Capital Budgeting

This book explains the financial appraisal of capital budgeting projects. The coverage extends from the development of basic concepts, principles and techniques to the application of them in increasingly complex and real-world situations. Identification and estimation (including forecasting) of cash flows, project appraisal formulae and the application of net present value (NPV), internal rate of return (IRR) and other project evaluation criteria are illustrated with a variety of calculation examples. Risk analysis is extensively covered by the use of the riskadjusted discount rate, the certainty equivalent, sensitivity analysis, simulation and Monte Carlo analysis.

The NPV and IRR models are further applied to forestry, property and international investments. Resource constraints are introduced in capital budgeting decisions with a variety of worked examples using the linear programming technique.

All calculations are extensively supported by Excel workbooks on the Web, and each chapter is well reviewed by end-of-chapter questions.

DON DAYANANDA is Senior Lecturer in the School of Commerce at Central Queensland University.

RICHARD IRONS is Lecturer in the School of Commerce at Central Queensland University.

STEVE HARRISON is Associate Professor in the School of Economics at the University of Queensland.

JOHN HERBOHN is Senior Lecturer in the School of Natural and Rural Systems Management at the University of Queensland.

PATRICK ROWLAND is Senior Lecturer in the Department of Property Studies at Curtin University of Technology.

Capital Budgeting

Financial Appraisal of Investment Projects

Don Dayananda,

Richard Irons, Steve Harrison, John Herbohn and Patrick Rowland



> PUBLISHED BY THE PRESS SYNDICATE OF THE UNIVERSITY OF CAMBRIDGE The Pitt Building, Trumpington Street, Cambridge, United Kingdom

CAMBRIDGE UNIVERSITY PRESS The Edinburgh Building, Cambridge CB2 2RU, UK 40 West 20th Street, New York, NY 10011-4211, USA 477 Williamstown Road, Port Melbourne, VIC 3207, Australia Ruiz de Alarcón 13, 28014 Madrid, Spain Dock House, The Waterfront, Cape Town 8001, South Africa

http://www.cambridge.org

© Don Dayananda, Richard Irons, Steve Harrison, John Herbohn and Patrick Rowland 2002

This book is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2002

Printed in the United Kingdom at the University Press, Cambridge

Typeface Times Roman 10/13 pt System $IAT_{FX} 2_{\mathcal{E}}$ [TB]

A catalogue record for this book is available from the British Library

Library of Congress Cataloguing in Publication data

Capital budgeting: financial appraisal of investment projects / Don Dayananda ... [et al.].
p. cm.
Includes bibliographical references and index.
ISBN 0 521 81782 X (hb) – ISBN 0 521 52098 3 (pb)
1. Capital budget. 2. Capital investments. I. Dayananda, Don.
HG4028.C4 C346 2002
658.15'242 – dc21 2002019249

ISBN 0 521 81782 X hardback ISBN 0 521 52098 3 paperback

Contents

	List of figures	<i>page</i> xiii
	List of tables	xiv
	Preface	xvii
1	Capital budgeting: an overview	1
	Study objectives	2
	Shareholder wealth maximization and net present value	3
	Classification of investment projects	4
	The capital budgeting process	5
	Organization of the book	9
	Concluding comments	10
	Review questions	11
2	Project cash flows	12
	Study objectives	14
	Essentials in cash flow identification	14
	Example 2.1	15
	Example 2.2	16
	Asset expansion project cash flows	23
	Example 2.3. The Delta Project	27
	Asset replacement project cash flows	31
	Example 2.4. The Repco Replacement Investment Project	32
	Concluding comments	34
	Review questions	35
3	Forecasting cash flows: quantitative techniques and routes	37
	Study objectives	39
	Quantitative techniques: forecasting with regression analysis;	
	forecasting with time-trend projections; forecasting using	
	smoothing models	39

vi

Contents

Cambridge University Press
052181782X - Capital Budgeting: Financial Appraisal of Investment Projects
Don Dayananda, Richard Irons, Steve Harrison, John Herbohn and Patrick Rowland
Frontmatter
More information

