to our consulting with business firms on financial problems and policies, has helped us to identify the most significant responsibilities of financial managers, the most fundamental problems facing firms, and the most feasible approaches to practical decision-making. Some topics are conceptually difficult, but so are the issues faced by financial managers. Business managers must be prepared to handle complex problems, and finding solutions to these problems necessarily involves the use of advanced tools and techniques.

We have not sought to avoid the many unresolved areas of business financial theory and practice. Although we could have simplified the text in many places by avoiding the difficult issues, we preferred to provide a basic framework based on the 'received doctrine', then to go on (often in appendixes) to present materials on a number of important but controversial issues. It is hoped that our presentation, along with the additional references provided at the end of each chapter, will stimulate the reader to further inquiry.

We acknowledge that the level and difficulty of the material is uneven. Certain sections are simply descriptions of the institutional features of the financial environment and, as such, are not difficult to understand. Other parts—notably the material on capital budgeting, uncertainty, and the cost of capital—are by nature rather abstract, and, as such, are difficult for those not used to thinking in abstract terms. In some of the more complex sections, we have simply outlined procedures in the main body of the text, then justified the procedures in the chapter appendixes.

The appendixes permit great flexibility in the use of *Managerial Finance*. The book can be used in a basic course by omitting selected appendix topics. If instructors wish to cover selected topics from the appendixes, they may do so, and the more interested or mature student may also choose to select appendix topics for independent study. Alternatively, the book may be used in a two-semester course, supplemented, as the instructor sees fit, with outside readings or cases, or both. At both UCLA and Florida we use the basic chapters plus a very few appendixes in the introductory course, then cover selected appendixes plus cases and some articles in the advanced course. In fact, some of the appendixes were written specifically to help bridge the gap between basic texts and journal literature.

Changes in the sixth edition

The Sixth Edition of *Managerial Finance* differs from the Fifth in several key respects.

1. We have updated all materials that have a time aspect.
2. A listing of 'Frequently Used Symbols' in *Managerial Finance* has been developed which relates and makes consistent all symbols used in the capital budgeting, cost of capital, uncertainty, valuation and other basic conceptual themes that run through the book. The symbols used seek to reflect the widest usage found in the journal literature. This has a number of advantages. The reader has the assurance that on the central conceptual materials one set of symbols is consistently used. Furthermore, this will help the reader increase his familiarity with the symbols used in the general literature. It will thereby facilitate the access of the reader to the journal literature. Another benefit of the list of 'Frequently Used Symbols' is that it provides a perspective which allows some simplification and reduction in the number of symbols employed in *Managerial Finance*.

3. Chapter 1 has been rewritten to focus more directly and fully on the nature of the finance function and to discuss the goals of the firm in a broader perspective.
4. We have added an appendix to Chapter 2 to discuss accounting under inflation and its implications for financial ratio analysis.
5. We have added a section to Chapter 10 for comparing mutually exclusive projects with unequal lives.
6. An appendix has been developed for Chapter 10, utilizing the Capital Asset Pricing Model for measuring the required risk adjusted return for new investment projects.
7. Another appendix to Chapter 10 describes the adjustments required for capital budgeting under inflation.
8. The section on leasing has been reworked to reflect the important development in the recent new articles on the subject.
9. Chapter 17 uses the market price of risk relationships to show how the risk premium in the returns to investments and to securities can be measured.
10. The new and complex formulas for option pricing are shown to use a combination of materials already covered in *Managerial Finance*; simple, clear applications of the Black and Scholes formulas are made to pricing options as well as to other corporate securities. This is placed as an appendix to Chapter 16.
11. Some recent work on state-preference theory is applied in discussing the determination of optimal financial leverage. Again the material is presented in clear, easy-to-follow examples, and its use in a managerial finance decision-framework is demonstrated in an appendix to Chapter 19.
12. Capital investment decisions are explicitly integrated with the valuation of the firm.
13. The materials on capital budgeting are further developed and clarified.
14. A correct conceptualization of multi-period stock valuation models is presented in Chapter 17.
15. New institutional materials are added to continue up-to-date coverage related to real world developments.
16. We have added new problems to round out the coverage of concepts as well as to provide appropriate emphasis to areas of central importance.