	More complex time series forecasting methods Forecasting routes Concluding comments Review questions	49 51 52 53
4	Forecasting cash flows: qualitative or judgemental techniques	55
	Study objectives	56
	Obtaining information from individuals	56
	Using groups to make forecasts	60
	The Delphi technique applied to appraising forestry projects	64
	Example 4.1. Appraising forestry projects involving new species Example 4.2. Collecting data for forestry projects involving new	65
	planting systems	00 60
	Example 4.3 Using scenario projection to forecast demand	70
	Concluding comments: which technique is best?	70
	Review questions	71
	Review questions	15
5	Essential formulae in project appraisal	74
	Study objectives	75
	Symbols used	75
	Rate of return	76
	Example 5.1	76
	Note on timing and timing symbols	76
	Future value of a <i>single</i> sum	77
	Example 5.2	77
	Example 5.3	78
	Present value of a <i>single</i> sum	78
	Example 5.4	78
	Example 5.5	79
	Future value of a series of cash flows	79
	Example 5.6	79
	Present value of a series of cash flows	80
	Example 5.7	80
	Example 5.8	80
	Present value when the discount rate varies	81
	Example 5.9	81
	Present value of an ordinary annuity	81
	Example 5.10	82
	Present value of a deferred annuity	83
	Example 5.11	83
	Example 5.12	83

		Contents	vii
	Perpetuity		84
	Net present value		85
	Example 5.13		85
	Net present value of an infinite chain		85
	Internal rate of return		86
	Example 5.14		86
	Loan calculations		87
	Example 5.15		87
	Loan amortization schedule		89
	Concluding comments		89
	Review questions		90
6	Project analysis under certainty		91
	Study objectives		92
	Certainty Assumption		92
	Net present value model		93
	The net present value model applied		95
	Other project appraisal methods		96
	Suitability of different project evaluation techniques		97
	Mutual exclusivity and project ranking		102
	Asset replacement investment decisions		108
	Project retirement		109
	Concluding comments		111
	Review questions		111
7	Project analysis under risk		114
	Study objectives		115
	The concepts of risk and uncertainty		115
	Main elements of the RADR and CE techniques		116
	The risk-adjusted discount rate method		118
	Estimating the RADR		118
	Estimating the RADR using the firm's cost of capital		119
	Example 7.1. Computation of the WACC for Costor Compar	ıy	120
	Estimating the RADR using the CAPM		120
	The certainty equivalent method		126
	Example 7.2. Computing NPV using CE: Cecorp		127
	The relationship between CE and RADR		128
	Example 7.3. Ceradr Company investment project		128
	Comparison of RADR and CE		129
	Concluding comments		130
	Review questions		130

viii Contents

8	Sensitivity and break-even analysis	133
	Study objectives	133
	Sensitivity analysis	134
	Procedures in sensitivity analysis	135
	Sensitivity analysis example: Delta Project	135
	Developing pessimistic and optimistic forecasts	138
	Pessimistic and optimistic forecasts of variable values for the	
	Delta Project example	141
	Applying the sensitivity tests	144
	Sensitivity test results	145
	Break-even analysis	149
	Break-even analysis and decision-making	150
	Concluding comments	150
	Review questions	151
9	Simulation concepts and methods	153
	Study objectives	154
	What is simulation?	154
	Elements of simulation models for capital budgeting	156
	Steps in simulation modelling and experimentation	158
	Risk analysis or Monte Carlo simulation	162
	Example 9.1. Computer project	163
	Design and development of a more complex simulation model	171
	Example 9.2. FlyByNight project	171
	Deterministic simulation of financial performance	175
	Example 9.3. FlyByNight deterministic model	175
	Stochastic simulation of financial performance	177
	Example 9.4. FlyByNight stochastic simulation	177
	Choice of experimental design	179
	Advantages and disadvantages of simulation compared with other	
	techniques in capital budgeting	179
	Concluding comments	180
	Review questions	180
	Appendix: Generation of random variates	181
10	Case study in financial modelling and simulation of a	
	forestry investment	185
	Study objectives	185
	Key parameters for forestry models	186
	Sources of variability in forestry investment performance	187
	Methods of allowing for risk in the evaluation of forestry investments	189
	Problems faced in developing forestry financial models	190
	Developing a financial model: a step-by-step approach	191