Several reviewers suggested that it might be desirable to reduce the total length of the book. The idea was appealing, but we did not follow their suggestion for several reasons. We want the book to cover the entire field of business finance and to deal with all the functions of the financial manager. Eliminating institutional material and concentrating on theory and technique would give the student an unrealistic, sterile view of finance. Some of the more advanced theory and techniques could have been eliminated on the ground that they probably would not be covered in basic courses, but it is useful to show where this material fits into the scheme of things and to provide the student with a bridge to the journal literature. Finally, our verbosity results, to a large extent, from a deliberate addition of statements, examples, and other materials to clarify points that our students have found difficult; eliminating these would have reduced the clarity of the book. These factors, *together with the fact that the book is structured so that instructors do not have to assign all the material*, caused us to forego a marked reduction in the book's length.

Ancillary materials

Several items are available to supplement *Managerial Finance*. First, there are two casebooks, *Cases in Managerial Finance*, 3rd Edition, and *Decisions in Financial Management: Cases*, by Eugene F. Brigham et al. Second, there are a number of readings books which can be used to supplement the text. One book in particular, *Issues in Managerial Finance*, edited by E. F. Brigham and R. E. Johnson, is a useful supplement to *Managerial Finance*. Finally, many students will find the *Study Guide* useful. The *Study*

Guide highlights the key points in the text and presents a comprehensive set of problems similar to those at the end of each chapter. Each problem is solved in detail, so a student who has difficulty working the end-of-chapter problems can be aided by reviewing the *Study Guide*.

Acknowledgments

In its several revisions, the book has been worked on and critically reviewed by numerous individuals, and we have received many detailed comments and suggestions from instructors (and students) using the book in our own schools and elsewhere. All this help has improved the quality of the book, and we are deeply indebted to the following individuals, and others, for their help: M. Adler, E. Altman, J. Andrews, R. Aubey, P. Bacon, W. Beranek, V. Brewer, W. Brueggeman, R. Carleson, S. Choudhury, P. Cooley, C. Cox, D. Fischer, R. Gray, J. Griggs, R. Haugen, S. Hawk, R. Hehre, J. Henry, A. Herrmann, G. Hettenhouse, R. Himes, C. Johnson, R. Jones, D. Kaplan, M. Kaufman, D. Knight, H. Krogh, R. LeClair, W. Lee, D. Longmore, J. Longstreet, H. Magee, P. Malone, R. Moore, T. Morton, T. Nantell, R. Nelson, R. Norgaard, J. Pappas, R. Pettit, R. Pettway, J. Pinkerton, G. Pogue, W. Regan, F. Reilly, R. Rentz, R. Richards, C. Rini, R. Roenfeldt, W. Sharpe, K. Smith, P. Smith, R. Smith, D. Sorenson, M. Tysseland, P. Vanderheiden, D. Woods, J. Yeakel, and D. Ziegenbein for their careful reviews of this and previous editions.

We owe special thanks to V. Apilado, J. Dran, M. Ertell, G. Laber, G. Hettenhouse, J. Longstreet, R. Melicher, and G. Pinches for providing us with detailed reviews of the manuscript of this edition. Particularly helpful in the present revision was the assistance of L. Dann, H. DeAngelo, J. Kiholm, M. McElroy, P. Scharf, and I. Woodward. We would like to thank C. Barngrover, S. Manshinghka, W. Eckardt, H. Rollins, H. Alwan, D. Wort, and J. Zumwalt for their assistance in helping us to develop the acetate program; we would also like to express our appreciation to Bob LeClair and to The American College for their help in preparing the transparencies, available from The Dryden Press. (Note to instructors: a set of additional problems with solutions developed with the assistance of Professors Roger Bey, Keith Johnson and Ramon Johnson will be made available to adoptors by The Dryden Press.)

The Universities of California and Florida, and our colleagues on these campuses, provided us with intellectual support in bringing the book to completion. Finally, we are indebted to the Dryden Press staff – principally Garret White, Paul R. Jones, Jo-Anne Naples, and Ray Ashton – for their special efforts in getting the manuscript into production and for following through to the bound book.

The field of finance will continue to experience significant changes. It is stimulating to participate in these exciting developments, and we sincerely hope that *Managerial Finance* will contribute to a better understanding of the theory and practice of finance.

Los Angeles, California
Gainesville, Florida
December 1977

J. Fred Weston
Eugene F. Brigham

Contents

PREFACE	v
PREFACE TO SIXTH AMERICAN EDITION	vii
PART 1 OVERVIEW OF FINANCE: ANALYSIS, PLANNING AND CONTROL	1
1 Scope and Nature of Managerial Finance	3
<i>The finance function 3; Goals of the firm 7; Changing role of financial management 10; Financial decisions: risk-return trade-off 12; Organization and structure of this book 13; Questions 15; Selected references 15.</i>	
2 Ratio Analysis	16
<i>Basic financial statements 16; Basic types of financial ratios 20; Rates of return in different industries 32; Sources of comparative ratios 34; Use of financial ratios in credit analysis 34; Use of financial ratios in security analysis 36; Some limitations of ratio analysis 36; Summary 37; Questions 38; Problems 39; Selected references 44.</i>	
<i>Appendix A to Chapter 2 Implications of Changes in Price Levels</i>	46
<i>Procedures in current cost accounting 47; Current purchasing power accounting 49; Limitations of financial statement analysis 50.</i>	
3 Profit Planning	51
<i>Break-even analysis 51; Sources and applications of funds statement 60; Summary 63; Questions 64; Problems 64; Selected references 66.</i>	
	xi

4 Financial Forecasting	68
<i>Cash flow cycle 68; Financing patterns 71; Percentage-of-sales method 72; Scatter diagram or least squares regression method 75; Multiple regression method 77; Comparison of forecasting methods 77; Summary 80; Questions 81; Problems 81; Selected references 84.</i>	
5 Financial Planning and Control: Budgeting	85
<i>Nature of the budgeting process 86; Cash budgeting 88; Variable or flexible budgets 91; Problems of budgeting 92; Use of financial plans and budgets 93; Divisional control in a decentralized firm 93; External uses of financial forecasts and budgets 95; Summary 95; Questions 96; Problems 96; Selected references 98.</i>	
Appendix A to Chapter 5 Illustrative Budget System	99
<i>Production budget 99; Materials purchases budget 100; Cash budget 101; Budgeted income statement 102; Budgeted balance sheet 103; Problems 104.</i>	
PART 2 WORKING CAPITAL MANAGEMENT	105
6 Working Capital Policy	107
<i>Importance of working capital management 107; Original concept of working capital 108; Extending the working capital concept 109; Long-term versus short-term debt 111; Relationship of current assets to fixed assets 117; Working capital policy: combining current asset and current liability management 120; Summary 121; Questions 121; Problems 122; Selected references 123.</i>	
Appendix A to Chapter 6 Term Structure of Interest Rates	125
<i>Theoretical explanation for the term structure of interest rates 126; Empirical evidence 128; References 129.</i>	
7 Current Asset Management	130
<i>Cash management 130; Determining the minimum cash balance 134; Marketable securities 135; Management of trade debtors: credit policy 137; Stocks 142; Determinants of the size of stocks 142; Generality of stock control problem 143; Stock control decision models 144; Use of EOQ model: an illustration 146; Cash management as a stock control problem 146; Summary 147; Questions 147; Problems 148; Selected references 149.</i>	
Appendix A to Chapter 7 The Basic Stock Control Model	151
<i>Nature of the problem 151; Classification of costs 152; Relationship between sales and stocks 154; Extending the EOQ model to include 'safety stocks' 155; Problem 156; Selected references 157.</i>	