	Cont	tents ix
	Example 10.1 Flores Venture Capital Ltd forestry project	192
	Comparing forestry projects of different harvest rotations	192
	Example 10.2 EVC Ltd: comparison of one-stage and two-stage	177
	harvest options	100
	Risk analysis or Monte Carlo analysis	200
	Example 10.3 Simulation analysis of EVC I to forestry project	200
	Concluding comments	200
	Review questions	202
		205
11	Resource constraints and linear programming	204
	Study objectives	206
	LP with two decision variables and three constraints	206
	Example 11.1. Roclap: product mix problem	206
	Investment opportunities and by-product constraints	212
	Example 11.2. Capital rationing problem	212
	LP and project choice	214
	Example 11.3. Project portfolio selection problem	215
	Concluding comments	217
	Review questions	217
12	More advanced linear programming concepts and methods	219
	Study objectives	219
	Basic LP assumptions and their implications for capital budgeting	g 220
	Expanding the number of projects and constraints	221
	Example 12.1. Power generator's decision problem	222
	Indivisible investments and integer activity levels	224
	Example 12.2. Resort development problem	225
	Borrowing and capital transfers	226
	Example 12.3. Borrowing and capital transfer problem	226
	Contingent or dependent projects	228
	Example 12.4. Infrastructure problem	228
	Mutually exclusive projects	229
	Example 12.5. Sports gear problem	230
	Some other LP extensions for capital budgeting	231
	Concluding comments	233
	Review questions	234
12	Financial modelling case study in forestry project evaluation	726
15	Study objectives	230
	Forestry evaluation models: uses and user groups	237
	Financial models available to evaluate forestry investments	237
	The Australian Cabinet Timbers Financial Model (ACTEM)	230
	Review of model development and design options	239
	Keview of model development and design options	240

Cambridge University Press
052181782X - Capital Budgeting: Financial Appraisal of Investment Projects
Don Dayananda, Richard Irons, Steve Harrison, John Herbohn and Patrick Rowland
Frontmatter
More information

	Concluding comments	249
	Review questions	250
14	Property investment analysis	251
	Study objectives	252
	Income-producing properties	252
	Example 14.1. Property cash flows from the industrial property	256
	Example 14.2. Equity cash flows before tax from the industrial property	258
	Example 14.3. Equity cash flows after tax from the industrial property	261
	Corporate real estate	263
	Example 14.4. Acquiring the industrial property for operations	263
	Example 14.5. Leasing or buying the industrial property for operations	266
	Development feasibility	268
	Example 14.6. Initial screening of an industrial building project	268
	Example 14.7. Project cash flows from a property development	270
	Example 14.8. Equity cash flows from the development project	271
	Concluding comments	272
	Review questions	272
15	Forecasting and analysing risks in property investments	274
	Study objectives	275
	Forecasting	275
	Example 15.1. Forecasting operating cash flows for the industrial	
	property	278
	Example 15.2. Forecasting resale proceeds for the industrial property	283
	Example 15.3. Forecasting development cash flows for a	
	residential project	285
	Risk analysis	288
	Example 15.4. Net present value of the industrial property – sensitivity	
	analysis	289
	Example 15.5. Overbuilding for the industrial property – scenario	
	analysis	290
	Example 15.6. Development risks – Monte Carlo (risk) simulation	293
	Concluding comments	293
	Review questions	295
16	Multinational corporations and international project appraisal	297
	Study objectives	298
	Definition of selected terms used in the chapter	298
	The parent's perspective versus the subsidiary's perspective	299
	Example 16.1. Garment project	301
	Exchange rate risk	303
	Country risk	304

Contents xi A strategy to reduce a project's exchange rate and country risks 305 Other country risk reduction measures 309 Incorporating exchange rate and country risk in project analysis 310 Concluding comments 311 Review questions 311 References 313 Index 316