Contents	xiii
<i>Appendix B to Chapter 7 Cash Management Models</i>	158
<i>Baumol model 158; Miller–Orr model 160; Beranek model 162; White and Norman model 162; A comparison of the models 163; Selected references 163.</i>	
8 Major Sources and Forms of Short-term Financing	165
<i>Trade credit 165; Concept of net credit 167; Short-term financing by commercial banks 167; Bills of exchange 170; Use of security in short-term financing 171; Financing of trade debtors 171; Summary 174; Questions 175; Problems 176; Selected references 177.</i>	
PART 3 DECISIONS INVOLVING LONG-TERM ASSETS	179
9 The Interest Factor in Financial Decisions	181
<i>Compound value 181; Present value 183; Compound value versus present value 185; Compound value of an annuity 186; Present value of an annuity 187; Annual payments for accumulation of a future sum 188; Annual receipts from an annuity 189; Determining interest rates 189; Linear interpolation 190; Present value of an uneven series of receipts 191; Semi-annual and other compounding periods 192; A special case of semi-annual compounding debenture values 193; Appropriate compounding or discounting rates 195; Summary 196; Questions 198; Problems 198.</i>	
<i>Appendix A to Chapter 9 Continuous Compounding and Discounting</i>	201
<i>Continuous compounding 201; Continuous discounting 204; Continuous compounding and discounting for annuities 204.</i>	
10 Capital Budgeting Techniques	207
<i>Significance of capital budgeting 208; A simplified view of capital budgeting 209; Application of the concept 210; Administrative details 211; Capital budgeting analysis: choosing among alternative proposals 212; Importance of good data 212; Ranking investment proposals 213; Basic differences between the NPV and IRR methods 219; Capital budgeting project evaluation 221; Alternative capital budgeting worksheet 227; Capital rationing 227; Comparing mutually exclusive projects with different lives 229; Summary 231; Questions 232; Problems 232; Selected references 234.</i>	
<i>Appendix A to Chapter 10 Further Analysis of Discounted Cash Flow Selection Criteria</i>	237
<i>More on capital rationing: NPV versus IRR 237; The reinvestment rate assumption 237; Terminal value 239; IRR and NPV redefined 239; NPV versus profitability index 241; Shifting MCC or IRR curves 242; Multiple solution to the IRR 242; Programming approaches to capital rationing 244; Problems 245; Selected references 246.</i>	

11 Investment Decisions under Uncertainty	247
<i>Risk in financial analysis 247; Traditional measures of risk of individual projects 251; Portfolio risk 254; Utility theory and portfolio choices 260; Investment decisions under uncertainty in the CAPM framework 264; Beta coefficients 267; Required return on an investment 268; Risk adjusted investment hurdle rates 268; Risk adjusted discounted rates versus the certainty equivalent method 272; Summary 274; Questions 275; Problems 276; Selected references 279.</i>	
Appendix A to Chapter 11 Formal Analysis of Risk	282
<i>Illustrating the use of probability concepts 284; Cumulative probability 286; Other distributions 287; Summary 288; Problems 288.</i>	
Appendix B to Chapter 11 Evaluating Uncertain Cash Flows over Time	289
<i>Independent returns over time 289; Cumulative probability 292; Inter-dependent returns over time 293; The Hillier and Hertz approaches 293; Problems 297.</i>	
Appendix C to Chapter 11 Abandonment Value	300
<i>Further developments in abandonment decision rules 304; Problems 304.</i>	
Appendix D to Chapter 11 Some Implications of Portfolio Theory; the Capital Asset Pricing Model	307
<i>Effects of diversification: some illustrations with a two-asset portfolio 307; Relationship between correlation and expected rates of return 310; Security risk versus portfolio risk 310; Efficient versus inefficient portfolios 311; Basic assumptions of the CAPM 312; The trade-off between risk and return 312; Cost of capital dynamics 313; Questions 314; Problems 314; Selected references 315.</i>	
Appendix E to Chapter 11 Certainty Equivalent Adjustments	316
<i>Implications 321.</i>	
Appendix F to Chapter 11 Capital Budgeting Procedures under Inflation	323
<i>Problems 326.</i>	
PART 4 SOURCES AND FORMS OF LONG-TERM FINANCING	327
12 The Market for Long-term Securities	329
<i>The development of the UK Stock Exchange 329; Stock marketing reporting 330; The dealing process within the UK Stock Exchange 330; Recent developments on the UK Stock Exchange 333; Benefits provided by security exchanges 333; The listing requirements of the UK Stock Exchange 334; The merchant banks 335; The new issue market 336; costs of flotation 339; Summary 340; Questions 341; Problems 341; Selected references 342.</i>	