Figures

1.1	Corporate goal, financial management and capital budgeting	page 2
1.2	The capital budgeting process	5
3.1	Forecasting techniques and routes	39
4.1	Major steps in the survey and data analysis process	57
4.2	A simple model for appraising investment in forestry projects	64
4.3	Modified extract of survey form used in stage 1 of Delphi	
	survey in Example 4.1	66
6.1	Net present value profiles for projects A and B	100
7.1	Main features of RADR and CE techniques	117
8.1	Project NPV versus unit selling price	148
8.2	Project NPV versus required rate of return	148
8.3	Project NPV versus initial outlay	148
9.1	Cumulative relative frequency curve for NPV of computer project	169
10.1	NPV and LEV profiles of FVC Ltd forestry investment	197
10.2	Cumulative relative frequency distribution for forestry	
	investment for FVC Ltd	202
11.1	Graphical solution to the product mix problem	207
11.2	Product mix problem: iso-contribution lines and optimal product mix	208
13.1	Schematic representation of the structure of the ACTFM	240
13.2	ACTFM: example of plantation output sheet	242
13.3	Prescriptive costs sheet	244
13.4	Costs during plantation sheet	244
13.5	Annual costs sheet	244
15.1	Trend in industrial rents per square metre	281
15.2	Distribution of possible net present values	294
16.1	A strategy for an MNC to reduce a host country project's	
	exchange rate and country risks	306

Tables

2.1	Delta Corporation's historical sales po	age 27
2.2	Delta Project: cash flow analysis	28
2.3	Repco Replacement Investment Project: initial investment	33
2.4	Repco Replacement Investment Project: incremental operating cash flows	33
2.5	Repco Replacement Investment Project: terminal cash flow	34
2.6	Repco Replacement Investment Project: overall cash flow	34
3.1	Desk sales and number of households	40
3.2	Desk sales, number of households and average household income	43
3.3	Household and income projections, 2002–2006	44
3.4	Desk sales forecasts using two-variable and multiple regressions	44
3.5	Desk sales forecasts using time-trend regression	46
3.6	Hypothetical sales data and calculation of simple moving average	47
3.7	Forecasts using exponential smoothing model	49
3.8	Ticket sales, households and household income	54
4.1	Planting and harvesting scenario for a maple and messmate mixture	67
4.2	Estimates of model parameters for a maple and messmate mixed plantation	on 68
5.1	First three months of a loan amortization schedule	89
6.1	Delta Project: annual net cash flow	95
6.2	Cash flows, NPV and IRR for projects Big and Small	103
6.3	Cash flows, NPV and IRR for projects Near and Far	104
6.4	Cash flows, NPV and IRR for projects Short and Long	104
6.5	Replication chain cash flows as an annuity due	105
6.6	Cash flows within timed replication chains	107
6.7	Calculated individual NPVs for various replication cycle	
	lengths within a chain	108
6.8	Calculated total NPVs for perpetual replacement over various	
	replication cycle lengths within a chain	109
6.9	Repco Replacement Investment Project: incremental cash flows	109
6.10	Cash flow forecasts for various retirement lives	110
6.11	Operational cash flows	112
7.1	Stock-market index Value and Delta Company share price	122

	List of tables	XV
7 2	Stock market index and share price returns	122
7.2	Cecore: CE coefficients and cash flows	125
7.5	Compare Company stock returns and stock market index returns	127
7.4	Capitibeta Company: forecasted project cash flows	131
7.J 9.1	Passimistia, most likely and antimistic forecasts	131
0.1 0.1	Pessimistic, most likely and optimistic forecasts	144
0.2	Computer projects according to the second section of the second s	143
9.1	computer project: pessimistic, modal and optimistic values for selected	164
0.2	cash now variables	104
9.2	Computer project: random numbers and generated values under	1(7
0.2	triangular distributions for the four stochastic variables	10/
9.3	Computer project: Annual net cash nows and NPVs for first five replicates	108
9.4	Computer project: ordered NPVs and cumulative relative frequencies	168
9.5	FlyByNight: parameters of the basic model	1/3
9.6	FlyByNight: output from the basic model simulation run	174
9.7	FlyByNight: NPV levels from the deterministic simulation	176
9.8	FlyByNight: NPV estimates for individual replicates	
	and mean of replicates	178
9A.1	Probability distribution of number of tickets sold	182
9A.2	Cumulative probability distribution of number of tickets sold,	
	and ranges of random numbers	183
10.1	Sources of risk in farm forestry	188
10.2	FVC Ltd forestry project: Main cash categories and predicted timing	193
10.3	FVC Ltd forestry project: Cash outflows and timing associated with	
	a two-species plantation	194
10.4	Estimated cash inflows for 1,000 ha plantation	195
10.5	NPV calculations for FVC Ltd forestry project	196
10.6	FVC Ltd forestry project: parameters selected for sensitivity analysis	198
10.7	NPVs for FVC Ltd forestry investment	198
10.8	Impact of harvesting all trees at year 34 compared with the	
	two-stage harvest in Example 10.1	200
10.9	Calculation of random values used in NPV calculations	201
11.1	Initial tableau for the product mix problem	209
11.2	Revised LP tableau after solution for the product mix problem	211
11.3	Sensitivity report for the product mix problem	211
11.4	LP tableau after solution for the capital rationing problem	214
11.5	Sensitivity report for the capital rationing problem	214
11.6	NPVs, cash outflows and available capital in the project portfolio	
	selection problem	215
11.7	LP model for the project portfolio selection problem	216
12.1	Power generator's decision problem: alternative technologies	222
12.2	LP tableau for power generator problem after solution	223
12.3	LP tableau and optimal plan for property developer decision problem	226
12.4	Property developer decision problem: alternative solution methods	226