13 Ordinary Shares	343
<i>Apportionment of income control and risk 343; Ordinary share financing 345; Ordinary shares as a source of funds 345; Rights issues 346; Theoretical relationships 347; Effects on position of shareholders 348; Advantages of the use of rights issues 349; Summary 350; Questions 350; Problems 351; Selected references 353.</i>	
14 Loan Capital	354
<i>Instruments of long-term debt financing 354; Characteristics of long-term debt 355; Decisions on the use of long-term debt 356; Preference shares 357; Characteristics of preference shares 358; Evaluation of preference shares 359; Decisions regarding the use of preference shares 360; Rationale for different classes of securities 360; Summary 361; Questions 362; Problems 363; Selected references 364.</i>	
15 Term Loans and Leases	365
<i>Term loans 365; Lease financing 367; Types of leases 368; Accounting for leases 370; Cost comparison between lease and purchase 372; Additional factors that may affect the leasing versus owning decision 374; Summary 378; Questions 379; Problems 379; Selected references 380.</i>	
<i>Appendix A to Chapter 15 Alternative Approaches to Leasing Decisions</i>	382
<i>Cost of debt as the discount factor 382; Use of internal-rate-return analysis 384; Use of multiple discount rates 385; The value additivity principle in leasing analysis 387; Multiple discounts with a break-even approach 388; Summary 390; Problems 390.</i>	
16 Warrants and Convertibles	391
<i>Warrants 391; Warrant valuation 393; Convertibles 395; Analysis of convertible debentures 397; Decisions on use of warrants and convertibles 404; Reporting earnings if convertibles or warrants are outstanding 406; Summary 406; Questions 407; Problems 407; Selected references 411.</i>	
<i>Appendix A to Chapter 16 The Option Pricing Model</i>	412
<i>Introduction to options 412; The use of call options 413; Basic price relations 415; Calculations of options values 415; Factors influencing options values 418; The pricing of corporate securities 419; Problems 420; Selected references 420.</i>	
PART 5 FINANCIAL STRUCTURE AND THE COST OF CAPITAL	423
17 Valuation and Rates of Return	425
<i>Definitions of value 425; The required rate of return 427; Valuation of debentures 430; Preference share valuation 434; Ordinary share valuation and rates of return 434; Factors leading to changes in market prices 437; Multiperiod share valuation models 438; A general valuation formulation</i>	

444; Marketability and rates of return 445; Summary 445; Questions 446; Problems 447; Selected references 449.

18 Financial Structure and the Use of Gearing 452

Basic definitions 452; Theory of financial gearing 453; Analysis of alternative methods of financing 460; Break-even analysis 463; Relationship of financial gearing to operating gearing 465; Variations in financial structure 468; Factors influencing financial structure 469; Summary 471; Questions 472; Problems 472; Selected references 474.

19 The Cost of Capital 476

Composite, or overall, cost of capital 476; Basic definitions 477; Before-tax component cost of debt (k_b) 478; Preference shares 479; Tax adjustment 480; Cost of retained earnings (k_r) 481; Cost of external equity (k_e) 482; Finding the basic required rate of return on ordinary shares 484; Effect of gearing on the cost of equity 485; Effect of gearing on the component cost of debt 487; Combining debt and equity: weighted average, or composite, cost of capital 488; High-risk and low-risk firms 490; Calculating the marginal cost of capital: an illustration 491; Other breaks in the MCC schedule 494; Combining the MCC and the investment opportunity schedules 496; Dynamic considerations 498; Large firms versus small firms 498; Summary 499; Questions 500; Problems 501; Selected references 503.