xvi List of tables

12.5	Tableau after solution for borrowing and capital transfer problem	227
12.6	Tableau with solution for coal-miner's example	229
12.7	Tableau and solution for sports gear problem	230
12.8	Capital expenditure for alternative hotel designs	235
13.1	Estimated harvest ages, timber yields and timber prices for	
	eucalypt and cabinet timber species in North Queensland	243
13.2	Modelling options for forestry investments	247
14.1	Operating cash flows before tax	253
14.2	Property cash flows before tax	257
14.3	Equity cash flows before tax	259
14.4	Equity cash flows after tax (an Australian example)	262
14.5	Evaluating moving to new premises	265
14.6	The costs of leasing or buying	267
14.7	Preliminary analysis of a property development	269
14.8	Project cash flows from a property development	270
14.9	Equity cash flows from a property development	271
15.1	Forecasting rent from leased properties	278
15.2	Lease rent for the industrial property	279
15.3	Industrial property market statistics	280
15.4	Operating cash flows for the industrial property	282
15.5	Property cash flows before tax for the industrial property	284
15.6	Development project cash flows before tax	286
15.7	Sensitivity table for net present value	290
15.8	Cash flows and returns from contrasting scenarios	291
15.9	Monte Carlo simulation of office development	292
15.10	Lease terms for suburban office building	295
15.11	Market data for suburban offices	295
16.1	Analysis of the proposed garment project	302

Preface

Capital budgeting is primarily concerned with how a firm makes decisions on *sizable* investments in *long-lived* projects to achieve the firm's overall goal. This is the decision area of financial management that establishes criteria for investing resources in *long-term* real assets.

Investment decisions (on *sizable long-term* projects) today will determine the firm's strategic position many years hence, and fix the future course of the firm. These investments will have a considerable impact on the firm's future cash flows and the risk associated with those cash flows. Capital budgeting decisions have a long-range impact on the firm's performance and they are critical to the firm's success or failure.

One of the most crucial and complex stages in the capital budgeting decision process is the financial or economic evaluation of the investment proposals. This 'project analysis' is the focus of this book. Project analysis usually involves the identification of relevant cash flows, their forecasting, risk analysis, and the application of project evaluation concepts, techniques and criteria to assess whether the proposed projects are likely to add value to the firm. When the project choice is subject to resource constraints, mathematical programming techniques such as linear programming are employed to select the feasible optimal combination of projects.

Motivation for the book

The writing of this book was motivated by the lack of a suitable capital budgeting textbook with the following desirable features and coverage:

- Analysis and applications based on sound conceptual and theoretical foundations with pedagogical tools appropriate for capital budgeting
- · Cash flow forecasting
- · Project choice under resource constraints
- Comprehensive illustrations of concepts, methods and approaches for project analysis under uncertainty (or risk), with applications to different industries
- Preparing the reader for actual project analysis in the real world which involves voluminous, tedious, complex and repetitive computations and relies heavily on computer packages.

xvii

xviii **Preface**

The book bridges this gap in the market by including these features and areas of coverage.

Distinctive features and areas of coverage

Distinctive features include:

- · Practical approach with applications based on sound and appropriate concepts and theory
- Concepts, techniques and applications are illustrated by worked examples, tables and charts
- Worked examples are extensively supported with live Excel workbooks easily accessible on the Web
- Use of pedagogical tools such as Excel spreadsheet calculations accessible on the World Wide Web – to help the users of the book grasp important and difficult concepts and calculations, and make them clear, useful, attractive and sometimes fun by the use of technology (computer packages)
- Complex and difficult topics are explained intuitively with tableaux rather than in terms of algebra.

Areas of coverage include:

- · Quantitative and qualitative techniques for cash flow forecasting
- Application of mathematical programming techniques such as linear programming for decision support when the project choice is subject to resource constraints
- Sensitivity and break-even analysis and simulation with applications to various industries such as the computer, airline, forestry and property industries, each of which has its unique characteristics
- As well as the standard industrial investment examples, the exotic and environmentally sensitive area of forestry investment and the increasingly demanding area of property investment are analysed with examples and case studies. The intricacies of investment across international borders are also discussed.

All of this material is reinforced with some challenging end-of-chapter review questions. Solutions to all the calculation questions are fully worked on Excel spreadsheets and are available on the Web.

Organization of the book

This book follows a natural progression from the development of basic concepts, principles and techniques to the application of them in increasingly complex and real-world situations. Identification and estimation of cash flows are important initial steps in project analysis and are dealt with in Chapters 2 to 4. Once the cash flows have been estimated, investment proposals are subjected to project evaluation techniques. The application of these techniques involves financial mathematics (Chapter 5). Chapter 6 uses the cash flow concepts and

Preface xix

the formulae (from Chapters 2 and 5) to evaluate case study projects using several project evaluation criteria such as net present value (NPV), internal rate of return (IRR) and payback period, and demonstrates the versatility of the NPV criterion. This basic model is then expanded to deal with risk (or uncertainty of cash flows) through the use of the risk-adjusted discount rate and certainty equivalent methods (Chapter 7), sensitivity and break-even analyses (Chapter 8) and risk simulation methods (Chapter 9). These concepts and methods are then applied in a case study involving the evaluation of a forestry investment in Chapter 10. Resource constraints on the capital budgeting decision are considered in Chapters 11 and 12 by introducing the basics of linear programming (LP), applying the LP technique for selection of the optimal project portfolios and presenting extensions to the LP technique which make the approach more versatile. A number of special topics in capital budgeting are covered towards the end of the book. They include forestry investment analysis (Chapter 13), property investment analysis (Chapters 14 and 15) and evaluation of international investments (Chapter 16).

Joint authorship

The positive side of joint authorship has been the rich interplay of ideas and lively debate on both conceptual and applied matters. The book has certainly benefited from this spirited interplay of ideas. Keeping five academics working, and working towards a common goal, an integrated exposition, has been a challenging management task. We have all benefited from the discipline of a common goal and pressing deadlines.

Intended audience

We have endeavoured in this text to make the capital budgeting concepts, theory, techniques and applications accessible to the interested reader, and trust that the reader will garner a better understanding of this important topic from our treatment. This book should suit both advanced undergraduate and postgraduate students, investment practitioners, financial modellers and practising managers. Although the book relies on material that is covered in corporate finance, economics, accounting and statistics courses, it is self-contained in that prior knowledge of those areas, while useful, is not essential.

Teaching and learning aids

Excel workbooks referred to in the text are accessible on the Web (at http://publishing. cambridge.org/resources/052181782x/). They provide details relating to calculations and the student can use the examples provided to practise various computations. Estimating regression equations, performing sensitivity and break-even analyses, conducting simulation experiments and solving linear programming problems are all done using Excel and they are all provided on the Web for the readers of this book to experiment with.

An Instructor's Manual includes answers to end-of-chapter review questions.

xx Preface

Acknowledgements

We have benefited from the encouragement and support of colleagues, family and friends. We particularly acknowledge the support given by Kathy Ramm, Head of the School of Commerce, Central Queensland University. We are also grateful to the talented staff at Cambridge University Press, especially Ashwin Rattan (Commissioning Editor, Economics and Finance), Chris Harrison (Publishing Director, Humanities and Social Sciences), Robert Whitelock (Senior Copy-Editorial Controller, Humanities and Social Sciences), Chris Doubleday (commissioned copy-editor for this book), Karl Howe (Production Controller) and Deirdre Gyenes (Design Controller).

A final word

We have significant combined research, teaching and industry experience behind us, and trust that this understanding of the learning process shines through in the text. Corporate financial management is not a process to be lightly embarked upon, but we hope your journey can be made more rewarding by the way in which this book has been presented.