Appendix A to Chapter 19 Some Unresolved Issues on the Cost of Capital 508
Cost of retained earnings 508; Cost of depreciation-generated funds 510.

Appendix B to Chapter 19 The Effect of Capital Structure on Valuation and the Cost of Capital 511
The net income (NI) and net operating income (NOI) approaches 511; Modigliani and Miller's support for NOI: the arbitrage argument 517; The effect of gearing on the cost of capital: a summary of alternative positions 522; Problems 523.

Appendix C to Chapter 19 Using the CAPM to Estimate a Firm's Cost of Capital 525
Estimating the market parameters 525; Estimating the beta coefficient for individual firms 528; Use of the security market line to estimate the cost of equity capital 528; Measuring business and financial risks 529; Estimate of the firm's cost of capital 530; Problems 531; Selected references 533.

Appendix D to Chapter 19 The State-Preference Model and Optimal Financial Gearing 535
Alternative future states-of-the-world 535; The concept of a pure security 536; Use of the SPM to determine the optimal financial gearing 537; The nature of agency costs 540; Problems 541; Selected references 542.

20 Dividend Policy and Internal Financing 543

Factors influencing dividend policy 543; Dividend policy decision 546; Rationale for stable dividends 547; Alternative dividend policies 547; Residual theory of dividends 548; Long-run viewpoint 550; High and low dividend payout industries 551; Conflicting theories on dividends 551; Dividend payments 552; Scrip dividends and stock splits 552; Summary 554; Questions 555; Problems 555; Selected references 558.

PART 6 INTEGRATED TOPICS IN FINANCIAL MANAGEMENT 561

21 Timing of Financial Policy 563

Significance to financial management 563; Historical patterns in the costs of financing 564; Interest rates as an index of availability of funds 565; Costs of different kinds of financing over time 565; Relationship between long-term and short-term interest rates 566; Characteristic patterns in the cost of money 567; Money and capital market behaviour 568; Fiscal policy 569; Interest rate forecasts 572; Effects of price level changes on interest rates 573; Summary 573; Questions 574; Problems 574; Selected references 577.

22 External Growth: Mergers and Holding Companies 578

Mergers versus internal growth 580; Terms of mergers 581; Illustration of an actual takeover situation 586; Accounting policies in mergers 588; Holding companies 594; Regulation of mergers 597; Summary 599; Questions 601; Problems 602; Selected references 604.

23 Failure, Reorganization and Liquidation 606

The firm's life cycle 607; Failure 607; Causes of failures 608; The failure record 609; Liquidation procedures 610; Debenture-holders' action 615; Reconstruction and scheme of arrangement 615; Extension 619; Summary 619; Questions 620; Problems 620; Selected references 621.

24 Multinational Business Finance 623

Trend towards international operations 623; Changing organization and structure of multinational business 627; Evaluation of foreign investment opportunities 629; The screening process 629; Problems faced by multinational firms 636; Financing the project 640; Questions 640; Problems 641; Selected references 641.

Appendix A to Chapter 24 Export Finance 644

Finance for exports 644; Questions 646; Selected references 646.

25 Financial Management in the Small Firm 647

Definition of a 'small firm' 647; Alternative forms of business organization 648; Economic aspects of firm size 650; Life cycle of the firm 652; Small firms in traditional small business industries 653; Characteristics of

traditional small firms 653; The small firm with growth potential 656; Financial facilities for small firms 661; Further developments 664; Summary 664; Questions 665; Problems 665; Selected references 670.

Appendix A: The Tax Environment 672

Fiscal policy 672; Corporate taxation 676; Personal income tax 681; Summary 683.

Appendix B: Depreciation Methods 685

Straight line 686; Double declining balance 686; Sum-of-years'-digits 686; Units of production 687; Effect of depreciation on reported profits 687.

Appendix C: The Normal Curve 688

Appendix D: Interest Tables 689

Appendix E: Answers to Selected End-of-Chapter Problems 695

GLOSSARY 699

INDEX 707

FREQUENTLY USED SYMBOLS IN MANAGERIAL FINANCE *inside cover*